

VDOİHİ

Bağımlı ve Bir Bağımsız Olasılıklı
Farklı Dizilimsiz Bağımlı Durumlu
Simetrinin Herhangi İki Durumuna
Bağı Tek Kalan Düzgün Olmayan
Simetrik Olasılık

Cilt 2.3.3.3.4.1.1.13

İsmail YILMAZ

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VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin herhangi iki durumuna bağlı tek kalan düzgün olmayan simetrik olasılık Cilt 2.3.3.3.4.1.1.13

İsmail YILMAZ

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1. Bağımlı durumlu simetrisinin herhangi iki durumuna bağlı tek kalan düzgün olmayan simetrik olasılık

Dili: Türkçe + Matematik Mantık



Türkiye Cumhuriyeti Devleti
Kuruluşunun
100.Yılı Anısına



K. Atatürk

DÜZELTME

Bu cilt için

$$fz S_{j_{ik},j^{sa}}$$

simgesi yerine

$$fz S_{j_{ik},j^{sa}}^{DOST}$$

simgesi olmalı.

Yazar Hakkında

İsmail YILMAZ; Hamzabey Köyü, Yeniçağa, Bolu'da 1973 yılında doğdu. İlkokulu köyünde tamamladıktan sonra, ortaokulu Yeniçağa ortaokulunda tamamladı. Liseyi Ankara Ömer Seyfettin ve Gazi Çiftliği Liselerinde okudu. Lisans eğitimini Çukurova Üniversitesi Fen Edebiyat Fakültesi Fizik bölümünde, yüksek lisans eğitimini Sakarya Üniversitesi Fen Bilimleri Enstitüsü Fizik Anabilim Dalında ve doktora eğitimini Gazi Üniversitesi Eğitim Bilimleri Enstitüsü Fen Bilgisi Eğitimi Anabilim Dalında tamamladı. Fen Bilgisi Eğitiminde; Newton'un hareket yasaları, elektrik ve manyetizmanın prosedürel ve deklaratif bilgi yapılarıyla birlikte matematik mantık yapıları üzerine çalışmalar yapmıştır. Yazarın farklı alanlarda yapmış olduğu çalışmalar arasında ölçme ve değerlendirmeye yönelik çalışmaları da mevcuttur.

VDOİHİ

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GÜLDÜNYA

Simge ve Kısaltmalar

n : olay sayısı

n : bağımlı olay sayısı

m : bağımsız olay sayısı

l : bağımsız durum sayısı

I : simetrinin bağımsız durum sayısı

ll : simetrinin bağımlı durumlarından önce bulunan bağımsız durum sayısı

I : simetrinin bağımlı durumlarından sonra bulunan bağımsız durum sayısı

lk : simetrinin bağımlı durumları arasındaki bağımsız durumların sayısı

k : dağılımın başladığı bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası

l : ilgilenilen bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası

l : simetrinin ilk bağımlı durumunun, bağımlı olasılık farklı dizilimsiz dağılımın son olayı için sırası. Simetrinin sonuncu bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

l_i : simetrinin son bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası. Simetrinin birinci bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

l_s : simetrinin ilk bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz

dağılımlardaki sırası. Simetrinin sonuncu bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

l_{ik} : simetrinin aranacağı durumdan önce bulunan bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası veya simetrinin iki bağımlı durumu arasında bağımsız durum bulunduğunda, bağımsız durumdan önceki bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası

l_{sa} : simetrinin aranacağı bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası. Simetrinin aranacağı bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

j : son olaydan/(alt olay) ilk olaya doğru aranılan olayın sırası

j_i : simetrinin son bağımlı durumunun, bağımlı olasılıklı dağılımlarda bulunabileceği olayların, son olaydan itibaren sırası

j_{sa}^i : simetriyi oluşturan bağımlı durumlar arasında simetrinin son bağımlı durumunun bulunduğu olayın, simetrinin son olayından itibaren sırası ($j_{sa}^i = s$)

j_{ik} : simetrinin ikinci olayındaki durumun, gelebileceği olasılık dağılımlardaki olayın sırası (son olaydan ilk olaya doğru) veya simetride, simetrinin aranacağı durumdan önce bulunan bağımlı durumun, bağımlı olasılıklı dağılımlarda bulunabileceği olayların, son olaydan itibaren sırası veya simetrinin iki bağımlı

durum arasında bağımsız durumun bulunduğunda bağımsız durumdan önceki bağımlı durumun bağımlı olasılıklı dağılımlarda bulunabileceği olayların son olaydan itibaren sırası

j_{sa}^{ik} : j_{ik} 'da bulunan durumun simetriyi oluşturan bağımlı durumlar arasında bulunduğu olayın son olaydan itibaren sırası

$j_{x_{ik}}$: simetrinin ikinci olayındaki durumun, olasılık dağılımlarının son olaydan itibaren bulunabileceği olayın sırası

j_s : simetrinin ilk bağımlı durumunun, bağımlı olasılıklı dağılımlarda bulunabileceği olayların, son olaydan itibaren sırası

j_{sa}^s : simetriyi oluşturan bağımlı durumlar arasında simetrinin ilk bağımlı durumunun bulunduğu olayın, simetrinin son olayından itibaren sırası ($j_{sa}^s = 1$)

j_{sa} : simetriyi oluşturan bağımlı durumlar arasında simetrinin aranacağı durumun bulunduğu olayın, simetrinin son olayından itibaren sırası

j^{sa} : j_{sa} 'da bulunan durumun bağımlı olasılıklı dağılımda bulunduğu olayın son olaydan itibaren sırası

D : bağımlı durum sayısı

D_i : olayın durum sayısı

s : simetrinin bağımlı durum sayısı

s : simetrik durum sayısı. Simetrinin bağımlı ve bağımsız durum sayısı

m : olasılık

M : olasılık dağılım sayısı

U : uyum eşitliği

u : uyum derecesi

s_i : olasılık dağılımı

$_{fz}S_{j_i}^{DST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

$_{fz}S_{j_{i,0}}^{DST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

$_{fz}S_{j_{i,D}}^{DST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

$_{fz}^0S_{j_i}^{DST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız durumlu simetrinin son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

$_{fz}^0S_{j_{i,0}}^{DST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız durumlu bağımsız simetrinin son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

$_{fz}^0S_{j_{i,D}}^{DST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız durumlu bağımlı simetrinin son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

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$f_Z S_{j^{sa},0}^{DST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin durumuna bağlı tek kalan simetrik olasılık

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$f_{Z,0} S_{j_s,j_i,0}^{DST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı

durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

$f_{Z,0} S_{j_s,j_i,D}^{DST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

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herhangi iki ve son durumuna bağlı tek kalan simetrik olasılık

$fz \overset{DSSST}{j_i}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin son durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

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$0 \overset{DSSST}{fz \Rightarrow} j_i$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız durumlu simetrinin son durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

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$f_z S_{j^{sa}}^{DSST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin durumuna bağlı tek kalan düzgün simetrik olasılık

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$0S_{js,jik,j^{sa},ji,D}^{DOST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız veya bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre tek kalan düzgün olmayan simetrik olasılık

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E2

BAĞIMLI ve BİR BAĞIMSIZ OLASILIKLI FARKLI DİZİLİMSİZ DAĞILIMLAR

Bağımlı ve Bir Bağımsız Olasılıklı Farklı Dizilimsiz Dağılımlar

- Simetrik Olasılık
- Toplam Düzgün Simetrik Olasılık
- Toplam Düzgün Olmayan Simetrik Olasılık
- İlk Simetrik Olasılık
- İlk Düzgün Simetrik Olasılık
- İlk Düzgün Olmayan Simetrik Olasılık
- Tek Kalan Simetrik Olasılık
- Tek Kalan Düzgün Simetrik Olasılık
- Tek Kalan Düzgün Olmayan Simetrik Olasılık
- Kalan Simetrik Olasılık
- Kalan Düzgün Simetrik Olasılık
- Kalan Düzgün Olmayan Simetrik Olasılık

büyüğe sıralanmasıyla elde edilebilen kurallı tablolar kullanılmaktadır. Farklı dizilimsiz dağılımlarda durumların küçükten-büyüğe sıralama için verilen eşitliklerde kullanılan durum sayısının düzenlenmesiyle, büyükten-küçüğe sıralama durumlarının eşitlikleri elde edilebilir.

Farklı dizilimli dağılımlar, dağılımın ilk durumuyla başlayan (bunun yerine farklı dizilimli dağılımlarda simetrisinin ilk durumuyla başlayan dağılımlar), dağılımın ilk durumu haricinde dağılımın herhangi bir durumuyla başlayan dağılımlar (bunun yerine farklı dizilimli dağılımlarda simetride bulunmayan bir durumla başlayan dağılımlar) ve dağılımın ilk durumu haricinde ilk dağılımının başladığı farklı ikinci durumla başlayıp simetrisinin ilk durumuyla başlayan dağılımların sonuna kadar olan dağılımlarda (bunun yerine farklı dizilimli dağılımlarda simetride bulunmayan diğer durumlarla başlayan dağılımlar) simetrik, düzgün simetrik, düzgün olmayan simetrik v.d. incelenir. Bağımlı dağılımlardaki incelenen başlıklar, bağımlı ve bir bağımsız olasılıklı dağılımlarda, bağımsız durumla ve bağımlı durumla başlayan dağılımlar olarak da incelenir.

Bağımlı dağılım ve bir bağımsız olasılıklı durumla oluşturulabilen dağılımlara ve bağımlı olasılıklı dağılımların kendi olay sayısından (bağımlı olay sayısı) büyük olasılara (bağımsız olay sayısı) dağılımla bağımlı ve bir bağımsız olasılıklı dağılımlar elde edilir. Bağımlı dağılım farklı dizilimsiz dağılımlarda incelendiğinde, bu dağılımlara bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlar denir. Bağımlı ve bir bağımsız olasılıklı dağılımlar; bağımlı dağılımlara, bağımsız durumlar ilk durumdan dağıtılmaya başlanarak tabloları elde edilir. Bu bölümde verilen eşitlikler, bu yöntemle elde edilen kurallı tablolara göre verilmektedir. Farklı dizilimsiz dağılımlarda durumların küçükten-

Bağımlı dağılımlar; a) olasılık dağılımlardaki simetrik, (toplam) düzgün simetrik ve (toplam) düzgün olmayan simetrik b) ilk simetrik, ilk düzgün simetrik ve ilk düzgün olmayan simetrik c) tek kalan simetrik, tek kalan düzgün simetrik ve tek kalan düzgün olmayan simetrik ve d) kalan simetrik, kalan düzgün simetrik ve kalan düzgün olmayan simetrik olasılıklar olarak incelendiğinden, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda bu başlıklarla incelenmekle birlikte, bu simetrik olasılıkların bağımsız durumla başlayan ve bağımlı durumlarıyla başlayan dağılımlara göre de tanımlanma eşitlikleri verilmektedir.

Farklı dizilimsiz dağılımlarda simetrinin durumlarının olasılık dağılımındaki sırasına göre simetrik olasılıkları etkilediğinden, bu bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımları da etkiler. Bu nedenle bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetrinin durumlarının bulunabileceği olaylara göre simetrik olasılık eşitlikleri, simetrinin durumlarının olasılık dağılımındaki sıralamalarına göre ayrı ayrı verilecektir. Bu eşitliklerin elde edilmesinde bağımlı olasılıklı farklı dizilimsiz dağılımlarda simetrinin durumların bulunabileceği olaylara göre çıkarılan eşitlikler kullanılmaktadır. Bu eşitlikler, bir bağımlı ve bir bağımsız olasılıklı dağılımlar için VDO ve CHT adlı çıkarılan eşitliklerle birleştirilerek, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımların yeni eşitlikleri elde edilecektir. Eşitlikleri adlandırılmasında bağımlı olasılıklı farklı dizilimsiz dağılımlarda kullanılan adlandırmalar kullanılacaktır. Bu adların altına simetrinin bağımlı ve bağımsız durumlarına göre ve dağılımın bağımsız veya bağımlı durumla başlamasına göre “Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı/bağımsız-bağımlı/bağımlı-bir bağımsız/bağımlı-bağımsız/bağımsız-bağımsız/bağımsız-bağımsız” kelimeleri getirilerek, simetrinin bağımlı durumlarının bulunabileceği olaylara göre bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz adları elde edilecektir. Simetriden seçilen durumların bulunabileceği olaylara göre simetrik, düzgün simetrik veya düzgün olmayan simetrik olasılık için birden fazla kullanılması durumunda gerekmedikçe yeni tanımlama yapılmayacaktır.

Simetrinin durumlarının bağımlı olasılık farklı dizilimsiz dağılımlarındaki sırasına göre verilen eşitliklerdeki toplam sınıra sınır değerleri, simetrinin küçükten-büyükçe sıralanan dağılımlarına göre verildiğinden, bu dağılımlarda da aynı sıralama kullanılmaya devam edilecektir. Bağımlı olasılıklı farklı dizilimsiz dağılımlarda olduğu gibi bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda da aynı eşitliklerde simetrinin durum sayıları düzenlenerek büyükten-küçükçe sıralanan dağılımlar için de simetrik olasılık eşitlikleri elde edilecektir.

Bu şekilde bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlardan, bağımsız olasılıklı durumla başlayıp ilk bağımlı durumu bağımlı olasılıklı dağılımın ilk bağımlı durumuyla başlayan başlayabileceği diğer bir bağımlı durum olan ve bağımsız olasılıklı durumla başlayan dağılımın aynı ilk bağımlı durumuyla başlayan dağılımlarda, simetrinin herhangi iki durumuna bağlı tek kalan düzgün olmayan simetrik olasılığın eşitlikleri verilmektedir.

SİMETRİDEN SEÇİLEN İKİ DURUMA GÖRE TEK KALAN DÜZGÜN OLMAYAN SİMETRİK OLASILIK

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}))$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \dots + \mathbb{k}_2 = \dots$$

$$f_Z^S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{lk}+1} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \left. \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \right).$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - 1} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - j^{sa} = l_{sa} - l - j_{sa}^{ik} + 1)} \sum_{j_{sa} = l_{sa} - l - j_{sa}^{ik} + 1} \right) \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_{sa} - l + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=0}^{j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = D - s}^{j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = n + \mathbb{k}}^{n} \sum_{j_{sa} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik}}^{(n_i - j_s + 1)}$$

$$\sum_{j_{sa} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{is} - j_s + 1)} \sum_{j_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}^{(n_{sa} - j_s + 1)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa}^{ik} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 2 \leq \mathbf{l} \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$(\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_Z^S(j_{ik}, j) &= \sum_{k=l}^{(\mathbf{l}_{ik}-j_{sa}^{ik}-1)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\mathbf{l}_{ik}-j_{sa}^{ik}-1)} \sum_{j_{sa}^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{-l+1} \\ &\sum_{n_{ik}=\mathbf{l}_{ik}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}-\mathbb{K}_2-j_{ik}+1)}^{(n_{ik}=\mathbf{n}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}^{sa}+1}^{n_{ik}+j_{ik}-j_{sa}^{sa}-\mathbb{K}_2} \\ &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa}^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa}^{sa})!} \cdot \\ &\frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j_{sa}^{sa} - \mathbf{l}_{ik})! \cdot (j_{sa}^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa}^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa}^{sa} - s)!} \cdot \\ &\sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j_{sa}^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D-s}^{\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1} \end{aligned}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_{sa}+s-\mathbf{n}-l_i-1)! \cdot (\mathbf{n}-j_{sa}-j_{sa}^s-s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa} \leq \mathbf{n} - j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa} \leq \mathbf{n} - j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$(s = j_{sa}^{ik} - \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i) \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z^S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\
& \sum_{n_i=n+l}^n \sum_{(n_{ik}=n+l_2-j_{ik}+1)}^{(n_i-j_{ik}-l_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(n_i - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left. \frac{(D + j^{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\
& \left(\sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right. \\
& \sum_{n_i=n+l}^n \sum_{(n_{ik}=n+l_2-j_{ik}+1)}^{(n_i-j_{ik}-l_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left. \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \right)
\end{aligned}$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l_1}^n \sum_{(n_{ik}=n+l_2-j_{ik}+1)}^{(n_i-j_{ik}-l_1+1)} \sum_{n_{sa}=n+j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} - 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - j_{sa}^{ik})!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+l_1}^n \sum_{(n_{is}=n+l_2+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - l_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} S_{j_{ik}, j_{sa}} = & \left(\sum_{k=l}^{\binom{()}{j_{ik} - l}} \sum_{j_{sa} = l_s + j_{sa} - l}^{\binom{()}{j_{sa} - l}} \sum_{j_{sa} = l_{sa} + \mathbf{n} - D}^{l_s + j_{sa} - l} \right. \\ & \sum_{i=\mathbf{n} + \mathbb{k}}^n \sum_{n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left(\sum_{k=l}^{\binom{()}{j^{sa} + j_{sa}^{ik} - j_{sa} - 1}} \sum_{j_{sa} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1}^{\binom{()}{j^{sa} + j_{sa}^{ik} - j_{sa} - 1}} \sum_{j_{sa} = l_{sa} + \mathbf{n} - D}^{l_s + j_{sa} - l} \right) \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}-s+n+j_{sa}^{ik}-D-1)}^{l_{sa}-l+1} j^{sa=l_s+j_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{lk}-l)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} + j^{sa})!} \cdot \\
& \frac{(n - \mathbf{n} - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - 1)!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{lk} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - \mathbf{n} - s)!}{(D + j_{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z^s} S_{i_{ik}, j_{sa}} = \sum_{k=l}^{(l_s - j_{sa}^{ik} - l)} \sum_{(j_{ik} = n + j_{sa}^{ik} - D + 1)}^{(l_s - j_{sa}^{ik} - l)} \sum_{j_{sa} = l_{sa} + n - D}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{k}}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{sa} + j_{sa} - n - 1} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{ik}+j_{sa}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} - 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} > 0 \wedge$$

$$D \geq n < n \wedge l - \mathbb{k}_k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa} \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^s = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (D + j_{sa} - j^{sa} - l_{sa})!} + \\
& \left(\sum_{k=l}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik}} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik})} \sum_{l_{sa}-l+1}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+l_{sa}}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{sa}+1} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{l_{sa}-l+1}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(n + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)}^{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_{ik}, j^{sa}} = \sum_{k=l}^{\binom{l_{ik}+j_{sa}-j_{sa}^{ik}}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{\substack{n_i=n+\mathbb{k}_1 \\ n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}}^{\binom{l_{ik}+j_{sa}-j_{sa}^{ik}}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{\substack{n_{sa}=n-j_{sa}+1 \\ n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2}}^{\binom{l_{ik}+j_{sa}-j_{sa}^{ik}}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{l_{ik}+j_{sa}-l}{j_{ik}=j_{sa}^s+j_{sa}^{ik}-j_{sa}}} \sum_{\substack{n_i=n+\mathbb{k} \\ n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}}^{\binom{l_{ik}+j_{sa}-l}{j_{sa}=l_i+n+j_{sa}-D-s}} \sum_{\substack{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1 \\ n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2}}^{\binom{l_{ik}+j_{sa}-l}{j_{sa}=l_i+n+j_{sa}-D-s}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$j_{sa}^{ik}, j_{sa} = \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}-l+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} j^{sa=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-s-\mathbb{k}_2-j_{sa})} \\
& \frac{(n_{ik}+j_{ik}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l+1)!}{(l_s+j_{sa}-j_{ik}-s+1)! (j_{ik}+j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-j_s+1)!}{(D+j_{sa}+s-n-\mathbb{k}_2-j_{sa})! (n+j_{sa}-j_{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$D \geq l < n \wedge I = \mathbb{k}_2 = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i - \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: \mathbb{Z} \geq 2 \wedge \mathbb{k} = \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=l_i+1}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}^{ik}=D-s}^{(j_{sa}^{ik}-D-s)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}-j_{sa}}^{(n_i-j_s+1)} \\
& \sum_{\mathbb{k}=\mathbf{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{\mathbb{k}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik})}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2)} \frac{(n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} + j_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j_{sa})!} \cdot \frac{(n_{ik} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(n_{ik} - l - j_{sa}^{ik})!}{(n_{ik} - j_{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik}, j_{sa}^{ik}} \sum_{j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1}^{(j_{ik} - j_{sa}^{ik} - j_{sa})} \sum_{j_{sa} = l_i + \mathbf{n} + j_{sa} - D - s}^{l_s + j_{sa} - l} \\ & \sum_{n_{ik} = \mathbf{n} + \mathbb{k}}^{(n_i - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l-s+1}^{l_s+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - 1)!}{(n + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1)!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{sa}^{ik}} = & \sum_{k=l}^{(l_i+n+j_{sa}^{ik}-D-s)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} j_{sa}^{sa=l_i+n+j_{sa}-D-s} \\ & \sum_{n_{ik}=n_{sa}+\mathbb{K}}^n \sum_{(n_{ik}=n_{sa}+\mathbb{K}_1+1)}^{(n_{ik}=j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - \mathbf{n} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{l=l_i}^{(l_{ik}-l)} \sum_{j_{sa}^{ik}=\mathbf{n}-j_{sa}^{ik}-j_{sa}}^{j_{sa}^{ik}-D-j_{sa}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{sa}}^{(n_{ik}-j_s+1)} \sum_{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-l_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-l_{sa})}^{(n_{ik}-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - l_{sa})!}{(n_{ik} + j_{sa}^{ik} - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(l_s + j_{sa} - j_{ik} - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\begin{aligned}
& ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge \\
& D \geq n < n \wedge l = \mathbb{K} \geq 0 \wedge
\end{aligned}$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z \mathcal{S}_{j_{ik}, j_{sa}} = & \sum_{k=l}^{\sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} (l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n+\mathbb{k}_2}^{(n_i-j_{ik}-\mathbb{k}_1)} \sum_{n_{sa}=n-j_{sa}}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \\ & \frac{(n_i - n_{sa} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \\ & \sum_{k=l}^{\sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} (l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} (\quad)} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \vee j_{sa} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\binom{()}{n_i=\mathbf{n}+\mathbb{k}}}^{(n_i=\mathbf{n}+\mathbb{k}+1)}$$

$$\frac{\sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_2}}^{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_2}}{\sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_2}}^{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_2}} \frac{(n_{ik} - j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(j_{sa}^{ik} - l - 1)!}{(j_{sa}^{ik} - j_{sa} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\begin{aligned} & ((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \\ & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \\ & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})) \wedge \end{aligned}$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = \mathbf{s} + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}_2+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$((D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz^S_{j_{ik}, j_{sa}} = \sum_{k=l}^{j_{sa}^{ik} - j_{sa}} \sum_{(j_{ik} = \mathbf{l}_{ik} + \mathbf{n} - D)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j^{sa} = \mathbf{l}_i + \mathbf{n} + j_{sa} - D - s}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-l_{k1}+1)} \sum_{n_s=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l + 1)!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_{sa}+n-D} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-l_{k1}}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - l_{k2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_{ik}} \sum_{k=l}^{(l_i + \mathbf{n} + j_{sa}^{ik} - D - s - 1)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s} \\ & \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n+\mathbb{k}-j_{sa}+1)}^{n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{sa} - n_{sa}^{ik} - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} - j_{ik} - n_{sa}^{ik} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, \mathbb{k}_{j_{sa}^s}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\binom{()}{n_i+l_s+l_{sa}-j_{sa}-j_{ik}}}^{(n_i+l_s+l_{sa}-j_{sa}-j_{ik})}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-l_{sa}-\mathbb{k}_2} \sum_{\binom{()}{n_{ik}+j_{sa}-\mathbb{k}_2}}^{(n_{ik}+j_{sa}-\mathbb{k}_2)} (n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa})! \cdot (j_{sa}^{ik}+j_{sa}-j_{ik}-s)!} \cdot$$

$$\frac{(j_{sa}^{ik}+j_{sa}-j_{ik}-l-1)!}{(j_{sa}^{ik}+j_{sa}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+\mathbf{n}-l_i-j_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!}$$

$$\begin{aligned} & ((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \\ & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \end{aligned}$$

$$\begin{aligned} & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\ & (D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \end{aligned}$$

$$\begin{aligned} & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \end{aligned}$$

$$\begin{aligned} & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \end{aligned}$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_{z=2}^{s, j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}-k+n-D)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{sa}+n-D}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}^{n_{sa}=n-j^{sa}+1} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{i,j_{sa}}^{j_{sa}} = \sum_{k=l}^{\binom{j_{sa}}{j_{ik}+j_{sa}^{ik}-j_{sa}}} \sum_{n_i=n+\mathbb{k}}^{\binom{j_{sa}-l}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n_{sa}=n-j_{sa}+1}^{\binom{j_{sa}-l}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{j_{sa}}{j_{ik}+j_{sa}^{ik}-j_{sa}}} \sum_{n_i=n+\mathbb{k}}^{\binom{j_{sa}-l}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n_{sa}=n-j_{sa}+1}^{\binom{j_{sa}-l}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \frac{(n_i - j_s + 1)!}{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})!}$$

$$\begin{aligned}
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (n_{ik}+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^{ik}\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
j_{ik}, j^{sa} &= \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}
\end{aligned}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+\mathbb{k}}^n \sum_{(n_{is}=n)}^{(n_i + 1)} \sum_{(j_{ik})}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_1}^{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n_{ik}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(D-l-1)!}{(D+j_{sa}-l-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+l-1-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge \mathbb{k} > 0 \wedge$$

$$j_{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 1 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_i + j_{sa} - l - s + 1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_i - l - j_{sa} - s)!}{(l_i - j^{sa} - \mathbf{n} - 1)! \cdot (n_i - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_i + j_{sa}^{ik} - l - s + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - l - s + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(n_i - j_{ik} - l - s + 1)} \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{is} = n + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{sa} + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - j_{sa}^{ik})}^{(n_i - j_{sa} + 1)} \frac{(n_i - n_{ik} - j_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - n_{ik} - j_{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(n_i - j_s + 1)} \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{(\quad)} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{K}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{K}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{l_s + j_{sa} - l}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D, j_{sa}=l_s+j_{sa}^{ik}-l+1)}^{(l_s+j_{sa}^{ik}-l)} \cdot$$

$$\sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_i-j_{ik}-1, n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_i-j_{ik}-1)} \sum_{(n_{ik}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \cdot$$

$$\frac{(n_i - n_{ik})!}{(n_i - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_{is}=n+\mathbb{k}_1+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \Rightarrow 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \leq 4 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+l_{sa}}^n \sum_{n_{ik}=n+l_{sa}+j_{sa}^{ik}-j_{ik}+1}^{(j_{ik}-j_{sa}^{ik}-1)} \sum_{n_{sa}=n-j^{sa}+1}^{(j_{ik}-j_{sa}^{ik}-j_{sa}-1)} \\
& \frac{(n_i - 1)!}{(j_{ik} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - j_{sa})! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+l_{sa}}^n \sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (n_{ik}+j_{sa}-j_{sa}-s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\},$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k}$$

$$\mathbb{k} - z = 2 \wedge \mathbb{k} \leq \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+j_{sa}-l} \sum_{j^{sa}=j_{sa}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - l_s + j_{sa} - l + 1)}^{(j_{ik} - j_{sa}^{ik} - l + 1)}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - 1)}^{(n_i - j_{ik} - 1)} \sum_{(n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}$$

$$\frac{(n_i - n_{ik})!}{(n_i - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{sa} - n_{sa})!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = j_{sa} + 1}^{l_s + j_{sa} - l}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{is} = n + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j^{sa} = j_{sa} + 2}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{ik} - j_{sa}^{ik} - l_{sa}^{ik} + j_{sa}^{ik})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(j_{sa}=j_{sa}^{ik}+1)}^{(l_{ik}+j_{sa}^{ik}-l-j_{sa}^{ik}+1)} \sum_{(n_i-j_{sa}^{ik})}^{(n_i-j_{sa}^{ik})} \sum_{(n+l_{ik}(n_{is}+j_{sa}^{ik}+l_{ik}+j_{sa}^{ik}-j_{ik}))}^{(n+l_{ik}(n_{is}+j_{sa}^{ik}+l_{ik}+j_{sa}^{ik}-j_{ik}))} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1})}^{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_2})}^{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_2})} \cdot \\
& \frac{(n_{ik} + j_{sa}^{ik} - l_{ik} - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - l_{ik} - l_{k_2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq n - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{sa} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq n + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa}^{ik} - n \wedge$$

$$l_{sa} \leq n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{k}_Z: Z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-l} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \right)$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - j_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} j_{ik}^{sa} j_{sa}^{ik} &= \sum_{k=l}^{(l_{ik}-1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(l_{ik}-1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-1)} \\ &\sum_{n=\mathbb{K}}^{(n_i-\mathbb{K}_1+1)} \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{(n_i-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \\ &\left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \right) \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(n + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik}, j_{sa} = \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} - l + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \right) + \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \right)$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - j^{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa} - j^{sa})! \cdot (D + j^{sa} - \mathbf{n} - l_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=j_{ik}-1}^{(j_{sa}^{ik}-l)} \sum_{k=j_{sa}^{ik}+1}^{(j_{sa}^{ik}-l)} \sum_{a=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(j_{sa}^{ik}-l)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^{ik})! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$j_{sa}^{ik} \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{(n_{ik} = n_{ik} - j_{ik} + 1)}^{(j_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)} \sum_{j_{sa} + 1}^{j_{sa} + 1} \frac{(n_{ik} + n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} + n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} + n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l-1)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (l_i+j_{sa}-j_{sa}-s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \Rightarrow 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s - \mathbb{k}_1, j_{sa}^{ik} - \mathbb{k}_2, j_{sa}^i - \mathbb{k}_3, \dots, j_{sa}^i\} \wedge$$

$$s \leq 4 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \right).$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - 1} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{sa} - l - j_{sa}^{ik} + 1} \sum_{n = n - D}^{n - l - j_{sa}^{ik} + 1} \right) \cdot \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1) \atop n_{ik} = n - j_{sa} + 1}^{(n_i - j_{ik} - 1) \atop n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_i - n_{ik} - j_{ik} + 1) \atop n_{sa} = n - j^{sa} + 1}^{(n_i - n_{ik} - 1) \atop n_{sa} = n - j^{sa} + 1} \cdot \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1) \atop n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{(n_i - j_{ik} - 1) \atop n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{sa} = n - j^{sa} + 1} \cdot \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - 1)!} \cdot$$

$$\sum_{k=0}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{k} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{j_{sa} - l - j_{sa}^{ik} + 1 - k} \cdot$$

$$\sum_{i=0}^{n_{is} - \mathbb{k}_1} \binom{n_{is} - \mathbb{k}_1}{i} \binom{n_{is} - \mathbb{k}_1}{n_{is} - \mathbb{k}_1 - i} \cdot$$

$$\sum_{j=0}^{n_{is} - \mathbb{k}_1} \binom{n_{is} - \mathbb{k}_1}{j} \binom{n_{is} - \mathbb{k}_1}{n_{is} - \mathbb{k}_1 - j} \cdot$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$D + \mathbf{n} - l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$D + l_{ik} + j_{sa}^{ik} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge$$

$$j_{sa}^{ik} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{(n_i-j_s+1)} \frac{(n_i-j_s+1)!}{(j_{ik}-l)! (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}+j_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} -$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-l} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_s + n - D}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \right. \\
& \sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{ik} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa} - 1)! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg)$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(l_i=\mathbf{l}+\mathbf{n}+j_{sa}-D)}^{()}$$

$$\sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(j_s+1)}$$

$$\sum_{(n_{is}=\mathbf{n}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1)}^{()} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\geq \mathbf{n} < n \wedge l \neq l_i \wedge l \leq D - \mathbf{n} + 1 \wedge$$

$$D + l_i + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} - j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{sa}^{ik} + j_{sa} - \mathbf{n} - l_{sa} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S j_{ik} j_{sa} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} j_{sa} = l_{sa} + n -$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = n + \mathbb{k}_1 - j_{sa} - \mathbb{k}_2 + 1)}^{(n_{ik} + j_{sa} - j_{sa} - \mathbb{k}_2 + 1)} j_{sa} = n +$$

$$\frac{(n_{sa} - n_{ik} - 1)!}{(j_{sa} - 2)! \cdot (n_{sa} - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{sa} - n_{ik} - 1)!}{(j_{sa} - 1)! \cdot (n_{sa} - n_{ik} - j_{ik} - 1)!} \cdot$$

$$\frac{(n_{sa} - n_{ik} - 1)!}{(n_{sa} - n_{ik} - 1)! \cdot (n - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - n_{ik} - 1)!}{(n_{sa} - n_{ik} - 1)! \cdot (n - j_{sa})!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} j_{sa} = n +$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fzS_{j_{ik}^{sa}} = \left(\sum_{i=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-j_{sa}^{ik})} \sum_{(j_{sa}=j_{ik}+l_{sa}-j_{sa}^{ik})} \sum_{(n_i-j_{sa}^{ik})} \sum_{(n_{is}+l_{ik}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{sa}-j_{sa}^{ik})} \sum_{(n_{ik}=n_{ik}+j_{ik}-j^{sa}-l_{k2})} \frac{(n_{ik} + j_{sa}^{ik} - l_{k2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - l_{k2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq l_s \wedge l_s \leq D - n - 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} < n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{ik}} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\ \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\ \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\ \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ \left. \frac{(l_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\ \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\ \left. \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \right)$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{(n_s=\mathbf{n}+j_{sa}-j_{sa}^{ik}+1)}^{n_{ik}+j_{sa}-j^{sa}-\mathbb{K}_2}$$

$$\frac{(n_i - j_{ik} - 1)!}{(n_i - j_{ik} - 1)! \cdot (n_i - j_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{sa} - j_{sa} - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_{sa} + j_{ik} - j_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Big) -$$

$$\sum_{k=l} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{K}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{K}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{j_{ik}, j_{sa}^{ik}} \sum_{k=l}^{l+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^{ik})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-j_{sa}^{ik}-j_{ik}-j_{sa}^{ik}-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-j_{sa}^{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-j_{sa}^{ik}-j_{ik}-j_{sa}^{ik}-1)!}{(D+j_{sa}^s+s-n-j_{sa}^{ik}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_{sa} \leq D + s - n \wedge$$

$$D \geq n < n \wedge l - j_{sa}^{ik} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa} \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^{ik} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - n_{sa} + 1)!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=0}^{l_s + j_{sa}^{ik} - l_{ik} - 1} \sum_{l=0}^{j_{ik} - j_{sa}^{ik} - 1} \sum_{s=0}^{n_{sa} - j_{sa}^{ik} - l}$$

$$\sum_{k=n+l}^{n_{ik}-j_s+1} \sum_{l=n+l}^{n_{ik}-j_s+1} (n_{is}=n+l+j_{sa}^{ik}-j_{ik})$$

$$\sum_{k=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{k1}}^{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k2}} \sum_{s=0}^{n_{sa}-j_{sa}^{ik}-l_{k2}}$$

$$\frac{(l_{ik} + j_{sa}^{ik} - s - l_{k2} - j_{sa}^s)!}{(n_{ik} - n - l_{k2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - n + 1) \leq n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$S_{j_{ik}, j_{sa}} = \sum_{k=0}^{(j_{ik}+j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1} \sum_{n_i=\mathbf{l}+\mathbb{K}}^n \sum_{(n_i=n_{ik}-\mathbb{K}_1+1)}^{(n_i=j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \sum_{k=\mathbf{l}}^{\mathbf{l}_{ik}-\mathbf{l}+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{\mathbf{l}_i+j_{sa}-\mathbf{l}-s+1} \sum_{j^{sa}=\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+2}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} + j_{sa}^{ik} - j_{sa})}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + s - \mathbf{n} < \mathbf{l}_i \leq D + \mathbf{l}_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{l=0}^{\mathbf{l}} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{ik}+j_{sa}-l-s-1)} \sum_{j_{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_i+j_{sa}-l-s+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j_{sa} - \mathbf{l}_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{sa} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(j^{sa} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - 1)!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{i=0}^{(j_{sa}^{ik} - j_{sa})} \sum_{j_{sa}^{ik} - j_{sa} + 1}^{l_s + j_{sa} - l} \sum_{j_{sa} = l_i + \mathbf{n} + j_{sa} - D - s}^{l_s + j_{sa} - l} \\ & \sum_{i=\mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_s+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - 1)!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz S_{j_{ik} - j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-D-s+1} \sum_{(j_{ik}=j_{sa}+1)}^{l_i+j_{sa}-l-s+1} \sum_{j=l_i+n+j_{sa}-D-s}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(l_i - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z, s_{ik}, j^{sa}} = \sum_{k=l}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{ik}=j_{sa}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{ik}=j_{sa}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\begin{aligned}
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l_i - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l_i - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - l)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - j^{sa} - s)!} \cdot
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{ik} - s > 0 \wedge l_i + j_{sa}^{ik} - j_{ik} - s > 0 \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik} - j_{sa} - 1\} \wedge$$

$$s \geq \mathbf{n} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = \mathbb{k} \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{(\quad)} \sum_{j^{sa} = j_{sa} + 1}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - l + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}, j_{sa}^{sa}=l_i+n+j_{sa}-D+l_i+l_{sa}-l_{sa}^{ik}+1)} \sum_{(j_{sa}^{sa}=l_i+n+j_{sa}-D+l_i+l_{sa}-l_{sa}^{ik}+1)}$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{sa}-j_{sa}^{sa}-j_{sa}^{sa}+1)} \sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{sa}-j_{sa}^{sa}-j_{sa}^{sa}+1)}$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{sa}-j_{sa}^{sa}-j_{sa}^{sa}+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa}^{sa})}$$

$$\frac{(n_{ik} + j_{sa} - s - l_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} \wedge j_{sa}^{sa} \leq j_{sa}^{ik} \wedge$$

$$j_{ik} \leq j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{sa}^{ik}, j_{sa}^{ik}, l_{sa}^{sa}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = \mathbf{s} + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
 &\frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}+1)!} \cdot \\
 &\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik})! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 &\frac{(n_{sa})!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 &\frac{(l_{ik}-l_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
 &\frac{(D+j^{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 &\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
 &\frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
 \end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$D + s - \mathbf{n} < \mathbf{l}_i \leq D + \mathbf{l}_s + s - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)} \sum_{n_i=n+\mathbb{K}}^{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{sa}+j^{sa}-\mathbf{n}-1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_{sa}+j^{sa}-\mathbf{n}-1)}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l)! \cdot (\mathbf{n}-j_{sa}-j_{sa}^{ik}-j_{ik}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s > l_i \wedge l_i - j_{sa} - s > l_s \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s \wedge \mathbf{n} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik} - j_{sa} - 1\} \wedge$$

$$s \geq \mathbf{n} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-k)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}-k}$$

$$\sum_{(j_{ik}+j_{sa}-j_{sa}^{ik}-k-j_{sa}^{ik}-j_s+1)}$$

$$\sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_{ik} + j_{ik} - l_{sa} - s - k_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - l_{sa} - s - k_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$((D \geq l_i < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{l=1}^{(j_{sa}^{ik} - j_{sa})} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{(j_{sa}^{ik} - j_{sa})} \sum_{j_{sa} = j_{sa} + 1}^{(j_{sa}^{ik} - j_{sa})} \sum_{n_i = n + \mathbb{K}}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{K}}^n \sum_{n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (n_{sa} + j_{sa}^{ik} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{l_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$(\mathbf{n} > \mathbf{n} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$j_{sa}^{ik} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n} \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{j_{ik}-\mathbb{K}_1+1} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)!} \cdot \frac{(n+j_{sa}^{ik}-j_{ik}-s)!}{(n+j_{sa}-j_{ik}-s)!} \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)!} \cdot \frac{(j_{ik}+j_{sa}^{ik}-1)!}{(j_{ik}+j_{sa}-1)!} \\
& \frac{(D-n-1)!}{(D+j_{sa}+s-n-j_{sa})!} \cdot \frac{(n+j_{sa}-j_{sa}^{ik}-s)!}{(n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1) \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_s \leq D + l_s + s - n - 1)) \wedge$$

$$(D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - l_s < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D + l_s + s - n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{(n_{ik}+1)}$$

$$\sum_{n=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{ik})}^{(n_{ik}+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-l_k-j_{sa}-l_{ik}}^{()} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_k-j_{sa}-l_{ik})}^{(n_{ik}+1)} \frac{(n_{ik} + j_{sa}^{ik} - s - l_{k2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k2} - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s - l - 1)!}{(D + j_{sa} - l_{sa} - s - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + l_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq n + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_{sa} \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = l_i \wedge l_s \leq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = \mathbf{s} + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j_{sa}=j_{sa}+n-D}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} - j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j_{sa} - \mathbf{l}_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{j_{ik}=j_{ik}+j_{sa}-j_s}$$

$$n_{is} + \mathbb{k} (n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})$$

$$\sum_{n_{is}=n_{is}+j_{sa}^s-j_{sk}^{ik}} \sum_{n_{sa}=n_{ik}+j_{ik}^s-j_{sa}^s-\mathbb{k}_2} ($$

$$\frac{(n_{ik} + j_{sa} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbb{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{+j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$(D \geq n \wedge n \wedge l \neq i l) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{sa}^{sa} \leq j_{sa}^{sa} \wedge j_{sa}^{sa}$$

$$j_{ik} + j_{sa} - i_k \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$-j_{ik}^{ik} \wedge 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq n < n \wedge l \neq \perp \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sq}^{ik} \leq j_{ik} \leq j^{sa} + j_{sq}^{ik} - j_{sq} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z,j_{ik},j_{sa}}^{s,j_{ik},j_{sa}} = \sum_{k=l}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-j_{sa}^{ik}+1} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_{ik}-j_{ik}+1)}^{(n_i-j_{ik}-j_{ik}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{j_{sa}^{ik}-j_{sa}^{ik}+1} \sum_{j_{sa}^{ik}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_s - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\quad)} \sum_{j_{sa}^{ik}=j_{sa}+1}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq \mathbf{l} \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^{\left(\sum_{j_{sa}+j_{sa}^{ik}-j_{sa}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=j_{sa}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \right)} \sum_{n_i=n+\mathbb{K}_1}^n \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) +$$

$$\left(\sum_{k=l}^{\left(\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{j^{sa}=j_{sa}+2}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right)} \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \right.$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} j_{sa}^{ik+2} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_{sa}+j_{ik}+1)}^{(n_i-j_{ik}-l+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{()} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^i - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - l_i)! \cdot (\mathbf{n} - j_{sa}^{ik} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 > l_s \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} \Rightarrow 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z^S j_{ik}, j^{sa} &= \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+l+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_s+l+1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^n \sum_{(n_i-j_{ik}-\mathbb{k}_2+1)}^{(n_i-j_{ik}-\mathbb{k}_2+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \\
& \sum_{(n_{is}=\mathbf{n}+\mathbb{k}_1+j_{sa}-j_{ik}+1)}^{(n_{is}=\mathbf{n}+\mathbb{k}_1+j_{sa}-j_{ik}+1)} \sum_{(n_{sa}=\mathbf{n}-j_{sa}+1)}^{(n_{sa}=\mathbf{n}-j_{sa}+1)} \\
& \frac{(n_i - j_{ik} - 2)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}_1+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge s = 0 \wedge$$

$$j_{sa}^i \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{\mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\}.$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k}_1 = \mathbb{k}_2 = 1 \wedge z = 2 \Rightarrow$$

$$f^Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j_{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}^{sa}-l-j_{sa}^{ik}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-\mathbb{K}_2} \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} \right) + \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \right)$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik})} \sum_{(n_i=n+\mathbb{k})}^{(n_i-j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i - j_{ik} - j^{sa} - \mathbb{k}_2)!}{(j_{ik} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa}^s - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} \Rightarrow 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s - \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right.$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + j^{sa} = l_{sa} + n - D)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{n - D} \right) \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1)}^{(n_i - j_{ik} - 1)} \sum_{(n_{ik} = n - j^{sa} + 1)}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik})!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n-j_{ik}-1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \\ &\frac{(n_i - n_{sa} - 1)!}{(j_{ik} - l + 1)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j_{ik} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \\ &\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\ &\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{l=l}^{j_{ik}+j_{sa}-l-s+1} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{j_{ik}+j_{sa}-l-s+1} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \\ \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l} \sum_{\binom{(\quad)}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}}} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\binom{(\quad)}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa})!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - s)!}{(l_s + j_{sa}^{ik} - j_{ik} - s)! (j_{ik} + j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - s)!}{(D + j_{sa} + s - n - j_{sa})! (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n \leq l_{sa} \leq n + l_s + j_{sa} - n \wedge$$

$$D \geq n < n \wedge l - \mathbb{k}_1 \geq 0$$

$$j_{sa} \leq j_{ik} - 1 \wedge j_{sa}^{ik} = j_{ik} - 1 \wedge j_{sa} \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^s = s + \mathbb{k}_1$$

$$\mathbb{k}_z: z = 2, \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{\binom{(l_i+j_{sa}^{ik}-l-s+1)}{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_{ik}-\mathbb{k}_1+1)}{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - n_{sa} + 1)!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{ik} = 0}^{l_{ik} + n - l - j_{sa}^{ik}} \sum_{j_{sa} = n_{sa} - j_{sa}^{ik}}^{n_{sa} - j_{sa}^{ik}}$$

$$\sum_{n_{is} = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{j_{sa}^{ik} = j_{ik}}^{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}$$

$$\sum_{k=n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}$$

$$\frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(j_{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = l_i + \mathbb{k}_1 - j_{sa} - D - s}^{j_{sa} = l_i + \mathbb{k}_1 - j_{sa} - D - s} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_i + j_{sa} - l - s + 1} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-l}^{()} \sum_{j_{sa}=l_{sa}+n}^{()} \sum_{j_{sa}=j_{sa}^{ik}-j_{ik}}^{()} \sum_{n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik}}^{()} (n_{is}+l_{sa}+j_{sa}^{ik}-j_{ik})! \\
& \sum_{n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik}-l_{sa}}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa}}^{()} (n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})! \\
& \frac{(n_{ik} + j_{sa} - s - l_{sa})!}{(n_{ik} + j_{ik} - l_{sa} - s)! \cdot (n - l_{sa} - s)! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_i \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{sa}, j_{sa}^{ik}, l_{sa}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_{ik}, j^{sa}} = & \sum_{k=l}^{(l_i + \mathbf{n} + j_{sa}^{ik} - D - s - 1)} \sum_{(j_{ik} = l_i + \mathbf{n} - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s} \\
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
 & \frac{(n_i - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 & \frac{(l_{ik} + j_{sa}^{ik} - l_{sa} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)}^{l_i + j_{sa} - l - s + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
 \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-j_{sa}^{ik})} \sum_{(j_{ik}=j_{ik}+j_{sa}^{ik}-j_{sa}^{ik})} \sum_{(n_i-j_{sa}^{ik})} \sum_{(n+l_k) \cdot (n_{is}+l_k+j_{sa}^{ik}-j_{ik})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{sa}-l_{k1})} \sum_{(n_{ik}=n_{ik}+j_{ik}-j_{sa}-l_{k2})} \frac{(n_{ik} + j_{sa}^{ik} - l_{k2} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - l_{k2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa}^{ik} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}
\end{aligned}$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \bigg) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} j_{sa}^{sa=j_{sa}+1} \\ &\sum_{n_i=\mathbb{k}}^n \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{ik}+1)}^{(j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(j_{ik}-j_{sa}-1)} \\ &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - \mathbb{k}_2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - \mathbb{k}_1 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} - \end{aligned}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j_{sa}^{sa=j_{sa}+1}}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{\binom{()}{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_2} \sum_{\binom{()}{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}} \\
& \frac{(n_{ik} + j_{ik} - s - \mathbb{k}_2 - l_{sa})!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq l_i \wedge l_i \leq D - n + 1) \right)$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_i \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + j_{sa}^{ik})}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{sa} - \mathbb{k}_2)}$$

$$\frac{(n_{ik} - n_{ik} - 1)!}{(j_{sa} - 2)! \cdot (n_{ik} - n_{ik} - j_{ik} + j_{sa}^{ik})!} \cdot$$

$$\frac{(j_{sa} - j_{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j_{sa}^{ik})!} \cdot$$

$$\frac{(n_{is} - 1)!}{(n_{sa} - j_{sa} - n + 1)! \cdot (n - j_{sa})!} \cdot$$

$$\frac{(l_{sa} - l - j_{sa}^{ik})!}{(l_{sa} - j_{sa} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} \cdot$$

$$\sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{(l_{sa} + j_{sa}^{ik} - l)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(l_{sa} + j_{sa}^{ik} - l)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{sa} + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - \mathbf{n} = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = \mathbb{K}_1 + \mathbb{K}_2 \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 =$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{l} \\ &\sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\ &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j^{sa} = l_s + j_{sa} - l + 1)} \sum_{(n_i = n + l_{ik} - j_{ik} - j^{sa} - l_{k_2})} \\
& \sum_{n_i = n + l_{ik} - j_{ik} - j^{sa} - l_{k_2} + 1}^n \sum_{n_{ik} = n + l_{k_2} - j_{ik} + 1}^{(n_{ik} - j_{ik} - j^{sa} - l_{k_2})} \sum_{n_{sa} = n - j^{sa} + 1}^{(n_{sa} - j_{sa} - j^{sa} - l_{k_2})} \\
& \frac{(n_i - 1)!}{(j_{ik} - j^{sa} - l_{k_2})! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - j^{sa} - l_{k_2})! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = n + l_{k_2}}^n \sum_{(n_{is} = n + l_{k_2} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (l_i+j_{sa}-j_{sa}-s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \Rightarrow I = \mathbb{k} \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^s - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^{ik} \geq 4 \wedge j_{sa}^s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}$$

$$\begin{aligned}
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{l=l_{sa}-l+1}^{(l_s+j_{sa}^{ik})} \sum_{j_{sa}^{ik}=j_{sa}-D-j_{sa}}^{l_{sa}-l+1} j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} j_{sa}^{ik} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-D-s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{k1}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-l_{k2})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_{k2} - j_{sa}^{ik})!}{(n_{ik} + j_{ik} - n - l_{k2} - j_{sa}^{ik})! (n + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - 1)! (j_{ik} + j_{sa}^{ik} - 1)!}$$

$$\frac{(D - 1)!}{(D + j_{sa}^{ik} + s - n - j_{sa}^{ik})! (n + j_{sa}^{ik} - j_{sa}^{ik} - s)!}$$

$$((D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1) \vee$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l}_i \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: Z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_{Z^D}^{j_{sa}^{ik}} = \sum_{k=l}^{j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} + j_{sa}^{ik} - l - j_{sa}^{ik} + 1} \sum_{(j_{ik} = j_{sa}^{ik} + n - D)} \sum_{j_{sa} = l_{sa} + n - D} \sum_{i=n+\mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{j_{ik} - \mathbb{K}_1 + 1} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j_{sa} - \mathbf{l}_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+j_{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{sa} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(n_i - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + n + j_{sa}^{ik} - D - s)}^{(l_s + j_{sa}^{ik} - l)} \sum_{j^{sa}=j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+l_k}^n \sum_{(n_{is}=n)}^{(n_{is}+1)} \sum_{j_{ik}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + l_i - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\begin{aligned} & ((D \geq n < n \wedge l_i \wedge l_s \leq D - n + 1 \wedge \\ & j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \end{aligned}$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_i \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{il} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{(n_i=n+\mathbb{k})}^{(n_i-j_{sa}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-n_{ik}-1)!} \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} - \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_s+j_{sa}-l}$$

$$\begin{aligned}
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^i - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - j - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - i - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - i - 1)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l = i! \wedge l_{sa} \leq D + j_{sa}^i - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 = l_i \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \Rightarrow 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{ik} \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \left(\sum_{k=1}^n \sum_{i!}^{(\quad)} \sum_{(j_{ik} = j_{sa}^{ik})}^{(\quad)} \sum_{j^{sa} = j_{sa}} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} \Bigg) + \\
& \left(\sum_{k=\mathbf{l}}^{\binom{()}{\mathbf{l}}} \sum_{(j_{ik}=j_{sa}^{ik})}^{l_{sa}-\mathbf{l}+1} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-\mathbf{l}+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - j_{ik} - \mathbb{K}_1 - 1)!}{(n_i - j_{ik} - \mathbb{K}_1 - j_{ik} + 1)!} \cdot \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_i + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=\mathbf{l}}^{\binom{()}{\mathbf{l}}} \sum_{(j_{ik}=j_{sa}^{ik})}^{l_{sa}-\mathbf{l}+1} \sum_{j^{sa}=j_{sa}}^{l_{sa}-\mathbf{l}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{\binom{()}{\mathbf{l}}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}^{l_{sa}-\mathbf{l}+1} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{K}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{K}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(D - \mathbf{l}_i)!}{(D + s - \mathbf{n} - \mathbf{l}_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l} = \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} = & \sum_{k=0}^{n-j_{ik}-j_{sa}^{ik}+1} \sum_{l=0}^{l_{sa}-j_{sa}^{ik}+1} \sum_{j_{sa}=j_{sa}}^{l_{sa}-j_{sa}^{ik}+1} \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(n_i - j_{ik} - \mathbb{K}_1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa}^{ik})!} \cdot \\ & \frac{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} \cdot \end{aligned}$$

$$\sum_{k=0}^{n-j_{ik}-j_{sa}^{ik}+1} \sum_{l=0}^{l_{sa}-j_{sa}^{ik}+1} \sum_{j_{sa}=j_{sa}}^{l_{sa}-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = \mathbf{n} - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{j_{sa} = j_{sa}}^{l_{sa} - {}_i l + 1} \sum_{k = {}_i l}^{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k=0}^n \sum_{l=0}^{(n-k)} \sum_{j_{sa}=j_{sa}}^{(n-k-l)} j_{ik}^{ik} j_{sa}^{sa}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-j_{ik}-l_1+1)}^{(n-l)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}}^{(n-l-j_{sa})}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_1)!}{(D + s - l_1 - l_2)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = l \wedge l_s \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} \leq j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, l_{11}, j_{sa}^{ik}, l_{22}, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 4 \wedge s = s + l \wedge$$

$$l_{22}: z \geq 2 \wedge l_{11} = l_{22} \Rightarrow$$

$$\sum_{k=0}^n \sum_{l=0}^{(n-k)} \sum_{j_{sa}=j_{sa}}^{(n-k-l)} j_{ik}^{ik} j_{sa}^{sa} = \sum_{k=0}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(n-l)} \sum_{j_{sa}=j_{sa}}^{(n-k-l-j_{sa})} j_{ik}^{ik} j_{sa}^{sa}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n+l_1-j_{ik}+1)}^{(n-l-j_{sa})} \sum_{n_{sa}=n-j_{sa}+1}^{(n-l-j_{sa})} j_{ik}^{ik} j_{sa}^{sa}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=i}^n \sum_{(j_{ik}=j_{sa}^{ik})}^{()} \sum_{j_{sa}=j_{sa}^{ik}}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}-\mathbb{k}_2}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D + s - n - l_i)!}{(n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, j_{sa}^l\}$$

$$s \geq 4, n = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + 1 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=i}^n \sum_{(j_{ik}=j_{sa}^{ik})}^{(l_{sa}+j_{sa}^{ik}-i l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - l + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$\sum_{k=0}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - l_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}, \mathbb{k}_1 - j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: Z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \sum_{k=0}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - l_i + j_{sa}^i)!}{(l_{ik} - j_{ik} - l_i + j_{sa}^i + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{sa}^i - l_i - s)!}{(D + s - \mathbf{n} - l_i - s)!} \cdot \\
& \sum_{k=0}^{\binom{D-l_i}{2}} \sum_{i=0}^{\binom{D-l_i}{2}} \sum_{j_{sa}^i=j_{sa}}^{(j_{ik}=j_{sa}^{ik})} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}-j_{ik}-\mathbb{k}_1+1)}^{\binom{D-l_i}{2}} \sum_{n_{sa}=\mathbf{n}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(j_{ik}=j_{sa}^{ik})} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_i \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^i + j_{sa}^{ik} - j_{sa}^i \wedge$$

$$j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j_{sa}^i \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^i = l_{ik} \wedge$$

$$l_{ik} + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=1}^n \sum_{l=1}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \frac{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)}{(j_{ik}-2)! (n_i-n_{ik}-j_{sa}+1)!} \cdot \frac{(n_i-j_{ik}-\mathbb{k}_1+1)}{(n_{ik}+j_{ik}-j^{sa}-1)!} \cdot \frac{(n_{ik}+j_{ik}-j^{sa}-1)}{(n_{sa}-j_{sa}+1)!} \cdot \frac{(n_i-1)!}{(j_{ik}-2)! (n_i-n_{ik}-j_{sa}+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{sa}-l-j_{sa}^{ik})!}{(n_{ik}-j_{ik}-l_{sa}+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(n_{ik}+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n-s)!} - \sum_{k=1}^n \sum_{l=1}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n-s)!} \cdot \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$$\left((D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{i=0}^n \sum_{l=0}^{(l_{ik}-i+1)} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-i+1} \sum_{i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^n \sum_{i=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}}^{(n)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!}.$$

$$\frac{(D - l_{ik})!}{(D + s - l_{ik} - l)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 - \mathbb{k}_2 \Rightarrow$$

$$j_{ik} j_{sa} = \left(\sum_{k=1}^n \sum_{i=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}+j_{sa}}^{(n)} \sum_{j_{sa}=j_{sa}}^{l_{ik}+j_{sa}-i l-j_{sa}^{ik}+1} \right)$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \Bigg) + \\
& \left(\sum_{k=i l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik})}^{l_{ik} + j_{sa} - i l - j_{sa}^{ik}} \sum_{j_{sa} = j_{sa} + 1}^{j_{sa} - i l - j_{sa}^{ik}} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i l}^{(l_{ik} - i l + 1)} \sum_{(j_{ik} = j_{sa}^{ik})}^{l_{sa} - i l + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - i l - j_{sa}^{ik} + 2}^{l_{sa} - i l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}^{ik}}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n-l_{ik}-j_{ik}-l_{k_1}, n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - l_{k_2} - j_{sa}^s)! \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = l \wedge l_{sa} \leq D - l_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j^{sa} + j_{sa} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} - 1 \leq j^{sa} - n + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} > l_{ik} \wedge$$

$$s \geq n < n \wedge l = l \wedge l_{sa} \leq D - l_{sa} - n \wedge$$

$$j_{sa} \leq j^{sa} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, l_{k_1}, l_{k_2}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s \leq s + l \wedge$$

$$l_{k_2}: z = 2 \wedge l_{k_2} = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=1}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right)$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i\mathbf{l} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i\mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left(\frac{(j_{ik} - j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa} - s)!} \right) + \\
& \left(\sum_{k=i\mathbf{l}}^{(l_{ik}-i\mathbf{l}-1)} \sum_{j_{sa}^{ik}}^{l_{sa}-i\mathbf{l}+1} \sum_{j_{sa}^{ik}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-i\mathbf{l}+1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i\mathbf{l} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i\mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$

$$\sum_{k=0}^n \sum_{i=0}^k \sum_{j_{ik}=j_{sa}^{ik}}^{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \bullet s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z \cdot z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=0}^n \sum_{i=0}^k \sum_{j_{ik}=j_{sa}^{ik}}^{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=1}^{\infty} \sum_{i=1}^{\infty} \sum_{j=1}^{\infty} (j_{ik} = j_{sa}^{ik}) j^{sa} = j_{sa}^{sa}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\infty)} \sum_{n_{sa}=n-n_{ik}-j_{sa}^{sa}-\mathbb{k}_2}^{(\infty)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D + j_{sa} - n - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} - s)! \cdot (n - s)!}$$

$$\left((D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n - l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-l+1} \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-\mathbb{K}_2}^{n_{ik}+j_{ik}-\mathbb{K}_2} \frac{(n_i-j_{ik}-\mathbb{K}_1+1)!}{(n_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}-j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-j_{sa}-l_{ik})! \cdot (j_{sa}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \sum_{j_{sa}=j_{sa}^{ik}} \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{(\quad)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{K}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{K}_2-j_{sa}^s)! \cdot (n-s)!} \cdot \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq \mathbf{l} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq \mathbf{l} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$\begin{aligned} & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ & \left(\sum_{k=l}^{\left(\sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \right)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1} \right) \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j^{sa} = l_{sa} + n - D}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j^{sa} = l_{sa} + n - D}^{l_{sa} - l + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \frac{(l_{ik}+j_{sa}^{ik}-j_{sa}^{ik}+1)!}{(l_{ik}+n+j_{sa}^{ik}-j_{sa}^{ik}-D-s)!} \cdot \sum_{(n_i-j_s+1)}^{()} \sum_{(n+l_k)}^{()} \frac{(n_i-j_s+1)!}{(n+l_k)!} \cdot \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{k_1})}^{()} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \frac{(n_{ik}+j_{sa}^{ik}-l_{k_2}-j_{sa}^s)!}{(n_{ik}+j_{ik}-l_{k_2}-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^{ik} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

~~$((D \geq n < n \wedge a_{D-n} = D - n - 1 \wedge$~~

$$D + l_{sa} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ts} \leq j^{sa} + j_{ts} - j_{sa} - 1 \wedge$$

$$j_{ik} \wedge j_{sa} = j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik}) \vee$$

$$(D - n \wedge l_s) > D - n + 1 \wedge$$

$$D + l_{ik} + j_{sq} - n - l_{sq} - j_{sq}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \bigg) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z^S j_{ik} j_{sa} = \sum_{k=l}^{(l_{ik}-l_{sa}+1)} \sum_{(j_{ik}=n-D) j_{sa}=l_{sa}-D}^{l_{sa}+1} \sum_{n_i=n+k}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)}^{(j_{ik}-k_1+1)} \sum_{(j_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{(j_{sa}+1)} \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l-1)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (l_i+j_{sa}-j^{sa}-s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^l \leq j_{sa}^{l-1} + 1 \wedge j_{sa}^{ik} = j_{sa}^{l-1} + 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{l-1}, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{n+n+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}=n-D)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}+1)}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}^{lk}}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i + j^{sa} - \mathbf{n} - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - j^{sa} - s)!}{(D + j_{sa} - \mathbf{n} - j^{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{lk}-D-s)}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{lk}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{lk} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{lk} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{lk} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{j^{sa}=l_{sa}+n-D}^{j^{sa}=l_{sa}-l} \right) \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \left(\sum_{k=l}^n \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-l} \right)$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s+l)-l} \sum_{(j_{ik}-s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+l)-l} j^{sa} = l_s + j_{sa} - l + 1 \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{lk}-l)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} + j^{sa})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1)!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{lk} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - n - j_{sa} - s)!}{(D + j^{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 2 \leq \mathbf{l} \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l} = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{i_{ik}, j_{sa}} = \sum_{k=l}^{(l_s - j_{sa}^{ik} - l)} \sum_{(j_{ik} = \mathbf{n} + j_{sa}^{ik} - D + 1)}^{(l_s - j_{sa}^{ik} - l)} \sum_{j_{sa} = l_{sa} + \mathbf{n} - D}^{l_{sa} - l + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{sa} + j_{sa} - \mathbf{n} - 1} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} j^{sa} = j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(l_s-l-1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_{ik}+j_{sa}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-s-\mathbb{k}_2-j_{sa})! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}+s-n-\mathbb{k}_2-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} - 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} > 0 \wedge$$

$$D \geq n < n \wedge l_s - \mathbb{k}_k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq l_s \wedge s = s + \mathbb{k}_k \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} j^{sa} = j_{ik}+j_{sa}-j_{sa}^{ik} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - l_{sa})!} + \\
& \left(\sum_{k=l}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik} - 1} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik})} \sum_{n_{sa}=\mathbf{n}-D}^{l_{sa}-l+1} \right. \\
& \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}-j_{ik}-j_{sa}^{ik})} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right) \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - l_s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)}^{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$j_{sa}^{ik} - j_{sa} = \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{sa}+j_{sa}^{lk}-j_{sa})}^{(l_s+j_{sa}-l)} j^{sa=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{lk}-j_{sa})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_{ik}-j_{sa}+1)}$$

$$\frac{(n_{ik}+j_{sa}^{lk}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! (n+j_{sa}^{lk}-j_{ik}-s)!}$$

$$\frac{(l_s-l+1)!}{(l_s+j_{sa}-j_{ik}-1)! (j_{ik}+j_{sa}^{lk}-1)!}$$

$$\frac{(D-j_s+1)!}{(D+j_{sa}+s-n-j_{sa})! (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{lk} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{lk} - j_{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{lk} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{lk} + 1 \geq l \wedge l_{sa} + j_{sa}^{lk} - j_{ik} = l_{ik} \wedge$$

$$D \geq l < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{lk} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{lk} - 1 \wedge$$

$$s: \{j_{sa}^l, \dots, \mathbb{k}_1, j_{sa}^{lk}, \mathbb{k}_2, \dots, j_{sa}^s\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{j_{ik}=l_i}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa}^{ik}=D-s}^{(j_{ik} - l_{sa}^{ik} - D - s)} \sum_{j_{sa}^{ik}=n_{sa} - j_{sa}^{ik}}^{(n_{sa} - j_{sa}^{ik})}$$

$$\sum_{n_{is}=n+\mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is}=n+\mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{is}=n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1)} \sum_{(n_{sa}=n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}$$

$$\frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + j_{sa} - j_{sa}^{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \frac{(n_{ik} + j_{sa} - j_{sa}^{ik} - j_{sa} - \mathbb{k}_2)}{(n_{ik} + j_{sa} - j_{sa}^{ik} - j_{sa} - \mathbb{k}_2 + 1)} \cdot \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j_{sa} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(n_{ik} - j_{ik} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \\ &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ &\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(n_{sa} - j_{sa} - n - 1)} \cdot \\ &\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\ &\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l-s+1}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa} - j_{ik})!}{(l_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{sa}^{ik}} = \sum_{k=l}^{(l_i+n+1-j^{sa}-D-s)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} j_{sa}^{sa=l_i+n+j_{sa}-D-s} \sum_{n_{ik}=\mathbb{k}}^n \frac{(n_{ik}-\mathbb{k}_1+1)!}{(n_{ik}+\mathbb{k}_2-j_{ik}+1)!} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_s - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{l=\mathbf{l}}^{(l_{ik}-l)} \sum_{j_{sa}^{ik}=\mathbf{j}_{sa}^{ik}-D-j_{sa}}^{j_{sa}^{ik}-D-j_{sa}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}-D-j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_s+j_{sa}^{ik}-j_{ik}}} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_2} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}} \\
& \frac{(n_{ik} + j_{ik} - s - \mathbb{k}_2 - l_{sa})!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\begin{aligned}
& ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee
\end{aligned}$$

$$\begin{aligned}
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee
\end{aligned}$$

$$\begin{aligned}
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee
\end{aligned}$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z \mathcal{S}_{j_{ik}, j_{sa}} = \sum_{k=l}^{\sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} (l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_{ik}-\mathbb{k}_1+1)} (n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_i=n+\mathbb{k}}^{\sum_{(n_{ik}=n+\mathbb{k}_2-j_{sa}+1)} (n_{ik}=n+\mathbb{k}_2-j_{sa}+1)} \sum_{n_{sa}=n-j_{sa}}^{\sum_{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} (n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{ik}-j_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} \cdot \sum_{k=l}^{\sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} (l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_s+1)} (n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{\sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} (n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} (n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l}^{\quad} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{is}+j_{sa}^{ik}-j_{sa}}}^{(n_{is}+j_{sa}^{ik}-j_{sa})}$$

$$\frac{\sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}}}^{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa})} \sum_{\binom{()}{n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s}}^{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n_{ik}+j_{sa}^{ik}-j_{ik}-s)!}$$

$$\frac{(D + j_{sa} - l - 1)!}{(D + j_{sa} - l - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\ & j_{ik}^{ik} + 1 \leq j_{ik}^{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq n < n \wedge l_s > D - n + 1 \wedge \\ & j_{sa}^{ik} + 1 \leq j_{ik}^{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})) \wedge \end{aligned}$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+\mathbf{n}-D)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
 &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + \mathbf{n} + j_{sa}^{ik} - D - s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s + j_{sa}^{ik} - l)} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S j_{ik}, j_{sa}^{ik} = \sum_{k=l}^{j_{sa}^{ik}-j_{sa}} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\ \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(\mathbf{l}_{ik}-l+1)} \sum_{(j_{ik}=\mathbf{l}_{ik}+\mathbf{n}-D)}^{(\mathbf{l}_{ik}-l+1)} \sum_{j^{sa}=\mathbf{l}_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{\mathbf{l}_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 - 1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{ik} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_{sa} - \mathbf{n} - 1)!}{(j^{sa} - j_{sa} - 1)!} \cdot \\
& \frac{(\mathbf{l}_{ik} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(\mathbf{l}_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - j_{sa}^{ik})!} \cdot \frac{(\mathbf{l}_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(\mathbf{l}_s - l - 1)!}{(\mathbf{l}_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_{ik}} \sum_{k=l}^{(l_i+n+j_{sa}^{ik}-D-s-1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}-j_{sa}+1)}^{n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - \mathbb{k}_1 - 1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{sa} - n_{sa}^{ik} - 1)!}{(j^{sa} - \mathbb{k}_2 - 1)! \cdot (n_{sa} - j_{sa}^{ik} - j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^n \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, \dots, j_{sa}^{i-1}, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{\binom{(n_i+l_k+1)}{n_{is}+l_k}} \sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_2}=n_{ik}-j^{sa}-l_{k_2}}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D + j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}{(D + j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\ & j_{ik}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \end{aligned}$$

$$\begin{aligned} & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\ & (D \geq n < n \wedge l_s > D - n + 1 \wedge \end{aligned}$$

$$\begin{aligned} & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \end{aligned}$$

$$\begin{aligned} & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq n < n \wedge l_s > D - n + 1 \wedge \end{aligned}$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz_{\mathbf{s}}^{s, j_{sa}} = \sum_{k=l}^{\mathbf{s} + n + j_{sa}^{lk} - j_{sa} - 1} \sum_{(j_{ik} - \mathbb{K}_k + n - D)}^{\mathbf{l}_{sa} - l + 1} \sum_{j^{sa} = \mathbf{l}_{sa} + n - D}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)}$$

$$\frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(\mathbf{l}_{ik} - l - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j_{sa}^{ik}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i + j^{sa} - n - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(n_i - j_{ik} - l_{k_1} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{i, j_{sa}}^{j_{sa}} = \sum_{k=l}^{\binom{j_{sa}}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n=\mathbf{n}+\mathbb{k}}^{\binom{j_{sa}-l}{n_{ik}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}+1}} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{\binom{j_{sa}-l}{n_{sa}=n-j_{sa}+1}} \frac{(n_{ik} - n_{sa} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{)}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n=\mathbf{n}+\mathbb{k}}^{\binom{)}{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{l_{sa}-l+1}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j_{sa} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_{ik}-n_{sa}-1)!} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)}^{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = n - j_{sa}^{ik} - j_{ik})}^{(n_{is} = n - j_{sa}^{ik} - j_{ik})}$$

$$\frac{(n_{ik} - j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{ik}^{ik} + 1 \leq j_{ik}^{ik} < j_{sa}^{sa} + j_{sa}^{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{sa} \leq \mathbf{n} + j_{sa}^{sa} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$j_{sa}^{sa} - j_{sa}^{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq \mathbf{s} \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s}^{l_i + j_{sa} - l - s + 1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_i - l - j_{sa} - s)!}{(l_i + j^{sa} - \mathbf{n} - l - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(l_i + j_{sa}^{ik} - l - s + 1)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - l - s + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ & \frac{(n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{sa} - j_{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \cdot \\ & \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ & \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(\quad)} \\ & \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D - 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + n - D}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D, \dots, j_{sa} = l_s + j_{sa}^{ik} - l + 1)}^{l+1} \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\
& \frac{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)!}{(j_{ik} - \mathbb{k}_1 + 1)! \cdot (n_i - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{sa} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^{ik} - j_{sa} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_s^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D} \\ &\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}. \end{aligned}$$

[illegible]

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa} - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^{ik}\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k}$$

$$\mathbb{k} - z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(j_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+j_{sa}-l} \sum_{j_{sa}=j_{sa}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa}^{ik} - l + 1)}^{l+1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} = \mathbf{n} - j_{ik} + 1)}^{(n_i - j_{ik} - 1)} \sum_{(n_{ik} = \mathbf{n} - j_{sa} + 1)}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{sa} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = j_{sa} + 1}^{l_s + j_{sa} - l} \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}_1}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right)$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)} \sum_{j^{sa} = j_{sa} + 2}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l} \right. \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\
 & \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-l} \right. \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 & \left. \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \right)
 \end{aligned}$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} j_{sa}^{ik} j_{sa}^{sa} = & \left(\sum_{k=l}^{(l_{ik}-1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_{ik}-1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-1)} \right. \\ & \sum_{n_{ik}=n+\mathbb{k}}^{(n_i-n_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \right) \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{-(l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik}, j_{sa} = \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} - l + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \frac{(n_i - j_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \right) + \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \right)$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - n_{sa} + 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - j_{sa}^{ik} - j_{ik} - 1)!}{(D + j^{sa} - n - j_{sa}^{ik} - j_{ik} - 1)! \cdot (D + j^{sa} - n_{sa} - s)!} \cdot \\
& \sum_{k=j_{ik}-1}^{j_{sa}^{ik}-l} \sum_{k=j_{sa}^{ik}+1}^{j_{sa}^{ik}-l} \sum_{a=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$n_{ik} \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} + 1} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n_{ik} - \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2}^{j_{sa} + 1} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} - \end{aligned}$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l-1)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}.$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_{ik}=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \right).$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - 1} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{sa} - l - j_{sa}^{ik} + 1} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{sa} - l - j_{sa}^{ik} + 1} \right) \cdot \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot
\end{aligned}$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{(n_i-j_s+1)} \frac{(n_{ik}-n_{ik}-j_{ik}-\mathbb{K}_1+1)!}{(j_{ik}-2)! \cdot (n_{ik}-n_{ik}-j_{ik}-\mathbb{K}_1+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} -$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-l} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right. \\ \left. \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \right).$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(l_i=l_i+n+j_{sa}-D)}^{()} \cdot \\
& \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1)}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \cdot \\
& \frac{(n_{ik} + j_{sa} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$n \geq n < n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$D + l_i + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} - j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{sa}^{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} j_{sa} = l_{sa} + n - \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{n_{ik} + j_{sa} - j_{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(j_{sa} - n_{ik} - 1)!}{(j_{sa} - n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j_{sa})!} \cdot \\ &\frac{(n_{sa} - n_{is} - 1)!}{(n_{sa} - n_{is} - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(l_{sa} - l - j_{sa}^{ik})!}{(l_{sa} - l - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \\ &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ &\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{()} \\ &\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fz S_{j_{ik}^{sa}} = \left(\sum_{i=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right.$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{ik}} \right. \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(l_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1} \right. \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \left. \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \right)$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{l_{sa}-l+1} j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1 \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_s=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}-1)}^{n_{ik}+j_{sa}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa} - \mathbb{k}_1 - 1)! \cdot (n_i - n_{ik} - j_{sa} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_s - n_{sa} - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_s + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_{sa}-l+1} j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{j_{ik}, j_{sa}} \sum_{k=l}^{l+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-j_{sa}^{ik}-j_{ik}-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-j_{sa}^{ik}-j_{ik}-1)!}{(D+j_{sa}+s-n-\mathbb{k}_2-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_{sa} \leq D + s - n \wedge$$

$$D \geq n < n \wedge l - j_{sa}^{ik} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^{ik} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=\mathbb{k}_1}^{(l_s + j_{sa}^{ik} - j_{ik} - 1)} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} - j_{sa}^{ik} - 1} \sum_{j_{sa}^{ik} = j_{sa}^{ik} - 1}^{j_{sa}^{ik} - j_{sa}^{ik} - 1}$$

$$\sum_{n=\mathbb{k}_1}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{k=n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_i - j_s + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_i - j_s + 1)}$$

$$\frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D - \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(j_{ik}+j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j_{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{(\mathbf{l}_{ik}+j_{sa}-\mathbf{l}_{ik})-j_{sa}^{ik}+1} \sum_{n_{ik}=\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}-\mathbb{K}_2-j_{ik}+1)}^{(n_{ik}=\mathbf{n}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j_{sa} - \mathbf{l}_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(\mathbf{l}_{ik}-\mathbf{l}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{j_{sa}=\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+2}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{(j_{ik}+j_{sa}-j^{sa}-l_{ik}-1)}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{j_{sa}=l_i+\mathbf{n}+j_{sa}-D-s} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{sa}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{l=0}^{(j_{sa}^{ik} - j_{sa} - s - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_i + n + j_{sa} - D - s}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{sa} + j_{sa} - n - 1} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 - 1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{sa} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(j^{sa} - j_{ik} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - 1)!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{i=0}^{(j_{sa}^{ik} - j_{sa})} \sum_{j_{sa}^{ik} - j_{sa} + 1}^{l_s + j_{sa} - l} \sum_{j_{sa} = l_i + n + j_{sa} - D - s}^{l_s + j_{sa} - l} \\ & \sum_{i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa} - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik} j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-D-s-1} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_i+j_{sa}-l-s+1} \sum_{j=l_i+n+j_{sa}-D-s}^{n+j_{sa}^{ik}-D-s-1} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{sa}^{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}=n-j_{sa}+1} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1)!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z, s, j_{ik}, j_{sa}} = \sum_{k=l}^{\binom{n}{j_{ik}+j_{sa}-j_{sa}^{ik}-j_{sa}}} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{sa}^{ik}+1}} \sum_{j_{sa}=j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{sa}=n-j_{sa}+1} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{n}{j_{ik}+j_{sa}-j_{sa}^{ik}-j_{sa}}} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{sa}^{ik}+1}} \sum_{j_{sa}=j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-j^{sa}-s)!} \cdot
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s > l_i \wedge l_{sa} - s > l_i \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} - s - \mathbf{n} - j_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s, j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i \} \wedge$$

$$s \geq \mathbb{k} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - l + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}, j_{sa}^{ik}=l_i+n+j_{sa}-D+1)}^{()} \sum_{(j_{sa}^{ik}=l_i+n+j_{sa}-D+1)}^{()}$$

$$\sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()}$$

$$\frac{(n_{ik} + j_{sa} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = l_i > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{ik}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j^{sa}} \\ &\quad \sum_{n_i=n+\mathbb{k}}^{n_i} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ &\quad \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\quad \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\quad \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\quad \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\ &\quad \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{j_{ik}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j^{sa}} \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-1)! \cdot (\mathbf{n}-j_{sa}^{ik}-j_{sa}^s-s)!} \cdot
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s > l_i \wedge j_{sa}^{ik} - s > j_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s \wedge s - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq \mathbf{n} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{(j_{ik}+j_{sa}-j_{sa}^{ik}-j_s+1)}$$

$$\sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}$$

$$\frac{(n_{ik} + j_{ik} - l_{sa} - l_{k2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - l_{sa} - l_{k2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$((D \geq l_i \leq n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$\mathbf{l}_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{\mathbf{l}_i = \mathbf{l}_{ik} - j_{sa}^{ik} + 1}^{(j_{sa}^{sa} + j_{sa}^{ik} - j_{sa}) \mathbf{l}_{ik} + j_{sa}^{ik} + 1} \sum_{\substack{j_{sa}^{ik} = j_{sa}^{ik} + 1 \\ (n_i - j_{ik} - \mathbb{k}_1 + 1) \leq j_{sa}^{ik} - j_{sa} - \mathbb{k}_2}}^{(j_{sa}^{sa} + j_{sa}^{ik} - j_{sa}) \mathbf{l}_{ik} + j_{sa}^{ik} + 1} \sum_{\substack{j_{sa} = j_{sa} + 1 \\ (n_i - j_{ik} - \mathbb{k}_1 + 1) \leq j_{sa}^{ik} - j_{sa} - \mathbb{k}_2}}^{(j_{sa}^{sa} + j_{sa}^{ik} - j_{sa}) \mathbf{l}_{ik} + j_{sa}^{ik} + 1} \\ &\quad \sum_{n_i = \mathbf{n} + \mathbb{k}}^{(n_i - j_{ik} - \mathbb{k}_1 + 1) \leq j_{sa}^{ik} - j_{sa} - \mathbb{k}_2} \sum_{n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1) \leq j_{sa}^{ik} - j_{sa} - \mathbb{k}_2} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1) \leq j_{sa}^{ik} - j_{sa} - \mathbb{k}_2} \\ &\quad \frac{(n_i - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}{(n_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ &\quad \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ &\quad \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\quad \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j_{sa} - \mathbf{l}_{ik})! \cdot (j_{sa}^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ &\quad \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \\ &\quad \sum_{k=\mathbf{l}}^{(\mathbf{l}_{ik} - \mathbf{l} + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{(\mathbf{l}_{ik} - \mathbf{l} + 1)} \sum_{j_{sa} = \mathbf{l}_{ik} + j_{sa} - \mathbf{l} - j_{sa}^{ik} + 2}^{\mathbf{l}_{sa} - \mathbf{l} + 1} \\ &\quad \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - n_{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (j^{sa} + j_{sa}^{ik} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{l_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^{\mathbf{n}} \sum_{n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik}}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{sa} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$(\mathbf{n} > \mathbf{n} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{sa}^{ik} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{j_{ik}-\mathbb{k}_1+1} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)!} \cdot \frac{(l_s-l-\mathbb{k}_2)!}{(l_s+j_{sa}^{ik}-j_{ik}-\mathbb{k}_2)!+(j_{ik}+j_{sa}^{ik}-1)!} \cdot \frac{(D-n-1)!}{(D+j_{sa}+s-n-j_{sa}^s)!+(n+j_{sa}-j_{sa}^s-s)!}$$

$$\left((D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1) \right)$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_s \leq D + l_s + s - n - 1)$$

$$(D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n - l_s \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D + s - n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
 \end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{ik})}^{(n_{ik}=n+l_k+1)}$$

$$\sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1}-j_{sa}-l_{k_2})}^{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1}-j_{sa}-l_{k_2})} \frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k_2} - j_{sa})! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s - l - 1)!}{(D + j_{sa} - l_{sa} - s - l - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l = l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_{sa} \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = l_i > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j_{sa}=j_{sa}+n-D}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ & \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}-j_{sa}-j_{sa}^{ik}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\ & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \\ & \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \end{aligned}$$

$$\begin{aligned}
 & (D \geq n \wedge n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge \\
 & j_{sa}^{ik} \leq j_{ik} \leq j_{sa} \wedge j_{sa} \wedge \\
 & j_{ik} + j_{sa} - j_{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge \\
 & -j_{ik} \wedge l_s + j_{sa} - j_{sa} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\
 & l_i \leq D + s - n) \vee \\
 & (D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge \\
 & j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge
 \end{aligned}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{77}^{S_{j_{ik}, j_{sa}}} = \sum_{k=l}^{(j_{sa} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} - j_{sa}^{ik} + 1} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} - j_{sa}^{ik} + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = n_{ik} - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa}^{ik})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa}^{ik} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{j_{sa}^{ik} - l + 1} \sum_{j_{sa}^{ik} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j^{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq \mathbf{l} \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z \mathcal{S}_{j_{ik}, j^{sa}} = & \left(\sum_{k=l} \left(\sum_{(j_{sa} + j_{sa}^{ik} - j_{sa})}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{j^{sa} = j_{sa} + 1}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \right. \right. \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{sa} - n_{sa} - 1)!}{(n_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left(\sum_{k=l} \left(\sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{j^{sa} = j_{sa} + 2}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \right. \right. \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} j_{sa}^{ik+2} \\
& \sum_{n_i=n+l_1}^n \sum_{n_{ik}=n_{sa}-j_{ik}+1}^{(n_i-j_{ik}-l_{sa}-1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_2} \\
& \frac{(n_i - n_{ik} - l_{sa} - l_1 - 1)!}{(j_{ik} - l_{sa} - n_i - n_{ik} - j_{ik} - l_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{()} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l)! \cdot (\mathbf{n}-j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 > l_s \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 \neq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z^S j_{ik}, j^{sa} &= \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \left. \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \right)
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_{sa}-l+1} \right) \cdot \\
& \sum_{n_i=n+l_{sa}-j_{sa}-l_{ik}}^n \sum_{(n_{is}=n+l_{sa}-j_{sa}-l_{ik})}^{(n_i-j_{ik}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{n_{ik}+j_{ik}-l_{sa}-l_{ik}} \\
& \frac{(n_{is} - n_{ik})!}{(j_{ik} - 2)! \cdot (n_{is} - n_{ik} - j_{ik} - l_{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l_{sa}-j_{sa}-l_{ik}}^n \sum_{(n_{is}=n+l_{sa}-j_{sa}-l_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{sa}}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})}
\end{aligned}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_s \geq 0 \wedge$$

$$j_{sa}^i \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{0, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^s\}$$

$$j_{sa}^i \geq 5 \wedge j_{sa}^i = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_1 \leq \mathbb{k}_2 - 1 \wedge z = 2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - j_{sa}^{ik} - j_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j=j_{sa}^{ik}+1}^{n_{ik} - j_{sa}^{ik}} \sum_{n=n+l_k}^{(n_i - j_s + 1)} \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - n - s \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D - l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1})} \sum_{j_{sa}=l_{sa}+n-D} \right. \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_2+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \\ & \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ & \left. \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \right) \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{(j_{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik})}^{(l_{ik}-l+1)} \cdot \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}+j_{ik}+1)}^{(n_{ik}-j_{ik}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{sa}-j_{sa}+1)} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - n_{sa} - j^{sa})! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l-1)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (l_i+j_{sa}-j^{sa}-s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \right).$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1} \sum_{(j_{ik} = j_{sa}^{ik} + j^{sa} = l_{sa} + n - D)}^{l_{sa} - l + 1} \sum_{j_{sa} = j_{ik} + j_{sa}^{ik} + 1}^{n - D} \right) \cdot \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - \mathbb{K}_1 + 1)}^{(n_i - j_{ik} - 1)} \sum_{n_{ik} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - 1)!} \cdot$$

$$\sum_{n_{ik}=l_i+n_{sa}+j_{sa}^{ik}-l}^{(l_{ik}+j_{sa}^{ik}-l)} \sum_{j_{ik}=l_i+n_{sa}+j_{sa}^{ik}-D-s}^{(j_{ik}-j_{sa}^{ik}-D-s)} j_{ik}^{(j_{ik}-j_{sa}^{ik}-D-s)} \cdot$$

$$\sum_{n_{is}=n+l_{ik}+j_{sa}^{ik}-j_{ik}}^n \sum_{n_{sa}=n+l_{ik}+j_{sa}^{ik}-j_{ik}}^{(n_{is}-j_{sa}+1)}$$

$$\sum_{n_{is}=n+l_{ik}+j_{sa}^{ik}-j_{ik}-l_{k_1}}^{(n_{is}-j_{sa}+1)} \sum_{n_{sa}=n+l_{ik}+j_{sa}^{ik}-j_{ik}-l_{k_2}}^{(n_{sa}-j_{sa}+1)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbf{n} - l_{k_2} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D - \mathbf{n} < l \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = l_i > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}$$

$$\frac{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2-1)!}{(j_{ik}-2)! \cdot (n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot$$

$$\frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot$$

$$\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} \cdot$$

$$\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{l=0}^{j_{ik}+j_{sa}-l-s+1} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l} \sum_{\binom{()}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}}} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-s+1)!}{(l_s+j_{sa}-j_{ik}-s+1)! (j_{ik}+j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-j_s+1)!}{(D+j_{sa}+s-n-j_{sa})! (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n \leq l_{sa} \leq n + l_s + j_{sa} - n \wedge$$

$$D \geq n < n \wedge l = 0, \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 0, s = s + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_z: z = 2, \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j_{sa}} &= \sum_{k=l} \sum_{\binom{(l_i+j_{sa}^{ik}-l-s+1)}{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_{ik}-\mathbb{k}_1+1)}{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}} \sum_{n_{sa}=n-j_{sa}^{ik}-\mathbb{k}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{ik} = l_{ik} + n - l_{sa} - j_{sa}^{ik}}^{(l_{ik} - j_{ik} - l + 1)} \sum_{j_{sa} = n_{sa} - j_{ik} - j_{sa}^{ik}}^{(n_i - j_s + 1)}$$

$$\sum_{n_{is} = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{k=n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_i - j_s + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_i - j_s + 1)}$$

$$\frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq \mathbf{n} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(j_{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = l_i + l_{sa} - D - s}^{l_{sa} + j_{sa} - l - j_{sa}^{ik} + 2} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} + j_{sa} - l - j_{sa}^{ik} + 2} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-l_{sa})}^{()} \sum_{(j^{sa}=l_{sa}+n_{sa}-j_{sa}^{ik}-l_{sa})}^{()} j^{sa}.$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}^{()} (n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})}^{()} (n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})$$

$$\frac{(n_{ik} + j_{sa} - s - l_{sa})!}{(n_{ik} + j_{ik} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=l} \sum_{(j_{ik}=l_i+n-D)}^{(l_i+n+j_{sa}^{ik}-D-s-1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{ik} + j_{ik} - l_{sa}^{ik} - j_{sa})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa}^{ik} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\left((D \geq n < n \wedge l_{i-1} \wedge l_s \wedge D = n + 1 \wedge \right.$$

$$j_{ik} + j_{sa} - j_{sa} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$$

$$l_i \leq D + s(n) \vee$$

$$(D \geq n < n \wedge l \neq_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sq}^{ik} \leq j_{ik} \leq j^{sa} + j_{sq}^{ik} - j_{sq} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} j_{sa}^{sa=j_{sa}+1} \cdot \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}^{(j_{ik}-k_1+1)} \cdot \sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}^{(j_{ik}-k_2)} \cdot \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}^{sa=j_{sa}+1}}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-k_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_{sa}-l+1} \sum_{j^{sa}=j_{sa}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n_i+j_s+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{sa}-l_{ik})}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + j_{ik} - s - l_{sa})!}{(n_{ik} + j_{ik} - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l \neq l_i \wedge l_i \leq D - n + 1) \vee$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_i \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = l_i > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j^{sa}} = & \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + j_{sa}^{ik} - j_{sa} - 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}_2)} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa})!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa})!} \cdot \\ & \frac{(n_{is} - 1)!}{(n_{sa} - j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{sa} - l - j_{sa}^{ik})!}{(l_{sa} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\ & \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ & \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\ & \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_i \wedge l_i + j_{sa} - n - j_{sa}^{ik} = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 = \mathbb{k}_1 + \mathbb{k}_2$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + n - D}^{l} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa} - l + 1)}$$

$$\sum_{n_i = n + \mathbb{k}_1}^n \sum_{n_{ik} = n + \mathbb{k}_2}^{(j_{ik} - j_{sa}^{ik} - 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{(n_{ik} - j_{ik} - j_{sa} - \mathbb{k}_2)}$$

$$\frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - j_{sa})! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{()} \sum_{(j_{ik} = j_{sa}^{ik} + j_{sa}^{ik} - j_{sa})}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$\left((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}^{ik} \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa} \leq j_{ik} - 1 \wedge j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa} \geq 5 \wedge j_{sa} \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j_{sa}=l_{sa}+n-D}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{l=l_{sa}-l+1}^{(l_{sa}+j_{sa}^{ik})} \sum_{j_{sa}^{ik}=j_{sa}-D-j_{sa}}^{l_{sa}-l+1} j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} j_{sa}^{ik} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{k1}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k2})}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-l_{k2}-j_{sa}^{ik})!}{(n_{ik}+j_{ik}-n-l_{k2}-j_{sa}^s)! (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-n-1)!}{(D+j_{sa}+s-n-l_{k1}-j_{sa})! (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1) \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z^D} j_{sa}^{sa} = \sum_{k=l}^{j_{sa}+j_{sa}^{ik}-j_{sa}-l+j_{sa}-l-j_{sa}^{ik}+1} \sum_{(j_{ik}=j_{sa}+n-D)} \sum_{j^{sa}=l_{sa}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}-l+j_{sa}-l-j_{sa}^{ik}+1} \\ \sum_{n+l_{sa}}^n \sum_{(n_{ik}=n+l_{sa}-j_{ik}+1)}^{j_{ik}-\mathbb{k}_1+1} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{sa} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - j^{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)$$

$$(D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + n + j_{sa}^{ik} - D - s)}^{(l_s + j_{sa}^{ik} - l)} \sum_{j^{sa}=j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+l_k}^n \sum_{(n_{is}=n)}^{(n_{is}+1)} \sum_{(n_{ik}=n_{is} + j_{sa}^{ik} - l_k - 1)}^{(n_{ik}=n_{is} + j_{sa}^{ik} - l_k - 1)} \sum_{(n_{ik}=n_{is} + j_{sa}^{ik} - l_k - 1)}^{(n_{ik}=n_{is} + j_{sa}^{ik} - l_k - 1)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_k - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_k - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + l_i - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\begin{aligned} & ((D \geq n < n \wedge l_i \wedge l_s \leq D - n + 1 \wedge \\ & j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \end{aligned}$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_i \neq l_s \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i_l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{(n_i=n+\mathbb{k})}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-n_{ik}-\mathbb{k}_1-1)!} \cdot \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} - \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_s+j_{sa}-l}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-1)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 = l_i \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{ik} < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \left(\sum_{k=\mathbf{l}} \sum_{(j_{ik}=j_{sa}^{ik})}^{(\quad)} \sum_{j^{sa}=j_{sa}} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \left. \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \right)
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \Bigg) + \\
& \left(\sum_{k=i}^n \sum_{l}^{()} \sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa}-l+1} \sum_{j_{sa}=j_{sa}^{sa}+1}^{l_{sa}-l+1} \right. \\
& \sum_{n_i=n+l}^n \sum_{n_{ik}=n+l-j_{ik}+1}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2}}^{n_{ik}+j_{ik}-j_{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - n_{ik} - l_{k_1} + 1)!} \cdot \frac{(n_i - n_{sa} - l_{k_1} - 1)!}{(j_{sa} - n_{sa} - l_{k_1} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=i}^n \sum_{l}^{()} \sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa}-l+1} \sum_{j_{sa}=j_{sa}^{sa}}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l}^n \sum_{n_{ik}=n_i-j_{ik}-l_{k_1}+1}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2}}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} = & \sum_{k=0}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \sum_{j_{ik}=j_{sa}^{ik}}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \sum_{j_{sa}=j_{sa}}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i-j_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_{sa}^{ik}-n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}^{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa})!} \cdot \\ & \frac{(\mathbf{l}_{ik}-\mathbf{l}_i-j_{sa}^{ik})!}{(\mathbf{l}_{ik}-j_{ik}-\mathbf{l}_i+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \frac{(D+j_{sa}-\mathbf{l}_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-\mathbf{l}_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}^{ik}-s)!} \cdot \end{aligned}$$

$$\sum_{k=0}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \sum_{j_{ik}=j_{sa}^{ik}}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \sum_{j_{sa}=j_{sa}}^{(\mathbf{l}_{sa}-\mathbf{l}_i)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{(\mathbf{l}_{sa}-\mathbf{l}_i)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{j_{sa}^{sa}=j_{sa}}^{l_{sa}-{}_i l+1} \sum_{k={}_i l}^{()} (j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k=1}^{\sum_{i=1}^n} \sum_{l=1}^{(j_{ik}=j_{sa}^{ik})} \sum_{j_{sa}=j_{sa}}^{(j_{sa}=j_{sa})}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}}^{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - l_i)! \cdot (n - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbf{l} \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$\sum_{k=1}^{\sum_{i=1}^n} \sum_{l=1}^{(j_{ik}=j_{sa}^{ik})} \sum_{j_{sa}=j_{sa}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=i}^n \sum_{l=0}^{(n-k)} \sum_{j_{sa}=j_{sa}^{ik}}^{(n-k-l)} \sum_{j_{sa}=j_{sa}^{ik}}^{(n-k-l)} \sum_{j_{sa}=j_{sa}^{ik}}^{(n-k-l)}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n_i-j_{sa}-l_{k_2}}^{(n_i-j_{sa}-l_{k_2})} \sum_{n_{sa}=n_i-j_{sa}-l_{k_2}}^{(n_i-j_{sa}-l_{k_2})} \sum_{n_{sa}=n_i-j_{sa}-l_{k_2}}^{(n_i-j_{sa}-l_{k_2})}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - n - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D + s - n - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, j_{sa}^{ik}, \dots, l_{k_2}\}$$

$$s \geq 5, l_{k_1} = s + l_{k_1} \wedge$$

$$l_{k_2}: z = 2 \wedge l_{k_2} = l_{k_1} + 1 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=i}^n \sum_{l=0}^{(n-k)} \sum_{(j_{ik}=j_{sa}^{ik})}^{(l_{sa}+j_{sa}^{ik}-i l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_i-j_{sa}-l_{k_2})} \sum_{n_i=n+l}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-j_{sa}-l_{k_2})} \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-j_{sa}-l_{k_2})} \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-j_{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - {}_i l)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\sum_{k=0}^{\binom{\mathbf{n}}{s}} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_i=n_{ik}-j_{ik}-\mathbb{k}_2+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}, \dots, j_{sa}^i, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: 2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S{}_{j_{ik}, j^{sa}} = \sum_{k={}_i l}^{(l_{ik} - {}_i l + 1)} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - l_i - j_{sa}^i)!}{(l_{ik} - j_{ik} - l_i + j_{sa}^i)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{sa}^i - l_i - j_{sa}^i - s)!}{(D + s - n - l_i - j_{sa}^i - s)!} \cdot \\
& \sum_{k=0}^{\binom{D}{l_i}} \sum_{l_i} \sum_{j_{sa}^i=j_{sa}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{\binom{D}{l_i}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l = l_i \wedge l_i \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^i + j_{sa}^{ik} - j_{sa}^i \wedge$$

$$j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j_{sa}^i \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^i = l_{ik} \wedge$$

$$l_{ik} + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=1}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \frac{(l_{sa}+j_{sa}^{ik}-i l-j_{sa}+1)}{(j_{ik}=j_{sa}^{ik})} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}+1} \frac{(n_i-j_{ik}-\mathbb{k}_1+1)}{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)} \frac{(n_{ik}+j_{ik}-j^{sa}-1)}{(n_{sa}=n_{ik}+j_{ik}-j^{sa}+1)} \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-1)!} \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \frac{(l_{sa}-i l-j_{sa}^{ik})!}{(n_{ik}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \frac{(n_{ik}+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (n-s)!} \sum_{k=1}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (n-s)!} \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (n-s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l = i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{i=1}^n \sum_{l=1}^{(l_{ik}-i+1)} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-i+1} \sum_{n=n+\mathbb{k}}^n \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} (j_{ik} = j_{sa}^{ik}) j^{sa} = j_{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\infty)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}}^{(\infty)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s) \cdot (n - s)!}.$$

$$\frac{(D - l_i)}{(D + s - l_i)! \cdot (n - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = i l \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 - \mathbb{k}_2 \Rightarrow$$

$$j_{ik} j^{sa} = \left(\sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} (j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}) \sum_{j^{sa}=j_{sa}}^{l_{ik}+j_{sa}-i l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} + \\
& \left(\sum_{k=i l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik})} l_{ik} + j_{sa} - i l - j_{sa}^{ik} \right. \\
& \quad \left. \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k} - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \right. \\
& \quad \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \quad \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \quad \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \quad \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \quad \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \quad \sum_{k=i l}^{(l_{ik} - i l + 1)} \sum_{(j_{ik} = j_{sa}^{ik})} \sum_{j^{sa} = l_{ik} + j_{sa} - i l - j_{sa}^{ik} + 2}^{l_{sa} - i l + 1} \\
& \quad \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \quad \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \quad \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg)$$

$$\sum_{k=1}^{\infty} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}-j_{ik}-\mathbb{k}_1)}^{n_{ik}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_{sa} \leq D - j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} + j_{sa} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} - 1 \leq j^{sa} - \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} > l_{ik} \wedge$$

$$\mathbf{n} \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$\mathbf{s} \geq 5 \wedge \mathbf{s} \leq \mathbf{s} + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z \mathcal{S}_{j_{ik}, j^{sa}} = \left(\sum_{k=1}^{\infty} \sum_{(j_{ik}=j_{sa}^{ik})}^{(l_{ik} - {}_i l + 1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i\mathbf{l} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i\mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left(\frac{(j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa} - s)!} \right) + \\
& \left(\sum_{k=i\mathbf{l}}^{(l_{ik} - i\mathbf{l} - 1)} \sum_{j_{sa}^{ik}}^{l_{sa} - i\mathbf{l} + 1} \sum_{j_{sa}^{ik} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - i\mathbf{l} + 1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i\mathbf{l} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i\mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$

$$\sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} \binom{(\quad)}{i} \binom{(\quad)}{j} \binom{(\quad)}{k} j^{sa} = j_{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}}^{(\quad)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l)!} \cdot (n - s)!$$

$$D \geq \mathbf{n} < n \wedge l = i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - \mathbf{n} > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 5 \bullet \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z \cdot z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} \binom{(\quad)}{i} \binom{(\quad)}{j} \binom{(\quad)}{k} j^{sa} = j_{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \cdot$$

$$\sum_{k=1}^n \sum_{i=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}}^{(n)} j_{sa}^{sa} = j_{sa}^{sa}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n)} \sum_{n_{sa}=n_i-j_{ik}-\mathbb{k}_2}^{(n)} j_{sa}^{sa} = j_{sa}^{sa}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D + j_{sa} - n - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} - s)! \cdot (n - s)!}$$

$$\left((D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n - l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=1}^{(\quad)} \sum_{i=1}^{(\quad)} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-i^{l+1}} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-\mathbb{k}_2}^{n_{ik}+j_{ik}-\mathbb{k}_2} \\ &\frac{(n_{ik}-n_{ik}-\mathbb{k}_1+1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ &\frac{(n_{sa}-n_{sa}-1)!}{(n_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\ &\frac{(n_{sa}-1)!}{(n_{sa}-j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa})!} \cdot \\ &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-j_{sa}-l_{ik})! \cdot (j_{sa}-j_{sa})!} \cdot \\ &\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}-s)!} - \\ &\sum_{k=1}^{(\quad)} \sum_{i=1}^{(\quad)} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-i^{l+1}} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{(\quad)} \\ &\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}-s)!} \cdot \\ &\frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-s)!} \end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{tk} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$\begin{aligned} & \sum_{k=l}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l} \sum_{(j_{ik}=l_{ik}+\mathbf{n}-D)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{ik}+\mathbf{n}-D)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$

~~$((D \geq n < n \wedge \alpha_{\text{true}} \geq D - n - 1 \wedge$~~

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} - 1 \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik}) \vee$$

$$(D - n \wedge l_s) > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \bigg) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z^S j_{ik} j_{sa} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=n-D) j_{sa}=l_{sa}-D}^{l_{sa}+1} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_{is}-j_{ik}+1)}^{(j_{ik}-\mathbb{k}_1+1)} \sum_{j_{sa}=1}^{j_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ &\frac{(n_{ik}-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_{ik}-j_{ik}+1)!} \cdot \\ &\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ &\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\ &\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \\ &\sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j_{sa}=l_i+n+j_{sa}-D-s} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa}^{l-1} + 1 \wedge j_{sa}^{ik} < j_{sa}^{l-1} + 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^{l-1}, j_{sa}^{ik}, j_{sa}^{l-1}, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s \leq s + \mathbb{k} \wedge$$

$$z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j_{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa}-1} \sum_{(j_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}=n-j^{sa}+1} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}+1)}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(n_i - j_{ik} - l_{k_1} + 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - j^{sa} - s)!}{(D + j_{sa} - n - j^{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{lk}-D-s)}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{lk}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-l_{k_1}}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{lk} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (n + j_{sa}^{lk} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{lk} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq \mathbf{l} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_z^{\mathbf{s}} j_{ik, j_{sa}} = \left(\sum_{k=l}^{\mathbf{l}} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)} \sum_{j_{sa}=l_{sa}+n-D}^{j_{sa}=l_{sa}-l} \right) \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \Bigg) + \left(\sum_{k=l}^{\mathbf{l}} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_s+j_{sa}-l} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{lk}-l)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1 - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{lk} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - \mathbf{n} - s)!}{(D + j_{sa} - \mathbf{n} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z^s}^{S_{j_{ik}, j_{sa}}} = \sum_{k=l}^{(l_s - j_{sa}^{ik} - l)} \sum_{(j_{ik} = n + j_{sa}^{ik} - D + 1)}^{(l_s - j_{sa}^{ik} - l)} \sum_{j_{sa} = l_{sa} + n - D}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{k}}^{(n_i - j_{sa}^{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{sa} + j_{sa} - n - 1} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - j_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa} - j_{sa} > 0 \wedge$$

$$D \geq n < n \wedge l_s - \mathbb{k}_k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq l_s \wedge s = s + \mathbb{k}_k \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa})!} + \\
& \left(\sum_{k=l}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik}} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik})} \sum_{l_{sa}-l+1}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_{sa}+j_{ik}-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{l_{sa}-l+1}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - l_s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)}^{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{\left(\begin{matrix} l_{ik} + j_{sa} - j_{sa}^{ik} + 1 \\ j_{ik} + j_{sa} - j_{sa}^{ik} \end{matrix} \right)} \sum_{j_{sa} = l_{sa} + n - D}^{l_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{n_i = n + k_1}^{n} \sum_{n_{sa} = n - j^{sa} + 1}^{n - j_{sa} - k_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\left(\begin{matrix} l_s + j_{sa} - l \\ j_{ik} = j_{sa}^s + j_{sa}^{ik} - j_{sa} \end{matrix} \right)} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_s + j_{sa} - l} \sum_{n_i = n + k}^n \sum_{n_{is} = n + k + j_{sa}^{ik} - j_{ik}}^{(n_i - j_s + 1)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$j_{sa}^{ik} - j_{sa} = \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}} \sum_{l_{sa}=l+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{lk}-j_{sa})}^{(l_s+j_{sa}-l)} j^{sa=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-j_{sa})!}{(l_s+j_{sa}-j_{ik}-s-j_{sa})! (j_{ik}+j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-j_{sa})!}{(D+j_{sa}+s-n-j_{sa})! (n+j_{sa}-j_{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$D \geq 1 < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^{ik}\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: \mathbb{Z} \geq 2 \wedge \mathbb{k} = \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=l_i}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa}^{ik}=j_{sa}^{ik} - D - s}^{(j_{sa}^{ik} - l_{sa} - \mathbb{k}_1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik} - l_{sa} - \mathbb{k}_1}^{(n_i - j_s + 1)} \\
& \sum_{n=\mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_i - j_s + 1)} \\
& \frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik})}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2)} \frac{(n_{ik} - j_{sa} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{ik} - j_{sa} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(n_{ik} - j_{sa} - 1)!}{(n_{ik} - j_{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}}^{j_{ik}^{ik} - j_{sa}} = \sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1} \sum_{j_{sa} = l_s + j_{sa} - l} (j_{ik}^{ik} - j_{sa}) \cdot \sum_{(n_i = n + \mathbb{k}_1 + 1)}^{(n_i = n + \mathbb{k}_1 + 1)} n_{ik} + j_{ik} - j_{sa}^{ik} - \mathbb{k}_2 \cdot \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)} n_{sa} = n - j_{sa} + 1 \cdot \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l-s+1}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n - n_{sa} - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{sa}^{ik}} = & \sum_{k=l}^{(l_i+n+1-j^{sa}-D-s)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} j^{sa=l_i+n+j_{sa}-D-s} \\ & \sum_{n_{ik}=n+1}^n \sum_{(n_{ik}=\mathbb{K}_1+1)}^{(n_{ik}=\mathbb{K}_1+\mathbb{K}_2-1)} \sum_{(n_{sa}=n-j_{sa}^{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} j^{sa=j_{ik}+j_{sa}-j_{sa}^{ik}} \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{l=\mathbf{l}}^{(l_{ik}-l)} \sum_{j_{sa}^{ik}=\mathbf{l}}^{(j_{sa}^{ik}-D-j_{sa})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}-D-j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{sa}-\mathbf{l}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{sa}}^{(n_{ik}-j_s+1)} \sum_{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-l_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-l_{sa}-l_{sa})}^{(n_{ik}-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - l_{sa})!}{(n_{ik} + j_{sa}^{ik} - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(l_s + j_{sa} - j_{ik} - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\begin{aligned}
& ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge \\
& D \geq n < n \wedge l = \mathbb{K} > 0 \wedge
\end{aligned}$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z \mathcal{S}_{j_{ik}, j_{sa}} = \sum_{k=l}^{\sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} (l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_{ik}-\mathbb{k}_1+1)} (n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_i=n+\mathbb{k}}^{\sum_{(n_{ik}=n+\mathbb{k}_2-j_{sa}+1)} (n_{ik}=n+\mathbb{k}_2-j_{sa}+1)} \sum_{n_{sa}=n-j_{sa}}^{\sum_{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} (n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_i - n_{sa} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=l}^{\sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} (l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_s+1)} (n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{\sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} (n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{\sum_{()} ()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$s \geq 5 \wedge \mathbf{s} = \mathbf{s} + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
 &\frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}+1)!} \cdot \\
 &\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 &\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
 &\frac{(D+j^{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \\
 &\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 &\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
 &\frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
 \end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{j_{sa}^{ik}-j_{sa}} \sum_{(j_{ik}=\mathbf{l}_{ik}+n-D)}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=\mathbf{l}_i+n+j_{sa}-D-s} \\ &\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-l_{k1}+1)} \sum_{n_s=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - l_{k2})!} \cdot \\
& \frac{(n_{sa} + j_{ik} - n - 1)!}{(n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - j_{sa}^{ik})!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_{sa}+n-D} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-l_{k1}}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - l_{k2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_{ik}} \sum_{k=l}^{(l_i + \mathbf{n} + j_{sa}^{ik} - D - s - 1)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s} \\ & \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n+\mathbb{k}-j_{sa}+1)}^{n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, \mathbb{k}_{j_{sa}^s}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j^{sa} = l_{sa} + n - D}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{\sum_{i=1}^n (n_i - 1)} \sum_{j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa}}^{l_s+j_{sa}-l} j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n (n_i - 1) \sum_{j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa}}^{l_s+j_{sa}-l} j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (j_{sa}^{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D + j_{sa} + \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}{(D + j_{sa} + \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z=2}^{s, j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}-\mathbb{k}_k+n-D)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{sa}+n-D}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(n_{ik}-n+\mathbb{k}_2-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-n_{ik}-1)!} \cdot \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(n_i - j_{ik} - 1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{i,j_{sa}}^{j_{sa}} = \sum_{k=l}^{\binom{j_{sa}}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n_i=n+k}^{\binom{n}{n_i=n+k} (n_{ik}=n_{sa}-j_{ik}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{\binom{n}{n_{sa}=n-j_{sa}+1} (n_{ik}=n_{sa}-j_{ik}+1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{)}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n_i=n+k}^{\binom{)}{n_i=n+k} (n_{is}=n+k+j_{sa}^{ik}-j_{ik})} \sum_{l_{sa}=l+1}^{\binom{)}{l_{sa}=l+1} (n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (n_{ik}+j_{sa}-j^{sa}-s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j^s = j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_s+\mathbf{n}+j_{sa}^{ik}-D-1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+l}^n \sum_{(n_{is} = n_{is} + \mathbb{k}_1 - j_{sa}^{ik} - \mathbb{k}_2)}^{(n_{is} = n_{is} + \mathbb{k}_1 - j_{sa}^{ik} - \mathbb{k}_2)} \sum_{(j_{ik} = j_{ik} - j_{sa}^{ik} - \mathbb{k}_2)}^{(j_{ik} = j_{ik} - j_{sa}^{ik} - \mathbb{k}_2)}$$

$$\frac{(n_{ik} - j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik}^{ik} + 1 \leq j_{ik}^{ik} < j_{sa}^{sa} + j_{sa}^{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq n + j_{sa} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$j_{sa}^{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq s \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j_{sa} = l_i + n + j_{sa} - D - s}^{l_i + j_{sa} - l - s + 1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_s - l - j_{sa} - s)!}{(l_s + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_i + j_{sa}^{ik} - l - s + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - l - s + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(n_i - j_{ik} - l + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n - j_{sa} + 1)}^{(n_{ik} + j_{ik} - \mathbb{k}_2)} \frac{(n_i - n_{ik} - j_{ik} - 2)! (n_i - n_{ik} - j_{ik} + 1)!}{(j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa}^{ik} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(n_i - j_s + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{()} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{l_s + j_{sa} - l}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D, j_{sa}=l_s+j_{sa}^{ik}-l+1)}^{(l_s+j_{sa}^{ik}-l)} \cdot \\
& \sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_i-j_{ik}-\mathbb{k}_1, n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_i-j_{ik}-\mathbb{k}_1)} \sum_{(n_{ik}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \cdot \\
& \frac{(n_i - n_{ik})!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - j_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \cdot \\
& \sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_{is}=n+\mathbb{k}_1+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \cdot \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \cdot
\end{aligned}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{j_{sa}^{ik}-l_{sa}-j_{sa}} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}}^{j_{sa}^{ik}-l_{sa}-j_{sa}} \cdot \\
& \sum_{n_i=n+l_{sa}+j_{sa}^{ik}-D-j_{sa}}^n \sum_{n_{ik}=n+l_{sa}+j_{sa}^{ik}-D-j_{sa}}^{j_{sa}^{ik}-l_{sa}-j_{sa}} \sum_{n_{sa}=n-j^{sa}+1}^{j_{sa}^{ik}-l_{sa}-j_{sa}} \cdot \\
& \frac{(n_i - 1)!}{(j_{ik} - l_{sa} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(j_{sa}^{ik} - n_{ik} - l_{sa} - j_{sa}^{ik} - 1)!}{(j_{sa}^{ik} - n_{ik} - 1)! \cdot (j_{sa}^{ik} - n_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{j_{sa}^{ik}-l_{sa}-j_{sa}} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}}^{j_{sa}^{ik}-l_{sa}-j_{sa}} \cdot \\
& \sum_{n_i=n+l_{sa}+j_{sa}^{ik}-D-j_{sa}}^n \sum_{n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)} \cdot
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (l_i+j_{sa}-j^{sa}-s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} \wedge j_{sa}^s = j_{sa}^{ik} + 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^{ik}\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k}$$

$$\mathbb{k} - z = 2 \wedge \mathbb{k} \leq \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+j_{sa}-l} \sum_{j^{sa}=j_{sa}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa}^{ik} - l + 1)}^{(l_s + j_{sa}^{ik} - l)} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} = n - j_{ik} + 1)}^{(n_i - j_{ik} - 1)} \sum_{(n_{ik} + j_{ik} = n - j_{sa} + 1)}^{(n_{ik} + j_{ik} - \mathbb{K}_2)} \\
& \frac{(n_i - n_{ik})!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - n_{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = j_{sa} + 1}^{l_s + j_{sa} - l} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{is} = n + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{j^{sa} = j_{sa} + 2}^{n_{ik} + j_{ik} - j^{sa} - 1} \right. \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - 1} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (l_{ik} - j_{sa})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$

$$\mathbb{k}_Z: Z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} \sum_{j^{sa}=j_{sa}+1} \right.$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) +$$

$$\left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-l} \right.$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j_{sa}^{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} j_{sa}^{ik} j_{sa}^{sa} &= \left(\sum_{k=l}^{(l_{ik}-1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_{ik}-1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-1)} \right) \\ &\sum_{n=\mathbb{k}}^{(n_i-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\ &\left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \right) \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(n + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik}, j_{sa} = \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \right)$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - j_{sa}^{ik} - 1)!}{(D + j^{sa} - \mathbf{n} - j_{sa}^{ik} - 1)! \cdot (D + j_{sa}^{ik} - j_{sa} - s)!} \cdot \\
& \sum_{k=j_{sa}^{ik}-l}^{j_{sa}^{ik}-1} \sum_{k=j_{sa}^{ik}+1}^{j_{sa}^{ik}-l} \sum_{a=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^{ik})! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$j_{sa}^{ik} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2}^{j_{sa} + 1} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{is} - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} - j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \\ &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l-1)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (j_{ik}+j_{sa}-j_{sa}-s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s - \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^i - \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right.$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - 1} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{sa} - l - j_{sa}^{ik} + 1} \sum_{n_{ik} = n + l_{sa} - j_{sa}^{ik} - 1}^{n_{ik} + j_{ik} - j^{sa} - l_{sa} - 1} \right) \\
& \sum_{n_i = n + l_{sa} - j_{sa}^{ik} - 1}^n \sum_{(n_{ik} = n + l_{sa} - j_{sa}^{ik} - 1) \atop n_{ik} = n + l_{sa} - j_{sa}^{ik} - 1}^{(n_i - j_{ik} - l_{sa} - 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{sa} - 1} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - l_{sa} - l_{sa} - 1)!}{(j^{sa} - l_{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \sum_{n_{ik} = n + l_{sa} - j_{sa}^{ik} - 1}^{n_{ik} + j_{ik} - j^{sa} - l_{sa} - 1} \\
& \sum_{n_i = n + l_{sa} - j_{sa}^{ik} - 1}^n \sum_{(n_{ik} = n + l_{sa} - j_{sa}^{ik} - 1) \atop n_{ik} = n + l_{sa} - j_{sa}^{ik} - 1}^{(n_i - j_{ik} - l_{sa} - 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{sa} - 1} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa}^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - S)}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (D + j_{sa} - j^{sa} - 1)} -$$

$$\sum_{k=0}^{\infty} \left(j_{ik=j_{sa+1}}^{sa} - j_{sa} \right) j_{sa}^{sa} = D-s$$

$$\sum_{n=\mathbf{n}+\mathbb{K}}^{n_i-j_s+1} \sum_{n_i=\mathbf{n}+\mathbb{K}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)}$$

$$\sum_{i=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\cdot)} (n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{K}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{K}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D - n \wedge l \neq_i l \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_{ik} + \dots - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sq} - \mathbf{n} < l_{sq} \leq D + l_{ik} + j_{sq} - \mathbf{n} - j_{sq}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_i=n+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_{ik}+1)} \sum_{(n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik})} \frac{(n_i-j_{ik}+1)!}{(j_{ik}-l)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}+j_{sa}-\mathbb{K}_2+1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{K}_2)!} \cdot \frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_{is}+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1)}^{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_s+\mathbf{n}-D}^{l_s+j_{sa}-l} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_s + n - D}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \right. \\
& \sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg)$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(n_{is}=l_i+\mathbf{n}+j_{sa}-D)}$$

$$\sum_{n_{is}=l_i+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{(j_{sa}^{ik}+j_{sa}^{ik}-j_{sa})} (n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})$$

$$\sum_{n_{is}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + j_{sa} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\geq \mathbf{n} < n \wedge l \neq l_i \wedge l \leq D - \mathbf{n} + 1 \wedge$$

$$D + l_i + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} - j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{sa}^{ik} + j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S j_{ik} j_{sa} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} j_{sa} = l_{sa} + n -$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = n - j_{sa} - \mathbb{k}_2)}^{(n_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2)} j_{sa} = n - j_{sa} + 1$$

$$\frac{(n_{sa} - n_{ik} - 1)!}{(j_{sa} - 2)! \cdot (n_{sa} - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - n_{sa} - 1)! \cdot (n - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - l - j_{sa}^{ik})!}{(n_{sa} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} j_{sa} = n - j_{sa} + 1$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fzS_{j_{ik}^{sa}} = \left(\sum_{i=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} j^{sa} = j_{ik}+j_{sa}-j_{sa}^{ik} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - j^{sa} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l_{sa} - j^{sa} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-j_{sa}^{ik})} \sum_{(j_{sa}=j_{ik}+j_{sa}^{ik}-j_{sa}^{ik})} \sum_{(n_i-j_{sa}^{ik})} \sum_{(n_{is}+l_{ik}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1})} \sum_{(n_{ik}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \frac{(n_{ik} + j_{sa}^{ik} - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - l_{k_2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n - 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} < n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{ik}} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\ \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\ \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\ \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ \left. \frac{(l_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\ \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\ \left. \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \right)$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K} - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{(n_s = n + \mathbb{K} - j_{sa}^{ik} + 1)}^{n_{ik} + j_{sa} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - j_{ik} - 1)!}{(n_i - j_{ik} - 2)! \cdot (n_i - j_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - j_{ik} - \mathbb{K}_2 - 1)!}{(n_{ik} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa}^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{sa}^{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{K}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{K}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{j_{ik}, j_{sa}} \sum_{k=l}^{l+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa})}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)}{(l_s+j_{sa}^{ik}-j_{ik}-1) \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)}{(D+j_{sa}^s+s-n-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_{sa} \leq D + s - n \wedge$$

$$D \geq n < n \wedge l - \mathbb{k}_1 > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{i_1}, \dots, \mathbb{k}_2, j_{sa}^{i_2}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^{i_1} = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=0}^{l_s + j_{sa}^{ik} - l_{ik} - 1} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} - 1} \sum_{j_{sa}^{ik} = j_{sa}^{ik} - 1}^{j_{sa}^{ik} - 1}$$

$$\sum_{n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}$$

$$\sum_{k=n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}$$

$$\frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - l_i) \leq n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} S_{j_{ik}, j_{sa}} = & \sum_{k=\mathbf{l}}^{(j_{ik}+j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_i+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1} \sum_{n_{ik}=\mathbf{l}_i+\mathbb{K}}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)}^{(n_{ik}+k-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=\mathbf{l}}^{(\mathbf{l}_{ik}-\mathbf{l}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(\mathbf{l}_{ik}-\mathbf{l}+1)} \sum_{j^{sa}=\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+2}^{\mathbf{l}_i+j_{sa}-\mathbf{l}-s+1} \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik})!} \cdot \\
& \frac{(n + j_{sa} - n - s)!}{(n + j^{sa} - n - s)! \cdot (n - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(n)} \sum_{(j_{ik} + j_{sa}^{ik} - j_{sa})}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} j^{sa} = l_i + n + j_{sa} - D - s \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + s - \mathbf{n} < \mathbf{l}_i \leq D + \mathbf{l}_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{l=0}^{(j_{sa}^{ik} - j_{sa} - s - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_i + \mathbf{n} + j_{sa} - D - s}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{sa} + j_{sa} - \mathbf{n} - 1} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_{ik} - l - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j_{sa} - \mathbf{l}_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} - 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - 1)!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{i=n+\mathbb{k}}^n \sum_{j_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{(j_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n - n_{sa} - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa} - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik} j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-D-s+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_i+j_{sa}-l-s+1} \sum_{j=l_i+n+j_{sa}-D-s}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i-j_{sa}-\mathbb{k}_1+1)}{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n - n_{sa} - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(l_i - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z, s}^{i, j_{ik}, j_{sa}} = \sum_{k=l}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{ik}=j_{sa}+1}^{(n_i-j_{sa}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{ik}=j_{sa}+1}^{(n_i-j_{sa}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l-1)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s \leq l_i \wedge l_{ik} - j_{sa}^{ik} - s > j_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} - s - \mathbf{n} - j_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{ik} - 1 \wedge j_{sa}^{ik} \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq \mathbb{k} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - l + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}, j_{sa}^{sa}=l_i+\mathbf{n}+j_{sa}-D)}^{(\quad)} \sum_{(j_{sa}^{ik}=l_i+l_{sa}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(\quad)} \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(\quad)}$$

$$\sum_{(n_{is}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1)}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + j_{sa} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
 &\frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}+1)!} \cdot \\
 &\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 &\frac{(l_{ik}-l_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
 &\frac{(D+j^{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 &\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
 &\frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
 \end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s + s - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(n_i-j_{sa}^{ik}-\mathbb{k}_1+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_i=n+\mathbb{k}}^{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{sa}-j^{sa}-1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l)! \cdot (\mathbf{n}-j_{sa}^{ik}-j_{ik}-l-j^{sa}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s > l_i \wedge l_i + j_{sa}^{ik} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s \wedge \mathbf{n} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - j_{sa} \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq \mathbb{k} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-s)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-s)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq l_i < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{l_i = n + \mathbb{k}}^{(j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{(j_{sa}^{ik} - j_{sa})} \sum_{j_{sa} = j_{sa} + 1}^{(j_{sa}^{ik} - j_{sa})} \sum_{n_i = n + \mathbb{k}}^{(n_i - \mathbb{k}_1 + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{(n_i - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{(n_i - \mathbb{k}_1 + 1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (n_{sa} + j_{sa}^{ik} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{l_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$(\mathbf{n} > \mathbf{n} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{sa}^{ik} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{j_{ik}-\mathbb{k}_1+1} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)!} \cdot \frac{(n+j_{sa}^{ik}-j_{ik}-s)!}{(n+j_{sa}-j_{ik}-s)!} \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)!} \cdot \frac{(j_{ik}+j_{sa}^{ik}-1)!}{(j_{ik}+j_{sa}-1)!} \\
& \frac{(D-n-1)!}{(D+j_{sa}+s-n-j_{sa})!} \cdot \frac{(n+j_{sa}-j_{sa}^{ik}-s)!}{(n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1) \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_s \leq D + l_s + s - n - 1) \wedge$$

$$(D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - l_s < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D + l_s + s - n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: Z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
 \end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{(\quad)}$$

$$\sum_{n=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=n_{ik}+j_{sa}^{ik}-j_{sa}-j_{ik})}^{(n_{ik}+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_1-j^{sa}-\mathbb{k}_2)}^{(\quad)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa})! \cdot (n_{ik}+j_{sa}^{ik}-j_{ik}-s)!}}{(\quad)}$$

$$\frac{(D + j_{sa} - l - 1)!}{(D + j_{sa} - l - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l = l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_{sa} \leq D + l_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = \mathbf{s} + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j_{sa}^{s}=j_{sa}+n-D}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} - j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{l_{sa}-l+1} \sum_{j_{sa}^{s}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + j_{sa} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$-j_{sa}^{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{z,j_{ik},j_{sa}}^{s,j_{ik},j_{sa}} = \sum_{k=l}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-j_{sa}^{ik}+1} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-j_{sa}^{ik}+1} \sum_{n_i=n+k}^n \sum_{(n_{ik}=n_{ik}-j_{ik}+1)}^{(n_i-j_{ik}-l+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-k_2} \frac{(n_i - n_{ik} - 1)!}{(n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{j_{sa}^{ik}-j_{sa}^{ik}+1} \sum_{j_{sa}^{ik}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(l_s + j_{sa} - \mathbf{n} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - s)! \cdot (\mathbf{n} - j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=\mathbf{n}+j_{sa}^{ik}-j_{sa}}^{\binom{()}{}} \sum_{j_{sa}^{ik}=\mathbf{n}+j_{sa}^{ik}-j_{sa}}^{\binom{()}{}} \sum_{j^{sa}=\mathbf{n}+j_{sa}^{ik}-j_{sa}}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_1}^{\binom{()}{}} \sum_{(n_{sa}=\mathbf{n}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{\binom{()}{}} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq \mathbf{l} \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^{\left(\sum_{j_{sa}+j_{sa}^{ik}-j_{sa}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=j_{sa}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \right)} \right. \\ \left. \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_i - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\ \left(\sum_{k=l}^{\left(\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{j^{sa}=j_{sa}+2}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right)} \right. \\ \left. \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \right.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{sa}^{ik}+1}^{l_{sa}-l+1} j_{sa}^{ik+2}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n_{sa}-j_{ik}+1}^{(n_i-j_{ik}-1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} (n_i - n_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)! \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=l}^{()} \sum_{j_{sa}=j_{sa}^{ik}-j_{sa}}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-l}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l)! \cdot (\mathbf{n}-j_{sa}^{ik}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 > l_s \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^{s-\mathbb{k}_1}, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 \neq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S j_{ik}, j^{sa} = \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right)$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+l+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_s+l+1} \right) \cdot \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^n \sum_{(n_i-j_{ik}-\mathbb{k}_2+1)}^{(n_i-j_{ik}-\mathbb{k}_2+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{sa}=\mathbf{n}-j^{sa}+1)} \\
& \frac{(n_i - j_{ik} - \mathbb{k}_2)!}{(j_{ik} - \mathbb{k}_2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - j_{sa} - \mathbb{k}_2 + 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_s = 0 \wedge$$

$$j_{sa}^i \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa}^{il} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{ \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^s, \dots, j_{sa}^i \}$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_1 \leq \mathbb{k}_z \leq \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j=j_{sa}^{ik}+1}^{j_{sa}^{ik}} \sum_{s=j_{sa}^{ik}}^{n_{ik} - j_{sa}^{ik}}$$

$$\sum_{n=n+\mathbb{k}}^{n_{ik} - j_{sa}^{ik}} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_{ik}-j_s+1)}$$

$$\sum_{s=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D > \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D - l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j_{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}^{ik}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \right)$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik})} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}+j_{ik}+1)}^{(n_{ik}-j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \frac{(n_i - j_s + 1)!}{(j_{ik} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{is} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (j_{ik} + j_{sa} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s - \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^i - 1, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge s = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right.$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + j^{sa} = l_{sa} + n - D)}^{l_{sa} - l + 1} \sum_{j_{sa} = j_{ik} + j_{sa}^{ik} + 1}^{n - D} \right) \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - \mathbb{K}_1 + 1)}^{(n_i - j_{ik} - 1)} \sum_{(n_{ik} = n - j_{sa} + 1)}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik})!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - \mathbb{K}_2 - 1)!}{(j^{sa} - \mathbb{K}_2 - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{n_{ik}=l_i+n_{sa}-j_{sa}^{ik}-\mathbb{k}_2}^{(l_i+j_{sa}^{ik}-l)} \sum_{j_{ik}=l_i+n_{sa}-j_{sa}^{ik}-\mathbb{k}_2}^{(j_{ik}+j_{sa}^{ik}-l)} \sum_{j_{sa}^{ik}=l_i+n_{sa}-j_{sa}^{ik}-\mathbb{k}_2}^{(j_{sa}^{ik}+j_{sa}^{ik}-l)}$$

$$\sum_{n_{is}=n+\mathbb{k}_2}^n \sum_{j_{sa}^{ik}=n_{is}+j_{sa}^{ik}-j_{ik}}^{(n_{is}-j_{sa}+1)}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(n_{sa}-j_{sa}+1)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D - n - l_i \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \\ &\frac{(n_i-n_{sa}-1)!}{(j_{ik}-l+1)! \cdot (n_{ik}-j_{ik}+1)!} \cdot \\ &\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ &\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ &\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \\ &\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\ &\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_{ik}, j_{sa}} = \sum_{l=l}^{j_{ik}+j_{sa}-l-s+1} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{j_{ik}+j_{sa}-l-s+1} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \\ \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l} \sum_{\binom{()}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} (n_{is}=n+\mathbb{k}+j_{sa}^{ik}-s) \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}+j_{sa}-\mathbb{k}_2}}^{(n_{ik}+j_{sa}-s-\mathbb{k}_2-j_{sa})!} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-s)!}{(l_s+j_{sa}-j_{ik}-s)! (j_{ik}+j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-s)!}{(D+j_{sa}+s-n-j_{sa})! (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n \leq l_{sa} \leq n + l_s + j_{sa} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{\binom{()}{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}}^{(l_i+j_{sa}^{ik}-l-s+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - j_{ik} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{ik}=0}^{l_{ik} + n - l - j_{sa}^{ik}} \sum_{j_{sa}=0}^{n - j_{sa}^{ik} - j_{ik}} \sum_{n=\mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i - j_s + 1)} \sum_{k=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(j_{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = l_i + \mathbf{n} - j_{sa} - D - s}^{j_{sa} = l_i + \mathbf{n} - j_{sa} - D - s} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-l}^{()} \sum_{j_{sa}=l_{sa}+n}^{()} j^{sa} = l_{sa} + n -$$

$$\sum_{n_{ik}=n+l_{ik}-j_{sa}^{ik}}^{()} \sum_{n_{is}=n+l_{ik}+j_{sa}^{ik}-j_{ik}}^{()} (n_{is} = n + l_{ik} + j_{sa}^{ik} - j_{ik})$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{ik}-l_{sa}}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa}}^{()} (n_{sa} = n_{ik} + j_{ik} - j^{sa} - l_{sa})$$

$$\frac{(n_{ik} + j_{sa}^s - s - l_{sa} - j_{sa}^{ik})!}{(n_{ik} + j_{ik} - n - l_{sa} - j_{sa}^{ik})! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$D \geq n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_i > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{sa}^{ik}, \dots, l_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 {}_{fz}S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_i+n-D)}^{(l_i+n+j_{sa}^{ik}-D-s-1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 & \frac{(l_{ik}-l_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
 & \frac{(l_{ik}+j_{ik}-l_{sa}^{ik})!}{(j_{ik}+l_{ik}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot
 \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}^{ik}, j_{sa}^{ik}=j_{ik}+l_{sa}-j_{sa}^{ik})} \sum_{(n_i=j_{sa}^{ik}-j_{ik})}^{(n_i-j_{sa}^{ik})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1}, n_{ik}=n_{ik}+j_{ik}-j_{sa}^{ik}-l_{k_2})}^{(n_{ik}+j_{sa}^{ik}-l_{ik}-l_{k_2}-j_{sa}^{ik})} \sum_{(n_{ik}+j_{sa}^{ik}-l_{ik}-l_{k_2}-j_{sa}^{ik})}^{(n_{ik}+j_{sa}^{ik}-l_{ik}-l_{k_2}-j_{sa}^{ik})} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} j_{sa}^{sa=j_{sa}+1} \\ &\sum_{n_i=\mathbb{k}}^n \sum_{(n_{ik}=n_{is}+j_{ik}-j_{sa}-\mathbb{k}_1+1)}^{(j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(j_{ik}-\mathbb{k}_2)} \\ &\frac{(n_{ik}-n_{ik}-1)!}{(j_{ik}-\mathbb{k}_1)! \cdot (n_{ik}-j_{ik}+1)!} \cdot \\ &\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{ik}-\mathbb{k}_2)! \cdot (n_{ik}-j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa})!} \cdot \\ &\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ &\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}-s)!} - \end{aligned}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j_{sa}^{sa=j_{sa}+1}}^{l_{sa}+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa} = l_i + n + j_{sa} - D - s \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_2} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}} \\
& \frac{(n_{ik} + j_{ik} - s - \mathbb{k}_2 - l_{sa})!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa}^{ik})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq l_i \wedge l \leq D - n + 1) \right)$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}_2)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa}^{ik} - \mathbb{k}_2)}^{(n_{ik} + j_{ik} - j_{sa}^{ik} - \mathbb{k}_2)} \frac{(n_{sa} - n_{ik} - 1)!}{(j_{sa} - 2)! \cdot (n_{sa} - n_{ik} - j_{ik} + j_{sa}^{ik})!} \cdot \frac{(n_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(n_{ik} - l - j_{sa}^{ik})!}{(l_{sa} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(\quad)} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - \mathbf{n} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \mathbb{k}_1 + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$fz^S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa} - l + 1)}^{(j_{ik} - j_{sa}^{ik} - 1)} \sum_{(n_{ik} = j_{ik} - j^{sa} - l_{k_2})}^{(n_{ik} - j_{ik} - j^{sa} - l_{k_2} + 1)} \\
& \sum_{n_i = n + l_{k_2} - j_{ik} + 1}^n \sum_{n_{ik} = n + l_{k_2} - j_{ik} + 1}^{(n_{ik} - j_{ik} - j^{sa} - l_{k_2} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{(n_{sa} - j_{sa} - j^{sa} - l_{k_2} + 1)} \\
& \frac{(n_i - 1)!}{(j_{ik} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(j_{ik} - n_{ik} - l_{k_2} - 1)!}{(j^{sa} - j_{sa}^{ik} - 1)! \cdot (j_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = n + l_{k_2}}^n \sum_{(n_{is} = n + l_{k_2} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (l_i+j_{sa}-j_{sa}-s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{ik} - 1 \wedge j_{sa}^{ik} \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^{ik} \geq 5 \wedge j_{sa}^s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{l=l_{sa}-l+1}^{(l_s+j_{sa}^{ik})} \sum_{j_{sa}^{ik}=j_{sa}^{ik}-D-j_{sa}}^{l_{sa}-l+1} j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} j_{sa}^{ik} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{k1}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-l_{k2})}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-l_{k2}-j_{sa}^{ik})!}{(n_{ik}+j_{ik}-n-l_{k2}-j_{sa}^{ik})! (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l+1)!}{(l_s+j_{sa}^{ik}-j_{ik}-1)! (j_{ik}+j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-n+1)!}{(D+j_{sa}^{ik}+s-n-l_{k2}-j_{sa}^{ik})! (n+j_{sa}^{ik}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1) \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} - l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_{z \cup j_{sa}}^{j_{sa}} = \sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - l + j_{sa}^{ik} + 1} \sum_{(j_{ik} = j_{sa}^{ik} + n - D)} \sum_{j^{sa} = l_{sa} + n - D} \sum_{n}^{j_{ik} - \mathbb{K}_1 + 1} \sum_{n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \sum_{n_{sa} = n - j^{sa} + 1} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_{sa}-l+1} \sum_{j_{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{ik}+1}^{n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j_{sa}^{ik} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j_{sa} - n - 1)! \cdot (n - j_{sa}^{ik})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - j_{sa}^{ik} - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j_{sa}=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i < j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(n_i - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + n + j_{sa}^{ik} - D - s)}^{(j_{sa}=j_{sa} + j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n=n+l_k}^n \sum_{(n_{is}=n_{is} + j_{sa}^{ik} - l_{ik} - l_{s_1} - l_{s_2})}^{(n_{is} + j_{sa}^{ik} - l_{ik} - l_{s_1} - l_{s_2} + 1)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_{s_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{s_2} - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$((D \geq n < n + l \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n + l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}}^{()} = \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}^{()} j^{sa=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}} \\ \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{sa}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j^{sa}+1}^{()} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\ \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{l_s+j_{sa}-l}^{()} j^{sa=l_i+n+j_{sa}-D-s}$$

$$\begin{aligned}
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - j_{sa}^{ik} - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - 1)! \cdot (\mathbf{n} + j_{sa}^{ik} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 = l_i \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^{s, \mathbb{k}_1}, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \left(\sum_{k=1}^{\quad} \sum_{l(j_{ik} = j_{sa}^{ik})}^{(\quad)} \sum_{j^{sa} = j_{sa}} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} \right) + \\
& \left(\sum_{k=1}^{\mathbf{l}} \sum_{(j_{ik}=j_{sa}^{ik})}^{(\cdot)} \sum_{j^{sa}=j_{sa}^{sa}+1}^{\mathbf{l}_{sa}-\mathbf{l}+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - j_{ik} - \mathbb{K}_1 - 1)!}{(n_i - j_{ik} - \mathbb{K}_1 - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - j_{ik} - \mathbb{K}_2 - 1)!}{(n_{ik} - j_{ik} - \mathbb{K}_2 - n_{sa} - j_{ik} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(\mathbf{l}_{sa} + j_{sa}^{ik} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{\mathbf{l}} \sum_{(j_{ik}=j_{sa}^{ik})}^{(\cdot)} \sum_{j^{sa}=j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{K}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{K}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(D - \mathbf{l}_i)!}{(D + s - \mathbf{n} - \mathbf{l}_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l} = \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} = & \sum_{k=0}^{l_{sa}-l_i+1} \sum_{j_{ik}=j_{sa}^{ik}-1}^{l_{sa}-l_i+1} \sum_{j_{sa}=j_{sa}}^{l_{sa}-l_i+1} \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l_i - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_i + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \end{aligned}$$

$$\sum_{k=0}^{l_{sa}-l_i+1} \sum_{j_{ik}=j_{sa}^{ik}-1}^{l_{sa}-l_i+1} \sum_{j_{sa}=j_{sa}}^{l_{sa}-l_i+1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = \mathbf{n} - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{j_{sa} = j_{sa}}^{l_{sa} - {}_i l + 1} \sum_{k = {}_i l}^{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{(j_{ik}, j_{sa})} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k=0}^{\infty} \sum_{l=0}^{(\cdot)} \sum_{j_{sa}=j_{sa}}^{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-j_{ik}-l_1+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}}^{(\cdot)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_1)!}{(D + s - l_1 - l_2)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = l > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, l_1, j_{sa}^{ik}, \dots, l_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l \wedge$$

$$l_z: z \geq 2 \wedge l = l_1 \wedge l_2 \Rightarrow$$

$$\sum_{k=0}^{\infty} \sum_{l=0}^{(\cdot)} \sum_{j_{sa}=j_{sa}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} j_{sa}^{sa}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n+l_2-j_{ik}+1)}^{(n_i-j_{ik}-l_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-l_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - l_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=i}^n \sum_{(j_{ik}=j_{sa}^{ik})}^{()} \sum_{j_{sa}=j_{sa}^{ik}}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}-\mathbb{k}_2}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D + s - n - l_i)!}{(n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = i l > 0 \wedge$$

$$j_{sa}^{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik}, \dots, j_{sa}^s, \dots, n\}$$

$$s \geq 5, n = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + 1 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=i}^{(l_{sa}+j_{sa}^{ik}-i l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - {}_i l)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}.$$

$$\sum_{k=0}^{\binom{n}{s}} \sum_{(j_{ik}=j_{sa}^{ik})} j^{sa}.$$

$$\sum_{n_i=n+\mathbb{k} \atop (n_{ik}=n_i-j_{ik}-\mathbb{k}_2-1) \atop n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^n \sum_{j_{sa}=j_{ik}-j^{sa}-\mathbb{k}_2}^{\binom{n}{s}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - j_{sa}^s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > \mathbb{k}_2 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s = (j_{sa}, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i) \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: 2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \sum_{k={}_i l}^{(l_{ik} - {}_i l + 1)} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - l_i + j_{sa}^i)!}{(l_{ik} - j_{ik} - l_i + j_{sa}^i)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{sa}^i - l_i - s)!}{(D + s - n - l_i - s)!} \cdot \\
& \sum_{k=0}^{\binom{D}{l_i}} \sum_{l_i} \sum_{j_{sa}^i} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{\binom{D}{l_i}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l = l_i \wedge l_i \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^i + j_{sa}^{ik} - j_{sa}^i \wedge$$

$$j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j_{sa}^i \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^i = l_{ik} \wedge$$

$$l_{ik} + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=1}^n \sum_{i=1}^l \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-1} \frac{(n_i-j_{ik}-\mathbb{k}_1+1)!}{(j_{ik}-2)!} \cdot \frac{(n_{ik}+j_{ik}-j^{sa}-1)!}{(n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{k}_2+1)!}{(j^{sa}-j_{ik}-1)!} \cdot \frac{(n_{sa}-1)!}{(n_{ik}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(n_{sa}-j_{sa}^{ik})!}{(n_{ik}-j_{ik}-j_{sa}^{ik}+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(n_{ik}+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n-s)!} - \sum_{k=1}^n \sum_{i=1}^l \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n-s)!} \cdot \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$$\left((D \geq n < n \wedge l = 1 \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{i=0}^n \sum_{l=0}^{(l_{ik}-i+1)} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-i+1} \sum_{i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=0}^n \sum_{l=0}^{(n-k)} \sum_{j^{sa}=j_{sa}}^{(n-k-l)} j_{ik}^{ik} j_{sa}^{sa}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)} n_{sa}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_{ik} - l_{sa} - l_{sa}^s)!}{(D + s - n - \mathbb{k}_2 - l_{sa}^s)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = l_{ik} \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{sa} = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: \mathbb{k}_2 \geq 2 \wedge \mathbb{k}_1 = \mathbb{k}_2 \Rightarrow$$

$$j_{ik} j_{sa} = \left(\sum_{k=0}^n \sum_{l=0}^{(n-k)} \sum_{j^{sa}=j_{sa}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} j_{sa}^{sa} \right)$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} n_{sa}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \right) + \\
& \left(\sum_{k=i l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik})}^{l_{ik} + j_{sa} - i l - j_{sa}^{ik}} \sum_{j_{sa} = j_{sa} + 1}^{j_{sa} - j_{sa}^{ik}} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\
& \frac{(n_i - j_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\
& \sum_{k=i l}^{(l_{ik} - i l + 1)} \sum_{(j_{ik} = j_{sa}^{ik})}^{l_{sa} - i l + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - i l - j_{sa}^{ik} + 2}^{l_{sa} - i l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}^{ik}}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n-l_{ik}-j_{ik}-l_{k_1})} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - l_{k_2} - j_{sa}^s)! \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = l \wedge l_{sa} \leq D - l_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j^{sa} + j_{sa} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} - 1 \leq j^{sa} - n + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} > l_{ik} \wedge$$

$$n \geq n < n \wedge l = l > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$n \geq 5 \wedge s \leq s + l \wedge$$

$$l_{k_2}: z = 2 \wedge l_{k_2} = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=1}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right)$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i\mathbf{l} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i\mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left(\frac{(j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa} - s)!} \right) + \\
& \left(\sum_{k=i\mathbf{l}}^{(l_{ik} - i\mathbf{l} - 1)} \sum_{j_{sa}^{ik}}^{l_{sa} - i\mathbf{l} + 1} \sum_{j_{sa}^{ik} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - i\mathbf{l} + 1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i\mathbf{l} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i\mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$

$$\sum_{k=1}^n \sum_{l=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{(n)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 5 \bullet s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2 \cdot z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=1}^n \sum_{l=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \sum_{j_{sa}^{ik} = j_{sa}}^{l_{sa} - i_{l+1}} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{ik} = n_i - j_{ik} - \mathbb{k}_1 + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - j_{ik} - 1)!}{(j_{sa}^{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \sum_{j_{sa}^{ik} = j_{sa}}^{l_{sa} - i_{l+1}} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{ik} = n_i - j_{ik} - \mathbb{k}_1 + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq \mathbf{l} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq \mathbf{l} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$\begin{aligned} & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ & \left(\sum_{k=l}^{\left(\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \right)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right) \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$

~~$((D \geq n < n \wedge c_{\text{left}} = D - n - 1 \wedge$~~

$$j_{sa}^{ik} + 1 \leq j_{ti} \leq j^{sa} + j_{ti} - j_{sa} - 1 \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik}) \vee$$

$$D + l_{ik} + j_{sq} - n - l_{sq} - j_{sq}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z^S j_{ik} j_{sa} = \sum_{k=l}^{(l_{ik}-l_{sa}+1)} \sum_{(j_{ik}=n-D) j_{sa}=l_{sa}-D}^{l_{sa}+1} \sum_{n_i=n+k}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)}^{(j_{ik}-k_1+1)} \sum_{j_{sa}=1}^{j_{ik}-j_{sa}-k_2} \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (l_i+j_{sa}-j^{sa}-s)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \neq 0 \wedge$$

$$j_{sa}^s \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa}^s + 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^s, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s \leq \mathbf{n} + \mathbb{k} \wedge$$

$$z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{l_{sa}+n+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}=n-D)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}+1)}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}^{lk}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - j_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{lk}-D-s)}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{lk}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{lk} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{lk} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{lk} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{j^{sa}=l_{sa}+n-D}^{j^{sa}=l_{sa}-l} \right) \sum_{n_i=n+\mathbb{k}}^{n_i=n+\mathbb{k}} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}=n-j^{sa}+1} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \left(\sum_{k=l}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_{sa}+n-D}^{j^{sa}=l_{sa}-l} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s+l)-l} \sum_{(j_{ik}-s+n+j_{sa}^{ik}-D-1)}^{(l_s+l)-l} j^{sa} = l_s + j_{sa} - l + 1 \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n - n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa} - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - n - j_{sa} - s)!}{(D + j_{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 2 \leq \mathbf{l} \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_{z^s} S_{i_{ik}, j_{sa}} = & \sum_{k=l}^{(l_s - j_{sa}^{ik} - l)} \sum_{(j_{ik} = \mathbf{n} + j_{sa}^{ik} - D - 1)}^{(l_s - j_{sa}^{ik} - l)} \sum_{j_{sa} = l_{sa} + \mathbf{n} - D}^{l_{sa} - l + 1} \\ & \sum_{n_i = \mathbf{n}}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} j^{sa} = j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - j_{sa} - j_{sa}^{ik} - 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} > 0 \wedge$$

$$D \geq n < n \wedge l_s - \mathbb{k}_k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_1 - j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq s = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} j^{sa} = j_{ik}+j_{sa}-j_{sa}^{ik} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa})!} + \\
& \left(\sum_{k=l}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik}} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik})} \sum_{j_{sa}^{ik}=j_{ik} + n - D}^{l_{sa} - l + 1} \right. \\
& \left. \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_{sa} - j_{ik} + 1)}^{n_i - j_{ik} - \mathbb{K}_1 - 1} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \right) \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{j_{sa}^{ik}=j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - l_s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)}^{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$j_{sa}^{ik} - j_{sa} = \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{sa}+j_{sa}^{lk}-j_{sa})}^{(l_s+j_{sa}-l)} j^{sa=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{lk}-j_{sa})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1}^{(n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}_1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)}$$

$$\frac{(n_{ik}+j_{sa}^{lk}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! (n+j_{sa}^{lk}-j_{ik}-s)!}$$

$$\frac{(l_s-l+1)!}{(l_s+j_{sa}^{lk}-j_{ik}-1)! (j_{ik}+j_{sa}^{lk}-1)!}$$

$$\frac{(D-j_s)!}{(D+j_{sa}+s-n-j_{sa})! (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{lk} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{lk} - j_{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{lk} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{lk} + 1 \geq l \wedge l_{sa} + j_{sa}^{lk} - j_{ik} = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{lk} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{lk} - 1 \wedge$$

$$s: \{j_{sa}^i, \dots, \mathbb{k}_1, j_{sa}^{lk}, \dots, j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 6 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_z - \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}} \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - j_{ik} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=l_i}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa}^{ik}=j_{ik} - D - s}^{j_{sa}^{ik} - D - s} \sum_{j_{sa}^{ik}=j_{sa}^{ik} - j_{sa}}^{j_{sa}^{ik} - j_{sa}} \cdot \\
& \sum_{n=\mathbb{k}}^{(n_i - j_s + 1)} \sum_{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \cdot \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \cdot \\
& \frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = n + \mathbb{k}_1 - j_{sa} + 1)}^{(n_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2)} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - j_{sa} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(n_{ik} - j_{sa} - 1)!}{(n_{ik} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_{ik}, j_{sa}} \sum_{l_i=0}^{(j_{sa}^{ik}-j_{sa})} \sum_{l_s=0}^{l_s+j_{sa}-l} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}=l_i+n+j_{sa}-D-s} \\ & \sum_{n=\mathbb{k}}^{(n_i-n_{ik}-\mathbb{k}_1+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}+j_{sa}-n-1} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n - \mathbf{n} - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{sa}^{ik}} = \sum_{k=l}^{(l_i+n+1-j_{sa}^{ik}-D-s)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} j_{sa}=l_i+n+j_{sa}-D-s$$

$$\sum_{n_{ik}=0}^n \sum_{(n_{ik}=\mathbb{k}_1-1)}^{(n_{ik}=\mathbb{k}_2-1)} \frac{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)!}{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} +$$

$$\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_s - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{l=\mathbf{l}}^{(l_{ik}-l)} \sum_{j_{sa}^{ik}=\mathbf{j}_{sa}^{ik}-D-j_{sa}}^{j_{sa}^{ik}-D-j_{sa}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}-D-j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_{sa}-l+1} \sum_{j^{sa}=l_{sa}+n-D}^{()} \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa}=l_i+n+j_{sa}-D-s \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_s+j_{sa}^{ik}-j_{ik}}} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_2} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}} \\
& \frac{(n_{ik} + j_{ik} - s - \mathbb{k}_2 - l_{sa})!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\begin{aligned}
& ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee
\end{aligned}$$

$$\begin{aligned}
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee
\end{aligned}$$

$$\begin{aligned}
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
& j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee
\end{aligned}$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z \mathcal{S}_{j_{ik}, j_{sa}} = \sum_{k=l}^{\sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} (l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_{ik}-\mathbb{k}_1+1)} (n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_i=n+\mathbb{k}}^{\sum_{(n_{ik}=n+\mathbb{k}_2-j_{sa}+1)} (n_{ik}=n+\mathbb{k}_2-j_{sa}+1)} \sum_{n_{sa}=n-j_{sa}}^{\sum_{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} (n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \sum_{k=l}^{\sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} (l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_s+1)} (n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{\sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} (n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} (n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \leq 2 \wedge \mathbb{k} = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l}^{\quad} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{\sum} \sum_{(j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{(n_{is}+l_{sa}-j_{ik})}$$

$$\sum_{n_i=n+l_{\mathbb{K}}}^n \sum_{(n_{is}+l_{sa}-j_{ik})}^{(n_{is}+l_{sa}-j_{ik})}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^{sa}-j_{sa}^{ik}-l_{\mathbb{K}_2}}^{(n_{is}+l_{sa}-j_{ik})} \sum_{(n_{ik}+j_{sa}^{sa}-s-l_{\mathbb{K}_2}-j_{sa}^s)!}^{(n_{ik}+j_{sa}^{sa}-s-l_{\mathbb{K}_2}-j_{sa}^s)!}}{(n_{ik}+j_{ik}-n-l_{\mathbb{K}_2}-j_{sa}^s)! \cdot (n_{ik}+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(D - l_i - 1)!}{(D + j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \frac{(j_{ik} - j_{sa}^{ik} - 1)!}{(j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\ & j_{ik}^{ik} + 1 \leq j_{ik}^{ik} < j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq n < n \wedge l_s > D - n + 1 \wedge \\ & j_{sa}^{ik} + 1 \leq j_{ik}^{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \bigg) \wedge \end{aligned}$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+\mathbf{n}-D)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=j_{ik}+j_{sa}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-1)} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
 &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + \mathbf{n} + j_{sa}^{ik} - D - s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s + j_{sa}^{ik} - l)} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S j_{ik}, j_{sa}^{ik} = \sum_{k=l}^{j_{sa}^{ik}-j_{sa}} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\ \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 - 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(j^{sa} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_{sa}+n-D} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_{ik}} \sum_{k=l}^{(l_i+n+j_{sa}^{ik}-D-s-1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n+\mathbb{k}-j_{sa}+1)}^{n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - \mathbb{k}_1 - 1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - \mathbb{k}_2 - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, \dots, j_{sa}^{i-1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j^{sa} = l_{sa} + n - D}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{\binom{(n_i+l_k+1)}{n_{is}+l_k}} \sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_2}}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(j_{sa}^{ik} - l - 1)!}{(j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\ & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \end{aligned}$$

$$\begin{aligned} & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\ & (D \geq n < n \wedge l_s > D - n + 1 \wedge \end{aligned}$$

$$\begin{aligned} & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \end{aligned}$$

$$\begin{aligned} & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq n < n \wedge l_s > D - n + 1 \wedge \end{aligned}$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz_{\mathbf{n}-j_{sa}}^{s_{\mathbf{n}-j_{sa}}} = \sum_{k=l}^{n+j_{sa}^{lk}-j_{sa}-1} \sum_{(j_{ik}-j_{sa}^{lk}+n-D)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{sa}+n-D}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i + j^{sa} - n - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_{is}+j_{sa}^{ik}-l)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{i, j_{sa}}^{j_{sa}} = \sum_{k=l}^{\binom{D}{j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}}} \sum_{n_{ik}=n+\mathbb{k}}^{\binom{D}{j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}}} \sum_{n_{sa}=n-j_{sa}+1}^{\binom{D}{j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}}} \frac{(n_{ik} - n_{sa} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{D}{j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}}} \sum_{n_{ik}=n+\mathbb{k}}^{\binom{D}{j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}}} \sum_{n_{sa}=n-j_{sa}+1}^{\binom{D}{j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}}} \frac{(n_i - j_s + 1)!}{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})!}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n_{ik} + j_{sa} - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j_{sa} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_{ik}-n_{sa}-\mathbb{k}_2-1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{(n_{sa}-1)!} \cdot \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+\mathbb{k}}^n \sum_{(n_{is} = n - j_{ik})}^{(n_{is} + 1)}$$

$$\frac{\sum_{n_{ik} = n_{is} + j_{sa}^{ik} - \mathbb{k}_1}^{(n_{ik} - j_{sa} - \mathbb{k}_2)} \frac{(n_{ik} - j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \frac{(j_{ik} - j_{sa}^{ik} - 1)!}{(j_{ik} + j_{sa} - l - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik}^{ik} + 1 \leq j_{ik} < j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge \mathbb{k} = \mathbb{k} >$$

$$j_{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{l_i + j_{sa} - l - s + 1} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_s - l - j_{sa} - s)!}{(l_s + j^{sa} - \mathbf{n} - l - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(l_i + j_{sa}^{ik} - l - s + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - l - s + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_i - j_{ik} - l + 1)}^{(n_i - j_{ik} - l + 1)} \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)} \\ & \frac{(n_{ik} - j_{ik} - l + 1)!}{(j_{ik} - l + 1)! \cdot (n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - j_{sa} - \mathbb{K}_2 + 1)!}{(j_{sa} - l_{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \\ & \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ & \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{()} \\ & \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{K}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{K}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D - 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + n - D}^{l_s + j_{sa} - l} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D)}^{(j_{ik} = l_s + j_{sa}^{ik} - l + 1)} \sum_{(j_{sa} = l_s + j_{sa}^{ik} - l + 1)}^{(j_{sa} = l_s + j_{sa}^{ik} - l + 1)} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_i = \mathbf{n} + \mathbb{k}_1 + j_{ik} - j_{sa}^{ik} - 1)}^{(n_i = \mathbf{n} + \mathbb{k}_1 + j_{ik} - j_{sa}^{ik} - 1)} \sum_{(n_{ik} = \mathbf{n} + j_{sa}^{ik} - j_{ik} - \mathbb{k}_2)}^{(n_{ik} = \mathbf{n} + j_{sa}^{ik} - j_{ik} - \mathbb{k}_2)} \\
& \frac{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (n_{ik} + j_{ik} - j_{sa}^{ik} - \mathbb{k}_2)!}{(j_{ik} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - j_{sa}^{ik} - \mathbb{k}_2 + 1)!}{(j^{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{(j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s)}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^{ik} - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^i < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_s^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s \leq 6 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{l_{sa} - l + 1} \\ &\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa})}^{(j^{sa}=j_{ik}+j_{sa}-j_{sa})} \cdot \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^n \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2}^{(j_{ik}-n_{ik}-1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(j_{ik}-n_{ik}-1)} \cdot \\
& \frac{(j_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (j_{ik} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(j_{sa} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - n_{sa} - 1)! \cdot (j_{sa} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa})}^{(n_i-j_s+1)} \cdot \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \cdot
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_s + j_{sa}^{ik} - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k}$$

$$\mathbb{k} - z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+j_{sa}-l} \sum_{j^{sa}=j_{sa}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa}^{ik} - l + 1)}^{l+1} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - \mathbb{K}_1 = j_{ik} - j_{sa}^{ik} - j_{sa} = n - j_{sa}^{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1)} \sum_{n_{ik} = n + \mathbb{K}_2}^{n_{ik} + j_{ik} - j_{sa}^{ik} - j_{sa} = n - j_{sa}^{ik} + 1}^{\mathbb{K}_2} \\
& \frac{(n_i - j_{ik} - \mathbb{K}_1)! \cdot (n_{ik} - j_{ik} - \mathbb{K}_2)!}{(j_{ik} - j_{sa}^{ik} - 1)! \cdot (n_i - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - j_{ik} - \mathbb{K}_2)!}{(j_{sa}^{ik} - j_{sa}^{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j_{sa}^{ik} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - l} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{is} = n + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^{ik} - j_{sa}^{ik} - \mathbb{K}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$S_{j_{ik}, j_{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right)$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)} \sum_{j^{sa} = j_{sa} + 2}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l - j^{sa} - l_{ik})!}{(j_{ik} + l - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-l} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \right)$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j_{sa}^{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} j_{sa}^{ik} j_{sa}^{sa} = & \left(\sum_{k=l}^{(l_{ik}-1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\ & \sum_{n=\mathbf{n}+\mathbb{k}}^{(n_i-n_{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-n_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \right) \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(n + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik}, j^{sa} = \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \frac{(n_i - j_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa}^{ik} - n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \right)$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - j_{sa}^{ik})!}{(D + j^{sa} - n - 1)! \cdot (n + j^{sa} - j_{sa}^{ik} - s)!} \cdot \\
& \sum_{k=j_{ik}-1}^{j_{sa}^{ik}-l} \sum_{k=j_{sa}^{ik}+1}^{j_{sa}^{ik}-l} \sum_{a=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$n_{ik} \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} + 1} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n_{sa} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2}^{j_{sa} + 1} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} - \end{aligned}$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l-1)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s \neq 6 \wedge s = s \wedge \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right.$$

$$\sum_{n=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - 1} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{sa} - \mathbf{n} - D} l_{ik} + j_{sa}^{ik} - l - j_{sa}^{ik} + 1 \right) \cdot \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - \mathbb{K}_1 + 1) \atop n_{ik} = j_{ik} - j_{sa}^{ik} + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{(n_{ik} = j_{ik} - j_{sa}^{ik} + 1) \atop n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j_{sa}^{ik} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - j_{ik} - \mathbb{K}_2 - 1)!}{(j^{sa} - \mathbf{n} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - \mathbb{K}_1 + 1) \atop n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{(n_{ik} = \mathbf{n} - j^{sa} + 1) \atop n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (D + j_{sa} - j^{sa} - 1)!} \cdot$$

$$\sum_{k=0}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{k} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{j_{sa} - l - j_{sa}^{ik} + 1 - k} \cdot$$

$$\sum_{i=0}^{n} \binom{n}{i} \binom{n}{n-i} \cdot$$

$$\sum_{i=0}^{n} \binom{n}{i} \binom{n}{n-i} \cdot$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$D + j^{sa} - n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa}^{ik} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge$$

$$j_{sa}^{ik} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_i=n+\mathbb{K}+j_{sa}^{ik}-j_{ik}+1)}^{(n_i-j_{ik}+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-\mathbb{K}_2)} \frac{(n_{ik}-j_{ik}-1)!}{(j_{ik}-2)! \cdot (n_{ik}-j_{ik}-\mathbb{K}_1+1)!} \cdot \frac{(n_{ik}-j_{sa}-\mathbb{K}_2+1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{K}_2)!} \cdot \frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-l} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right. \\ \left. \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \right. \\ \left. \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \right. \\ \left. \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \right).$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(l_i=l_i+n+j_{sa}-D)}^{()} \\
& \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1)}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$n \geq n < n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$D + l_{sa} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} - j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{sa}^{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} j_{sa} = l_{sa} + n - \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = n + j_{sa}^{ik} - j_{ik} + 1)}^{n_{ik} + j_{sa} - j_{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - n - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(l_s - l - j_{sa}^{ik})!}{(l_{sa} - j_{sa} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \\ &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ &\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(\quad)} \\ &\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fz S_{j_{ik}^{sa}} = \left(\sum_{i=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{j_{sa}^{ik}} j^{sa} = j_{ik}+j_{sa}-j_{sa}^{ik} \right. \\ \left. \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right.$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right. \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
D &\geq \mathbf{n} < n \wedge l_s \leq n - \mathbf{n} - 1 \wedge \\
2 &\leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge \\
j_{sa}^{ik} &\leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge \\
j_{ik} - j_{sa} - j_{sa}^{ik} + 1 &\leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge \\
l_{ik} - j_{sa}^{ik} + j_{sa} &= l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\
\mathbf{n} < l_{sa} &\leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge \\
D &\geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge \\
j_{sa} &\leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge \\
\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} &\wedge
\end{aligned}$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{ik}} \right. \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(l_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1} \right. \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \left. \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \right)$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_s=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}-1)}^{n_{ik}+j_{sa}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa} - l_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - l_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) -$$

$$\sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{j_{ik}, j_{sa}^{ik}} \sum_{k=l}^{l+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}_2}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa})!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-j_{sa}^{ik}-j_{ik}-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-j_{sa}^{ik}-j_{ik}-1)!}{(D+j_{sa}+s-n-\mathbb{k}_2-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_{sa} \leq D + s - n \wedge$$

$$D \geq n < n \wedge l - j_{sa}^{ik} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_{j_{sa}^{ik}-j_{sa}}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^{ik} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(l_s+j_{sa}^{ik}-j_{ik})} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_s+j_{sa}^{ik}-j_{ik})} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_s+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{k=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(l_s+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(l_s+j_{sa}^{ik}-j_{ik})}$$

$$\frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D - \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: Z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(j_{ik}+j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik})}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{n_{ik}=n_{sa}-\mathbb{K}_1+1}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{sa}=n-j_{sa}+1)} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} + j_{sa}^{ik} - j_{sa})}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j^{sa}=l_i + \mathbf{n} + j_{sa} - D - s}^{()} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$\left. j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \right.$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\},$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{l=0}^{(j_{sa}^{ik} - j_{sa} - s - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_i + n + j_{sa} - D - s}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{sa} + j_{sa} - n - 1} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 - 1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(j^{sa} - j_{ik} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l + 1)!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{i=n+\mathbb{k}}^n \sum_{j_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1 - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{K}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{K}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik} j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-D-s-1} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_i+j_{sa}-l-s+1} \sum_{j=l_i+n+j_{sa}-D-s}^{n+j_{sa}^{ik}-D-s-1} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{sa}^{ik}+\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2} \sum_{n_{sa}=n-j_{sa}^{ik}+1}^{n_{sa}=n-j_{sa}^{ik}+1} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa}^{ik} - n - 1)! \cdot (n - j_{sa}^{ik})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa}^{ik} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa}^{ik} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1 - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - \mathbf{n} - j_{sa}^{ik})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{K}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{K}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z, s, j_{sa}^{ik}, j_{sa}} = \sum_{k=l}^{\binom{n}{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{sa}=j_{sa}+1}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{sa}^{ik}-j_{sa}}} \sum_{n_{ik}=n+\mathbb{k}}^{\binom{n_i-j_{ik}-\mathbb{k}_1+1}{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}} \sum_{n_{sa}=n-j_{sa}+1}^{\binom{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}{n_{sa}=n-j_{sa}+1}} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=l}^{\binom{n}{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{sa}=j_{sa}+1}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{sa}^{ik}-j_{sa}}}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l-1)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-j^{sa}-s)!} \cdot
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s \leq l_i \wedge l_{sa} - s > l_i \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} - s - \mathbf{n} - j_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik} - 1, \dots, \mathbb{k}_2, j_{sa}^{ik} - 1, \dots, j_{sa}^i\}$$

$$s \geq \mathbf{n} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - l + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}, j_{sa}^{ik}=l_i+n+j_{sa}-D)}^{()} \sum_{(j_{sa}^{ik}=l_i+n+j_{sa}-D)}^{()}$$

$$\sum_{(n_{is}=n+l+j_{sa}-j_{sa}^{ik}-j_{ik})}^{()} \sum_{(n_{is}=n+l+j_{sa}-j_{sa}^{ik}-j_{ik})}^{()}$$

$$\sum_{(n_{is}=n+l+j_{sa}-j_{sa}^{ik}-j_{ik})}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + j_{sa} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} \wedge j_{sa}^{ik} \leq j_{sa} \wedge$$

$$j_{ik} \leq j_{sa} \wedge j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{j_{sa}^{ik}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l-1)! \cdot (\mathbf{n}-j_{sa}-j^{sa}-s)!} \cdot
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s \leq l_i \wedge l_{sa} - s > l_i \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s \wedge s - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\}$$

$$s \geq \mathbf{n} \wedge s = s + \mathbb{k}$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-\mathbb{k}_2)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2}$$

$$\sum_{(j_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2-1)}^{(j_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)}$$

$$\sum_{(n_{is}=n+\mathbb{k}_2+j_{sa}^{ik}-j_{ik})}^{(n_{is}=n+\mathbb{k}_2+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{(n_{is}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_2-1)}^{(n_{is}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_2-1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$((D \geq l_i < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{l=0}^{(j_{sa}^{ik} - j_{sa})} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{(j_{sa}^{ik} - j_{sa})} \sum_{j_{sa} = j_{sa} + 1}^{(j_{sa}^{ik} - j_{sa})} \sum_{n_i = n + \mathbb{k}}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{(n_{ik} - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{(n_{sa} - j_{sa} - \mathbb{k}_2)} \\ & \frac{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}{(j_{sa}^{ik} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{n} \sum_{n_i = n + \mathbb{k}}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \sum_{n_{sa} = n - j_{sa} + 1} \end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^n \sum_{(j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa})}^{l_{ik} + j_{sa}^{ik}} \sum_{j^{sa}=j_{sa}+1}^{j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$(n > 0) \wedge n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} j_{sa}^{ik} j_{sa}^{sa} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ &\sum_{n=\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \end{aligned}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)!} \cdot \frac{(l_s-l-j_s+1)!}{(l_s+j_{sa}-j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(j_{ik}-j_{sa}^{ik}-1)!}{(D+j_{sa}+s-n-j_{sa}^s)!} \cdot \frac{(D-j_s+1)!}{(D+j_{sa}-j_{sa}^s-s)!}$$

$$\left((D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1) \right)$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_s \leq D + l_s + s - n - 1)$$

$$(D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n - l_s \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D + s - n - l_s \leq D + l_s + s - n - 1) \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
 \end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}} \sum_{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} j^{sa}=l_i+n+j_{sa}-D-s$$

$$\sum_{n=n+l_k}^n \sum_{\binom{(n_i+l_k+1)}{(n_{is}=n+l_k-j_{ik})}}$$

$$\sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{ik}-l_k-j_{sa}^{ik}-j_{sa}^{ik}-n_{ik}}} \sum_{\binom{()}{(n_{ik}+j_{sa}^{ik}-s-l_k-j_{sa}^s)!}} \frac{(n_{ik}+j_{sa}^{ik}-s-l_k-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-l_k-j_{sa})! \cdot (n_{ik}+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s - l - 1)!}{(D + j_{sa} - l_{sa} - s - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l = l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq n + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_{sa} \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = l_i > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ & \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}-j_{sa}-j_{sa}^{ik}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\ & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \\ & \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_{ik} + j_{sa} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$-j_{sa}^{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z,j_{ik},j^{sa}} = \sum_{k=l}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-j_{sa}^{ik}+1} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_{ik}-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i-j_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_{sa}-n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} + \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{j_{sa}^{ik}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(l_s + j_{sa} - \mathbf{n} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - s)! \cdot (\mathbf{n} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\cdot)} \sum_{j_{sa}^{ik}=j_{sa}+1}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z \mathcal{S}_{j_{ik}, j^{sa}} = & \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} - \mathbb{k}_1 + 1)}^{(j_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{j^{sa} = j_{sa} + 1}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \right. \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_i - n_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j^{sa} = j_{sa} + 2}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \right. \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\ & \left. \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \right) \end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{sa}^{ik}+1}^{l_{sa}-l+1} j_{sa}^{ik+2}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n_{sa}-j_{ik}+1}^{(n_i-j_{ik}-l_{ik}-1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{ik} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=l}^{()} \sum_{j_{sa}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{j_{sa}=j_{sa}^{ik}+1}^{l_s+j_{sa}-l}$$

$$\begin{aligned}
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - l_i)! \cdot (\mathbf{n} - j_{sa} - j^{sa} - s)!} \cdot
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 > l_s \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{ik} < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\},$$

$$s \geq 6 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 - \mathbb{k}_1 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z^S j_{ik}, j^{sa} &= \left(\sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{(l_{ik} - l + 1)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \left. \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \right) \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_{sa}-l+1} \right) \cdot$$

$$\sum_{n_i=n+l_{sa}-j_{sa}-l_{ik}}^n \sum_{(n_{is}=n+l_{sa}-j_{sa}-l_{ik})}^{(n_i-j_{sa}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-l_{sa}-j_{sa}^{ik}+1)} \cdot$$

$$\frac{(n_{ik} - j_{ik} - l_{sa} - j_{sa}^{ik} + 1)!}{(j_{ik} - j_{sa}^{ik} - 1)! \cdot (n_{ik} - j_{ik} - l_{sa} - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - j_{ik} - l_{sa} - j_{sa}^{ik} + 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - l_{sa} - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)}$$

$$\sum_{n_i=n+l_{sa}-j_{sa}-l_{ik}}^n \sum_{(n_{is}=n+l_{sa}-j_{sa}-l_{ik})}^{(n_i-j_{sa}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-l_{sa}-j_{sa}^{ik}+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{sa}-j_{sa}^{ik})}^{(n_{sa}-1)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge s = 0 \wedge$$

$$j_{sa}^i \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{ \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j \} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k}_1 \neq \mathbb{k}_2 \wedge z = 2 \Rightarrow$$

$$f^z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - j_{sa}^{ik} - j_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j=j_{sa}^{ik}+1}^{n_{ik} - j_{sa}^{ik}} \sum_{n=n+\mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_{is}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - n - s \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D - l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}^{ik}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-n_{ik}-\mathbb{k}_1+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ & \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} \right) + \\ & \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \left. \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \right) \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{(j_{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik})}^{(l_{ik}-l+1)} \cdot \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}+j_{ik}+1)}^{(n_{ik}-j_{ik}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{sa}-j_{sa}+1)} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (j_{sa} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l-1)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s \leq 6 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \right).$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j_{ik}=j_{sa}^{ik}+j_{sa}^{sa}-j_{sa}^{ik}-j_{sa}^{sa}-1)}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}-1}^{n-D} \right) \cdot \\
& \sum_{n_i=n+l_{ik}}^n \sum_{(n_{ik}=n+l_{ik}-j_{ik}+1)}^{(n_i-j_{ik}-l_{ik}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-l_{ik}+1} \\
& \frac{(n_i - n_{ik} - l_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - j_{ik} - l_{ik} - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{ik})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{l_{ik}-l+1} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}-1}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l_{ik}}^n \sum_{(n_{ik}=n+l_{ik}-j_{ik}+1)}^{(n_i-j_{ik}-l_{ik}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-l_{ik}+1} \\
& \frac{(n_i - n_{ik} - l_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - 1)!} \cdot$$

$$\sum_{n_{ik}=l_i+n_{sa}-j_{sa}^{ik}-D-s}^{(l_i+j_{sa}^{ik}-l)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(n_{ik}+j_{sa}^{ik}-l)} j^{sa-j_{sa}^{ik}}$$

$$\sum_{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^n \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(n_{i}-j_s+1)}$$

$$\sum_{n_{is}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D - \mathbf{n} < l \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n-j_{ik}-\mathbb{k}_1+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \frac{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)!}{(j_{ik}-2)! \cdot (n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{sa}-j_{sa}^{ik}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}-j_{ik}-s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_{ik}, j_{sa}} = \sum_{l=l_i}^{j_{ik}} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{j_{ik}+j_{sa}-l-s+1} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l} \sum_{\binom{()}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}}} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - s)!}{(l_s + j_{sa}^{ik} - j_{ik} - s)! (j_{ik} + j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - s)!}{(D + j_{sa} + s - n - j_{sa}^s)! (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n \leq l_{sa} \leq n + l_s + j_{sa} - n \wedge$$

$$D \geq n < n \wedge l \wedge \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_2 - j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq s = s + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_z: z = 2, \dots, \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{\binom{(l_i+j_{sa}^{ik}-l-s+1)}{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_{ik}-\mathbb{k}_1+1)}{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{ik} = l_{ik} + n - l_{sa} - j_{sa}^{ik}}^{(l_{ik} + j_{sa}^{ik} - l)} \sum_{j_{sa} = n_{sa} - j_{sa}^{ik}}^{(n_i - j_s + 1)}$$

$$\sum_{n_{is} = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}$$

$$\sum_{k=n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_i - j_s + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_i - j_s + 1)}$$

$$\frac{(l_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq \mathbf{n} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(j_{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = l_i + j_{sa} - D - s}^{n_{sa} - j_{sa} - 1} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-l_{sa})}^{()} \sum_{(j^{sa}=l_{sa}+n_{sa}-j_{sa}^{ik}-l_{sa})}^{()} j^{sa}.$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}^{()} (n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})}^{()} (n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})$$

$$\frac{(n_{ik} + j_{sa} - s - l_{sa})!}{(n_{ik} + j_{ik} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_i + n + j_{sa}^{ik} - D - s - 1)} \sum_{(j_{ik} = l_i + n - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_i + j_{sa} - l - s + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{\binom{D+l+1}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}=j_{sa}+1}^{\binom{D+l+1}{j_{sa}=j_{sa}+1}} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k+j_{sa}-j_{ik}}^{\binom{j_{ik}-k_1+1}{n_{is}=n+k+j_{sa}-j_{ik}}} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}}^{\binom{j_{ik}-k_2+1}{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}}} \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l}^{\binom{D+l+1}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}=j_{sa}+1}^{\binom{D+l+1}{j_{sa}=j_{sa}+1}} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k+j_{sa}-j_{ik}}^{\binom{j_{ik}-k_1+1}{n_{is}=n+k+j_{sa}-j_{ik}}} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}}^{\binom{j_{ik}-k_2+1}{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}}} \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{n_i=n+k}^n \sum_{n_{is}=n+k+j_{sa}-j_{ik}}^{\binom{j_{ik}-k_1+1}{n_{is}=n+k+j_{sa}-j_{ik}}} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}}^{\binom{j_{ik}-k_2+1}{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}}} \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-k_1}^{\binom{D+l+1}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}}^{\binom{j_{ik}-k_2+1}{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}}} \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{sa}}^{(n_{ik}-j_s+1)} \sum_{(n_{ik}+j_{sa}^{ik}-j_{ik}-l_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{sa}-l_{ik})}^{(n_{ik}-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - l_{sa})!}{(n_{ik} + j_{sa}^{ik} - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(l_s + j_{sa} - j_{ik} - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l \neq l \wedge l \leq D - n + 1) \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = l > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + j_{sa}^{ik} - j_{sa} - 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = n + \mathbb{k}_1 - j_{sa} - j_{sa}^{ik} + 1)}^{(n_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2)} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - j_{sa} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(n - l - j_{sa}^{ik})!}{(l_{sa} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \\ &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ &\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{()} \\ &\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\ &\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_i \wedge l_i + j_{sa} - n - j_{sa}^{ik} = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = l_i > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, j_{sa}^{ik}\} \wedge$$

$$s \geq 6 \wedge s = l_{k_1} + l_{k_2} \wedge$$

$$l_{k_2}: z = 2 \wedge l_{k_2} = l_{k_1} + l_{k_2} =$$

$$fz^S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + n - D}$$

$$\sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}}$$

$$\frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa} - l + 1)}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{n_{ik} = n + \mathbb{K}_2}^{(j_{ik} - n_{ik} - 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{(j_{ik} - n_{ik} - j_{sa} - \mathbb{K}_2)}$$

$$\frac{(j_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (j_{ik} - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot$$

$$\frac{(j_{ik} - n_{ik} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (j_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik} = j_{sa}^{ik} + j_{sa}^{ik} - j_{sa})} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1}$$

$$\sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-l)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$\left((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}^{ik} \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$n \geq n < n \wedge I = \mathbb{k} > 0$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j_{sa}=l_{sa}+n-D}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{l=l_{sa}-l+1}^{(l_s+j_{sa}^{ik})} \sum_{j_{sa}^{ik}=j_{sa}^{ik}-D-j_{sa}}^{l_{sa}-l+1} j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} j_{sa}^{ik} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{k1}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k2})}^{(\quad)} \\
& \frac{(n_{ik}+j_{sa}^{ik}-s-l_{k2}-j_{sa}^{ik})!}{(n_{ik}+j_{ik}-n-l_{k2}-j_{sa}^s)! (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-n-1)!}{(D+j_{sa}+s-n-j_{sa})! (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1) \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z^D} j_{sa}^{sa} = \sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - l + j_{sa}^{ik} + 1} \sum_{(j_{ik} = j_{sa}^{ik} + n - D)} \sum_{j^{sa} = l_{sa} + n - D} \sum_{n+l_k}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{j_{ik} - \mathbb{k}_1 + 1} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_{sa}-l+1} j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2 \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+j_{sa}^{ik}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i - j_{ik} - \mathbb{k}_1 - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - j_{sa}^{ik} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} j^{sa}=l_i+n+j_{sa}-D-s \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$(D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + n + j_{sa}^{ik} - D - s)}^{(l_s + j_{sa}^{ik} - l)} \sum_{j^{sa}=j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+\mathbb{k}}^n \sum_{(n_{is}=n)}^{(n_i + \mathbb{k} + 1)} \sum_{j_{ik}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$((D \geq n < n \wedge l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_i \neq l_s \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j_{sa}^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{sa}-\mathbb{k}_1+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-n_{ik}-\mathbb{k}_1+1)} \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} - \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j_{sa}^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l}$$

$$\begin{aligned}
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - l - 1)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 = l_i \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{ik} < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\},$$

$$s \geq 6 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 - \mathbb{k}_1 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \left(\sum_{k=1}^{\quad} \sum_{l(j_{ik} = j_{sa}^{ik})}^{(\quad)} \sum_{j^{sa} = j_{sa}} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \left. \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \right)
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \Bigg) + \\
& \left(\sum_{k=i}^n \sum_{l=0}^{\binom{D}{l}} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-l+1} \right. \\
& \sum_{n_i=n+l}^n \sum_{n_{ik}=n+l-j_{ik}+1}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - n_{ik} - l_{k_1} - 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(n_{sa} - j_{ik} - l_{k_2} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=i}^n \sum_{l=0}^{\binom{D}{l}} \sum_{j_{sa}=j_{sa}} \\
& \sum_{n_i=n+l}^n \sum_{n_{ik}=n_i-j_{ik}-l_{k_1}+1}^{\binom{D}{l}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - l_{k_2} - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - l_{k_2} - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} = & \sum_{k=0}^{(j_{sa} - j_{sa}^{ik})} \sum_{j_{ik}=j_{sa}^{ik}+k}^{(j_{sa} - j_{sa}^{ik})} \sum_{j_{sa}=j_{sa}}^{(j_{sa} - j_{sa}^{ik})} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+\mathbb{k}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa}^{ik} - n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(\mathbf{l}_{ik} - j_{sa}^{ik} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \cdot \end{aligned}$$

$$\sum_{k=0}^{(j_{sa} - j_{sa}^{ik})} \sum_{j_{ik}=j_{sa}^{ik}+k}^{(j_{sa} - j_{sa}^{ik})} \sum_{j_{sa}=j_{sa}}^{(j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{j_{sa}=j_{sa}}^{l_{sa}-{}_i l+1} \sum_{k={}_i l}^{()} (j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k=1}^{\sum_{i=1}^n} \sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - l_i - l_s)! \cdot (n - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = \sum_{i=1}^n l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \leq 2 \wedge \mathbb{k}_z = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$$

$$\sum_{k=1}^{\sum_{i=1}^n} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{j^{sa}=j_{sa}}^{l_{ik}+j_{sa}-l_i-l_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=i}^n \sum_{l=0}^{(n)} \sum_{j_{sa}=j_{sa}^{ik}}^{(n)} \sum_{j_{sa}=j_{sa}^{ik}}^{(n)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n)} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2}^{(n)} \sum_{j_{sa}=j_{sa}^{ik}}^{(n)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D + s - n - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^{ik}\} \wedge$$

$$s \geq 6, \dots = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \dots = \mathbb{k}_1 + 1 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=i}^n \sum_{l=0}^{(n)} \sum_{(j_{ik}=j_{sa}^{ik})}^{(n)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n)} \sum_{n_{sa}=n-j_{sa}+1}^{(n)} \sum_{j_{sa}=j_{sa}^{ik}}^{(n)}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - {}_i l)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!}.$$

$$\sum_{k=0}^{\binom{\mathbf{n}}{s}} \sum_{(j_{ik}=j_{sa}^{ik})} \Gamma_{j^{sa}=\mathbf{n}-j_{ik}+j_{sa}-\mathbb{k}_2}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k} \atop (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2-1) \atop n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^n \sum_{j_{sa}^{ik} \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n_{sa} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - j_{sa}^s = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > \mathbf{n} \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}, \dots, j_{sa}^i, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: Z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \sum_{k={}_i l}^{(l_{ik} - {}_i l + 1)} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - l_i + j_{sa}^i)!}{(l_{ik} - j_{ik} - l_i + j_{sa}^i)! \cdot (j_{ik} - j_{sa}^i - 1)!} \cdot \\
& \frac{(j_{sa}^i - l_i - s)!}{(D + s - n - l_i - s)!} \cdot \\
& \sum_{k=0}^{\binom{D-l_i}{s}} \sum_{l_i} \sum_{j_{sa}^i=j_{sa}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{\binom{D-l_i}{s}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l = l_i \wedge l_i \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^a + j_{sa}^{ik} - j_{sa}^a \wedge$$

$$j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k= {}_i l} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-1)} \frac{(l_{sa}+j_{sa}^{ik}-{}_i l-j_{sa}+1)}{(j_{ik}-2)! \cdot (n_{ik}-j_{ik}-1)!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)!} \cdot \frac{(n_{sa}-1)!}{(n_{ik}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(n_{ik}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!}{(n_{ik}+j_{sa}-l_{sa}-s)!} - \sum_{k= {}_i l} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-n-\mathbb{k}_2-j_{sa}^s)! \cdot (n-s)!} \cdot \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{i=0}^{n-l} \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{ik}-{}_i l+1)} \sum_{j_{sa}=j_{sa}}^{l_{sa}-{}_i l+1} \sum_{i=n+\mathbb{k}}^n \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} (j_{ik} = j_{sa}^{ik}) j^{sa} = j_{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(\infty)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}}^{(\infty)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{K}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{K}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = i l \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$j_{ik} j^{sa} = \left(\sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} (j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}) \sum_{j^{sa}=j_{sa}}^{l_{ik}+j_{sa}-i l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \Bigg) + \\
& \left(\sum_{k=i l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik})} l_{ik} + j_{sa} - i l - j_{sa}^{ik} \sum_{j_{sa} = j_{sa} + 1} \right. \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i l}^{(l_{ik} - i l + 1)} \sum_{(j_{ik} = j_{sa}^{ik})} l_{sa} - i l + 1 \sum_{j_{sa} = l_{ik} + j_{sa} - i l - j_{sa}^{ik} + 2} \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{\infty} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}-j_{ik}-\mathbb{k}_1, \dots, n_{sa}=\mathbf{n}_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbb{k}_2 - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_{sa} \leq D - j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} - 1 \leq j^{sa} - \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 > l_s \wedge j_{sa}^{ik} + j_{sa}^{ik} > l_{ik} \wedge$$

$$\mathbf{n} \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$\mathbf{n} \geq 6 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=1}^{\infty} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-{}_i l+1)} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left(\frac{(j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} - s)!} \right) + \\
& \left(\sum_{k=i l}^{(l_{ik} - i l - 1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-i l+1} \right) \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$

$$\sum_{k=0}^{\infty} \sum_{i=0}^{(\cdot)} \sum_{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{\infty}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbb{k}_2 - j_{sa}^s) \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (n - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - \mathbf{n} > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - \mathbb{k}_1 \wedge j_{sa}^s < j_{sa}^{ik} - \mathbb{k}_2 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 0 \bullet \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z \cdot z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=0}^{\infty} \sum_{i=0}^{(\cdot)} \sum_{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \cdot$$

$$\sum_{k=1}^n \sum_{i=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}}^{(n)} j_{sa}^{sa} = j_{sa}^{sa}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n)} n_{sa}^{sa} = j_{sa}^{sa} - \mathbb{k}_2$$

$$\frac{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D + j_{sa} - n - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} - s)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n - l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{k=1}^{(\quad)} \sum_{i=1}^{(\quad)} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-i+1} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-\mathbb{k}_2}^{n_{ik}+j_{ik}-\mathbb{k}_2} \\ &\frac{(n_{ik}-n_{sa}-\mathbb{k}_1+1)!}{(j_{ik}-2)! \cdot (n_{ik}-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ &\frac{(n_{ik}-n_{sa}-\mathbb{k}_2+1)!}{(j_{sa}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa}-1)!}{(n_{sa}-j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa})!} \cdot \\ &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-j_{sa}-l_{ik})! \cdot (j_{sa}-j_{sa})!} \cdot \\ &\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}-s)!} - \\ &\sum_{k=1}^{(\quad)} \sum_{i=1}^{(\quad)} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-i+1} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{(\quad)} \\ &\frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}_2-j_{sa}^s)!}{(n_{ik}+j_{ik}-\mathbf{n}-\mathbb{k}_2-j_{sa}^s)! \cdot (\mathbf{n}-s)!} \cdot \\ &\frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-s)!} \end{aligned}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right)$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l} \sum_{(j_{ik}=l_{ik}+\mathbf{n}-D)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right.$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (l_{ik} - j_{sa})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l} \sum_{(j_{ik}=l_{ik}+\mathbf{n}-D)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa})} \Delta_{(l+n)}^{(l)} l_{ik+j_{sa}^{sa}} - j_{sa}^{ik} + 1$$

~~$$\sum_{i \in \mathbb{N} + \mathbb{K}} (n_{is} + \mathbb{K} + j_{sa}^{ik} - j_{ik})$$~~

$$n_{ik} = n_{is+j_{sk}} - \sum_{a=1}^{k-1} (n_{ik+j_{ik}} - j^{sa} - \mathbb{k}_2)$$

$$\frac{(n + \mathbb{k}_1 + j_{sa}^{ik} - j_{ik} - n - j_{sa}^s)!}{(n + \mathbb{k}_1 - j_{ik} - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j_{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

~~$((D \geq n < n \wedge \alpha) \rightarrow D - n - 1 \wedge$~~

$$D + l_{sa} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ti} \leq j^{sa} + j_{ti} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} = j_{sa}^{\text{ik}} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik}) \vee$$

$$(D - n \wedge l_s) > D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l_{sa}+1)} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(n-D)} j_{sa}^{sa=l_{sa}+j_{sa}^{ik}-D} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_{is}-j_{ik}+1)}^{(j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(j_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} j_{sa}^{sa+1} \frac{(n_{ik}-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_{ik}-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa}^s - j_{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k}_1 = 0 \wedge$$

$$j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^s + 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} \leq s + \mathbb{k} \wedge$$

$$z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j_{sa}} = \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})} j_{sa}^s = j_{ik}+j_{sa}-j_{sa}^{ik} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{n+n+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}=n-D)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}=n-j^{sa}+1} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(n_i - j_{ik} - l_{k_1} + 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - j^{sa} - s)!}{(D + j_{sa} - n - j_{sa}^{ik})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(\quad)} \\
& \frac{(n_{ik} + l_{k_1} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k_1} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}-s+n+j_{sa}^{ik}-D-1)}^{l_{sa}-l+1} j^{sa}=l_s+j_{sa}-l+1 \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{lk}-l)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} + j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa} - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{lk} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - \mathbf{n} - j_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{lk}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z^s} S_{i_{ik}, j_{sa}} = \sum_{k=l}^{(l_s - j_{sa}^{ik} - l)} \sum_{(j_{ik} = n + j_{sa}^{ik} - D + 1)}^{(l_s - j_{sa}^{ik} - l)} \sum_{j_{sa} = l_{sa} + n - D}^{l_{sa} - l + 1} \frac{(n_i - j_{sa}^{ik} - \mathbb{k}_1 + 1)}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - j_{sa} - j_{sa}^{ik} - 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} > 0 \wedge$$

$$D \geq n < n \wedge l_s - \mathbb{k}_k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa} \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^s = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (D + j_{sa} - j^{sa})!} + \\
& \left(\sum_{k=l}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik}} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik})} \sum_{l_{sa}-l+1}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)}^{n_i-j_{ik}-l_{sa}^{ik}} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{sa}^{ik}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{l_{sa}-l+1}^{l_{sa}-l+1}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(n + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)}^{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l}^{\left(\begin{array}{c} l_{ik} + j_{sa} - l_{sa} - j_{sa}^{ik} + 1 \\ j_{sa} + j_{sa}^{ik} - j_{sa} \end{array} \right)} \sum_{j_{sa} = l_{sa} + n - D}^{l_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{n_i = n + \mathbb{k}_1}^{n} \sum_{n_{sa} = n - j^{sa} + 1}^{n - j_{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\ & \sum_{k=l}^{\left(\begin{array}{c} l_s + j_{sa} - l \\ j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa} \end{array} \right)} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_s + j_{sa} - l} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik}}^{(n_i - j_s + 1)} \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{lk}-j_{sa})}^{(l_s+j_{sa}-l)} j^{sa=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_{ik}-j_{ik}+1)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa})! (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l+1)!}{(l_s+j_{sa}-j_{ik}-1)! (j_{ik}-j_{sa}-1)!} \cdot \\
& \frac{(D-n)!}{(D+j_{sa}+s-n-j_{sa})! (n+j_{sa}-j_{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k}_1 = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i - \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i - \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=l_i+1}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}-D-s}^{(j_{sa}^{ik}-l_{sa}-1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}-l_{sa}}^{(n_i-j_s+1)} \\
& \sum_{\mathbb{k}=\mathbf{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{\mathbb{k}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik})}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2)} \frac{(n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j_{sa})!} \cdot \frac{(n_{ik} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(n_{ik} - l - j_{sa}^{ik})!}{(n_{ik} - j_{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(\quad)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik}, j_{sa}^{ik}} \sum_{j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1}^{(j_{ik} - j_{sa}^{ik} - j_{sa})} \sum_{j_{sa}^{ik} = l_i + \mathbf{n} + j_{sa} - D - s}^{l_s + j_{sa} - l} \\ & \sum_{n_{ik} = \mathbf{n} + \mathbb{k}}^{(n_i - \mathbf{n} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l-s+1}^{l_s+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - 1)!}{(n + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1)!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - n - j_{sa}^{ik})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{sa}^{ik}} = \sum_{k=l}^{(l_i+n+j_{sa}^{ik}-D-s)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} j_{sa}^{sa=l_i+n+j_{sa}-D-s} \sum_{n_{ik}=n_{sa}+1}^n \sum_{(n_{ik}=n_{sa}+1)}^{(n_{ik}-\mathbb{K}_1+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} \sum_{j_{sa}^{sa=j_{ik}+j_{sa}-j_{sa}^{ik}}}^{(l_i+j_{sa}-l-s+1)}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - \mathbf{n} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{l=\mathbf{l}}^{(l_{ik}-l)} \sum_{j_{sa}^{ik}=\mathbf{l}}^{(j_{sa}^{ik}-D-j_{sa})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j^{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{sa}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{sa}-l_{ik})}^{(n_{ik}+l_{k_1}+j_{ik}-s-n-l_{sa})!}$$

$$\frac{(n_{ik} + l_{k_1} + j_{ik} - s - n - l_{sa})!}{(n_{ik} + j_{ik} + l_{k_1} - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s + j_{sa} - j_{ik} - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z \mathcal{S}_{j_{ik}, j_{sa}} = & \sum_{k=l}^{\sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})} (l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_{ik}-\mathbb{k}_1+1)} (n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{sa}+1)}^{\sum_{(n_i-j_{ik}-\mathbb{k}_1+1)} (n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \cdot \\ & \sum_{k=l}^{\sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-s)} (l_{sa}+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_{sa}+1)} (n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{\sum_{(n_i-j_{sa}+1)} (n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \\ & \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\binom{()}{(n_{is}+\mathbb{k}_1)+j_{ik}}}^{(n_{is}+\mathbb{k}_1)+1}$$

$$\frac{\sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_2}}}^{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_2}}{\sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_2}}}^{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_2}} \cdot \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - j_{sa}^s)! \cdot (j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(j_{sa}^{ik} - l - 1)!}{(j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\begin{aligned} & ((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \\ & j_{ik}^{ik} + 1 \leq j_{ik}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq \mathbf{n} + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \\ & j_{sa}^{ik} - 1 \leq j_{ik}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})) \wedge \end{aligned}$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = \mathbf{s} + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} - \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$((D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz^S_{j_{ik}, j_{sa}} = \sum_{k=l}^{j_{sa}^{ik}-j_{sa}} \sum_{(j_{ik}=\mathbf{l}_{ik}+\mathbf{n}-D)}^{j_{sa}^{ik}-j_{sa}} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1} \\ \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{n_{ik}+j_{ik}-j^{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-l_{k1}+1)} \sum_{n_s=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - j_{sa}^{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_{sa}+n-D}^{n_{ik}+j_{ik}-j^{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-l_{k1}}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{()} \\
& \frac{(n_{ik} + l_{k1} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k1} - n - n - j_{sa}^{ik})! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_{ik}} \sum_{k=l}^{(l_i + \mathbf{n} + j_{sa}^{ik} - D - s - 1)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s} \\ & \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} j_{sa}^{sa=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(j^{sa} - n_{sa} - 1)!}{(j^{sa} - n_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} j_{sa}^{sa=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, \mathbb{k}_{j_{sa}^s}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_{z=2}^{s, j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}-k+n-D)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{sa}+n-D}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}^{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{i,j_{sa}}^{j_{sa}} = \sum_{k=l}^{\binom{j_{sa}}{j_{ik}+j_{sa}^{ik}-j_{sa}}} \sum_{n_i=n+\mathbb{k}}^{\binom{j_{sa}}{j_{ik}+j_{sa}^{ik}-j_{sa}}} \sum_{n_{sa}=n-j_{sa}+1}^{\binom{j_{sa}}{j_{ik}+j_{sa}^{ik}-j_{sa}}} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{j_{sa}}{j_{ik}+j_{sa}^{ik}-j_{sa}}} \sum_{n_i=n+\mathbb{k}}^{\binom{j_{sa}}{j_{ik}+j_{sa}^{ik}-j_{sa}}} \sum_{n_{sa}=n-j_{sa}+1}^{\binom{j_{sa}}{j_{ik}+j_{sa}^{ik}-j_{sa}}} \frac{(n_i - j_s + 1)!}{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})!}$$

$$\begin{aligned}
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^{ik}\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
j_{ik}, j^{sa} &= \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{(l_s + j_{sa}^{ik} - l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}
\end{aligned}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+lk}^n \sum_{(n_{is} = n - j_{sa}^{ik} - j_{ik})}^{(n_{is} = n - j_{sa}^{ik} - j_{ik})}$$

$$\frac{(n_{ik} + lk_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} + lk_1 - n - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik}^{ik} + 1 \leq j_{ik} \leq j_{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge lk > D \wedge$$

$$j_{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, lk_1, \dots, lk_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 1 \wedge s = s + lk \wedge$$

$$lk_z: z = 2 \wedge lk = lk_1 + lk_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j_{sa} = l_i + n + j_{sa} - D - s}^{l_i + j_{sa} - l - s + 1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_s - l - j_{sa} - s)!}{(l_i + j_{ik} - \mathbf{n} - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - \mathbf{n} + 1 \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_i + j_{sa}^{ik} - l - s + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - l - s + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(n - j_{ik} - l - s + 1)} \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{is} = n + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{sa} + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{(n_{sa} - j_{ik} + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{(n_{sa} - j_{ik} + 1)} \frac{(n_i - n_{ik} - j_{ik} - 1)!}{(n_{ik} - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - n_{ik} - j_{ik} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(n_i - j_s + 1)} \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{(\quad)} \frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{l_s + j_{sa} - l}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D, j_{sa} = l_s + j_{sa}^{ik} - l + 1)}^{(l_s + j_{sa}^{ik} - l)} \cdot$$

$$\sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 - 1)}^{(n_i - j_{ik} - 1)} \sum_{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{ik} + j_{ik} - j^{sa} - 1)} \cdot$$

$$\frac{(n_i - n_{ik})!}{(n_i - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1}$$

$$\sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^{ik} - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \Rightarrow 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \leq 4 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{l_{sa} - l + 1}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-j_{sa}^{ik}, j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-j_{sa}^{ik}, j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \frac{n}{\sum_{n_i=n+\mathbb{k}_2}^n \sum_{(j_{ik}=n+\mathbb{k}_2-j_{sa}-j_{sa}^{ik}-1)} \sum_{(j_{ik}=n+\mathbb{k}_2-j_{sa}-j_{sa}^{ik}-1)} \frac{(n_i-l_{ik}-1)!}{(j_{ik}-l_{ik}-1)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{sa}-n_{sa}-1)!}{(n_{sa}-j_{sa}-n_{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\substack{(\quad) \\ (n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_s + j_{sa}^{ik} - j_{sa}^s - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\},$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k}$$

$$\mathbb{k} - z = 2 \wedge \mathbb{k} \leq \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+j_{sa}-l} \sum_{j^{sa}=j_{sa}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - l_s + j_{sa} - l + 1)}^{(j_{ik} - j_{sa}^{ik} - l + 1)}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - 1)}^{(n_i - j_{ik} - 1)} \sum_{(n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}$$

$$\frac{(n_i - n_{ik})!}{(n_i - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{sa} - n_{sa})!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = j_{sa} + 1}^{l_s + j_{sa} - l}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{is} = n + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)} \sum_{j^{sa} = j_{sa} + 2}$$

$$\sum_{n_i = n + k_1}^n \sum_{(n_{ik} = n + k_2 - j_{ik} + 1)}^{(n_i - j_{ik} - k_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1}$$

$$\sum_{n_i = n + k_1}^n \sum_{(n_{ik} = n + k_2 - j_{ik} + 1)}^{(n_i - j_{ik} - k_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-l} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \right)$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - j_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} j_{ik}^{sa} j_{sa}^{ik} &= \sum_{k=l}^{(l_{ik}-1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(l_{ik}-1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-1)} \\ &\sum_{n=\mathbb{K}}^{(n_i-\mathbb{K}_1+1)} \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{(n_i-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \\ &\left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \right) \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(n + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik}, j_{sa} = \left(\sum_{k=1}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} - j_{sa}^{ik} - 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \right) + \left(\sum_{k=1}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{j_{sa}^{ik} - l_{sa} - l + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{j_{sa}^{ik} - l_{sa} - l + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \right)$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - j^{sa} - j_{sa}^{ik} - j_{ik} - 1)!}{(D + j^{sa} - \mathbf{n} - j_{sa}^{ik} - j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} - s)!} \cdot \\
& \sum_{k=j_{sa}^{ik}+1}^{j_{sa}^{ik}-l} \sum_{k=j_{sa}^{ik}+1}^{j_{sa}^{ik}-l} \sum_{a=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^{ik})! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$j_{sa}^{ik} \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{(j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(n_{is} + j_{ik} - j_{sa} - \mathbb{K}_2)} \sum_{j_{sa} + 1}^{j_{sa}^{ik} + 1} \frac{(n_{ik} + n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} + n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\binom{(\quad)}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa}^s - j_{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \Rightarrow 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s - \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \leq 4 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l} \sum_{\binom{(\quad)}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(n_i-j_{ik}-\mathbb{k}_1+1) \\ (n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \right).$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - 1} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{sa} - l - j_{sa}^{ik} + 1} \sum_{n = n - D}^{n - l - j_{sa}^{ik} + 1} \right) \cdot \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1) \atop n_{ik} = n - j_{sa} + 1}^{(n_i - j_{ik} - 1) \atop n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_i - n_{ik} - j_{ik} + 1) \atop n_{sa} = n - j^{sa} + 1}^{(n_i - n_{ik} - 1) \atop n_{sa} = n - j^{sa} + 1} \cdot \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \sum_{n = n + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1) \atop n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{(n_i - j_{ik} - 1) \atop n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{sa} = n - j^{sa} + 1} \cdot \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (D + j_{sa} - j^{sa} - 1)!} \cdot$$

$$\sum_{k=0}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{k} \cdot \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{j_{ik} - j^{sa} - j_{sa}^{ik} + j_{sa}} \cdot \sum_{j_{sa} = n - D - s}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{j_{sa} - n - D - s} \cdot$$

$$\sum_{i=0}^{n - j_{sa} + 1} \binom{n - j_{sa} + 1}{i} \cdot \sum_{j_{sa} = n + k_1}^{n - j_{sa} + 1} \binom{n - j_{sa} + 1}{j_{sa} - n - k_1} \cdot \sum_{j_{sa} = n + k_1}^{n - j_{sa} + 1} \binom{n - j_{sa} + 1}{j_{sa} - n - k_1} \cdot$$

$$\sum_{j_{sa} = n_{is} + j_{sa}^s - j_{sa}^{ik} - k_1}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{j_{sa} - n_{is} - j_{sa}^s + j_{sa}^{ik} + k_1} \cdot \sum_{j_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{j_{sa} - n_{ik} - j_{ik} + j^{sa} + k_2} \cdot$$

$$\frac{(n_{is} + j_{sa}^s - j_{sa}^{ik} - k_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} - j^{sa} - k_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$D + j^{sa} + s - n - l_i - j_{sa} \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa}^{ik} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge$$

$$j_{sa}^{ik} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S j_{ik} j_{sa} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1}^{(n_i-j_{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{(n_i-j_{ik}+1)} \frac{(n_i-j_{ik}+1)!}{(j_{ik}-l_i+1)! (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}+j_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} -$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_{ik}+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1}^{(n_i-j_{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{(n_i-j_{ik}+1)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-l} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_s + n - D}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \right. \\
& \sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{ik} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa} - 1)! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S j_{ik} j_{sa} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} j_{sa} = l_{sa} + n -$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} j_{sa} = n +$$

$$\frac{(n_{ik} + n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} + n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} + n_{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j_{sa})!} \cdot$$

$$\frac{(n_{ik} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot$$

$$\frac{(n_{ik} - l - j_{sa}^{ik})!}{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fzS_{j_{ik}^{sa}} = \left(\sum_{i=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right.$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (l_{ik} - j_{sa})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-j_{sa}^{ik})} \sum_{(j_{sa}=j_{ik}+j_{sa}^{ik}-j_{sa}^{ik})} \sum_{(n_i-j_{sa}^{ik})} \sum_{(n_i+l_k+j_{sa}^{ik}-j_{ik})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{sa}-l_{k_1})} \sum_{(n_{ik}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
& \frac{(l_{ik} + l_{k_1} + j_{sa}^{ik} - l_{sa} - n - j_{sa}^s)!}{(l_{ik} + l_{k_1} - n - j_{sa}^{ik})! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n - 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{ik}} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\ \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\ \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\ \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ \left. \frac{(l_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\ \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\ \left. \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \right)$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k} - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_s = \mathbf{n} + j_{sa}^{ik} - j_{ik} - \mathbb{k}_2 + 1)}^{n_{ik} + j_{sa} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - j_{ik} - 1)!}{(n_i - j_{ik} - 2)! \cdot (n_i - j_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{sa} - j_{sa} - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_{sa} + j_{ik} - j_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{sa}^{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{k=l}^{l+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_{sa} \leq D + s - n \wedge$$

$$D \geq n < n \wedge l - i \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^{ik} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz^S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=0}^{l_s + j_{sa}^{ik} - l_{ik} - 1} \sum_{l=0}^{j_{ik} - j_{sa}^{ik} - 1} \sum_{s=0}^{n - j_{sa} - j^{sa} - s} \cdot$$

$$\sum_{n+l_k}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + l_k + j_{sa}^{ik} - j_{ik})} \cdot$$

$$\sum_{k=n_{is} + j_{sa}^s - j_{sa}^{ik} - l_{k_1}}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - l_{k_2})} \cdot$$

$$\frac{(n_{ik} + j_{ik} + l_{k_1} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k_1} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - l_i) \leq n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$S_{j_{ik}, j_{sa}} = \sum_{k=0}^{(j_{ik}+j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1} \sum_{n_{ik}=\mathbf{l}_i+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}-j_{ik}+1)}^{(n_{ik}=\mathbf{l}_i+\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \sum_{k=\mathbf{l}}^{(\mathbf{l}_{ik}-\mathbf{l}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_i+j_{sa}-\mathbf{l}-s+1} \sum_{j^{sa}=\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+2}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - n - s)!}{(n + j^{sa} - n - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(n)} \sum_{(j_{ik} + j_{sa}^{ik} - j_{sa})}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j^{sa}=l_i + n + j_{sa} - D - s}^{(n)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + s - \mathbf{n} < \mathbf{l}_i \leq D + \mathbf{l}_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{l=0}^{\mathbf{l}} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{ik}+j_{sa}-l-s-1)} \sum_{j_{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_i+j_{sa}-l-s+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j_{sa} - \mathbf{l}_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{sa} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(j^{sa} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - 1)!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^{ik})! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{i=0}^{(j_{sa}^{ik} - j_{sa})} \sum_{j_{sa}^{ik}+1}^{l_s + j_{sa} - l} \sum_{j_{sa}^{ik}+1}^{j_{sa}^{ik} - j_{sa} - D - s} \\ & \sum_{i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_s+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1)!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik} j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-D-s+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_i+j_{sa}-l-s+1} \sum_{j=l_i+n+j_{sa}-D-s}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1)!}{(l_i - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z, s_{ik}, j^{sa}} = \sum_{k=l}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{ik}=j_{sa}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{ik}=j_{sa}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l_i - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l_i - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - l)! \cdot (\mathbf{n} - j_{sa}^s - j_{sa}^{ik} - j_{ik} - l)!} \cdot$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s \leq l_i \wedge l_{sa} - s > j_{sa}^{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} - s - \mathbf{n} - j_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik} - j_{sa} - 1\} \wedge$$

$$s \geq \mathbb{k}_1 \wedge s = s + \mathbb{k}_1 \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - l)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}, j^{sa}=l_i+\mathbf{n}+j_{sa}-D)}^{(\quad)} \sum_{(j_{ik}-l_{ik}+j_{sa}^{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(\quad)} \sum_{(j_{sa}^{ik}-j_{sa}^{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{(n_{is}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1)}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(l_{sa} + \mathbb{k}_1 + j_{sa}^s - s - \mathbf{n} - j_{sa}^s)!}{(j_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
 &\frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}+1)!} \cdot \\
 &\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 &\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 &\frac{(l_{ik}-l_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
 &\frac{(D+j^{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 &\frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
 &\frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
 \end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s + s - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(n_i-j_{sa}^{ik}-\mathbb{k}_1+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_{sa}+j^{sa}-\mathbf{n}-1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_{sa}+j^{sa}-\mathbf{n}-1)}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_{sa}+s-n-j_{sa}^{ik}-j_{ik}-l)! \cdot (n-j_{sa}-j_{sa}^s-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s \leq l_i \wedge l_{sa} - s > l_i \wedge$$

$$D + s - n < l_i \leq D + l_s \wedge s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik} - j_{sa} - 1\} \wedge$$

$$s \geq 0 \wedge s = s + \mathbb{k}$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}
\end{aligned}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{l=1}^{(j_{sa}^{sa} - j_{sa})} \sum_{\substack{j_{ik} = j_{sa}^{ik} + 1 \\ (n_i - j_{ik} - \mathbb{K}_1 + 1) \geq 0}} \sum_{\substack{j_{sa} = j_{sa} + 1 \\ (n_{sa} - j_{sa} - \mathbb{K}_2 + 1) \geq 0}} \sum_{\substack{n_i = n + \mathbb{K} \\ (n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1) \geq 0}} \sum_{n_{sa} = n - j_{sa} + 1}^{(j_{sa}^{sa} - j_{sa}) l_{ik} + j_{sa}^{ik} + 1} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{\substack{j_{ik} = j_{sa}^{ik} + 1 \\ (n_i - j_{ik} - \mathbb{K}_1 + 1) \geq 0}} \sum_{\substack{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2 \\ (n_{sa} - j_{sa} - \mathbb{K}_2 + 1) \geq 0}} \sum_{\substack{n_i = n + \mathbb{K} \\ (n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1) \geq 0}} \sum_{n_{sa} = n - j_{sa} + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (n_{sa} + j_{sa}^{ik} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik}}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$(\mathbf{n} > \mathbf{n} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_2: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$j_{sa}^{ik} j_{sa}^{sa} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n} \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{j_{ik}-\mathbb{K}_1+1} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - 1)! \cdot (j_{ik} + j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - \mathbf{n} - 1)!}{(D + j_{sa}^s + s - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa} - j_{sa}^s - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1) \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - \mathbf{n} - l_s \leq D + l_s + s - \mathbf{n} - 1) \wedge$$

$$(D \geq \mathbf{n} < n \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} - l_s \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D + s - \mathbf{n} - l_s \leq D + l_s + s - \mathbf{n} - 1) \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_{ik})}^{(n_{ik}+1)}$$

$$\frac{\sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_1-j_{sa}-n_{ik})} \sum_{(n_{ik}+\mathbb{k}_1-j_{sa}-j_{sa}^{ik}-n-j_{sa}^s)!}}{(n_{ik}+j_{sa}+\mathbb{k}_1-n-j_{sa}^{ik}-j_{sa}^s)! \cdot (n_{ik}+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(D + j_{sa} - l - 1)!}{(D + j_{sa} - l - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + l_i - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq n + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_{sa} \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j_{sa}^{sa}+n-D}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} - j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j_{sa}^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{(n_{is}=n+\mathbb{k}_1+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_2)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(l_{ik} + \mathbb{k}_1 + j_{sa}^s - s - \mathbf{n} - j_{sa}^s)!}{(j_{ik} + j_{ik} + \mathbb{k}_2 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$-j_{sa}^{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z,j_{ik},j_{sa}}^{s,j_{ik},j_{sa}} = \sum_{k=l}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-1} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_{ik}-j_{ik}+1)}^{(n_i-j_{ik}-j_{sa}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(n_i - n_{ik} - j_{ik} + 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{j_{sa}^{ik}-1} \sum_{j_{sa}^{ik}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_s - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\quad)} \sum_{j_{sa}^{ik}=j_{sa}+1}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq \mathbf{l} \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^{\left(j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \right)} \sum_{j_{sa} = j_{sa} + 1}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{n_i = n + \mathbb{K}_1}^n \sum_{n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) +$$

$$\left(\sum_{k=l}^{\left(j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \right)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = j_{sa} + 2}^{j_{sa} + j_{sa}^{ik} - j_{sa} - 1} \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right)$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{sa}^{ik}+1}^{l_{sa}-l+1} j_{sa}^{ik+2}$$

$$\sum_{n_i=n+l_2}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)}^{(n_i-j_{ik}-l_{sa}-1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=l}^{()} \sum_{j_{sa}=j_{sa}^{ik}+j_{sa}}^{()} \sum_{j_{sa}=j_{sa}^{ik}+1}^{l_s+j_{sa}-l}$$

$$\begin{aligned}
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^i - j_{sa}^{ik} - \mathbb{K}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - n - j_{sa}^i)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - n - n - j_{sa}^i)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa} + s - n - j_{sa}^{ik} - j_{ik} - l_i)! \cdot (n - j_{sa} - j_{sa}^{ik} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^i + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^i \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 > l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{ik} \leq j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{ik} - \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}^{ik} + 1, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s - \mathbb{K} \wedge$$

$$\mathbb{K}_2 = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned}
f_Z^S_{j_{ik}, j_{sa}} &= \left(\sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{(l_{ik} - l + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \right. \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \left. \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \right)
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+l+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_s+l+1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^n \sum_{(n_i-j_{ik}+\mathbb{k}_1+1)}^{(n_i-j_{ik}+\mathbb{k}_1+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{n_{ik}+j_{ik}-\mathbb{k}_2} \\
& \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik}+1)}^{(n_i-j_{ik}+\mathbb{k}_1+1)} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{n_{ik}+j_{ik}-\mathbb{k}_2} \\
& \frac{(n_i - j_{ik} - 2)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\left((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = l \wedge s = 0 \wedge$$

$$j_{sa}^i \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{ \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i \}.$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k}_Z = \mathbb{k}_Z - 1 \wedge z = 2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - \mathbf{n})!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j=j_{sa}^{ik}+1}^{n_{ik} - j_{sa}^{ik}}$$

$$\sum_{i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)} (n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})$$

$$\sum_{k=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D > \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D - l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j_{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1})} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-\mathbb{K}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \cdot \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}+j_{ik}+1)}^{(n_{ik}=n+\mathbb{k}+j_{ik}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{sa}=n-j^{sa}+1)} \cdot \\
& \frac{(n_i - 1)!}{(j_{ik} - l + 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa}^s - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} \Rightarrow 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s - \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right.$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + j^{sa} = l_{sa} + n - D)}^{l_{sa} - l + 1} \sum_{j_{sa} = l_{sa} + n - D}^{l_{sa} - l + 1} \right) \cdot \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1)}^{(n_i - j_{ik} - 1)} \sum_{n_{ik} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik})!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s - 1)!} \cdot \\
& \sum_{n_{ik}=l_{ik}+n_{sa}-j_{sa}^{ik}-D-s}^{(l_{ik}+j_{sa}^{ik}-l)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa}}^{(n_{ik}-j_{sa}+1)} \sum_{n_{is}=n+l_{ik}+j_{sa}^{ik}-j_{ik}}^{(n_{is}=n+l_{ik}+j_{sa}^{ik}-j_{ik})} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa}-l_{k_1}}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \cdot \\
& \frac{(n_{ik} + j_{ik} - l_{k_1} - n - n - j_{sa}^s)!}{(n_{ik} + j_{ik} - l_{k_1} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - n - l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n-j_{ik}-1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \\ &\frac{(n_i - n_{sa} - 1)!}{(j_{ik} - l + 1)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j_{ik} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \\ &\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\ &\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{l=l_i}^{j_{ik}+j_{sa}-l-s+1} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{j_{ik}+j_{sa}-l-s+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \\ \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{(\quad)}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}}} (n_i-j_s+1)$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\binom{(\quad)}{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2}} (n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^{ik})!$$

$$\frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^{ik})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!}$$

$$\frac{(l_s-l-s+1)!}{(l_s+j_{sa}^{ik}-j_{ik}-s+1)! \cdot (j_{ik}+j_{sa}^{ik}-1)!}$$

$$\frac{(D-n+1)!}{(D+j_{sa}+s-n-j_{sa}^{ik}-j_{sa}^{ik}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n \leq l_{sa} \leq n + l_s + j_{sa} - n \wedge$$

$$D \geq n < n \wedge l - \mathbb{k}_k \geq 0$$

$$j_{sa} \leq j_{ik} - 1 \wedge j_{sa}^{ik} = j_{ik} - 1 \wedge j_{sa} \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^s = s + \mathbb{k}_1$$

$$\mathbb{k}_z: z = 2, \dots, n = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l} \sum_{\binom{(l_i+j_{sa}^{ik}-l-s+1)}{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_{ik}-\mathbb{k}_1+1)}{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}} \sum_{n_{sa}=n-j^{sa}+\mathbb{k}_2}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{ik} = n - l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa} = n - j_{sa}^{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik}}$$

$$\sum_{n+l_k}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + l_k + j_{sa}^{ik} - j_{ik})}$$

$$\sum_{k=n_{is} + j_{sa}^s - j_{sa}^{ik} - l_{k_1}}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - l_{k_2})}$$

$$\frac{(n_{ik} - l_{k_1} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - l_{k_1} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(j_{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = l_i + j_{sa} - D - s}^{j_{sa} - D - s} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-l_{sa})}^{()} \sum_{(j^{sa}=l_{sa}+n_{sa}-j_{sa})}^{()} j^{sa} = l_{sa} + n_{sa} - j_{sa} - 1$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}^{()} (n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})}^{()} (n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})$$

$$\frac{(l_{sa} + l_{ik} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(j_{ik} + j_{ik} + l_{sa} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_i \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{sa}, j_{sa}^{ik}, l_{sa}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_{ik}, j^{sa}} = & \sum_{k=l}^{(l_i+n+j_{sa}^{ik}-D-s-1)} \sum_{(j_{ik}=l_i+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
 & \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 & \frac{(l_{ik}-l_{sa}-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l_{sa}-j_{sa}^{ik}+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
 & \frac{(l_{ik}+j_{sa}^{ik}-l_{sa}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot
 \end{aligned}$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} j_{sa}^{sa=j_{sa}+1} \\ &\sum_{n_i=\mathbb{k}}^n \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{ik}+1)}^{(j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(j_{ik}-j_{sa}+1)} \\ &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - \mathbb{k}_2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - \mathbb{k}_2 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} - \end{aligned}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j_{sa}^{sa=j_{sa}+1}}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j_{sa}=l_i+n+j_{sa}-D-s$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{ik} - s - n - l_{sa})!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s + j_{sa} - j_{ik} - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$((D \geq n < n \wedge l \neq l \wedge l \leq D - n + 1) \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j^{sa}} = & \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + j_{sa}^{ik} - j_{sa} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{sa} + 1)} \\ & \frac{(n_{sa} - n_{ik} - 1)!}{(j_{sa} - 2)! \cdot (n_{sa} - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(j_{sa} - j_{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - j_{sa} - n - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{sa} - l - j_{sa}^{ik})!}{(l_{sa} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\ & \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{sa} + 1)} \\ & \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\ & \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - \mathbf{n} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = \mathbb{K}_1 + \mathbb{K}_2 \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 =$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{l} \\ &\sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\ &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa} - l + 1)} \sum_{(n_i = n - j_{ik} - j_{sa} - l + 1)} \sum_{(n_{ik} = n + l_{ik} - j_{ik} - j_{sa} - l + 1)} \sum_{(n_{sa} = n - j^{sa} + 1)} \\
& \frac{(n_i - 1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j_{sa}^{ik} + j_{sa}^{ik} - j_{sa})} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = n + l_{ik}}^n \sum_{(n_{is} = n + l_{ik} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$\left((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}^{ik} \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} \Rightarrow I = \mathbb{k} \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^{ik} \geq 4 \wedge j_{sa}^{ik} \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j_{sa}=l_{sa}+n-D}$$

$$\begin{aligned}
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{l=l_{sa}-l+1}^{(l_s+j_{sa}^{ik})} \sum_{j_{sa}^{ik}=j_{sa}-D-j_{sa}}^{l_{sa}-l+1} j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} j_{sa}^{ik} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-l_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{k1}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-l_{k2})}^{()}$$

$$\frac{(n_{ik} + l_{k1} + j_{sa}^{ik} - s - n - j_{sa}^{ik})!}{(n_{ik} + j_{ik} + l_{k1} - n - n - j_{sa}^{ik})! (n + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - 1)! (j_{ik} + j_{sa}^{ik} - 1)!}$$

$$\frac{(D - 1)!}{(D + j_{sa}^{ik} + s - n - j_{sa}^{ik})! (n + j_{sa}^{ik} - j_{sa}^{ik} - s)!}$$

$$((D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1) \vee$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_{z^D}^{j_{sa}^{ik}} = \sum_{k=l}^{j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{(j_{ik} = j_{sa}^{ik} + n - D)} \sum_{j_{sa} = l_{sa} + n - D} \\ \sum_{n+l_{sa}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{j_{ik} - \mathbb{K}_1 + 1} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+j_{sa}^{ik}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{sa} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i - n_{sa} - 1)!}{(n_i + j^{sa} - n_{sa} - 1)! \cdot (n - j^{sa} - j_{sa}^{ik})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - j_{sa}^{ik} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(n_i - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + n + j_{sa}^{ik} - D - s)}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa}=j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+l_k}^n \sum_{(n_{is}=n)}^{(n_{is}=n+1)} \sum_{j_{ik}}$$

$$\frac{(n_{ik} + l_{sa} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{sa} + l_{sa} - n - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa} + l_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot$$

$$\begin{aligned} & ((D \geq n < n + l \wedge l_i \wedge l_s \leq D - n + 1 \wedge \\ & j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_{sa}^{ik} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee \\ & (D \geq n < n + l \neq l_i \wedge l_s \leq D - n + 1 \wedge \\ & j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_{sa}^{ik} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge \\ & D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge \\ & D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee \end{aligned}$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1} \sum_{n_i=\mathbf{n}+\mathbb{K}}^{(n_i-j_{sa}-\mathbb{K}_1+1)} \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{sa}+j^{sa}-\mathbf{n}-1} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_s+j_{sa}-\mathbf{l}}$$

$$\begin{aligned}
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - j_{sa}^{ik} - j_{ik} - 1)! \cdot (n - j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l = i l \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 = l_i \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \Rightarrow 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i \leq j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{s, \mathbb{k}_1}, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^{s, \mathbb{k}_2}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z^{S_{j_{ik}, j^{sa}}} &= \left(\sum_{k=1}^n \sum_{l=1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{j_{sa}^{sa} = j_{sa}}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \right) \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} \right) + \\
& \left(\sum_{k=1}^{\binom{()}{l}} \sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa}-l+1} \sum_{j_{sa}=j_{sa}^{sa}+1}^{l_{sa}-l+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - j_{ik} - \mathbb{K}_1 - 1)!}{(n_i - j_{ik} - \mathbb{K}_1 - 1)! \cdot (n_i - j_{ik} - \mathbb{K}_1 - j_{ik} + 1)!} \cdot \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_i - j_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{\binom{()}{l}} \sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa}-l+1} \sum_{j_{sa}=j_{sa}^{sa}}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{\binom{()}{l}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}^{l_{sa}-l+1} \\
& \frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l} = {}_i \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \Rightarrow 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} = & \sum_{k=0}^{n-j_{ik}-j_{sa}^{ik}+1} \sum_{l=0}^{l_{sa}-j_{sa}^{ik}+1} \sum_{j_{sa}=j_{sa}}^{l_{sa}-j_{sa}^{ik}+1} \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(n_i - j_{ik} - \mathbb{K}_1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa}^{ik})!} \cdot \\ & \frac{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} \cdot \end{aligned}$$

$$\sum_{k=0}^{n-j_{ik}-j_{sa}^{ik}+1} \sum_{l=0}^{l_{sa}-j_{sa}^{ik}+1} \sum_{j_{sa}=j_{sa}}^{l_{sa}-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = \mathbf{n} - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{j_{sa} = j_{sa}}^{l_{sa} - {}_i l + 1} \sum_{k = {}_i l}^{(j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa})}^{(j_{ik}, j_{sa})} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k=1}^n \sum_{l=1}^{(n)} \sum_{j_{sa}=j_{sa}}^{(n)} j_{ik}^{ik} j_{sa}^{sa}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-j_{ik}-l_1+1)}^{(n)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}}^{(n)} \frac{(n_{ik} + l_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_1 - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_1)!}{(D + s - l_1 - l)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = l \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} \leq j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, l_{11}, j_{sa}^{ik}, l_{22}, j_{sa}, \dots, j_{sa}^s\}$$

$$s \geq 4 \wedge s = s + l \wedge$$

$$l_{22}: z \geq 2 \wedge l_{22} = l_{11} - l_{22} \Rightarrow$$

$$\sum_{k=1}^n \sum_{l=1}^{(n)} \sum_{j_{sa}=j_{sa}}^{(n)} j_{ik}^{ik} j_{sa}^{sa} = \sum_{k=1}^n \sum_{l=1}^{(n)} \sum_{j_{sa}=j_{sa}}^{(n)} j_{ik}^{ik} j_{sa}^{sa} = \sum_{k=1}^n \sum_{l=1}^{(n)} \sum_{j_{sa}=j_{sa}}^{(n)} j_{ik}^{ik} j_{sa}^{sa}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n+l_1-j_{ik}+1)}^{(n)} \sum_{n_{sa}=n-j_{sa}+1}^{(n)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=i}^n \sum_{(j_{ik}=j_{sa}^{ik})}^{()} \sum_{j_{sa}=j_{sa}^{ik}}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-\mathbb{k}_2}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - n - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - n - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D + s - n - l_i)!}{(n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, j_{sa}^l\}$$

$$s \geq 4, s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + 1 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=i}^n \sum_{(j_{ik}=j_{sa}^{ik})}^{(l_{sa}+j_{sa}^{ik}-i l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - l + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$\sum_{k=0}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n_{ik}-j_{ik}-l_{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_{ik} + l_{ik} + j_{sa}^{ik} - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k_1} - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - l_{ik} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = l \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}, l_{k_1} - j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s \leq s + l_k \wedge$$

$$l_{k_2}: l = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \sum_{k=0}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - l_i + j_{sa}^{ik} - j_{sa}^s)!}{(l_{ik} - j_{ik} - l_i + j_{sa}^{ik} - j_{sa}^s)! \cdot (j_{ik} - j_{sa}^{ik} - j_{sa}^s)!} \cdot \\
& \frac{(j_{sa}^{ik} - j_{sa}^s - s)!}{(D + s - \mathbf{n} - l_i - n - s)!} \cdot \\
& \sum_{k=1}^{\binom{D}{l_i}} \sum_{l_i} \sum_{j_{sa}^{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}-j_{ik}-\mathbb{k}_1+1)}^{\binom{D}{l_i}} \sum_{n_{sa}=\mathbf{n}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_i \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa}^s \wedge$$

$$j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s = l_{ik} \wedge$$

$$l_{ik} + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=1}^n \sum_{l=1}^{\binom{l_{sa} + j_{sa}^{ik} - i l - j_{sa} + 1}{j_{ik} = j_{sa}^{ik}}} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{\binom{n_i - j_{ik} - \mathbb{k}_1 + 1}{n_{ik} + j_{ik} - j^{sa} - 1}} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{\binom{n_i - j_{ik} - \mathbb{k}_1 + 1}{n_{sa} = n - j^{sa} + 1}} \frac{(n_i - j_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(n - i l - j_{sa}^{ik})!}{(n_{ik} - j_{ik} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(n_{ik} + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} - \sum_{k=1}^n \sum_{l=1}^{\binom{()}{j_{ik} = j_{sa}^{ik}}} \sum_{j^{sa} = j_{sa}}^{\binom{()}{j_{ik} = j_{sa}^{ik}}} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{ik} = n_i - j_{ik} - \mathbb{k}_1 + 1}^{\binom{()}{n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\left((D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{i=0}^n \sum_{l=0}^{(l_{ik}-i+1)} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-i+1} \sum_{i=\mathbf{n}+\mathbb{K}}^n \sum_{n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^n \sum_{i=1}^{(n)} \sum_{j^{sa}=j_{sa}}^{(n)} j_{ik}^{ik}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}}^{(n)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_{ik})!}{(D + s - n - l_{ik})! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} \leq j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 - \mathbb{k}_2 \Rightarrow$$

$$j_{ik} j_{sa} = \left(\sum_{k=1}^n \sum_{i=1}^{(n)} \sum_{j^{sa}=j_{sa}}^{(n)} \frac{l_{ik} + j_{sa} - i l - j_{sa}^{ik} + 1}{j_{sa}^{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \Bigg) + \\
& \left(\sum_{k=i l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik})}^{l_{ik} + j_{sa} - i l - j_{sa}^{ik}} \sum_{j_{sa} = j_{sa} + 1}^{j_{sa} - i l - j_{sa}^{ik}} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i l}^{(l_{ik} - i l + 1)} \sum_{(j_{ik} = j_{sa}^{ik})}^{l_{sa} - i l + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - i l - j_{sa}^{ik} + 2}^{l_{sa} - i l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=0}^{\infty} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{(j^{sa}=j_{sa}^{ik})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1, n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = {}_i l \wedge l_{sa} \leq D - j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j^{sa} + j_{sa} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} - 1 \leq j^{sa} - n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} > l_{ik} \wedge$$

$$n \geq n < n \wedge I = \mathbb{k} \Rightarrow n \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=0}^{\infty} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-{}_i l+1)} \right)$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i\mathbf{l} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i\mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left(\frac{(j_{ik} - j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa} - s)!} \right) + \\
& \left(\sum_{k=i\mathbf{l}}^{(l_{ik} - i\mathbf{l} - 1)} \sum_{j_{sa}^{ik}}^{l_{sa} - i\mathbf{l} + 1} \sum_{j_{sa}^{ik} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - i\mathbf{l} + 1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i\mathbf{l} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i\mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$

$$\sum_{k=1}^n \sum_{i=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \bullet s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z \cdot z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=1}^n \sum_{i=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=1}^n \sum_{i=1}^n \sum_{j=1}^n \sum_{l=1}^n \sum_{m=1}^n \sum_{n=1}^n \sum_{s=1}^n \sum_{t=1}^n \sum_{u=1}^n \sum_{v=1}^n \sum_{w=1}^n \sum_{x=1}^n \sum_{y=1}^n \sum_{z=1}^n \sum_{\substack{j_{ik}=j_{sa}^{ik} \\ j^{sa}=j_{sa}^{sa}}} \sum_{j_{sa}=j_{sa}^{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-n_{ik}-j_{sa}^{sa}-\mathbb{k}_2}^{(n_{sa}=n-n_{ik}-j_{sa}^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n_{sa}^{is})! \cdot (n - s)!} \cdot$$

$$\frac{(D - s - n - l_{sa})!}{(D - s - n - l_{sa})! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \sum_{j_{sa}^{ik} = j_{sa}}^{l_{sa} - i_{l+1}}$$

$$\sum_{n_i = n + \mathbb{K}}^n \sum_{n_{ik} = n_i - j_{ik} - \mathbb{K}_1 + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n_{ik} + j_{ik} - \mathbb{K}_2}^{n_{ik} + j_{ik} - \mathbb{K}_2} \sum_{j_{sa} = n - j_{sa} + 1}^{n_{sa} - j_{sa} + 1}$$

$$\frac{(n_i - n_{ik} - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}{(n_{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \sum_{j_{sa}^{ik} = j_{sa}}^{l_{sa} - i_{l+1}}$$

$$\sum_{n_i = n + \mathbb{K}}^n \sum_{n_{ik} = n_i - j_{ik} - \mathbb{K}_1 + 1}^{(\quad)} \sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq \mathbf{l} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq \mathbf{l} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$\begin{aligned} & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ & \left(\sum_{k=l}^{\left(\sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \right)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1} \right) \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j^{sa} = l_{sa} + n - D}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j^{sa} = l_{sa} + n - D}^{l_{sa} - l + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})} l_{ik}+j_{sa}-j_{sa}^{ik}+1$$

~~$$\sum_{n+\mathbb{K}} \sum_{(n_i-j_s+\mathbb{K}+j_{sa}^{ik}-j_{ik})}$$~~

~~$$n_{ik} = n_{is} + j_{s\ell}^{ik} - \mathbb{1}_{k_1} (n_{is} + n_{ik} + j_{ik} - j^{sa} - \mathbb{1}_{k_2})$$~~

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$((D \geq n < n \wedge \psi \rightarrow D - n = 1) \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ts} \leq j^{sa} + j_{ts} - j_{sa} - 1 \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik}) \vee$$

$$(D - n) \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z^S j_{ik} j_{sa} = \sum_{k=l}^{(l_{ik}-l_{sa}+1)} \sum_{(j_{ik}=n-D) j_{sa}=l_{sa}-D}^{l_{sa}+1} \sum_{n_i=n+k}^n \sum_{(n_{ik}=n_{is}-j_{ik}+1)}^{(j_{ik}-k_1+1)} \sum_{j_{sa}=1}^{j_{ik}+j_{ik}-j_{sa}-k_2} \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^l \leq j_{sa}^{l-1} - 1 \wedge j_{sa}^{ik} = j_{sa}^{l-1} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{l-1}, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = \mathbf{s} + \mathbb{k} \wedge$$

$$z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{n+n+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}=n-D)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}+1)}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{lk}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - j^{sa} - s)!}{(D + j_{sa} - n - j^{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{lk}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{lk}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{lk} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{lk} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{lk} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{j^{sa}=l_{sa}+n-D}^{j^{sa}=l_{sa}-l} \right) \sum_{n_i=n+\mathbb{k}}^{n_i=n+\mathbb{k}} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}=n-j^{sa}+1} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \left(\sum_{k=l}^n \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-l} \right)$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s+l)-1} \sum_{(j_{ik}-s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+l)-l} j^{sa} = l_s + j_{sa} - l + 1 \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\
& \frac{(l_{ik} - 1)!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - n - j_{sa})!}{(D + j_{sa} - n - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 2 \leq \mathbf{l} \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l} = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{i_{ik}, j_{sa}} = \sum_{k=l}^{(l_s - j_{sa}^{ik} - l)} \sum_{(j_{ik} = \mathbf{n} + j_{sa}^{ik} - D + 1)}^{(l_s - j_{sa}^{ik} - l)} \sum_{j_{sa} = l_{sa} + \mathbf{n} - D}^{l_{sa} - l + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \\
& \sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_{is}=n+\mathbb{k}_1+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(l_s-l-1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - j_{sa} - j_{sa}^{ik} - 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} > 0 \wedge$$

$$D \geq n < n \wedge l_s - \mathbb{k}_1 > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq l_s \wedge s = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_2: z = 2 \wedge \mathbb{k}_2 = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z^S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \right. \\
& \sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - l_{sa})!} + \\
& \left(\sum_{k=l}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik} - 1} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik} - 1)}^{l_{sa} - l + 1} \sum_{n=D}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \right) \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + j_{ik} - j_{sa}^{ik} - j_{ik} + 1)}^{n_i - j_{ik} - \mathbb{k}_1 - 1} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} \sum_{j^{sa}=j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)}^{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$j_{sa}^{ik} - j_{sa} = \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{sa}+j_{sa}^{lk}-j_{sa})}^{(l_s+j_{sa}-l)} j^{sa=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{lk}-j_{sa})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}_2)}^{(n_{ik}-j_s+1)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa})!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! (n + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{lk} - j_{ik} - 1)! (j_{ik} + j_{sa}^{ik} - 1)!}$$

$$\frac{(D - 1)!}{(D + j_{sa} + s - n - j_{sa})! (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{lk} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, j_{sa}^l\} \wedge$$

$$s \geq 5 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_z - \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - n_{sa} + 1)!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{j_{ik}=l_i}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}^{ik}=D-s}^{(j_{ik}-l_{sa}^{ik}-D-s)} \sum_{j_{sa}^{ik}=n_{sa}-j_{sa}^{ik}}^{(n_{sa}-j_{sa}^{ik})}$$

$$\sum_{n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{\substack{(\cdot) \\ (n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}}^{(\cdot)}$$

$$\frac{(n_{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - 1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}_2)} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j_{sa} - 1)!}{(n_{sa} - j_{sa} - \mathbf{n} - 1)! \cdot (n - j_{sa})!} \cdot \frac{(n - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} - \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})} \frac{\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(\quad)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \cdots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \cdots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
& \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{ik}=l_s+n+j_{sa}^{ik}-D-1} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{j_{sa}=l_i+n+j_{sa}-D-s} \sum_{n_{ik}=n+l_2-j_{ik}+1}^{n_{ik}=n+l_2-j_{ik}+1} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}=n-j_{sa}+1} \frac{(n_i - n_{ik} - l_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa} - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n_{ik} + j_{sa} - \mathbf{n} - s)!}{(n_{ik} + j^{sa} - \mathbf{n} - s)! \cdot (n_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{l=\mathbf{l}}^{(l_{ik}-l)} \sum_{j_{sa}^{ik}=\mathbf{j}_{sa}^{ik}-D-j_{sa}}^{j_{sa}^{ik}-D-j_{sa}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+l_i+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(l_s+j_{sa}-l)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{ik} - s - n - l_{sa})!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s + j_{sa} - j_{ik} - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z \mathcal{S}_{j_{ik}, j_{sa}} = \sum_{k=l}^{\sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} (l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i=n+\mathbb{k}_1}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{sa}^{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1)} \sum_{n_{sa}=n-j_{sa}^{ik}}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{ik}-j_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \sum_{k=l}^{\sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} (l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{\sum_{()}} \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^{ik})! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} j_{ik}, j^{sa} = \sum_{k=l}^{\quad} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \end{aligned}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa}=l_i+n+j_{sa}-D-s$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{(n_{is}+j_{sa}^{sa}-j_{ik})}}^{(n_{is}+j_{sa}^{sa}-j_{ik})}$$

$$\frac{\sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{sa}-j_{ik}-\mathbb{k}_2}} \sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{sa}-j_{ik}-\mathbb{k}_2}}^{n_{ik}=n_{is}+j_{sa}^{sa}-j_{ik}-\mathbb{k}_2} (n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - j_{sa}^s)! \cdot (n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D + j_{sa} - l - 1)!}{(D + j_{sa} - l - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\ & j_{ik}^{ik} + 1 \leq j_{ik}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq n < n \wedge l_s > D - n + 1 \wedge \\ & j_{sa}^{ik} + 1 \leq j_{ik}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})) \wedge \end{aligned}$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+\mathbf{n}-D)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=j_{ik}+j_{sa}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-1)} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(j_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
 &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + \mathbf{n} + j_{sa}^{ik} - D - s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s + j_{sa}^{ik} - l)} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S(j_{ik}, j_{sa}) = \sum_{k=l}^{j_{sa}^{ik}-j_{sa}} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\ \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 - 1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{ik} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(n_{sa} + j_{sa} - n - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - j_{sa}^{ik})!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_{sa}+n-D} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^{ik})! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_{ik}} \sum_{k=l}^{(l_i+n+j_{sa}^{ik}-D-s-1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)}^{n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - \mathbb{k}_1 - 1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{sa} - n_{sa}^{ik} - 1)!}{(j^{sa} - \mathbb{k}_2 - 1)! \cdot (n_{sa} - j_{sa}^{ik} - j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, \dots, j_{sa}^{i-1}, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{\binom{(n_i+l_k+1)}{n_i+l_k+1-j_{ik}}}$$

$$\sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{ik}-l_{k_2}=n_{ik}-j^{sa}-l_{k_2}}} \sum_{\binom{()}{n_{ik}=n_{is}+j_{sa}^{ik}-l_{k_2}=n_{ik}-j^{sa}-l_{k_2}}}$$

$$\frac{(n_{ik} + l_{k_1} + j_{sa}^{ik} - l_{k_2} - n - j^{sa})! \cdot (n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k_1} - n - j^{sa})! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(j_{ik} - j_{sa}^{ik} - l - 1)!}{(j_{ik} + j_{sa} - j_{sa}^{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge j_{ik}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz_{\mathbf{s}}^{s, j_{sa}} = \sum_{k=l}^{s+n+j_{sa}^{lk}-j_{sa}-1} \sum_{(j_{ik}-j_{ik}+n-D)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{sa}+n-D}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}^{n_{sa}=n-j^{sa}+1} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{ik}}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
& \frac{(n_{sa} - j_{sa} - 1)!}{(n_i + j_{sa} - n - 1)! \cdot (n - j_{sa}^{ik})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j_{sa} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)} j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\
& \sum_{n = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = n - j_{sa}^{ik} - j_{ik})}^{(n_i - j_{sa}^{ik} + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^{ik} - \mathbb{k}_1}^{(n_{ik} + \mathbb{k}_1 - j_{sa}^{ik} - j_{ik})} \sum_{(n_{ik} = n_{is} + j_{sa}^{ik} - \mathbb{k}_1 - j_{sa} - \mathbb{k}_2)}^{(n_{ik} + \mathbb{k}_1 - j_{sa}^{ik} - j_{ik})} \\
& \frac{(n_{ik} + \mathbb{k}_1 - j_{sa}^{ik} - j_{ik} - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} + \mathbb{k}_1 - \mathbf{n} - l_{sa} - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > \mathbf{n} - \mathbf{n} + 1 \wedge$$

$$j_{ik}^{ik} + 1 \leq j_{ik}^{ik} < j_{sa}^{sa} + j_{sa}^{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq \mathbf{n} + j_{sa}^{ik} - j_{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge \mathbb{k} = \mathbb{k} >$$

$$j_{sa}^{sa} - j_{sa}^{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq \mathbf{s} \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s}^{l_i + j_{sa} - l - s + 1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_i - l - j_{sa} - s)!}{(l_i + j^{sa} - \mathbf{n} - l - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - j^{sa} - s - \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(l_i + j_{sa}^{ik} - l - s + 1)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - l - s + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + j_{sa}^{ik} - j_{ik} - \mathbb{k}_1 + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - \mathbb{k}_2} \\ & \frac{(n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{sa} - j_{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \cdot \\ & \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ & \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(\quad)} \\ & \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D - 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + n - D}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D)}^{(j_{ik} = l_s + n + j_{sa}^{ik} - l + 1)} \sum_{(j_{sa} = l_s + n + j_{sa}^{ik} - l + 1)}^{(j_{sa} = l_s + n + j_{sa}^{ik} - l + 1)} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - \mathbb{K}_1 + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{(n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)} \\
& \frac{(n_i - j_{ik} - \mathbb{K}_1 + 1)! \cdot (n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)!}{(j_{ik} - \mathbb{K}_1 + 1)! \cdot (n_i - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{sa} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{is} = n + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^{ik} - j_{sa} - \mathbb{K}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i < j_{sa}^{ik} - 1$$

$$s: \{j_s^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge s = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D - 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{sa} + n - D} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}. \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{sa} - j_{ik} - j_{sa} - j_{sa}^{ik})} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{sa} - j_{ik} - j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{n_{ik} = n + \mathbb{K}_2}^{(j_{ik} - j_{sa}^{ik} - 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{(j_{ik} - j_{sa}^{ik} - 1)}$$

$$\frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!}.$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - j_{sa}^{ik})! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (s + j_{sa}^s - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k}$$

$$\mathbb{k} - z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+j_{sa}-l} \sum_{j^{sa}=j_{sa}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa}^{ik} - l + 1)}^{l+1}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - \mathbb{K}_1 + 1)}^{(n_i - j_{ik} - 1)} \sum_{(n_{ik} = n - j_{sa} + 1)}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{K}_1)!}{(j_{ik} - \mathbb{K}_2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = j_{sa} + 1}^{l_s + j_{sa} - l}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{is} = n + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right)$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)} \sum_{j^{sa} = j_{sa} + 2}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (l_{ik} - j_{sa})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{(j_{sa}=j_{sa}^{ik}+1)}^{(n_i-j_{sa}^{ik})}$$

$$\sum_{(n+l_{ik}(n_{is}+l_{ik}+j_{sa}^{ik}-j_{ik}))}^{(n+l_{ik}(n_{is}+l_{ik}+j_{sa}^{ik}-j_{ik}))}$$

$$\sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1})}^{(n_{ik}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_{ik}+l_{k_1}+j_{sa}^{ik}-n-j_{sa}^s)!}{(n_{ik}+l_{k_1}-n-j_{sa}^{ik})! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq n - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{sa} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa}^{ik} - n \wedge$$

$$l_{sa} \leq n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l} \right. \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\
 & \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-l} \right. \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 & \left. \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \right)
 \end{aligned}$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} j^{sa} = l_s + j_{sa} - l + 1 \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - j_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} j_{sa}^{ik} j_{sa}^{sa} = & \left(\sum_{k=l}^{(l_{ik}-1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_{ik}-1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-1)} \right. \\ & \sum_{n_{ik}=n+\mathbb{k}}^{(n_i-n_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j_{sa}^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \right) \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik}, j^{sa} = \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} - l + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \frac{(n_i - j_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \right)$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - j^{sa} - 1)!}{(D + j^{sa} - n - 1)! \cdot (n + j^{sa} - n_{sa} - s)!} \cdot \\
& \sum_{k=j_{ik}-1}^{j_{sa}^{ik}-l} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-l} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$n - j_s + 1 \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} + 1} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n_{ik} - \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2}^{j_{sa} + 1} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} - \end{aligned}$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa}^s - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right.$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - 1} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{sa} - l - j_{sa}^{ik} + 1} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{sa} - l - j_{sa}^{ik} + 1} \right) \cdot \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot
\end{aligned}$$

$$D + j_{sq} - \mathbf{n} < l_{sq} \leq D + l_{ik} + j_{sq} - \mathbf{n} - j_{sq}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{(n_i-j_s+1)} \frac{(n_{ik}-n_{ik}-j_{ik}-\mathbb{K}_1+1)!}{(j_{ik}-2)! \cdot (n_{ik}-n_{ik}-j_{ik}-\mathbb{K}_1+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} -$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - l_{ik} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-l} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right. \\ \left. \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \right).$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + n - D}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \right. \\
& \sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{sa} + n - D}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(l_i=l_i+n+j_{sa}-D)}^{()} \\
& \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \\
& \frac{(l_{sa} + l_{k_1} + j_{sa} - s - n - j_{sa}^s)!}{(l_{sa} + j_{ik} + l_{k_1} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$n \geq n < n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$D + l_{sa} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} - j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{sa}^{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = l_i > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} j_{sa}^{sa} = l_{sa} + n - \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(j_{sa} - n_{ik} - 1)!}{(j_{sa} - n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j_{sa})!} \cdot \\ &\frac{(n_{sa} - n_{is} - 1)!}{(n_{sa} - n_{is} - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(l_{sa} - l - j_{sa}^{ik})!}{(l_{sa} - l - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \\ &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j_{sa}^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ &\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{()} \\ &\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fz S_{j_{ik}^{sa}} = \left(\sum_{i=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right)$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-j_{sa}^{ik})} \sum_{(j_{sa}=j_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}$$

$$\sum_{(n+l_{sa}-j_{sa}^{ik})} \sum_{(n+l_{sa}-j_{sa}^{ik})}$$

$$\sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{sa}-l_{ik})} \sum_{(n_{ik}=n_{ik}+j_{ik}-j_{sa}-l_{sa})}$$

$$\frac{(l_{sa} + l_{k_1} + j_{sa}^{ik} - n - j_{sa}^s)!}{(l_{sa} + l_{k_1} - n - j_{sa}^{ik})! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n - 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = l > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{ik}} \right. \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(l_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1} \right. \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \left. \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \right)$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k} - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \frac{n_{ik} + j_{sa} - j^{sa} - \mathbb{k}_2}{n_{sa} = n_{ik} + j_{ik} - j^{sa} + 1} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa} - \mathbb{k}_1 - 1)! \cdot (n_i - n_{ik} - j_{sa} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{sa} - j_{sa} - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_{sa} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{sa} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{j_{ik}, j_{sa}^{ik}} \sum_{k=l}^{l+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(j_{ik}=j_{sa}^{ik}+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^{ik})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-j_{sa}^{ik}-j_{ik}-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-j_{sa}^{ik}-j_{ik}-1)!}{(D+j_{sa}^s+s-n-j_{sa}^{ik}-j_{ik}-1)! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_{sa} \leq D + s - n \wedge$$

$$D \geq n < n \wedge l_{sa} - \mathbb{k}_2 > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^{ik} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(j_{ik}=j_{sa}^{ik}+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=\mathbb{k}_1}^{(l_s + j_{sa}^{ik} - j_{ik} - 1)} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} - j_{sa}^{ik} - 1} \sum_{j_{sa}^{ik} = j_{sa}^{ik} - 1}^{j_{sa}^{ik} - j_{sa}^{ik} - 1}$$

$$\sum_{n=\mathbb{k}_1}^{(n_i - j_s + 1)} \sum_{(n_{is} = \mathbf{n} + \mathbb{k}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{k=n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_i - j_s + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_i - j_s + 1)}$$

$$\frac{(n_{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D - \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(j_{ik}+j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j_{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{(\mathbf{l}_{ik}+j_{sa})} \sum_{(n_i=n_{ik}-\mathbb{K}_1+1)}^{(n_i+j_{sa}-\mathbb{K}_1+1)} \sum_{n_{ik}=n_{sa}-j_{ik}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{sa}+1} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j_{sa} - \mathbf{l}_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(\mathbf{l}_{ik}-\mathbf{l}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(\mathbf{l}_{ik}-\mathbf{l}+1)} \sum_{j_{sa}=\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+2}^{\mathbf{l}_i+j_{sa}-\mathbf{l}-s+1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{(j_{ik}+j_{sa}-j^{sa}-l_{ik}-1) \leq j_{sa}^{ik}-j_{sa}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{j_{sa}=l_i+\mathbf{n}+j_{sa}-D-s} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$\left. j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \right.$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{l=0}^{(j_{ik} - j_{sa}^{ik} - s - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_i + n + j_{sa} - D - s}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{sa} + j_{ik} - n_{sa} - j_{sa}} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=\mathbf{l}_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(\mathbf{l}_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\mathbf{l}_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 - 1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_{sa} - \mathbf{n} - 1)!}{(j^{sa} - j_{sa} - 1)!} \cdot \\
& \frac{(\mathbf{l}_{ik} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(\mathbf{l}_{sa} + j_{sa}^{ik})! (\mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - 1)! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=\mathbf{l}_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(\mathbf{l}_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(\mathbf{l}_s - l - 1)!}{(\mathbf{l}_s + j_{sa}^{ik} - j_{ik} - \mathbf{l})! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{i=0}^{(j_{sa}^{ik} - j_{sa})} \sum_{j_{sa}^{ik} - j_{sa} + 1}^{l_s + j_{sa} - l} \sum_{j_{sa} = l_i + n + j_{sa} - D - s}^{l_s + j_{sa} - l} \\ & \sum_{i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa} - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik} j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-D-s-1} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_i+j_{sa}-l-s+1} \sum_{j=l_i+n+j_{sa}-D-s}^{n+j_{sa}^{ik}-D-s-1} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{sa}^{ik}+\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-n_{ik}-\mathbb{k}_1-1)!} \cdot \frac{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{ik} + j^{sa} - n_{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_i - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - \mathbb{k}_1 - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + \mathbb{k}_1 - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z, s, j_{ik}, j_{sa}} = \sum_{k=l}^{\binom{n}{j_{ik}+j_{sa}-j_{sa}^{ik}-j_{sa}}} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{\binom{n}{j_{ik}+j_{sa}-j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}-n_{sa}-1)!} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{n}{j_{ik}+j_{sa}-j_{sa}^{ik}-j_{sa}}} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{\binom{n}{j_{ik}+j_{sa}-j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-\mathbf{n}-\mathbf{n}-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l-1)! \cdot (\mathbf{n}-j_{sa}-j^{sa}-s)!} \cdot
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s > l_i \wedge l_{ik} - j_{sa}^{ik} - s > l_i \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} - s - \mathbf{n} - j_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s, j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i \} \wedge$$

$$s \geq \mathbf{n} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot
\end{aligned}$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(n_i-j_{sa}^{ik}-\mathbb{k}_1+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\ &\quad \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{sa}^{ik}-\mathbb{k}_1+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{sa}+j^{sa}-n-1)} \\ &\quad \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\quad \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\quad \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\quad \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\ &\quad \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_{sa}+j^{sa}-n-1)} \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-\mathbf{n}-\mathbf{n}-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l-1)! \cdot (\mathbf{n}-j_{sa}-j^{sa}-s)!} \cdot
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s > l_i \wedge l_{sa} - s > l_i \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s \wedge s - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik} - \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq \mathbf{n} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{(j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq n+j_{sa}-s+1)}$$

$$\sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}$$

$$\frac{(n_{ik} + j_{ik} + l_{k1} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}{(n_{ik} + j_{ik} + l_{k1} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$((D \geq l_i \leq n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$\mathbf{l}_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{\mathbf{l}_i=1}^{(j_{sa}^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{\substack{\mathbf{l}_{ik}=j_{sa}^{ik}+1 \\ (n_i-j_{ik}-\mathbb{k}_1+1) \geq \mathbf{l}_{ik}}}^{(j_{sa}^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{\substack{j_{sa}=j_{sa}+1 \\ (n_{sa}-j_{sa}-\mathbb{k}_2+1) \geq j_{sa}}}^{(j_{sa}^{sa}+j_{sa}^{ik}-j_{sa})} \\ &\quad \sum_{\substack{n_i=\mathbf{n}+\mathbb{k} \\ (n_i-j_{ik}-\mathbb{k}_1+1) \geq \mathbf{l}_{ik}}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{\substack{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1 \\ (n_{ik}-j_{ik}-\mathbb{k}_1+1) \geq \mathbf{l}_{ik}}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{\substack{n_{sa}=\mathbf{n}-j_{sa}+1 \\ (n_{sa}-j_{sa}-\mathbb{k}_2+1) \geq j_{sa}}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\ &\quad \frac{(n_i-j_{ik}-2)! \cdot (n_i-j_{ik}-\mathbb{k}_1-1)!}{(n_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\ &\quad \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa})!} \cdot \\ &\quad \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ &\quad \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\ &\quad \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}-s)!} + \\ &\quad \sum_{k=l}^{(l_{ik}-l+1)} \sum_{\substack{j_{ik}=j_{sa}^{ik}+1 \\ (n_i-j_{ik}-\mathbb{k}_1+1) \geq j_{ik}}}^{(l_{ik}-l+1)} \sum_{\substack{j_{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2 \\ (n_{sa}-j_{sa}-\mathbb{k}_2+1) \geq j_{sa}}}^{(l_{sa}-l+1)} \\ &\quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1 \\ (n_{ik}-j_{ik}-\mathbb{k}_1+1) \geq \mathbf{l}_{ik}}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{\substack{n_{sa}=\mathbf{n}-j_{sa}+1 \\ (n_{sa}-j_{sa}-\mathbb{k}_2+1) \geq j_{sa}}}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n_{sa} + j_{sa}^{ik} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik}}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$(n_i - n_{ik} - \mathbb{k}_1 - 1) \wedge (n_{ik} - n_{sa} - 1) \wedge (n_{sa} - 1) \wedge (l_{ik} - l - j_{sa}^{ik}) \wedge (l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik}) \wedge (D + j_{sa} - l_{sa}) \wedge (D + j^{sa} - n - l_{sa}) \wedge (n_{sa} + j_{sa}^{ik} - j^{sa} - s) \wedge (n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}) \wedge (n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s) \wedge (n_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s) \wedge (n + j_{sa}^{ik} - j_{ik} - s) \wedge (l_s + j_{sa}^{ik} - j_{ik} - l) \wedge (j_{ik} - j_{sa}^{ik} - 1) \wedge (D - l_i) \wedge (D + j^{sa} + s - n - l_i - j_{sa}) \wedge (n + j_{sa} - j^{sa} - s) \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$j_{sa}^{ik} j_{sa}^{sa} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \sum_{n=\mathbb{K}}^n \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{j_{ik}-\mathbb{K}_1+1} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - 1)! \cdot (j_{ik} + j_{sa}^{ik} - 1)!}$$

$$\frac{(D - 1)!}{(D + j_{sa}^s + s - n - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\left((D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1) \right)$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_s \leq D + l_s + s - n - 1)$$

$$(D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n - l_s \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D + s - n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
 \end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} j^{sa}=l_i+n+j_{sa}-D-s$$

$$\sum_{n=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_{ik})}^{(n_{ik}+1)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - j_{sa} - n - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} + \mathbb{k}_1 - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D + j_{sa} - l - 1)!}{(D + j_{sa} - l - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_{sa} \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j_{sa}=j_{sa}+n-D}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ & \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}-j_{sa}-j_{sa}^{ik}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\ & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \\ & \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \end{aligned}$$

$$\begin{aligned}
 & (D \geq n \wedge n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge \\
 & j_{sa}^{ik} \leq j_{ik} \leq j_{sa} \wedge j_{sa} \wedge \\
 & j_{ik} + j_{sa} - j_{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge \\
 & -j_{ik} \wedge l_s + j_{sa} - j_{sa} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\
 & l_i \leq D + s - n) \vee \\
 & (D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge \\
 & j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge
 \end{aligned}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{77} S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{i=j_{sa}^{ik}+1}^{j_{sa}^{ik}-j_{sa}+1} \sum_{a=1}^{j_{sa}^{ik}-j_{sa}+1} \frac{\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{ik}=n_{sa}-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{j_{sa}^{ik}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\cdot)} \sum_{j_{sa}^{ik}=j_{sa}+1}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq \mathbf{l} \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z \mathcal{S}_{j_{ik}, j^{sa}} = & \left(\sum_{k=l} \left(\sum_{(j_{sa} + j_{sa}^{ik} - j_{sa})}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{j^{sa} = j_{sa} + 1}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \right. \right. \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{sa} - n_{sa} - 1)!}{(n_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left(\sum_{k=l} \left(\sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{j^{sa} = j_{sa} + 2}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \right. \right. \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ & \left. \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \right. \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} j_{sa}^{ik+2} \\
& \sum_{n_i=n+l_1}^n \sum_{n_{ik}=n_{sa}-j_{ik}+1}^{(n_i-j_{ik}-l_1-1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_2} \\
& \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_{sa}^{ik} - n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{()} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-\mathbf{n}-\mathbf{n}-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l)! \cdot (\mathbf{n}-j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 > l_s \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 \neq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z^S j_{ik}, j^{sa} &= \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \left. \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \right)
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_{sa}-l+1} \right)$$

$$\sum_{n_i=n+l_{sa}-j_{sa}^{ik}-l_{sa}+1}^n \sum_{(n_{is}=n+l_{sa}-j_{sa}^{ik}-l_{sa}+1)}^{(n_i-j_{sa}^{ik}+1)} \sum_{(n_{sa}=n-j_{sa}^{ik}+1)}^{n_{ik}+j_{ik}-l_{sa}+1}$$

$$\frac{(n_{ik} - n_{ik} - j_{ik} - l_{sa} + 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - n_{ik} - j_{ik} - l_{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - j_{sa}^{ik} - 1)!}{(n_{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} - j_{sa}^{ik} - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+l_{sa}-j_{sa}^{ik}-l_{sa}+1}^n \sum_{(n_{is}=n+l_{sa}-j_{sa}^{ik}-l_{sa}+1)}^{(n_i-j_{sa}^{ik}+1)} \sum_{(n_{sa}=n-j_{sa}^{ik}+1)}^{n_{ik}+j_{ik}-l_{sa}+1}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{sa}+1}^{(n_{ik}-j_{sa}^{ik}+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-l_{sa}+1)}^{(n_{sa}-j_{sa}^{ik}+1)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_s = 0 \wedge$$

$$j_{sa}^i \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{ \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^s \}$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k}_1 \neq \mathbb{k}_2 \wedge z = 2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - j_{sa}^{ik} - j_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j=j_{sa}^{ik}+1}^{j_{sa}^{ik}} \sum_{i=n}^{n_{ik} - j_{sa}^{ik}} \sum_{n_{is}=n+k+j_{sa}^{ik}-j_{ik}}^{(n_{is}-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{s=n_{is}+j_{sa}^s-j_{sa}^{ik}-k_1}^{(n_{is}-j_s+1)} \\
& \frac{(n_{ik} + j_{ik} - k_1 - n - n - j_{sa}^s)!}{(n_{ik} + j_{ik} - k_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D + j^{sa} - n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D - l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1})} \sum_{j_{sa}=l_{sa}+n-D} \right. \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_2+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-\mathbb{K}_2} \\ & \frac{(n_i-n_{ik}-\mathbb{K}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{K}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\ & \frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ & \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} \right) + \\ & \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \\ & \frac{(n_i-n_{ik}-\mathbb{K}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{K}_1+1)!} \cdot \\ & \left. \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \right) \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \cdot \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}+j_{ik}+1)}^{(n_{ik}=n+\mathbb{k}+j_{ik}+1)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - n_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \left. \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \right)
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + j^{sa} = l_{sa} + n - D)}^{l_{sa} - l + 1} \sum_{j_{sa} = j_{ik} + j_{sa}^{ik} + j^{sa} = l_{sa} + n - D}^{l_{sa} - l + 1} \right) \cdot \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - \mathbb{K}_1 + 1)}^{(n_i - j_{ik} - 1)} \sum_{n_{ik} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - 1)!} \cdot$$

$$\sum_{n_{ik}=l_i+n_{sa}-j_{sa}^{ik}-D-s}^{(l_i+j_{sa}^{ik}-l)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-j_{sa}^{ik}}^{(n_{ik}+j_{sa}^{ik}-l)}$$

$$\sum_{n_{is}=n+l_{\mathbb{K}}}^{\mathbf{n}} \sum_{n_{sa}=n+l_{\mathbb{K}}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)}$$

$$\sum_{n_{is}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{\mathbb{K}_1}}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{\mathbb{K}_2}}^{(\quad)}$$

$$\frac{(n_{ik} + l_{\mathbb{K}_1} + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} - l_{\mathbb{K}_1} - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D - \mathbf{n} < l \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}$$

$$\frac{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2-1)!}{(j_{ik}-2)! \cdot (n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot$$

$$\frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot$$

$$\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} \cdot$$

$$\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{l=l_i}^{j_{ik}} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{j_{ik}-\mathbb{k}_1+1} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l} \sum_{\substack{(\quad) \\ (j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}} \sum_{\substack{l_s+j_{sa}-l \\ j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa})}} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\substack{(\quad) \\ (n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^{ik})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)!(n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-j_{sa}^{ik})!}{(l_s+j_{sa}^{ik}-j_{ik}-1)!(j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-j_{sa}^{ik})!}{(D+j_{sa}+s-n-j_{sa}^{ik}-j_{sa}^{ik})!} \cdot \frac{(n+j_{sa}-j^{sa}-s)!}{(n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n \leq l_{sa} \leq n + l_s + j_{sa} - n \wedge$$

$$D \geq n < n \wedge l - \mathbb{k}_1 > 0 \wedge$$

$$j_{sa} \leq j_{ik} - 1 \wedge j_{sa}^{ik} = j_{ik} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 0, s = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2, \dots, \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{\substack{(l_i+j_{sa}^{ik}-l-s+1) \\ (j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}} \sum_{\substack{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_{ik}-\mathbb{k}_1+1) \\ (n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}} \sum_{\substack{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2 \\ n_{sa}=n-j^{sa}+1}}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{ik} = l_{ik} + \mathbf{n} - l_{sa} - j_{sa}^{ik}}^{(l_{ik} - j_{ik} - l + 1)} \sum_{j_{sa} = n_{sa} - j_{ik} - j_{sa}^{ik}}^{(n_{sa} - j_{ik} - j_{sa}^{ik})}$$

$$\sum_{n_{is} = \mathbf{n} + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{k = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}$$

$$\frac{(n_i - \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D > \mathbf{n} \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq \mathbf{n} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(j_{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = l_i + j_{sa} - D - s}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_i + j_{sa} - l - s + 1} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j_{sa} - \mathbf{l}_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa} - s)!}$$

$$\sum_{k=l}^{(\quad)} (j_{ik}=j^{sa}+j^{sa}_{sa+n}) j^{sa}=l_{sa}+n$$

$$n_{is} + \mathbb{k} (n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})$$

$$\sum_{n_{is}=n_{is}+j_{sa}^s-j_{s1}^{ik}} (n_{sa}=n_{ik}+j_{ik}^s-j_{sa}^s-\mathbb{k}_{k_2})$$

$$\frac{(n + \mathbb{k}_1 + j_{sa} - s - \mathbf{n} - j_{sa}^s)!}{(j_{ik} + j_{ik} + \mathbb{k}_2 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$i \geq n \wedge l \neq i \wedge l \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{sk} \leq j_{sa}^{ik} \wedge j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_a^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sq} \leq j_{sq}^i - 1 \wedge j_{sq}^{ik} = j_{sq} - 1 \wedge j_{sq}^s < j_{sq}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sq}^s, \dots, \mathbb{k}_1, j_{sq}^{ik}, \mathbb{k}_2, j_{sq}, \dots, j_{sq}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=l} \sum_{(j_{ik}=l_i+n-D)}^{(l_i+n+j_{sa}^{ik}-D-s-1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{ik} + j_{sa}^{ik} - l_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}^{ik}, j_{ik}+j_{sa}^{ik}-j_{sa}^{ik})} \sum_{(n_i-j_{sa}^{ik}-n+l_k)} \sum_{(n_{is}+l_k+j_{sa}^{ik}-j_{ik})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{k1}, n_{ik}+j_{ik}-j^{sa}-l_{k2})} \frac{(n_{ik}+l_{k1}+j_{sa}^{ik}-n-j_{sa}^s)!}{(n_{ik}+l_{k1}-n-j_{sa}^{ik})! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\left((D \geq n < n \wedge l_{i-1} \wedge l_s \wedge D = n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ia} \leq j^{sa} + j_{sa}^{ik} - \alpha_a \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$$

$$l_{ik} \wedge j_{sa} - 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s(n) \vee$$

$$(D \geq n < n \wedge l \neq_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sq}^{ik} + 1 > l_s \wedge l_{sq} + j_{sq}^{ik} - j_{sq} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} j_{sa}^{sa=j_{sa}+1} \cdot \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \cdot \frac{(n_{ik}-k_1+1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik})! \cdot (j_{ik}-k_1+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} -$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}^{sa=j_{sa}+1}}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+l_i+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(l_s+j_{sa}-l)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{ik} - s - n - l_{sa})!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s + j_{sa} - j_{ik} - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l \neq l \wedge l \leq D - n + 1) \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j^{sa}} = & \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa})} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}_2)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{is} + 1)} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa})!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa})!} \cdot \\ & \frac{(n_{is} - 1)!}{(n_{sa} - j^{sa} - \mathbf{n} - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{sa} - l - j_{sa}^{ik})!}{(l_{sa} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\ & \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ & \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\ & \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_i \wedge l_i + j_{sa} - n - j_{sa}^{ik} = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \dots + \mathbb{k}_2 = \dots$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + n - D}^{l} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa} - l + 1)}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{n_{ik} = \mathbf{n} + \mathbb{k}_2}^{(j_{ik} - \mathbb{k}_1 - 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{(n_{ik} - j_{ik} - j^{sa} - \mathbb{k}_2)}$$

$$\frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - j_{sa})! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{()} \sum_{(j_{ik} = j_{sa}^{ik} + j_{sa}^{ik} - j_{sa})}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l)!}.$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa} - j_{sa} - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$j_{sa}^s \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^{ik} \geq 5 \wedge j_{sa}^s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j_{sa} = l_{sa} + \mathbf{n} - D}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{l=l_{sa}-l+1}^{(l_{sa}+j_{sa}^{ik})} \sum_{j_{sa}^{ik}=j_{sa}-D-j_{sa}}^{l_{sa}-l+1} j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} j_{sa}^{ik} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-l_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{k1}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-l_{k2})}^{()}$$

$$\frac{(n_{ik} + l_{k1} + j_{sa}^{ik} - s - n - j_{sa}^{ik})!}{(n_{ik} + j_{ik} + l_{k1} - n - n - j_{sa}^{ik})! (n + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - 1)! (j_{ik} + j_{sa}^{ik} - 1)!}$$

$$\frac{(D - 1)!}{(D + j_{sa}^{ik} + s - n - j_{sa}^{ik})! (n + j_{sa}^{ik} - j_{sa}^{ik} - s)!}$$

$$\left((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1) \right)$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z^D} j_{sa}^{sa} = \sum_{k=l}^{j_{sa}+j_{sa}^{ik}-j_{sa}-l+j_{sa}-l-j_{sa}^{ik}+1} \sum_{(j_{ik}=j_{sa}+n-D)} \sum_{j^{sa}=l_{sa}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}-l+j_{sa}-l-j_{sa}^{ik}+1} \\ \sum_{n+l_{sa}}^n \sum_{(n_{ik}=n+l_{sa}-j_{ik}+1)}^{j_{ik}-\mathbb{k}_1+1} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{sa}-l+1)} \sum_{j_{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-l_k+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}^{ik}-l_k} \\
& \frac{(n_i - n_{ik} - l_k - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_k + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{sa} - n_{sa} - j_{sa}^{ik})!} \cdot \\
& \frac{(n_{sa} - j_{sa}^{ik} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa}^{ik})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(n_i - j_{ik} - l_k + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_k}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-l_k)}^{()} \\
& \frac{(n_{ik} + l_k + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_k - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + n + j_{sa}^{ik} - D - s)}^{(l_s + j_{sa}^{ik} - l)} \sum_{j^{sa}=j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+\mathbb{k}}^n \sum_{(n_{is}=n)}^{(n_i + \mathbb{k} + 1)} \sum_{j_{ik}}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} + \mathbb{k}_1 - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + l_i - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\begin{aligned} & ((D \geq n < n \wedge l_i \neq l \wedge l_s \leq D - n + 1 \wedge \\ & j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \end{aligned}$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_i \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i_l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{(n_i=n+\mathbb{k})}^{(n_i-j_{sa}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-n_{ik}-\mathbb{k}_1+1)} \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} - \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_s+j_{sa}-l}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-\mathbf{n}-\mathbf{n}-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l-1)! \cdot (\mathbf{n}-j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{ik} < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \left(\sum_{k=\mathbf{l}} \sum_{(j_{ik}=j_{sa}^{ik})}^{(\quad)} \sum_{j^{sa}=j_{sa}} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \left. \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \right)
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \Bigg) + \\
& \left(\sum_{k=i}^n \sum_{l}^{()} \sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa}-l+1} \right. \\
& \sum_{n_i=n+l}^n \sum_{(n_{ik}=n+l-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - n_{ik} - l_{k_1} + 1)!} \cdot \\
& \frac{(n_i - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_{sa} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=i}^n \sum_{l}^{()} \sum_{j_{ik}=j_{sa}^{ik}}^{j^{sa}=j_{sa}} \\
& \sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{()} \\
& \frac{(n_{ik} + l_{k_1} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k_1} - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} = & \sum_{k=0}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \sum_{j_{ik}=j_{sa}^{ik}-1}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \sum_{j_{sa}=j_{sa}}^{\mathbf{l}_{sa}-\mathbf{l}_i} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i-j_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_{sa}^{ik}-n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}^{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa})!} \cdot \\ & \frac{(\mathbf{l}_{ik}-\mathbf{l}_i-j_{sa}^{ik})!}{(\mathbf{l}_{ik}-j_{ik}-\mathbf{l}_i+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \frac{(D+j_{sa}-\mathbf{l}_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-\mathbf{l}_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}^{ik}-s)!} - \end{aligned}$$

$$\sum_{k=0}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \sum_{j_{ik}=j_{sa}^{ik}}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \sum_{j_{sa}=j_{sa}}^{\mathbf{l}_{sa}-\mathbf{l}_i}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\mathbf{l}_{sa}-\mathbf{l}_i)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{\mathbf{l}_{sa}-\mathbf{l}_i}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=\mathbf{n}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{j_{sa}=j_{sa}}^{l_{sa}-{}_i l+1} \sum_{k={}_i l}^{()} (j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=i}^n \sum_{(j_{ik}=j_{sa}^{ik})}^{()} \sum_{j_{sa}=j_{sa}^{ik}}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-\mathbb{k}_2}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - n - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - n_{sa} - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n - s)!}$$

$$\frac{(D + s - n - l_i)!}{(n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = i l \wedge l_s > 0 \wedge$$

$$j_{sa}^{ik} \leq j_{sa} - j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, n\}$$

$$s \geq 5, n = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge n = \mathbb{k}_1 + 1 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=i}^n \sum_{(j_{ik}=j_{sa}^{ik})}^{(l_{sa}+j_{sa}^{ik}-i l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - {}_i l)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\sum_{k=1}^{\mathbf{n}} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{ik}=\mathbf{n}-n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{ik}^i - j_{sa} \wedge$$

$$j_{ik}^i + j_{sa} - j_{sa}^i \leq j^{sa} \leq j_{ik}^i + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^i - j_{sa}^s = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > \mathbf{n} \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^i, \dots, j_{sa}^i + \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: Z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S{}_{j_{ik}, j^{sa}} = \sum_{k={}_i l}^{(l_{ik} - {}_i l + 1)} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - l_i + 1 - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_i + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{sa}^{ik} - l_{sa} - s)!}{(D + s - n - l_i - n - s)!} \cdot \\
& \sum_{k=0}^{()} \sum_{l_i}^{()} \sum_{j_{sa}^{ik}}^{()} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l = l_i \wedge l_i \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa}^{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k= \textcolor{teal}{l}}^{l_{sa} + j_{sa}^{ik} - \textcolor{teal}{l} - j_{sa} + 1} \sum_{(j_{ik} = j_{sa}^{ik})} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(l_{sa} + j_{sa}^{ik} - \textcolor{teal}{l} - j_{sa} + 1)} \\ \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n_{ik} + j_{ik} - j^{sa} - 1}^{n_{ik} + j_{ik} - j^{sa} - 1} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{ik} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{sa} - \textcolor{teal}{l} - j_{sa}^{ik})!}{(n_{ik} - j_{ik} - \textcolor{teal}{l} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} - \\ \sum_{k= \textcolor{teal}{l}}^{(\textcolor{teal}{l})} \sum_{(j_{ik} = j_{sa}^{ik})} \sum_{j^{sa} = j_{sa}}^{(\textcolor{teal}{l})} \\ \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = n_i - j_{ik} - \mathbb{k}_1 + 1)}^{(\textcolor{teal}{l})} \sum_{n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}^{(\textcolor{teal}{l})} \\ \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge \textcolor{teal}{l} = \textcolor{teal}{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{i=0}^{n-l} \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{ik}-{}_i l+1)} \sum_{j_{sa}=j_{sa}}^{l_{sa}-{}_i l+1} \sum_{i=n+\mathbb{K}}^n \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} + \\
& \left(\sum_{k=i l}^{(j_{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik})} l_{ik} + j_{sa} - i l - j_{sa}^{ik} \right. \\
& \quad \left. \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \right. \\
& \quad \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \quad \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\
& \quad \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \quad \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \quad \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\
& \quad \sum_{k=i l}^{(l_{ik} - i l + 1)} \sum_{(j_{ik} = j_{sa}^{ik})} \sum_{j_{sa} = l_{ik} + j_{sa} - i l - j_{sa}^{ik} + 2}^{l_{sa} - i l + 1} \\
& \quad \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\
& \quad \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \quad \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg)$$

$$\sum_{k=1}^{\infty} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}-j_{ik}-\mathbb{k}_1) \wedge n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_{sa} \leq D - j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} - 1 \leq j^{sa} - \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$\mathbf{n} \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \cdots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \cdots, j_{sa}^i\} \wedge$$

$$\mathbf{n} \geq 5 \wedge \mathbf{s} \leq \mathbf{s} + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f^z \mathcal{S}_{j_{ik}, j^{sa}} = \left(\sum_{k=1}^{\infty} \sum_{({}_i l = j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-{}_i l+1)} \right)$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left(\frac{(j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa} - s)!} \right) + \\
& \left(\sum_{k=i l}^{(l_{ik} - i l - 1)} \sum_{j_{sa}^{ik}}^{l_{sa} - i l + 1} \sum_{j_{sa}^{ik} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$

$$\sum_{k=1}^{\infty} \sum_{i=1}^{(\cdot)} \sum_{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (n-s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l)! \cdot (n-s)!}$$

$$D \geq \mathbf{n} < n \wedge l = i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - \mathbf{n} > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 5 \bullet \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z \cdot z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=1}^{\infty} \sum_{i=1}^{(\cdot)} \sum_{j_{ik}=j_{sa}^{ik}} j_{sa}^{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=1}^n \sum_{i=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}}^{(n)} j_{sa}^{sa} = j_{sa}^{sa}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{(n)} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-l_{k_2}}^{(n)} j_{sa}^{sa} = j_{sa}^{sa}$$

$$\frac{(n_{ik} + l_{k_1} + j_{sa}^{ik} - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k_1} - n - n_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D + j_{sa} - n - l_{sa})!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n - l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j^{sa}} &= \sum_{k=1}^{(\quad)} \sum_{i=1}^{(\quad)} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-i^{l+1}} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-\mathbb{k}_2}^{n_{ik}+j_{ik}-\mathbb{k}_2} \\ &\frac{(n_{ik}+\mathbb{k}_1+n_{sa}-j_{ik}-1)!}{(j_{ik}-2)! \cdot (n_{ik}-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ &\frac{(n_{sa}-n_{sa}-1)!}{(n_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\ &\frac{(n_{sa}-1)!}{(n_{sa}-j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \\ &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-j^{sa}-l_{ik})! \cdot (j^{sa}-j_{sa})!} \cdot \\ &\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} - \\ &\sum_{k=1}^{(\quad)} \sum_{i=1}^{(\quad)} \sum_{j_{sa}=j_{sa}^{ik}}^{j_{sa}=j_{sa}} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(\quad)} \\ &\frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-\mathbf{n}-\mathbf{n}-j_{sa}^s)! \cdot (\mathbf{n}-s)!} \cdot \\ &\frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-s)!} \end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2$$

$$\sum_{k=l}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j^{sa}=l_{sa}+n-D}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_{sa}=n-j^{sa}+1}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l} \sum_{(j_{ik}=l_{ik}+\mathbf{n}-D)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{ik}+\mathbf{n}-D)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^{\sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}} \sum_{(l_{ik}+j_{sa}^{ik}-j_{sa}^{ik}+1)}^{(n_i-j_{sa}^{ik})} \sum_{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-1)}^{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-1)}$$

$$\sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{k1})}^{(n_{ik}=n_{ik}+j_{sa}^{ik}-l_{k2})} \sum_{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-1)}^{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-1)}$$

$$\sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{k1})}^{(n_{ik}=n_{ik}+j_{sa}^{ik}-l_{k2})} \sum_{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-1)}^{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}-1)}$$

$$\frac{(n_{ik} + l_{k1} + j_{sa}^{ik} - n - j_{sa}^s)!}{(n_{ik} + l_{k1} + j_{sa}^{ik} - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D < n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \Big) \Big) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z^S j_{ik} j_{sa} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=n-D) j_{sa}=l_{sa}-D}^{l_{sa}+1} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_{is}-j_{ik}+1)}^{(j_{ik}-\mathbb{k}_1+1)} \sum_{j_{sa}=1}^{j_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ &\frac{(n_{ik}-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_{ik}-j_{ik}+1)!} \cdot \\ &\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ &\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\ &\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \\ &\sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa}^s - j_{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa}^{l-1} + 1 \wedge j_{sa}^{ik} < j_{sa}^{l-1} + 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}^{l-1}, j_{sa}^{ik}, j_{sa}^{l-1}, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = \mathbf{s} + \mathbb{k} \wedge$$

$$\mathbf{z} = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S j_{ik}, j_{sa} = \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})} j_{sa}^s = j_{ik}+j_{sa}-j_{sa}^{ik} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{l_{ik}+n+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(j_{ik}=n+\mathbb{k}_2-j_{ik}+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}=n-j^{sa}+1} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}+1)}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - j^{sa} - s)!}{(D + j_{sa} - n - j^{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{lk}-D-s)}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{lk}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{lk} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{lk} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{lk} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq \mathbf{l} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_z^{\mathbf{s}} j_{ik, j^{sa}} = \left(\sum_{k=l}^{\mathbf{l}} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)} \sum_{j^{sa}=l_{sa}+n-D}^{j^{sa}=l_{sa}-l} \right) \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \left(\sum_{k=l}^{\mathbf{l}} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-l} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{lk}-l)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1 - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{lk} - j^{sa} - l_{ik})! (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - \mathbf{n} - j_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{K}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{lk} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z^s} S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_s - j_{sa}^{ik} - l)} \sum_{(j_{ik} = n + j_{sa}^{ik} - D + 1)}^{(l_s - j_{sa}^{ik} - l)} \sum_{j_{sa} = l_{sa} + n - D}^{l_{sa} - l + 1} \frac{(n_i - j_{ik} - \mathbb{k}_1 + 1)}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-\mathbf{n}-\mathbf{n}-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}+s-\mathbf{n}-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa} - j_{sa}^{ik} - 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} > 0 \wedge$$

$$D \geq \mathbf{n} < n \wedge l_s - \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq l_s \wedge s = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa})!} + \\
& \left(\sum_{k=l}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik}} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik})} \sum_{l_{sa}-l+1}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)}^{n_i-j_{ik}-\mathbb{K}_2} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{l_{sa}-l+1}^{l_{sa}-l+1}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - l_i)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)}^{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{\left(\begin{array}{c} l_{ik} + j_{sa} - j_{sa}^{ik} \\ j_{ik} + j_{sa} - j_{sa}^{ik} \end{array} \right)} \sum_{j_{sa} = l_{sa} + n - D}^{l_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{n_i = n + k_1}^{n} \sum_{n_{sa} = n - j_{sa} + 1}^{n - j_{sa} - k_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\left(\begin{array}{c} l_s + j_{sa} - l \\ j_{ik} = j_{sa}^s + j_{sa}^{ik} - j_{sa} \end{array} \right)} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_s + j_{sa} - l} \sum_{n_i = n + k}^n \sum_{n_{is} = n + k + j_{sa}^{ik} - j_{ik}}^{(n_i - j_s + 1)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$j_{sa}^{ik} - j_{sa} = \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}} \sum_{l_{sa}=l+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{lk}-j_{sa})}^{(l_s+j_{sa}-l)} j^{sa=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(l_s-l+1)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa})! (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l+1)!}{(l_s+j_{sa}-j_{ik}-s-n-j_{sa})! (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-s)!}{(D+j_{sa}+s-n-j_{sa})! (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$D \geq l < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa} - \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^s, \dots, j_{sa}^l\} \wedge$$

$$s \geq 5 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_z - \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=l_i+1}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}-D-s}^{(j_{sa}^{ik}-l_{sa}-j_{sa}^{ik}-1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}-j_{sa}^{ik}}^{(n_i-j_s+1)} \\
& \sum_{n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{is}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik})}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2)} \frac{(n_{ik} + j_{sa} - j_{sa}^{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} + j_{sa} - j_{sa}^{ik} - 1)!} \cdot \frac{(n_{ik} + j_{sa} - j_{sa}^{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{ik} + j_{sa} - j_{sa}^{ik} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(n_{ik} + j_{sa} - j_{sa}^{ik} - 1)!}{(n_{ik} + j_{sa} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(n_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_1)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & f^z \sum_{j_{ik}, j_{sa}^{ik}} \sum_{l_i} \frac{(j_{sa}^{ik} - j_{sa})!}{(j_{ik} - l_i + \mathbf{n} + j_{sa}^{ik} - D - 1)!} \sum_{l_s} \frac{l_s + j_{sa} - l}{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s} \\ & \sum_{n_i} \frac{(n_i - \mathbb{k}_1 + 1)!}{\sum_{n_{ik} = \mathbf{n} + \mathbb{k}} (n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)} \sum_{n_{sa}} \frac{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}{n_{sa} = \mathbf{n} - j^{sa} + 1} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l-s+1}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n - n_{sa} - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{sa}^{ik}} = & \sum_{k=l}^{(l_i+n+1-j^{sa})} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} j^{sa=l_i+n+j_{sa}-D-s} \\ & \sum_{n_{ik}=\mathbb{K}-(n_{ik}-\mathbb{K}_1+1)}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)} n_{sa}=\mathbf{n}-j^{sa}+1 \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{l=\mathbf{l}}^{(l_{ik}-l)} \sum_{j_{sa}^{ik}=\mathbf{j}_{sa}^{ik}-D-j_{sa}}^{j_{sa}^{ik}-D-j_{sa}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{sa}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{sa}-l_{ik})}^{(l_s+j_{sa}-j_{ik}-1)}$$

$$\frac{(n_{ik} + l_{k1} + j_{sa}^{ik} - s - n - l_{sa})!}{(n_{ik} + j_{ik} + l_{k1} - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s + j_{sa} - j_{ik} - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l = l > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z \mathcal{S}_{j_{ik}, j_{sa}} = & \sum_{k=l}^{\sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})} (l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_{ik}-\mathbb{k}_1+1)} (n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{sa}+1)}^{\sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{sa}+1)} (n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}}^{\sum_{(n_{sa}=\mathbf{n}-j_{sa})} (n_i-j_{ik}-\mathbb{k}_1+1)} \\ & \frac{(n_i - n_{sa} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{sa} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \cdot \\ & \sum_{k=l}^{\sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)} (l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_s+1)} (n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \\ & \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{\sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1)} (n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} (n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \\ & \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{\sum} \sum_{(j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n (n_{is}+\mathbb{k}_1+j_{sa}^{ik}-j_{ik})^{(n_{is}+\mathbb{k}_1+j_{sa}^{ik}-j_{ik}+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_2}^{()} \sum_{j_{sa}^{ik}=n_{ik}-j_{sa}-\mathbb{k}_2}^{()} (n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-j_{sa}-\mathbf{n}-j_{sa}^s)! \cdot (n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-\mathbf{n}-j_{sa}-j_{sa}^s)! \cdot (j_{sa}^{ik}+j_{sa}-j_{ik}-s)!} \cdot \frac{(j_{sa}^{ik}-l-1)!}{(j_{sa}^{ik}-j_{sa}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+\mathbf{n}-l_i-j_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!}$$

$$\begin{aligned} & ((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge \\ & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq \mathbf{n} + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \\ & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})) \wedge \end{aligned}$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j^{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} - \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$((D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{j_{sa}^{ik}-j_{sa}} \sum_{(j_{ik}=\mathbf{l}_{ik}+\mathbf{n}-D)}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\ \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-l_{k1}+1)} \sum_{n_s=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - l_{k2})!} \cdot \\
& \frac{(n_{sa} + j_{ik} - n - 1)!}{(n_{sa} + j_{ik} - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - j_{sa}^{ik})!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_{sa}+n-D} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-l_{k1}}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{()} \\
& \frac{(n_{ik} + l_{k1} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k1} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_{ik}} \sum_{k=l}^{(l_i + \mathbf{n} + j_{sa}^{ik} - D - s - 1)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s} \\ & \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - \mathbb{k}_1)! \cdot (n_{ik} - n_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, \mathbb{k}_{j_{sa}^s}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j^{sa} = l_{sa} + n - D}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{\sum} \sum_{\left(j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa} \right)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\left(n_{is}+j_{sa}^{ik}-j_{ik} \right)}^{(n_i+\mathbb{k}_1+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{ik}-\mathbb{k}_2}^{(n_{ik}+j_{sa}^{ik}-j_{ik}-\mathbb{k}_2)} \sum_{j^{sa}=\mathbf{n}+j_{sa}-D-s}^{(n_{ik}+j_{sa}^{ik}-j_{ik}-\mathbb{k}_2)} (n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - j_{ik} - \mathbb{k}_2)! \cdot (\mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - j_{sa}^s - j_{sa}^{ik})! \cdot (j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(j_{sa}^{ik} - l_i - 1)! \cdot (j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}{(D - l_i)!} \cdot \frac{1}{(D + j^{sa} + \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\begin{aligned} & ((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \\ & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s) \wedge \end{aligned}$$

$$\begin{aligned} & (l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\ & (D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \end{aligned}$$

$$\begin{aligned} & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \end{aligned}$$

$$\begin{aligned} & (l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \end{aligned}$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{z=2}^{s, j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}-k+n-D)}^{l_{sa}-l+1} \sum_{j_{sa}=l_{sa}+n-D}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{ik}+j_{ik}-j_{sa}-k_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{i,j_{sa}}^{j_{sa}} = \sum_{k=l}^n \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j_{sa}=l_s+n+j_{sa}-D-1)}^{(j_{sa}=l_s+n+j_{sa}-D-1)} \sum_{(n_i=n+k)}^n \sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}^n \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{sa}=n-j_{sa}+1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^n \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(j_{sa}=l_i+n+j_{sa}-D-s)} \sum_{(n_i=n+k)}^n \sum_{(n_{is}=n+k+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n_{ik} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j^s - j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+\mathbb{k}}^n \sum_{(n_{is}=n)}^{(n_{is}=n+\mathbb{k}+1)} \sum_{j_{ik}}^{(j_{ik}=n-j_{sa}^{ik}+\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik}^{ik} + 1 \leq j_{ik} < j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge \mathbb{k} = \mathbb{k} >$$

$$j_{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq s \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_i + j_{sa} - l - s + 1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_i - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_s - l - j_{sa} - s)!}{(l_s + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - \mathbf{n} + 1 \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_i + j_{sa}^{ik} - l - s + 1)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - l - s + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(n_i - j_{ik} - l - s + 1)} \sum_{n_i = n + k_1}^n \sum_{(n_{is} = n + k_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2)}^{(n_{sa} - j_{sa} + 1)} \frac{(n_i - n_{ik} - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}{(j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{(n_i - j_s + 1)} \sum_{n_i = n + k_1}^n \sum_{(n_{is} = n + k_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - k_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2)}^{()} \frac{(n_{ik} + k_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + k_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{l_s + j_{sa} - l}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D, j_{sa} = l_s + j_{sa}^{ik} - l + 1)}^{(l_s + j_{sa}^{ik} - l)} \cdot$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} = \mathbb{K}_1 - 1, n_{ik} + j_{ik} = n - j_{sa} + 1)}^{(n_i - j_{ik} = \mathbb{K}_1 - 1)} \sum_{(n_{ik} = n - j_{sa} + 1)}^{(n_{ik} + j_{ik} = n - j_{sa} + 1)} \cdot$$

$$\frac{(n_i - n_{ik})!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - n_{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{is} = n + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^{ik} - j_{sa} - \mathbb{K}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{j_{ik}-j_{sa}^{ik}-1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}-j_{sa}^{ik}-1} \cdot \\
& \sum_{n_i=n+l_{ik}}^n \sum_{n_{ik}=n+l_{ik}-j_{ik}+1}^{j_{ik}-j_{sa}^{ik}-1} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}-j_{sa}^{ik}-1} \cdot \\
& \frac{(n_i - 1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(j_{sa} - n_{ik} - l_{ik} - l_{k_2} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (j_{sa} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{j_{ik}-j_{sa}^{ik}-1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}-j_{sa}^{ik}-1} \cdot \\
& \sum_{n_i=n+l_{ik}}^n \sum_{n_{is}=n+l_{ik}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)} \cdot
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} \wedge j_{sa}^s = j_{sa}^{ik} + 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^{ik}\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k}$$

$$\mathbb{k} - z = 2 \wedge \mathbb{k} \leq \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+j_{sa}-l} \sum_{j^{sa}=j_{sa}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - l_s + j_{sa} - l + 1)}^{(j_{ik} - j_{sa}^{ik} - 1)}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - 1)}^{(n_i - j_{ik} - 1)} \sum_{(n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2)}$$

$$\frac{(n_i - n_{ik})!}{(n_i - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - n_{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = j_{sa} + 1}^{l_s + j_{sa} - l}$$

$$\sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{is} = n + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)} \sum_{j^{sa} = j_{sa} + 2}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \right. \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l - j^{sa} - l_{ik})!}{(j_{ik} + l - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(j_{sa}=j_{sa}^{ik}+1)}^{(l_{ik}+j_{sa}^{ik}-l-j_{sa}^{ik}+1)} \sum_{(n_i-j_{sa}^{ik})}^{(n_i-j_{sa}^{ik})} \sum_{(n+l_{ik}(n_{is}+l_{ik}+j_{sa}^{ik}-j_{ik}))}^{(n+l_{ik}(n_{is}+l_{ik}+j_{sa}^{ik}-j_{ik}))} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1})}^{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_2})}^{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_2})} \\
& \frac{(n_{ik}+l_{k_1}+j_{sa}^{ik}-n-j_{sa}^s)!}{(n_{ik}+l_{k_1}+j_{sa}^{ik}-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq n - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{sa} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq n + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa}^{ik} - n \wedge$$

$$l_{sa} \leq n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{k}_Z: Z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-l} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \right)$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j_{sa}^{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} j_{sa}^{ik} j_{sa}^{sa} &= \left(\sum_{k=l}^{(l_{ik}-1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_{ik}-1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-1)} \right) \\ &\sum_{n=\mathbb{k}}^{(n_i-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\ &\left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \right) \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq \quad i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik}, j_{sa} = \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \right)$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - j_{sa}^{ik} - 1)!}{(D + j^{sa} - \mathbf{n} - j^{sa} - l_{sa} - j_{sa}^{ik} - 1)! \cdot (D + j^{sa} - n_{sa} - s)!} \cdot \\
& \sum_{k=j_{ik}^{ik}+1}^{j_{sa}^{ik}-l} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-l} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}-l} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa}^s)!}^{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa}^s)!} \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$j_{sa}^{ik} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2}^{(n_i - j_{ik} - \mathbb{k}_2 + 1)} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{is} - n_{ik} - j_{ik} + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} - j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \\ &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa} - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s - \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right.$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - 1} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = l_{sa} - n - D}^{n - D} \right) \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - 1)!} \cdot$$

$$\sum_{k=0}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{k} \cdot \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{j_{ik} - j^{sa} - j_{sa}^{ik} + j_{sa}} \cdot \sum_{j_{sa} = D - s}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{j_{sa} - D + s}$$

$$\sum_{i=0}^{n_{i-s} - \mathbb{k}} \binom{n_{i-s} - \mathbb{k}}{i} \cdot \sum_{n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik}}^{n_{i-s} - \mathbb{k} + 1} \binom{n_{i-s} - \mathbb{k} + 1}{n_{is} - n - \mathbb{k} - j_{sa}^{ik} + j_{ik}}$$

$$\sum_{j_{sa} = n_{is} + j_{sa}^{ik} - j_{sa}^{ik} - \mathbb{k}_1}^{n_{i-s} - \mathbb{k} + 1} \binom{n_{i-s} - \mathbb{k} + 1}{j_{sa} - n_{is} - j_{sa}^{ik} + j_{sa}^{ik} + \mathbb{k}_1} \cdot \sum_{n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}^{n_{i-s} - \mathbb{k} + 1} \binom{n_{i-s} - \mathbb{k} + 1}{n_{sa} - n_{ik} - j_{ik} + j^{sa} + \mathbb{k}_2}$$

$$\frac{(n_{ik} + j_{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D + \mathbf{n} - \mathbf{n} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$D + l_{ik} + j_{sa}^{ik} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge$$

$$j_{sa}^{ik} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \frac{\sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1}^{(n_i-j_{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{(n_i-j_{ik}+1)}}{(j_{ik}-l+1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{K}_2)!} \cdot \frac{(n_i-j_{ik}+1)!}{(j_{ik}-l+1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{K}_2)!} \cdot \frac{(n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{K}_2)!}{(j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_{is}+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1}^{(n_{ik}-j_{is}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{(n_{ik}-j_{is}+1)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-l} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_s + n - D}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \right. \\
& \sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{(n_{is}=l_i+\mathbf{n}+j_{sa}-D)}^{(\quad)} \cdot \\
& \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(\quad)} \cdot \\
& \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(\quad)} \cdot \\
& \frac{(l_{sa} + l_{k_1} + j_{sa} - s - \mathbf{n} - j_{sa}^s)!}{(j_{ik} + l_{k_1} + j_{sa} - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\geq \mathbf{n} < n \wedge l \neq l_i \wedge l \leq D - \mathbf{n} + 1 \wedge$$

$$D + l_{sa} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} - j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{sa}^{ik} + j_{sa} - \mathbf{n} - l_{sa} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = l_i > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} j_{sa}^{sa} = l_{sa} + n -$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = n + \mathbb{k}_1 - j_{sa} - \mathbb{k}_2)}^{(n_i - j_{sa} - \mathbb{k}_1 + 1)} j_{sa}^{sa} = n + \mathbb{k}_1 + 1$$

$$\frac{(n_{sa} - n_{ik} - 1)!}{(j_{sa} - 2)! \cdot (n_{sa} - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - n_{sa} - 1)! \cdot (n - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - l - j_{sa}^{ik})!}{(n_{sa} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j_{sa}^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fzS_{j_{ik}^{sa}} = \left(\sum_{i=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} j^{sa} = j_{ik}+j_{sa}-j_{sa}^{ik} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-l_{sa}-j_{sa})} \sum_{(j_{sa}=j_{ik}+j_{sa}^{ik}-j_{sa}^{ik})} \sum_{(n_i-j_{sa}^{ik})} \sum_{(n_{is}+\mathbb{k}_1+j_{sa}^{ik}-j_{ik})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_1)} \sum_{(n_{ik}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(l_{sa} + \mathbb{k}_1 + j_{sa}^{ik} - \mathbf{n} - j_{sa}^s)!}{(l_{sa} + \mathbb{k}_1 + j_{sa}^{ik} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_s \wedge l_s \leq D - \mathbf{n} - 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{ik}} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\ \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\ \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\ \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ \left. \frac{(l_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \\ \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\ \left. \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \right)$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k} - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_s = n + \mathbb{k} - j_{sa} - \mathbb{k}_2 + 1)}^{n_{ik} + j_{sa} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - j_{ik} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 - 2)! \cdot (n_i - j_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - j_{ik} - \mathbb{k}_2 - 1)!}{(n_{ik} - j_{ik} - \mathbb{k}_2 - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{sa}^{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{k=l}^{l+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^{ik})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}+s-n-n-j_{sa}^{ik})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_{sa} \leq D + s - n \wedge$$

$$D \geq n < n \wedge l - \mathbb{k}_1 > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{i_1}, \dots, \mathbb{k}_2, j_{sa}^{i_2}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^{i_1} = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=0}^{l_s + j_{sa}^{ik} - l_{ik} - 1} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} - 1} \sum_{j_{sa}^{ik} = j_{sa}^{ik} - 1}^{j_{sa}^{ik} - 1}$$

$$\sum_{n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{k=n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_i - j_s + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_i - j_s + 1)}$$

$$\frac{(n_{ik} + j_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - l_i) \leq n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$S_{j_{ik}, j_{sa}} = \sum_{k=\mathbf{l}}^{(j_{ik}+j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik})}^{(j_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1)} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{(j_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1)} \sum_{n_{ik}=\mathbf{l}_k+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}-\mathbb{K}_2-j_{ik}+1)}^{(n_{ik}+j_{ik}-\mathbf{l}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_{ik}+j_{ik}-\mathbf{l}-\mathbb{K}_1+1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \sum_{k=\mathbf{l}}^{(\mathbf{l}_{ik}-\mathbf{l}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(\mathbf{l}_{ik}-\mathbf{l}+1)} \sum_{j^{sa}=\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+2}^{\mathbf{l}_i+j_{sa}-\mathbf{l}-s+1}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik})!} \cdot \\
& \frac{(n + j_{sa} - n - s)!}{(n + j^{sa} - n - s)! \cdot (n - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(n)} \sum_{(j_{ik} + j_{sa}^{ik} - j_{sa})}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j^{sa}=l_i + n + j_{sa} - D - s}^{(n)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + s - \mathbf{n} < \mathbf{l}_i \leq D + \mathbf{l}_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{l=0}^{\mathbf{l}} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{j_{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_i+j_{sa}-\mathbf{l}-s+1} \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} - 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} + j_{sa} - n - 1)!}{(j^{sa} - j_{ik} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - 1)!} \cdot \frac{(l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^{ik})! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik}, j_{sa}^{ik}} \sum_{(j_{sa}^{ik} - j_{sa})} \sum_{(j_{sa}^{ik} + 1)} \sum_{j_{sa} = l_i + \mathbf{n} + j_{sa} - D - s} \sum_{l_s + j_{sa} - l} \\ & \sum_{i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_s+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n - n_{sa} - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa} - 1)!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik} - j_{sa}} = & \sum_{k=l}^{n+j_{sa}^{ik}-D-s+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_i+j_{sa}-l-s+1} \sum_{j=l_i+n+j_{sa}-D-s}^{n+j_{sa}^{ik}-D-s+1} \\ & \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{sa}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}+j_{sa}-n-1} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n - n_{sa} - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(l_i - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$\mathbf{l}_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_{z, \mathbf{s}}^{j_{ik}, j_{sa}} = \sum_{k=l}^{\binom{\mathbf{l}_{ik} + j_{sa} - j_{sa}^{ik} + 1}{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa}}} \sum_{j_{sa} = j_{sa} + 1}^{\binom{\mathbf{l}_{ik} + j_{sa} - j_{sa}^{ik} + 1}{j_{sa} = j_{sa} + 1}} \sum_{n_i = \mathbf{n} + \mathbb{K}}^{\binom{n_i - j_{ik} - \mathbb{K}_1 + 1}{n_i = \mathbf{n} + \mathbb{K}}} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{\binom{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2}{n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1}} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_{ik} - \mathbf{l} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} - \sum_{k=l}^{\binom{\mathbf{l}_{ik} + j_{sa} - \mathbf{l} - j_{sa}^{ik} + 1}{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa}}} \sum_{j_{sa} = j_{sa} + 1}^{\binom{\mathbf{l}_{ik} + j_{sa} - \mathbf{l} - j_{sa}^{ik} + 1}{j_{sa} = j_{sa} + 1}}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-\mathbf{n}-\mathbf{n}-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l-1)! \cdot (\mathbf{n}-j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s \leq l_i \wedge l_{ik} - j_{sa}^{ik} - s > j_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} - s - \mathbf{n} - j_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - j_{sa} \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq \mathbb{k} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - l + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}, j_{sa}^{sa}=l_i+n+j_{sa}-D)} \sum_{(j_{sa}^{ik}=l_i+l-j_{sa}^{ik}+1)} \cdot$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{sa}-j_s+1)} \sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{sa}-j_s+1)} \cdot$$

$$\sum_{(n_{is}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \cdot$$

$$\frac{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$D \geq n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} \wedge j_{sa}^{sa} \wedge$$

$$j_{ik} \wedge j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\ \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}+1)!} \cdot \\ \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\ \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ \frac{(D+j^{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \\ \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\ \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\ \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\ \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s + s - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{ik}-1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j^{sa}-1} \\ &\quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik})-\mathbb{k}_1+1} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ &\quad \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ &\quad \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\quad \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\quad \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\ &\quad \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s}^{j_{ik}-1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j^{sa}-1} \end{aligned}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\ \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\ \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-\mathbf{n}-\mathbf{n}-j_{sa}^s)! \cdot (\mathbf{n}+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\ \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-l-1)!} \cdot \\ \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa}^{ik}-j_{ik}-l-1)! \cdot (\mathbf{n}-j_{sa}^{ik}-j_{ik}-s)!}.$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s > l_i \wedge l_{ik} - j_{sa}^{ik} - s > l_i \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{ik} - 1 \wedge j_{sa}^{ik} \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq \mathbb{k} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z, \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{(j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq n+j_{sa}-s+1)}$$

$$\sum_{(n_{is}=n+l_{ik}+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{(n_{is}=n+l_{ik}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}$$

$$\frac{(n_{ik} + j_{ik} + \mathbb{K}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}{(D - l_i)!}$$

$$\frac{(D - l_i)!}{(n + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq l_i < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{l_{ik}=j_{sa}^{ik}+1}^{(j_{sa}^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{\substack{l_{ik}=j_{sa}^{ik}+1 \\ (n_i-j_{ik}-\mathbb{k}_1+1) \leq l_{ik} \leq n_i-j_{ik}-\mathbb{k}_2+1}}^{(j_{sa}^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{\substack{j_{sa}=j_{sa}+1 \\ n_{sa}=n-j_{sa}+1}}^{(j_{sa}^{sa}+j_{sa}^{ik}-j_{sa})} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik}-l+1)} \sum_{\substack{j_{ik}=j_{sa}^{ik}+1 \\ j_{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}}^{l_{sa}-l+1} \sum_{\substack{n_i=n+\mathbb{k} \\ (n_{ik}=n+\mathbb{k}_2-j_{ik}+1) \\ n_{sa}=n-j_{sa}+1}}^n \sum_{\substack{(n_i-j_{ik}-\mathbb{k}_1+1) \\ n_{ik}=n+\mathbb{k}_2-j_{ik}+1}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{\substack{n_{sa}=n-j_{sa}+1}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (n_{sa} + j_{sa}^{ik} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^n \sum_{(j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik})}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik} + 1} \sum_{j^{sa} = j_{sa} + 1}^{j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{sa} + j_{sa}^{ik} - j_{ik} - l)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$(\mathbf{n} > \mathbf{n} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_2: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$j_{sa}^{ik} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n} \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{j_{ik}-\mathbb{K}_1+1} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - 1)! \cdot (j_{ik} + j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - \mathbf{n} - 1)!}{(D + j_{sa}^s + s - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa} - j_{sa}^s - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1) \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - \mathbf{n} - l_s \leq D + l_s + s - \mathbf{n} - 1) \wedge$$

$$(D \geq \mathbf{n} < n \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} - l_s \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D + s - \mathbf{n} - l_s \leq D + l_s + s - \mathbf{n} - 1) \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
 \end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l} \sum_{\binom{()}{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}} \sum_{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s$$

$$\sum_{n=\mathbf{n}+\mathbb{k}}^n \sum_{(n_i=\mathbf{n}+1)}^{(n_i=\mathbf{n}+1)} \sum_{(n_{is}=\mathbf{n}+1-j_{ik})}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_1} \sum_{\binom{()}{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-j_{sa}-\mathbf{n}-j_{sa}^s)!}}}{(n_{ik}+j_{sa}^{ik}+\mathbb{k}_1-\mathbf{n}-j_{sa}^s)! \cdot (j_{sa}^{ik}+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(j_{sa}^{ik}+j_{sa}^{ik}-j_{ik}-s-l-1)!}{(j_{sa}^{ik}+j_{sa}^{ik}-j_{ik}-l)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+\mathbf{n}-l_i-j_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!}$$

$$((D \geq \mathbf{n} < n \wedge l = l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq \mathbf{n} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_{sa} \leq D + l_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j_{sa}^{sa}+n-D}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} - j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{l_{sa}-l+1} \sum_{j_{sa}^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{(n_{is}=\mathbf{n}+\mathbb{k}_1+j_{sa}^{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(l_{sa} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(j_{ik} + j_{ik} + \mathbb{k}_2 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$j_{sa}^{ik} - j_{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{z,j_{ik},j_{sa}}^{s,j_{ik},j_{sa}} = \sum_{k=l}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-1} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-1} \sum_{n_i=n+k}^n \sum_{(n_{ik}=n_{ik}-j_{ik}+1)}^{(n_i-j_{ik}-l+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-k_2} \frac{(n_i - n_{ik} - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{j_{sa}^{ik}-1} \sum_{j_{sa}^{ik}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_s - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=\mathbf{n}+j_{sa}^{ik}-j_{sa}}^{\binom{()}{}} \sum_{j_{sa}^{ik}=\mathbf{n}+j_{sa}^{ik}-j_{sa}}^{\binom{()}{}} \sum_{j^{sa}=\mathbf{n}+j_{sa}^{ik}-j_{sa}}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_1}^{\binom{()}{}} \sum_{(n_{sa}=\mathbf{n}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{\binom{()}{}} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \neq \mathbf{l} \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \left(\sum_{(j_{ik}+j_{sa}-j_{sa}^{ik})}^{(j_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \right. \\ \left. \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ \left. \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\ \left(\sum_{k=l} \left(\sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=j_{sa}+2}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \right. \\ \left. \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_{ik}-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ \left. \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) +$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} j_{sa}^{ik+2}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)}^{(n_i-j_{ik}-l+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=l}^{()} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - n - j_{sa}^{ik})! \cdot (n - j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 > l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{s-\mathbb{k}_1}, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 \neq 2 \wedge \mathbb{k} = \mathbb{k}_1 \neq \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right)$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_s+l+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_s+l+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^n \sum_{(n_i-j_{ik}-\mathbb{k}_2+1)}^{(n_i-j_{ik}-\mathbb{k}_2+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{n_{ik}+j_{ik}-\mathbb{k}_2} \\
& \left. \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j_s+1)} \right) \\
& \frac{(n_i - j_{ik} - \mathbb{k}_2)!}{(j_{ik} - \mathbb{k}_2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - j_{sa} - \mathbb{k}_2 + 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\left((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = l \wedge l_s = 0 \wedge$$

$$j_{sa}^i \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{ \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^{ik} \}$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k}_Z = \mathbb{k}_Z - 1 \wedge z = 2 \Rightarrow$$

$$f^Z S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - j_{sa}^{ik} - j_{sa} - j_{sa}^{ik})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - \mathbf{n} - l_{sa})!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j=j_{sa}^{ik}+1}^{j_{sa}^{ik}} \sum_{i=n}^{n_{ik} - j_{sa}^{ik}}$$

$$\sum_{i=n+\mathbb{k}}^{n_{ik} - j_{sa}^{ik}} \sum_{i=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{(n_{ik}-j_s+1)}$$

$$\sum_{i=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_{is}-j_s+1)} \sum_{i=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(n_{is}-j_s+1)}$$

$$\frac{(n_{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D > \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D - l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^{\mathcal{S}}_{j_{ik}, j_{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik})} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \right)$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik})} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}+j_{ik}+1)}^{(n_{ik}-j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \frac{(n_i - j_s + 1)!}{(j_{ik} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{is} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (j_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa}^s - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s - \mathbb{k}_1, j_{sa}^{ik}, \dots, l_{sa} - j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right.$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + j^{sa} = l_{sa} + \mathbf{n} - D)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{\mathbf{n} - D} \right) \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - \mathbb{k}_2 - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - 1)!} \cdot \\
& \sum_{n_{ik}=l_i+n_{sa}-j_{sa}^{ik}-D-s}^{(l_i+j_{sa}^{ik}-l)} \sum_{j_{ik}=l_i+n_{sa}-j_{sa}^{ik}-D-s}^{(j_{ik}+j_{sa}^{ik}-l)} \sum_{j_{sa}^{ik}=n_{sa}-j_{sa}}^{(n_{sa}-j_{sa}^{ik})} \sum_{n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_{sa}+1)} \\
& \sum_{n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_{sa}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(n_{is}-j_{sa}^{ik})} \frac{(n_{ik} + j_{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - n - l_i \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \\ &\frac{(n_i-n_{sa}-1)!}{(j_{ik}-l+1)! \cdot (n_{ik}-j_{ik}+1)!} \cdot \\ &\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ &\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ &\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \\ &\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\ &\frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_{ik}, j_{sa}} = \sum_{l=l}^{j_{ik}+j_{sa}-l-s+1} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{j_{ik}+j_{sa}-l-s+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \\ \sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{(\quad)}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}}} (n_i-j_s+1)$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\binom{(\quad)}{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2}} (n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!$$

$$\frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)!} \cdot \frac{(n+j_{sa}^{ik}-j_{ik}-s)!}{(n+j_{sa}^{ik}-j_{ik}-s)!}$$

$$\frac{(l_s-l-s+1)!}{(l_s+j_{sa}^{ik}-j_{ik}-s+1)!} \cdot \frac{(j_{ik}+j_{sa}^{ik}-1)!}{(j_{ik}+j_{sa}^{ik}-1)!}$$

$$\frac{(D-s+1)!}{(D+j_{sa}+s-n-j_{sa}^{ik}-j_{sa}^{ik}-j_{sa}^{ik}-s)!} \cdot \frac{(D-s+1)!}{(D+j_{sa}+s-n-j_{sa}^{ik}-j_{sa}^{ik}-j_{sa}^{ik}-s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} \leq l_{sa} \leq \mathbf{n} + l_s + j_{sa} - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = 0, \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_s, \dots, j_{sa}^i\} \wedge$$

$$s \geq \mathbf{n}, s = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2, \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=l} \sum_{\binom{(l_i+j_{sa}^{ik}-l-s+1)}{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} (l_i+j_{sa}^{ik}-l-s+1)$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_{ik}-\mathbb{k}_1+1)}{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}} \sum_{n_{sa}=n-j^{sa}+\mathbb{k}_2}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} (n_i-j_{ik}-\mathbb{k}_1+1)$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{\Delta} \sum_{j_{ik}=0}^{l_{ik}+n-l_{sa}-j_{sa}^{ik}} \sum_{j_{sa}=0}^{l_s+j_{sa}^{ik}-l} \sum_{j_{sa}=0}^{n-j_{sa}^{ik}} \sum_{j_{sa}=0}^{n_i-j_s+1} \sum_{j_{sa}=n+\mathbb{k}}^{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{j_{sa}=0}^{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{j_{sa}=0}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(j_{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \sum_{j_{sa} = l_i + \mathbf{n} - j_{sa} - D - s}^{j_{sa} - D - s} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-l_{sa})}^{()} \sum_{(j^{sa}=l_{sa}+n_{sa}-j_{sa})}^{()} j^{sa} = l_{sa} + n_{sa} - j_{sa} - 1$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}^{()} (n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})$$

$$\sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})}^{()} (n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})$$

$$\frac{(l_{sa} + l_{ik} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(j_{ik} + j_{ik} + l_{sa} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_i > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{sa}, j_{sa}^{ik}, \dots, l_{sa}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik} = l_i + \mathbf{n} - D)}^{(l_i + \mathbf{n} + j_{sa}^{ik} - D - s - 1)} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s}^{l_i + j_{sa} - l - s + 1} \\
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
 & \frac{(n_i - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 & \frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (l_{ik} - j_{sa})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=l} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)}^{(l_{ik} - l + 1)} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_i + j_{sa} - l - s + 1} \\
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
 \end{aligned}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}, j_{sa}=j_{ik}+j_{sa}^{ik}-j_{sa})} \sum_{(n_i=j_{sa}^{ik}-j_{sa}, n_{ik}=n_{is}+l_{ik}-j_{sa}^{ik})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1}, n_{ik}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \frac{(n_{ik} + l_{k_1} + j_{sa}^{ik} - n - j^{sa})!}{(n_{ik} + l_{k_1} - n - j^{sa})! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot ((D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge l_i \leq D + s - n) \vee (D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \bigg) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{\binom{n}{j_{ik}-j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}=j_{sa}+1}^{l+1} \\ &\sum_{n_i=\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{j_{ik}-\mathbb{k}_1+1} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{j_{ik}-\mathbb{k}_1+1} \\ &\frac{(n_{ik}-n_{ik}-1)!}{(j_{ik}-\mathbb{k}_2)! \cdot (n_{ik}-j_{ik}+1)!} \cdot \\ &\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{ik}-\mathbb{k}_2)! \cdot (n_{ik}-j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa})!} \cdot \\ &\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ &\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}-s)!} - \end{aligned}$$

$$\sum_{k=l}^{\binom{n}{j_{ik}-j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{\binom{n}{j_{ik}-j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{(n_i-j_s+1)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa}=l_i+n+j_{sa}-D-s$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{ik} - s - n - l_{sa})!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s + j_{sa} - j_{ik} - 1)!}{(l_s + j_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq n < n \wedge l \neq l \wedge l \leq D - n + 1) \right)$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}_2)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{sa} + 1)} \frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{ik} - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(n_{ik} - l - j_{sa}^{ik})!}{(l_{sa} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_{sa} + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(\quad)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - \mathbf{n} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1, \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \mathbb{k}_1 + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$fz^S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \sum_{k=l}^{l_{sa}+j_{sa}^{ik}-l} \sum_{(j_{ik}=j_{sa}^{ik}-j_{sa})} \sum_{(j^{sa}=l_l+j_{sa}-l_{sa}-j_{sa}^{ik}-j_{sa})} \sum_{(n_i=n+l_{sa}-j_{sa}-j_{sa}^{ik}-j_{sa})} \sum_{(n_{ik}=n+l_{sa}-j_{sa}-j_{sa}^{ik}-j_{sa})} \sum_{(n_{sa}=n-j^{sa}+1)} \frac{(n_i-n_{ik}-1)!}{(j_{ik}-n_{ik}-1)! \cdot (n_i-n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-l_{sa}-l_{sa}^{ik}-1)!}{(j^{sa}-n_{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{sa}^{ik})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \sum_{k=l}^{l_{sa}+j_{sa}^{ik}-l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j^{sa}=l_l+n+j_{sa}-D-s)} \sum_{n_i=n+l_{sa}}^n \sum_{(n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_{sa}+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l)!}.$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (D + j_{sa} - j_{sa} - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq i) \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}^{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq i) \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{ik} - 1 \wedge j_{sa}^{ik} \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^{ik} \geq 5 \wedge j_{sa}^{ik} \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fzS_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j_{sa} = l_{sa} + \mathbf{n} - D}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{l=l_{sa}-l+1}^{(l_s+j_{sa}^{ik})} \sum_{j_{sa}^{ik}=j_{sa}-D-j_{sa}}^{l_{sa}-l+1} j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$

$$\sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-l)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - 1)! (j_{ik} + j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - \mathbf{n} - 1)!}{(D + j_{sa}^s + s - \mathbf{n} - j_{sa}^s)! (n + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq \mathbf{l} \wedge l_s \leq D - \mathbf{n} + 1) \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq \mathbf{l} \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D + j_{sa} - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq \mathbf{l} \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_{z=2}^{j_{sa}^{ik}} = \sum_{k=l}^{j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} + j_{sa}^{ik} - l - j_{sa}^{ik} + 1} \sum_{(j_{ik} = j_{sa}^{ik} + n - D)} \sum_{j_{sa} = l_{sa} + n - D} \\ \sum_{i=n+\mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{j_{ik} - \mathbb{K}_1 + 1} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \\ \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+j_{sa}^{ik}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i - n_{sa} - 1)!}{(n_i + j^{sa} - n_{sa} - 1)! \cdot (n - j^{sa} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - j_{sa}^{ik} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$(D \geq n < n \wedge l \neq i) \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i < j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(n_i - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + n + j_{sa}^{ik} - D - s)}^{(l_s + j_{sa}^{ik} - l)} \sum_{j^{sa}=j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=n+l_k}^n \sum_{(n_{is}=n+l_k)}^{(n_{is}=n+l_k+1)} \sum_{j_{ik}}^{(n_{is}=n+l_k+1)}$$

$$\frac{(n_{ik} + l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(n_{ik} + j_{sa}^{ik} - l_{ik} - j_{sa})! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\begin{aligned} & ((D \geq n < n + l_i \wedge l_i \wedge l_s \leq D - n + 1 \wedge \\ & j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_{sa}^{ik} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \end{aligned}$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n + l_i \wedge l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}}^{()} = \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}^{()} j^{sa} = l_{ik} + \mathbf{n} + j_{sa} - D - j_{sa}^{ik}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{(n_i-j_{sa}-\mathbb{k}_1+1)} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{()}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s$$

$$\begin{aligned}
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - j - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - l_i)! \cdot (\mathbf{n} - j_{sa}^{ik} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l = i l \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 = l_i \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^{s\mathbb{k}_1}, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \left(\sum_{k=1}^{\quad} \sum_{(j_{ik} = j_{sa}^{ik})}^{(\quad)} \sum_{j^{sa} = j_{sa}} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} \Bigg) + \\
& \left(\sum_{k=0}^{\mathbf{l}} \sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{j_{sa}=j_{sa}^{sa}+1}^{\mathbf{l}_{sa}-\mathbf{l}+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - j_{ik} - \mathbb{K}_1 - 1)!}{(n_i - j_{ik} - \mathbb{K}_1 - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - j_{ik} - \mathbb{K}_2 - 1)!}{(n_{ik} - j_{ik} - \mathbb{K}_2 - n_{sa} - j_{ik} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(\mathbf{l}_{sa} + j_{sa}^{ik} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) - \\
& \sum_{k=0}^{\mathbf{l}} \sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{j^{sa}=j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(D - \mathbf{l}_i)!}{(D + s - \mathbf{n} - \mathbf{l}_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l} = \mathbf{l} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} = & \sum_{k=0}^{l_{sa}-l_i} \sum_{j_{ik}=j_{sa}^{ik}-1}^{l_{sa}-l_i+k} \sum_{j_{sa}=j_{sa}}^{l_{sa}-l_i+k} \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l_i - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_i + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \end{aligned}$$

$$\sum_{k=0}^{l_{sa}-l_i} \sum_{j_{ik}=j_{sa}^{ik}-1}^{l_{sa}-l_i+k} \sum_{j_{sa}=j_{sa}}^{l_{sa}-l_i+k}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = \mathbf{n} - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{j_{sa} = j_{sa}}^{l_{sa} - {}_i l + 1} \sum_{k = {}_i l}^{()} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k={}_i l}^{(\quad)} \sum_{(j_{ik}=j_{sa}^{ik})}^{(\quad)} \sum_{j^{sa}=j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-\mathbb{k}_2}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!}$$

$$\frac{(D + s - \mathbf{n} - l_i)!}{(\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l > 0 \wedge$$

$$j_{sa}^{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik}, \dots, j_{sa}^s, \dots, \mathbb{k}_2\}$$

$$s \geq 5, \mathbf{n} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbf{n} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k={}_i l}^{(l_{sa}+j_{sa}^{ik}-{}_i l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - {}_i l)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$\sum_{k=0}^{\infty} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k} \atop (n_{ik}=n_i-j_{ik}-\mathbb{k}_1-1) \atop n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^n \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\frac{(n_{ik} + l_{ik} + j_{sa}^{ik} - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > \mathbb{k}_1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}, \mathbb{k}_1 - j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: 2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S_{j_{ik}, j^{sa}} = \sum_{k=0}^{\infty} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-{}_i l+1)}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \\
& \frac{(l_{ik} - j_{ik} - l_i + j_{sa}^i)!}{(l_{ik} - j_{ik} - l_i + j_{sa}^i)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{sa}^i - l_i - s)!}{(D + s - \mathbf{n} - l_i - \mathbf{n} - s)!} \cdot \\
& \sum_{k=1}^{\mathbb{k}} \sum_{l_i}^{(\cdot)} \sum_{j^{sa}=j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)} \sum_{n_{sa}=\mathbf{n}_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(\cdot)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_i \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^i + j_{sa}^{ik} - j_{sa}^i \wedge$$

$$j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j^{sa}} = \sum_{k=1}^n \sum_{i=1}^l \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-1} \frac{(n_i-j_{ik}-\mathbb{k}_1+1)!}{(j_{ik}-2)!} \frac{(n_{ik}+j_{ik}-j^{sa}-1)!}{(n_{ik}-n_{sa}-\mathbb{k}_2+1)!} \frac{(n_{sa}-1)!}{(n_{ik}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \frac{(n_{ik}-n_{sa}-\mathbb{k}_2+1)!}{(j^{sa}-j_{ik}-1)!} \frac{(n_{sa}-1)!}{(n_{ik}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \frac{(n_{ik}-j_{ik}-\mathbb{k}_1+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!}{(n_{ik}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \frac{(n_{ik}+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n-s)!} \sum_{k=1}^n \sum_{i=1}^l \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}} \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n-s)!} \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$$\left((D \geq n < n \wedge l = 1 \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} = & \sum_{i=0}^{n-1} \sum_{l=0}^{(l_{ik}-i)^{l+1}} \sum_{j_{sa}=j_{sa}^{ik}}^{l_{sa}-i^{l+1}} \\ & \sum_{i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \end{aligned}$$

$$\sum_{k=1}^n \sum_{i=1}^n \sum_{j=1}^n \sum_{l=1}^n \sum_{m=1}^n \sum_{n=1}^n \sum_{s=1}^n \sum_{t=1}^n \sum_{u=1}^n \sum_{v=1}^n \sum_{w=1}^n \sum_{x=1}^n \sum_{y=1}^n \sum_{z=1}^n \sum_{\substack{j_{ik}=j_{sa}^{ik} \\ j^{sa}=j_{sa}}} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_{ik})!}{(D + s - l_{ik} - l)! \cdot (n - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = i l \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} = j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \leq 2 \wedge \mathbb{k}_z = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$$

$$j_{ik} j^{sa} = \left(\sum_{k=1}^n \sum_{i=1}^n \sum_{j=1}^n \sum_{l=1}^n \sum_{m=1}^n \sum_{n=1}^n \sum_{s=1}^n \sum_{t=1}^n \sum_{u=1}^n \sum_{v=1}^n \sum_{w=1}^n \sum_{x=1}^n \sum_{y=1}^n \sum_{z=1}^n \sum_{\substack{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa} \\ j^{sa}=j_{sa}}} \sum_{j^{sa}=j_{sa}}^{l_{ik}+j_{sa}-i l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \right) + \\
& \left(\sum_{k=i l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik})}^{l_{ik} + j_{sa} - i l - j_{sa}^{ik}} \sum_{j_{sa} = i l + 1}^{j_{sa}^{ik} - i l + 1} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \\
& \frac{(n_i - j_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \right. \\
& \sum_{k=i l}^{(l_{ik} - i l + 1)} \sum_{(j_{ik} = j_{sa}^{ik})}^{l_{sa} - i l + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - i l - j_{sa}^{ik} + 2}^{l_{sa} - i l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1, n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = {}_i l \wedge l_{sa} \leq D - j_{sa} - n \wedge$$

$$j_{sa}^{ik} \leq j^{sa} + j_{sa} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} - 1 \leq j^{sa} - n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} > l_{ik} \wedge$$

$$n \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1, j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=1}^n \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-{}_i l+1)} \right)$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i\mathbf{l} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i\mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left(\frac{(j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa} - s)!} \right) + \\
& \left(\sum_{k=i\mathbf{l}}^{(l_{ik} - i\mathbf{l} - 1)} \sum_{j_{sa}^{ik}}^{l_{sa} - i\mathbf{l} + 1} \sum_{j_{sa}^{ik} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - i\mathbf{l} + 1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i\mathbf{l} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i\mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$

$$\sum_{k=1}^n \sum_{l=1}^{(n)} \sum_{j^{sa}=j_{sa}}^{(n)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}}^{(n)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n-s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n-s)!}$$

$$D \geq n < n \wedge l = l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j^{sa} > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 5 \bullet s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z \cdot z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=1}^n \sum_{l=1}^{(n)} \sum_{j^{sa}=j_{sa}}^{(n)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \sum_{j_{sa}^{ik} = j_{sa}}^{l_{sa} - i_{l+1}} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{ik} = n_i - j_{ik} - \mathbb{k}_1 + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}{(j_{sa}^{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(n_{sa} - j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \sum_{j_{sa}^{ik} = j_{sa}}^{l_{sa} - i_{l+1}} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{ik} = n_i - j_{ik} - \mathbb{k}_1 + 1}^{(\quad)} \sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2}^{(\quad)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{ik}-l+1)} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=l}^{\sum_{i=1}^n (n_i - j_s + 1)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_{ik}+j_{sa}^{ik}-j_{sa}^{ik+1})} \sum_{(n+l+j_{sa}-D-s)}^{(l+n+j_{sa}-D-s)} \sum_{(n+l_{ik}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n+l_{ik}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1})}^{(n_i-j_s+1)} \sum_{(n+l_{ik}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \frac{(n_{ik}+l_{k_1}+j_{sa}^{ik}-j_{ik}-l_{k_2})!}{(n_{ik}+l_{k_1}+j_{sa}^{ik}-j_{ik}-l_{k_2})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge \alpha_{D-n} \rightarrow D - n = 1 \wedge$$

$$D + l_{sa} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ts} \leq j^{sa} + j_{ts} - j_{sa} - 1 \wedge$$

$$j_{ik} - j_{sa} = j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik}) \vee$$

$$(D - n) \wedge l_s > D - n + 1 \wedge$$

$$D + l_{ik} + j_{sq} - n - l_{sq} - j_{sq}^{ik} + 2 \leq l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \Big) \Big) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z^S j_{ik} j_{sa} = \sum_{k=l}^{(l_{ik}-l_{sa}+1)} \sum_{j_{ik}=j_{sa}^{ik}-j_{sa}}^{(l_{ik}-l_{sa}+1)} \sum_{j_{sa}=l_{sa}^{ik}-j_{sa}}^{(l_{sa}^{ik}-j_{sa}+1)} \sum_{n_i=n+l}^n \sum_{n_{ik}=n_{sa}+j_{ik}-j_{sa}}^{(j_{ik}-k_1+1)} \sum_{n_{sa}=n_{ik}-j_{ik}+1}^{(j_{sa}-k_2+1)} \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l}^{()} \sum_{j_{ik}=j_{sa}^{ik}-j_{sa}}^{()} \sum_{j_{sa}=l_{sa}^{ik}-j_{sa}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l}^n \sum_{n_{is}=n+l+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa}^s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^l, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} \leq \mathbf{s} + \mathbb{k} \wedge$$

$$z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right)$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{l_{sa}+n+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}=n-D)}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \right) \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}+1)}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i + j^{sa} - \mathbf{n} - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - j^{sa} - s)!}{(D + j_{sa} - \mathbf{n} - j^{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)} \sum_{j^{sa}=l_{sa}+n-D}^{j^{sa}=l_{sa}-l} \right) \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \left(\sum_{k=l}^n \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-l} \right)$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s+l)-1} \sum_{(j_{ik}-s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+l)-l} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+n+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n - n_{sa} - j_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa} - j_{sa} - 1)!}{(l_{sa} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - n - s)!}{(D + j_{sa} - n - s)! \cdot (n + j_{sa} - j_{sa} - s)!} \right) - \\
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - j_{sa}^{ik} + 2 \leq \mathbf{l} \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_{z^s} S_{i_{ik}, j_{sa}} = & \sum_{k=l}^{(l_s - j_{sa}^{ik} - l)} \sum_{(j_{ik} = \mathbf{n} + j_{sa}^{ik} - D + 1)}^{(l_s - j_{sa}^{ik} - l)} \sum_{j_{sa} = l_{sa} + \mathbf{n} - D}^{l_{sa} - l + 1} \\ & \sum_{n_i = \mathbf{n}}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa})! \cdot (n+j_{sa}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} - 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} > 0 \wedge$$

$$D \geq n < n \wedge l - \mathbb{k}_k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_1 - j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^s = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z^S_{j_{ik}, j^{sa}} = & \left(\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - l_{sa})!} + \\
& \left(\sum_{k=l}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik}} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa}^{ik})} \sum_{l_{sa}-l+1}^{l_{sa}-l+1} \right. \\
& \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}-j_{ik}+1)}^{n_i-j_{ik}-\mathbb{k}_2-1} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right) \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa})} \sum_{l_{sa}-l+1}^{l_{sa}-l+1}
\end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D - j_{sa} - l_{sa} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)}^{(j_{ik}=\mathbf{n}+j_{sa}^{ik}-D-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$j_{sa}^{ik} - j_{sa} = \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{sa}+j_{sa}^{lk}-j_{sa})}^{(l_s+j_{sa}-l)} j^{sa=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{lk}-j_{sa})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_{ik}-j_{sa}+1)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{lk} - s - n - j_{sa})!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa})! (n + j_{sa}^{lk} - j_{ik} - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{lk} - j_{ik} - 1)! (j_{ik} + j_{sa}^{lk} - 1)!}$$

$$\frac{(D - 1)!}{(D + j_{sa} + s - n - j_{sa})! (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{lk} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{lk} - j_{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{lk} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{lk} + 1 \geq l \wedge l_{sa} + j_{sa}^{lk} - j_{ik} = l_{ik} \wedge$$

$$D \geq 1 < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{lk} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{lk} - 1 \wedge$$

$$s: \{j_{sa}^i, \dots, \mathbb{k}_1, j_{sa}^{lk}, \dots, j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 6 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_z \wedge \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - j_{ik} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=l_i+1}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}^{ik}=D-s}^{(j_{ik}-l_{sa}^{ik}-D-s)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}-j_{sa}}^{(n_i-j_s+1)} \\
& \sum_{n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{is}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}_2)} \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - j_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{is} - 1)!}{(n_{sa} - j_{sa} - \mathbf{n} - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{sa} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_{ik}, j_{sa}} \sum_{l_i=0}^{(j_{sa}^{ik}-j_{sa})} \sum_{j_{sa}^{ik}=l_i+1}^{l_s+j_{sa}-l} \sum_{j_{sa}=l_i+n+j_{sa}-D-1}^{j_{sa}=l_i+n+j_{sa}-D-s} \\ & \sum_{n_i=n+\mathbb{k}}^{(n_i-n_{ik}-\mathbb{k}_1+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_s+\mathbf{n}+j_{sa}^{ik}-D-1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l-s+1}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n - \mathbf{n} - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{sa}^{sa}} = \sum_{k=l}^{(l_i+n+1-j_{sa}^{sa}-D-s)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} j_{sa}^{sa}=l_i+n+j_{sa}-D-s$$

$$\sum_{n_{ik}+l_s}^n \sum_{(n_{ik}=n_{sa}-j_{ik}+1)}^{(n_{ik}-\mathbb{k}_1+1)} n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2$$

$$\sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}-n_{sa}-\mathbb{k}_2-j_{ik}+1)} (n_i-n_{ik}-\mathbb{k}_1-1)! \cdot (n_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)! \cdot (n_{ik}-n_{sa}-\mathbb{k}_2-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)! \cdot (n_{sa}-1)! \cdot (n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})! \cdot (l_{ik}-l-j_{sa}^{ik})! \cdot (l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)! \cdot (l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})! \cdot (j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})! \cdot (D+j_{sa}-l_{sa}-s)! \cdot (D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)! +$$

$$\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_i+j_{sa}-l-s+1)} j_{sa}^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(l_s + j_{sa} - \mathbf{n} - s)!}{(\mathbf{n} + j^{sa} - \mathbf{n} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{l=\mathbf{l}}^{(l_{ik}-l)} \sum_{j_{sa}^{ik}=\mathbf{l}}^{(j_{sa}^{ik}-D-j_{sa})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-l)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+l_i+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{is}=n+l_i+j_{sa}^{ik}-j_{ik}-\mathbb{k}_2)}^{(l_s+j_{sa}-l)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - l_{sa})!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa} - j_{ik} - 1) \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z \mathcal{S}_{j_{ik}, j_{sa}} = \sum_{k=l}^{\sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})} (l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_{ik}-\mathbb{k}_1+1)} (n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_i=n+\mathbb{k}}^{\sum_{(n_{ik}=n+\mathbb{k}_2-j_{sa}+1)} (n_{ik}=n+\mathbb{k}_2-j_{sa}+1)} \sum_{n_{sa}=n-j_{sa}}^{\sum_{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} (n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} \cdot \sum_{k=l}^{\sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)} (l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\sum_{(n_i-j_s+1)} (n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{\sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} (n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} (n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \leq 2 \wedge \mathbb{k} = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l}^{\quad} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$
$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$
$$\sum_{k=l}^{\binom{()}{}} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_i+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-l}$$
$$\sum_{n_i=n+\mathbb{k}_1}^n \sum_{\substack{n_i+l_{sa}^{ik}-j_{sa}-j_{ik} \\ (n_i+l_{sa}^{ik}-j_{sa}-j_{ik})}}^{(n_i+l_{sa}^{ik}-j_{sa}-j_{ik})+1}$$
$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2}^{\binom{()}{}} \sum_{j^{sa}=n_{ik}+j_{sa}-\mathbb{k}_2}^{(n_{ik}+j_{sa}-\mathbb{k}_2)+1}$$
$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - j_{sa} - \mathbb{k}_2)!(n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!}$$
$$\frac{(j_{sa}^{ik} - j_{ik} - l - 1)!}{(n_{ik} + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}$$
$$\frac{(D - l_i)!}{(D + j^{sa} + l_i - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$
$$((D \geq n < n \wedge l_{sa} = D - n + 1 \wedge$$
$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$
$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$
$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \vee$$
$$(D \geq n < n \wedge l_{sa} > D - n + 1 \wedge$$
$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$
$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$
$$(l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})) \wedge$$
$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$
$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+\mathbf{n}-D)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=j_{ik}+j_{sa}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
 &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_i + \mathbf{n} + j_{sa}^{ik} - D - s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s + j_{sa}^{ik} - l)} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z^S j_{ik}, j_{sa}^{ik} = \sum_{k=l}^{j_{sa}^{ik}-j_{sa}} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\ \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=\mathbf{l}_{ik}+\mathbf{n}-D)}^{(\mathbf{l}_{ik}-l+1)} \sum_{j^{sa}=\mathbf{l}_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{\mathbf{l}_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} + j_{sa} - \mathbf{n} - 1)!}{(j^{sa} - j_{sa} - 1)!} \cdot \\
& \frac{(\mathbf{l}_{ik} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(\mathbf{l}_{sa} + j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - j_{sa}^{ik} - 1)!} \cdot \frac{(\mathbf{l}_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^{ik})! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(\mathbf{l}_s - l - 1)!}{(\mathbf{l}_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_{ik}} \sum_{k=l}^{(l_i+n+j_{sa}^{ik}-D-s-1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_1-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=\mathbf{n}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)}^{n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - \mathbb{k}_1 - 1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - \mathbb{k}_2 - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, \dots, j_{sa}^{i-1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + n - D)} \sum_{j^{sa} = l_{sa} + n - D}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{\binom{(n_i+l_k+1)}{n_i+l_k+1-j_{ik}}} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}}$$

$$\frac{(n_{ik} + l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} - j_{sa})! \cdot (n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k1} - n - j_{sa}^s)! \cdot (j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(j_{sa}^{ik} - l - 1)!}{(j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\ & j_{ik}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \end{aligned}$$

$$\begin{aligned} & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\ & (D \geq n < n \wedge l_s > D - n + 1 \wedge \end{aligned}$$

$$\begin{aligned} & j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \end{aligned}$$

$$\begin{aligned} & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee \\ & (D \geq n < n \wedge l_s > D - n + 1 \wedge \end{aligned}$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$fz_{\mathbf{n}-j_{sa}}^{s_{\mathbf{n}-j_{sa}}} = \sum_{k=l}^{\mathbf{n}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{ik}-j_{sa}+n-D)}^{\mathbf{l}_{sa}-l+1} \sum_{j^{sa}=\mathbf{l}_{sa}+n-D}^{(n_i-j_{sa}-\mathbb{K}_1+1)} \sum_{n_{ik}=n+\mathbb{K}_2-j_{ik}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-n_{ik}-\mathbb{K}_1-1)!} \cdot \frac{(n_i-n_{ik}-\mathbb{K}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{K}_1+1)!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{K}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{K}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \frac{(\mathbf{l}_{ik}-l-j_{sa}^{ik})!}{(\mathbf{l}_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(\mathbf{l}_{sa}+j_{sa}^{ik}-\mathbf{l}_{ik}-j_{sa})!}{(j_{ik}+\mathbf{l}_{sa}-j^{sa}-\mathbf{l}_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-\mathbf{l}_{sa}-s)!}{(D+j^{sa}-\mathbf{n}-\mathbf{l}_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i + j^{sa} - n - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j_{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_{ik}+j_{sa}^{ik}-l)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{is}-j_s+1)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{i, j_{sa}}^{j_{sa}} = \sum_{k=l}^{\binom{D}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n_{ik}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}+1}^{\binom{D+j_{sa}-l_{sa}-1}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n_{sa}=n-j_{sa}+1}^{\binom{D+j_{sa}-l_{sa}-1}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \frac{(n_{ik}-n_{sa}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(n_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} - \sum_{k=l}^{\binom{D}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n_{ik}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}+1}^{\binom{D+j_{sa}-l_{sa}-1}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{n_{sa}=n-j_{sa}+1}^{\binom{D+j_{sa}-l_{sa}-1}{j_{sa}+j_{sa}^{ik}-j_{sa}}} \frac{(n_i-j_s+1)}{\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)}}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l)!}.$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (j_{ik} + j_{sa} - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j_{sa} = \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik}=l_s + \mathbf{n} + j_{sa}^{ik} - D - 1)} j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{(l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)}^{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{n=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is} = n - j_{sa}^{ik} + 1)}^{(n_{is} + 1)} (n_{is} - j_{ik})$$

$$\frac{\sum_{n_{ik} = n_{is} + j_{sa}^{ik} - \mathbb{k}_1}^{(n_{ik} + \mathbb{k}_1 - j_{sa}^{ik} - s)} \sum_{(n_{ik} = j_{sa} - \mathbb{k}_2)}^{(n_{ik} + j_{sa}^{ik} - j_{ik} - s)} \frac{(n_{ik} + \mathbb{k}_1 - j_{sa}^{ik} - s) \cdot (\mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 - \mathbf{n} - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > \mathbf{n} - \mathbf{n} + 1 \wedge$$

$$j_{ik}^{ik} + 1 \leq j_{ik}^{ik} < j_{sa}^{sa} + j_{sa}^{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq \mathbf{n} + j_{sa}^{ik} - j_{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge \mathbb{k} = \mathbb{k} >$$

$$j_{sa}^{sa} - j_{sa}^{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{l_i + j_{sa} - l - s + 1} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_s - l - j_{sa} - s)!}{(l_s + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - \mathbf{n} + 1 \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(l_i + j_{sa}^{ik} - l - s + 1)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - l - s + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_i - j_{ik} - l - s + 1)}^{(n_i - j_{ik} - l - s + 1)} \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ & \frac{(n_{ik} - j_{sa} - \mathbb{k}_1 + 1)!}{(j_{ik} - l - s + 1)! \cdot (n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - j_{sa} - \mathbb{k}_2 + 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \cdot \\ & \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{ik} + \mathbf{n} - D)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ & \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(\quad)} \\ & \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D - 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + n - D}^{l_s + j_{sa} - l} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \end{aligned}$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_s + \mathbf{n} + j_{sa}^{ik} - D)}^{(l_s + j_{sa}^{ik} - l - 1)} \sum_{(j_{sa} = l_s + j_{sa}^{ik} - l + 1)}^{(l_s + j_{sa}^{ik} - l - 1)} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1)}^{(n_i - j_{ik} - \mathbb{k}_1)} \sum_{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \\
& \frac{(n_i - j_{ik} - \mathbb{k}_1)!}{(j_{ik} - \mathbb{k}_1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - j_{ik} - \mathbb{k}_2 + 1)!}{(j^{sa} - \mathbb{k}_2 - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{(j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^{ik} - j_{sa} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} + 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1$$

$$s: \{j_s^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s \cdot 6 \wedge s = s \cdot \mathbb{k} \wedge$$

$$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D - 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{sa} + n - D}^{l_{sa} - l + 1} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l)!}.$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_s + j_{sa}^{ik} - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k}$$

$$\mathbb{k} - z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j_{sa} = l_s + j_{sa}^{ik} - l + 1)}^{l+1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} = \mathbf{n} - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{ik} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1)!}{(j_{ik} - \mathbb{K}_1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - j_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - \mathbb{K}_2 - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = j_{sa} + 1}^{l_s + j_{sa} - l} \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}_1}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{K}_1 + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{K}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2)}^{()}
\end{aligned}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}.$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{lk}+1} \right)$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)} \sum_{j^{sa} = j_{sa} + 2}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l - j^{sa} - l_{ik})!}{(j_{ik} + l - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}, j_{sa}=j_{sa}^{ik}+1, l_{ik}+j_{sa}^{ik}-l-j_{sa}^{ik}+1)} \sum_{(n_i-j_{sa}^{ik})} \sum_{(n+l_{ik}(n_{is}+l_{ik}+j_{sa}^{ik}-j_{ik}))} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-l_{ik}-l_{k_1}, n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_{ik}+l_{k_1}+j_{sa}^{ik}-n-j_{sa}^s)!} \cdot$$

$$\frac{(n_{ik}+l_{k_1}+j_{sa}^{ik}-n-j_{sa}^s)!}{(n_{ik}+l_{k_1}-n-j_{sa}^{ik})! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa}^{ik} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l_s \wedge l_s \leq n - 1 \wedge$$

$$j_{sa}^{ik} \leq j_{sa} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^{ik} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge$$

$$l_{sa} \leq n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-l} \right. \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-l} \right. \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \right)$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j_{sa}^{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{is} + j_{sa}^{ik} - j_{ik} - j_{sa}^{ik} - \mathbb{k}_1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{sa} - j_s + 1)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} j_{sa}^{ik} j_{ik} j^{sa} = & \left(\sum_{k=l}^{(l_{ik}-1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_{ik}-1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-1)} \right. \\ & \sum_{n_{ik}=n+\mathbb{k}}^{(n_i-n_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{ik}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \right) \end{aligned}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(n + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S j_{ik}, j^{sa} = \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{j_{sa} - j_{sa}^{ik}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \frac{(n_i - j_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa}^{ik} - n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \left(\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \right)$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - j_{sa}^{ik} - 1)!}{(D + j^{sa} - n - 1)! \cdot (n + j^{sa} - n_{sa} - s)!} \cdot \\
& \sum_{k=j_{sa}^{ik}-l}^{j_{sa}^{ik}-1} \sum_{k=j_{sa}^{ik}+1}^{j_{sa}^{ik}-l} \sum_{a=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^{ik})! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$n_{ik} \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} + 1} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n_{sa} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} - \mathbb{k}_2}^{j_{sa} + 1} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} - \end{aligned}$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} + 1} \sum_{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}^{l_{sa} + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa}^s - j_{sa} - s)!}.$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s \leq 6 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \right).$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{j^{sa} + j_{sa}^{ik} - j_{sa} - 1} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{sa} - n - D} l_{ik} + j_{sa}^{ik} - l - j_{sa}^{ik} + 1 \right) \cdot \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1) \atop n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - j_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - \mathbf{n} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1) \atop j^{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}_1}^n \sum_{(n_i - j_{ik} - \mathbb{k}_1 + 1) \atop n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (D + j_{sa} - j^{sa} - 1)!} \cdot$$

$$\sum_{k=0}^{j_{sa} - l - j_{sa}^{ik} + 1} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{k} \binom{j_{sa} - l - j_{sa}^{ik} + 1}{j_{sa} - l - j_{sa}^{ik} + 1 - k} \cdot$$

$$\sum_{i=0}^{n} \binom{n}{i} \sum_{s=0}^{n_i - j_s + 1} \binom{n_i - j_s + 1}{s} \cdot$$

$$\sum_{t=0}^{n + \mathbb{k}} \binom{n + \mathbb{k}}{t} \sum_{s=0}^{n_i - j_s + 1} \binom{n_i - j_s + 1}{s} \cdot$$

$$\sum_{t=0}^{n + \mathbb{k}_1} \binom{n + \mathbb{k}_1}{t} \sum_{s=0}^{n_i - j_s + 1} \binom{n_i - j_s + 1}{s} \cdot$$

$$\sum_{t=0}^{n + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s} \binom{n + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s}{t} \cdot$$

$$\sum_{t=0}^{n + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s} \binom{n + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s}{t} \cdot$$

$$\sum_{t=0}^{n + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s} \binom{n + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s}{t} \cdot$$

$$\sum_{t=0}^{n + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s} \binom{n + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s}{t} \cdot$$

$$D + n - l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_{ik} + j_{sa}^{ik} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l - 1 \wedge$$

$$j_{sa}^{ik} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}+1)}^{(n_i-j_{ik}+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \\ &\frac{(n_{ik}-n_{ik})!}{(j_{ik}-2)! \cdot (n_{ik}-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ &\frac{(n_{ik}-n_{sa}-\mathbb{k}_2+1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ &\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\ &\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \\ &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{()} \end{aligned}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$S_{j_{ik}, j^{sa}} = \left(\sum_{k=l}^n \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-l} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right. \\ \left. \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \right. \\ \left. \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \right. \\ \left. \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \right).$$

$$\begin{aligned}
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \right. \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - \mathbf{n} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j^{sa} = l_s + j_{sa} - l + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(n_{is}=l_i+n+j_{sa}-D-j_{sa}^{ik})}^{()} \cdot \\
& \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{()} \cdot \\
& \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-j_{ik})}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \cdot \\
& \frac{(l_{sa} + l_{k_1} + j_{sa} - s - n - j_{sa}^s)!}{(j_{ik} + l_{k_1} + j_{sa} - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \geq n < n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge \\
& D + l_{sa} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 2 \leq l \leq l_i - 1 \wedge \\
& j_{sa}^{ik} \leq j_{ik} - j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge \\
& j_{sa}^{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\
& D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge \\
& D \geq n < n \wedge l = l_i > 0 \wedge \\
& j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge
\end{aligned}$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} &= \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} j_{sa} = l_{sa} + n - \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = n + j_{sa}^{ik} - j_{ik} + 1)}^{n_{ik} + j_{sa} - j_{sa} - \mathbb{k}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - n_{sa} - 1)! \cdot (n - j_{sa})!} \cdot \\ &\frac{(n_{sa} - l - j_{sa}^{ik})!}{(n_{sa} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \\ &\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\ &\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(\quad)} \\ &\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fz S_{j_{ik}^{sa}} = \left(\sum_{i=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{j_{sa}^{ik}} j^{sa} = j_{ik}+j_{sa}-j_{sa}^{ik} \right. \\ \left. \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \right.$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-j_{sa})} \sum_{(j_{sa}=j_{ik}+j_{sa}^{ik}-j_{sa})}$$

$$\sum_{(n+l_{sa}-j_{sa})} \sum_{(n+l_{sa}-j_{sa})} \sum_{(n+l_{sa}-j_{sa})}$$

$$\sum_{(n+l_{sa}-j_{sa})} \sum_{(n+l_{sa}-j_{sa})} \sum_{(n+l_{sa}-j_{sa})}$$

$$\frac{(l_{sa} + l_{k_1} + j_{sa}^{ik} - n - j_{sa}^s)!}{(l_{sa} + l_{k_1} - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa} - s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n - 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = l > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{ik}} \right. \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \left. \frac{(l_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1} \right. \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ \left. \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \right)$$

$$\begin{aligned}
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k} - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \frac{n_{ik} + j_{sa}^{ik} - j^{sa} - \mathbb{k}_2}{n_{sa} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik} + 1} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa}^{ik} - \mathbb{k}_1 + 1)! \cdot (n_i - n_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - j_{sa}^{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - \mathbb{k}_2 - 1)! \cdot (n_{ik} + j_{sa}^{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{sa}^{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - D - s)}^{l_{sa} - l + 1} j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{()} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{j_{ik}, j_{sa}} \sum_{k=l}^{l+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\begin{aligned}
& \sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^{ik})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s+j_{sa}^{ik}-j_{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-l-1)!}{(D+j_{sa}^s+s-n-j_{sa}^{ik}-j_{sa}^{ik}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_{sa} \leq D + s - n \wedge$$

$$D \geq n < n \wedge l - \mathbb{k}_1 > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
fz S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}
\end{aligned}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(l_s+j_{sa}^{ik}-j_{ik})} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-j_{sa}^{ik}} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-j_{sa}^{ik}}$$

$$\sum_{n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{k=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D - \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(j_{ik}+j_{sa})} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_{ik}=n_{sa}+\mathbb{K}}^n \sum_{(n_{ik}=n_{sa}+\mathbb{K}_2-j_{ik}+1)}^{(n_{ik}=n_{sa}+\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_i+j_{sa}-l-s+1} \sum_{j_{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j^{sa} - j_{sa}^{ik} - j_{sa})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n - j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{(j_{ik}+j_{sa}^{ik}-j_{sa})}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$\left. j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \right.$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\},$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{l=0}^{(j_{sa}^{ik} - j_{sa} - s - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_i + n + j_{sa} - D - s}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{sa} + j_{sa} - n - 1} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l} \sum_{(j_{ik}=\mathbf{l}_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(\mathbf{l}_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\mathbf{l}_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - \mathbf{n} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} + j_{sa} - \mathbf{n} - 1)!}{(j^{sa} - j_{sa} - 1)!} \cdot \\
& \frac{(\mathbf{l}_{ik} - j_{sa}^{ik})!}{(\mathbf{l}_{ik} - j_{ik} - \mathbf{l} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(\mathbf{l}_{sa} + j_{sa}^{ik})! (\mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - \mathbf{l} - 1)! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l} \sum_{(j_{ik}=\mathbf{l}_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(\mathbf{l}_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^{ik})! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(\mathbf{l}_s - l - 1)!}{(\mathbf{l}_s + j_{sa}^{ik} - j_{ik} - \mathbf{l})! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{i=n+\mathbb{k}}^n \sum_{j_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{n_{sa}=n-j^{sa}+1}^{l_s+j_{sa}-l} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=l_s+j_{sa}-l+1}^{l_s+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1 - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik} j_{sa}} = \sum_{k=l}^{n+j_{sa}^{ik}-D-s+1} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_i+j_{sa}-l-s+1} \sum_{j=l_i+n+j_{sa}-D-s}^{n+j_{sa}^{ik}-D-s+1} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{sa}^{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}-j_{ik}-1} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - 1 - j_{ik})!}{(l_{ik} - j_{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l} \sum_{(j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_i+j_{sa}-l-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{K}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}^{(\quad)} \\
& \frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z, s, j_{sa}^{ik}} = \sum_{k=l}^{\binom{l_{ik}+j_{sa}-j_{sa}^{ik}+1}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{ik}=j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - j_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \sum_{k=l}^{\binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{j_{sa}^{ik}=j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - l)! \cdot (\mathbf{n} - j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s \leq l_i \wedge l_{sa} - s > j_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} - s - \mathbf{n} - j_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik} - 1, \dots, \mathbb{k}_2, j_{sa}^{ik} - 1, \dots, j_{sa}^i\}$$

$$s \geq \mathbf{n} \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - l + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}, j_{sa}^{sa}=l_i+n+j_{sa}-D+l_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j_{sa}^{sa}=l_i+n+j_{sa}-D+l_{sa}-l-j_{sa}^{ik}+1)} \cdot$$

$$\sum_{(j_{sa}^{sa}=l_i+n+j_{sa}-D+l_{sa}-l-j_{sa}^{ik}+1)} \cdot \sum_{(j_{sa}^{sa}=l_i+n+j_{sa}-D+l_{sa}-l-j_{sa}^{ik}+1)} \cdot$$

$$\sum_{(j_{sa}^{sa}=l_i+n+j_{sa}-D+l_{sa}-l-j_{sa}^{ik}+1)} \cdot \sum_{(j_{sa}^{sa}=l_i+n+j_{sa}-D+l_{sa}-l-j_{sa}^{ik}+1)} \cdot$$

$$\frac{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$D \geq n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} \wedge j_{sa}^{sa} \leq j_{sa}^{ik} \wedge$$

$$j_{ik} \leq j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_{ik}, j^{sa}} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (j_{ik} - n_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
 &\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{j_{sa}^{ik}} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - l - 1)! \cdot (\mathbf{n} - j_{sa}^{ik} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s > \mathbf{n} \wedge l_i + j_{sa}^{ik} - s > \mathbf{n} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^i\}$$

$$s \geq \mathbf{n} \wedge s = s + \mathbb{k}$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-l_{sa}-s)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{(j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq n+j_{sa}-s+1)}$$

$$\sum_{(n_{is}=n+l_{ik}+j_{sa}^{ik}-j_{ik})}$$

$$\sum_{(n_{is}=n+l_{ik}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2)}$$

$$\frac{(n_{ik} + j_{ik} + \mathbb{K}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}{(D - l_i)!}$$

$$\frac{(D - l_i)!}{(n + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq l_i < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$\mathbf{l}_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{\substack{l=0 \\ (n_i-j_{ik}-\mathbb{k}_1+1) \leq l \leq n_i-j_{ik}}} \sum_{\substack{j_{sa}^{ik}=j_{sa}+1 \\ (n_i-j_{ik}-\mathbb{k}_1+1) \leq j_{sa}^{ik}-j_{sa} \leq n_i-j_{ik}}} \sum_{\substack{j_{sa}=j_{sa}+1 \\ (n_i-j_{ik}-\mathbb{k}_1+1) \leq j_{sa}-j_{sa} \leq n_i-j_{ik}}} (j_{sa}^{ik}-j_{sa}) \mathbf{l}_{ik} + j_{sa}^{ik} - \mathbb{k} + 1 \\ & \sum_{\substack{n_i=\mathbf{n}+\mathbb{k} \\ (n_i-j_{ik}-\mathbb{k}_1+1) \leq n_i-j_{ik} \leq n_i-j_{ik}}} \sum_{\substack{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1 \\ (n_i-j_{ik}-\mathbb{k}_1+1) \leq n_{ik}-j_{ik} \leq n_i-j_{ik}}} \sum_{\substack{n_{sa}=\mathbf{n}-j_{sa}+1 \\ (n_i-j_{ik}-\mathbb{k}_1+1) \leq n_{sa}-j_{sa} \leq n_i-j_{ik}}} \\ & \frac{(n_i-j_{ik}-2)! \cdot (n_i-j_{ik}-j_{ik}-\mathbb{k}_1+1)!}{(n_i-j_{ik}-\mathbb{k}_2-1)!} \cdot \\ & \frac{(j_{sa}-j_{sa}^{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!}{(n_{sa}-1)!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa})!} \cdot \\ & \frac{(\mathbf{l}_{ik}-l-j_{sa}^{ik})!}{(\mathbf{l}_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \frac{(\mathbf{l}_{sa}+j_{sa}^{ik}-\mathbf{l}_{ik}-j_{sa})!}{(j_{ik}+\mathbf{l}_{sa}-j_{sa}-\mathbf{l}_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\ & \frac{(D+j_{sa}-\mathbf{l}_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-\mathbf{l}_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}-s)!} + \\ & \sum_{k=l}^{(\mathbf{l}_{ik}-l+1)} \sum_{\substack{j_{ik}=j_{sa}^{ik}+1 \\ (j_{ik}-j_{sa}^{ik}-1) \leq j_{ik}-j_{sa}^{ik} \leq j_{ik}-j_{sa}^{ik}}} \sum_{\substack{j_{sa}=\mathbf{l}_{ik}+j_{sa}-l-j_{sa}^{ik}+2 \\ (j_{sa}-j_{sa}^{ik}-1) \leq j_{sa}-j_{sa}^{ik} \leq j_{sa}-j_{sa}^{ik}}} \\ & \sum_{\substack{n_i=\mathbf{n}+\mathbb{k} \\ (n_i-j_{ik}-\mathbb{k}_1+1) \leq n_i-j_{ik} \leq n_i-j_{ik}}} \sum_{\substack{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1 \\ (n_i-j_{ik}-\mathbb{k}_1+1) \leq n_{ik}-j_{ik} \leq n_i-j_{ik}}} \sum_{\substack{n_{sa}=\mathbf{n}-j_{sa}+1 \\ (n_i-j_{ik}-\mathbb{k}_1+1) \leq n_{sa}-j_{sa} \leq n_i-j_{ik}}} \end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n_{sa} + j_{sa}^{ik} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{n_{ik} + j_{sa}^{ik} - j_{sa}^{ik}} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik}}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$(n_i - j_s + 1) \wedge n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} j_{sa}^{ik} j_{sa}^{sa} &= \sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ &\sum_{n=\mathbb{K}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{K}_2-j_{ik}+1)}^{(j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2} \\ &\frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \end{aligned}$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - 1)! \cdot (j_{ik} + j_{sa}^{ik} - 1)!}$$

$$\frac{(D - 1)!}{(D + j_{sa}^s + s - n - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\left((D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1) \right)$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_s \leq D + l_s + s - n - 1)$$

$$(D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n - l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D + s - n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 &\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2}^{l_{sa}-l+1} \\
 &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 &\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 &\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
 \end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} j^{sa}=l_i+n+j_{sa}-D-s$$

$$\sum_{n=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{ik})}^{(n_{ik}+1)}$$

$$\frac{(n_{ik} + l_{k_1} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k_1} - n - l_{sa} - j_{sa}^s)! \cdot (n_{ik} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} + l_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$((D \geq n < n \wedge l_{sa} \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_{sa} \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_{sa} \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = l > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j_{sa}=j_{sa}^{ik}+1}^{l_{sa}-l+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ & \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}-j_{sa}-j_{sa}^{ik}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\ & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \\ & \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}^{ik}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \end{aligned}$$

$$\begin{aligned} (D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge \\ j_{sa}^{ik} \leq j_{ik} \leq j_{sa} \wedge j_{sa} \wedge \\ j_{ik} + j_{sa} - j_{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge \\ -j_{ik} \wedge l_s + l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ l_i \leq D + s - n) \vee \\ (D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge \\ j_{sa}^{ik} \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge \end{aligned}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{sa} - j_{sa} + 1 > \mathbf{l}_s \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z, S_{j_{ik}, j_{sa}}} = \sum_{k=l}^{(j_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k}_k + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} - j_{sa}^{ik} + 1} \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} - j_{sa}^{ik} + 1} \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = n_{ik} - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{ik} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{j_{sa}^{ik} - j_{sa}^{ik} + 1} \sum_{j_{sa}^{ik} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_{sa} - l + 1}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l - l - j_{sa})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - l_{sa} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik})!} \cdot \\
& \frac{(n + j_{sa} - \mathbf{n} - s)!}{(n + j^{sa} - \mathbf{n} - s)! \cdot (n - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\cdot)} \sum_{j_{sa}^{ik}=j_{sa}+1}^{l_s+j_{sa}-l} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l \neq \mathbf{l} \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_Z \mathcal{S}_{j_{ik}, j^{sa}} = & \left(\sum_{k=l}^{\left(\sum_{j_{sa}+j_{sa}^{ik}-j_{sa}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right)} \sum_{j_{sa}=j_{sa}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_i - n_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left(\sum_{k=l}^{\left(\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}-1} \right)} \sum_{j_{sa}=j_{sa}+2}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{(l_{ik}-l+1)} \sum_{j_{sa}=j_{sa}^{ik}+1}^{l_{sa}-l+1} j_{sa}^{ik+2}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{n_{ik}=n_{sa}-j_{ik}+1}^{(n_i-j_{ik}-l_{ik}-1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{K}_2}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{ik} - j_{sa}^{ik} - l_{ik} - \mathbb{K}_1 + 1)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=l}^{()} \sum_{j_{sa}=j_{sa}^{ik}+j_{sa}}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - l)! \cdot (\mathbf{n} - j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 > l_s \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{ik} < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\},$$

$$s \geq 6 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 - \mathbb{k}_1 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S j_{ik}, j^{sa} = \left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\left(\sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{l_{sa}-l+1} \right) \cdot$$

$$\sum_{n_i=n+l_{sa}-j_{sa}^{ik}-l_{ik}}^n \sum_{(n_{is}=n+l_{sa}-j_{sa}^{ik}-l_{ik}-j_{ik}+1)}^{(n_i-j_{ik}-l_{sa}+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{n_{ik}+j_{ik}-l_{sa}-l_{ik}-l_{sa}+1} \cdot$$

$$\frac{(n_{is} - n_{ik})!}{(j_{ik} - 2)! \cdot (n_{is} - n_{ik} - j_{ik} - l_{sa} + 1)!} \cdot$$

$$\frac{(n_{ik} - l_{sa} - l_{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+l_{sa}-j_{sa}^{ik}-l_{ik}}^n \sum_{(n_{is}=n+l_{sa}-j_{sa}^{ik}-l_{ik}-j_{ik}+1)}^{(n_i-j_{ik}-l_{sa}+1)} \cdot$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}-l_{sa}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})} \cdot$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_s = 0 \wedge$$

$$j_{sa}^i \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{ \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots \} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k}_1 \neq \mathbb{k}_2 \wedge z = 2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{l_{sa}-l+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - j_{sa}^{ik} - j_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j=j_{sa}^{ik}+1}^{n_{ik} - j_{sa}^{ik}} \sum_{n=n+\mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_1 - n - n - j_{sa}^s)!}^{(n_{ik}+j_{ik}-\mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!} \cdot \\
& \frac{(n_{ik} + j_{ik} - \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!}{(l_s - l - 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D - n - s \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq l \leq D - l_{ik} + j_{sa} - n - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa} - j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{ik}, j_{sa}} = & \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-l_{ik}+j_{sa}^i-l-j_{sa}^{ik}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_i-n_{ik}-\mathbb{K}_1+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \\ & \frac{(n_i-n_{ik}-\mathbb{K}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{K}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-\mathbb{K}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{K}_2)!} \cdot \\ & \frac{(n_{sa}-1)!}{(j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ & \frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} \right) + \\ & \left(\sum_{k=l} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(j_{sa}+j_{sa}^{ik}-j_{sa}-1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \right. \\ & \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \\ & \frac{(n_i-n_{ik}-\mathbb{K}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{K}_1+1)!} \cdot \\ & \left. \frac{(n_{ik}-n_{sa}-\mathbb{K}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{K}_2)!} \right) \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{(j_{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik})}^{(l_{ik}-l+1)} \cdot \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}+j_{ik}+1)}^{(n_{ik}-j_{ik}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (j_{sa} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-l} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}
\end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i, l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq l \leq D + l_{ik} + j_{sa} - \mathbf{n} - l_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s \leq 6 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 \leq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=l} \sum_{(j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \right).$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=l}^{(l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + j^{sa} = l_{sa} + n - D)}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{n - D} \right) \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_i - j_{ik} - \mathbb{K}_1 + 1)}^{(n_i - j_{ik} - 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - j_{ik} - \mathbb{K}_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa})}^{l_{sa} - l + 1} \sum_{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik} + 1}^{l_{sa} - l + 1} \\
& \sum_{n_i = n + \mathbb{K}_1}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - 1)!} \cdot$$

$$\sum_{n_{ik}=l_i+n_{sa}-j_{sa}^{ik}-D-s}^{(l_i+j_{sa}^{ik}-l)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(j_{ik}-j_{sa}^{ik}-1)}$$

$$\sum_{n_{is}=n+\mathbb{k}_1}^{\mathbf{n}} \sum_{n_{sa}=n_{is}+\mathbb{k}_1+j_{sa}^{ik}-j_{ik}}^{(n_i-j_s+1)}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1)}$$

$$\frac{(n_{sa} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} - \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D - \mathbf{n} < l \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{ik}-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}$$

$$\frac{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2-1)!}{(j_{ik}-2)! \cdot (n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot$$

$$\frac{(n_{sa}-n_{ik}-\mathbb{k}_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot$$

$$\frac{(l_{ik}-l-j_{sa}^{ik})!}{(l_{ik}-j_{ik}-l+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} -$$

$$\sum_{k=l}^{(l_s+j_{sa}^{ik}-l)} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_s+j_{sa}^{ik}-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)! \cdot (n+j_{sa}^{ik}-j_{ik}-s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z \mathcal{S}_{j_{ik}, j_{sa}} = & \sum_{l=l_i}^{j_{ik}} \sum_{j_{sa}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}^{j_{ik}} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_i+j_{sa}-l-s+1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{\substack{(\quad) \\ (j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}} \sum_{\substack{l_s+j_{sa}-l \\ j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{sa})}} \\
& \sum_{\substack{(\quad) \\ n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1 \quad (n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}} \\
& \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-n-j_{sa}^{ik})!}{(n_{ik}+j_{ik}+\mathbb{k}_1-n-n-j_{sa}^s)!(n+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
& \frac{(l_s-l-j_{sa}^{ik})!}{(l_s+j_{sa}^{ik}-j_{ik}-1)!(j_{ik}-j_{sa}^{ik}-1)!} \cdot \\
& \frac{(D-j_{sa}^{ik})!}{(D+j_{sa}+s-n-j_{sa}^{ik}-j_{sa}^{ik})!} \cdot (n+j_{sa}-j^{sa}-s)!
\end{aligned}$$

$$D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n \leq l_{sa} \leq n + l_s + j_{sa} - n \wedge$$

$$D \geq n < n \wedge l \neq i, \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{ik} - 1 \wedge j_{sa}^{ik} < j_{ik} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_1 - j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^s = s + \mathbb{k}_1 \wedge$$

$$\mathbb{k}_z: z = 2, \dots, \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} &= \sum_{k=l} \sum_{\substack{(l_i+j_{sa}^{ik}-l-s+1) \\ (j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}} \sum_{\substack{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_{ik}-\mathbb{k}_1+1) \\ (n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}} \sum_{\substack{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2 \\ n_{sa}=n-j^{sa}+1}}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{j_{ik} = n - l_{ik} - j_{sa}^{ik}}^{(l_{ik} + n - l_{ik} - j_{sa}^{ik})} \sum_{j_{sa} = n - j_{sa}^{ik}}^{(n_i - j_s + 1)} \\
& \sum_{n = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)} \\
& \sum_{k = n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1}^{(n_{is} + j_{sa}^s - j_{sa}^{ik} - \mathbb{k}_1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 + j_{sa}^s - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - \mathbb{k}_1 + j_{sa}^s - s - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D > \mathbf{n} \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq \mathbf{n} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(j_{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2} \sum_{j_{sa} = l_i + j_{sa} - D - s}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2} \\ \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + j_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ \sum_{k=l}^{(l_{ik} - l + 1)} \sum_{(j_{ik} = l_{ik} + n - D)}^{l_i + j_{sa} - l - s + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - l - j_{sa}^{ik} + 2}^{l_i + j_{sa} - l - s + 1} \\ \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \\ \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{()} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-l}^{()} \sum_{j^{sa}=l_{sa}+n}^{()} j^{sa} = l_{sa} + n$$

$$\sum_{n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik}}^{()} (n_{is} = n + l_{sa} + j_{sa}^{ik} - j_{ik})$$

$$\sum_{n_{is}=n+l_{sa}+j_{sa}^{ik}-j_{ik}}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa}}^{()} (n_{sa} = n_{ik} + j_{ik} - j^{sa} - l_{sa})$$

$$\frac{(l_{sa} + l_{sa} + l_{sa} - s - \mathbf{n} - j_{sa}^s)!}{(j_{ik} + j_{ik} + l_{sa} - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(l_i+n+j_{sa}^{ik}-D-s-1)} \sum_{(j_{ik}=l_i+n-D)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})!}{(j_{ik} + l_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{l_i+j_{sa}-l-s+1} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} j_{sa}^{sa=j_{sa}+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+j_{sa}-j_{ik})}^{(j_{ik}-k_1+1)} \sum_{(n_{is}=n+k+j_{sa}-j_{ik})}^{(j_{ik}-k_2+1)} \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=l}^{()} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j_{sa}^{sa=j_{sa}+1}}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+j_{sa}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_{ik}, j^{sa} = \sum_{k=l} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l} \sum_{\binom{()}{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik}}}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{ik} - s - n - l_{sa})!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - l_{sa})! \cdot (n + j_{sa} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa} - j_{ik} - 1) \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq n < n \wedge l \neq l_i \wedge l \leq D - n + 1) \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=\mathbf{l}_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa})}^{(l_{sa}+j_{sa}^{ik}-l-j_{sa}+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+j_{sa}^{ik}-j_{sa}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik}}^{(n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)} \\ & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\ & \frac{(n_{ik} - j_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{is} - 1)!}{(n_{sa} - j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_{sa} - l - j_{sa}^{ik})!}{(l_{sa} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\ & \sum_{k=l} \sum_{(j_{ik}=\mathbf{l}_i+\mathbf{n}+j_{sa}^{ik}-D-s)}^{(l_s+j_{sa}^{ik}-l)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\ & \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\left((D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_i \wedge l_i + j_{sa} - n - j_{sa}^{ik} = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = l_i \wedge l_s > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, j_{sa}^{ik}\} \wedge$$

$$s \geq 6 \wedge s = l_{k_1} + l_{k_2} \wedge$$

$$l_{k_2}: z = 2 \wedge l_{k_2} = l_{k_1} + l_{k_2} =$$

$$fz S_{j_{ik}, j^{sa}} = \sum_{k=l}^{(j^{sa} + j_{sa}^{ik} - j_{sa})} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_s + j_{sa} - l} \sum_{j^{sa} = l_{sa} + n - D}$$

$$\sum_{n_i = n + l_{k_1}}^n \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}}$$

$$\frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = j_{sa}^{ik} - j^{sa} = l_s + j_{sa} - l + 1)}^{(j_{ik} = j_{sa}^{ik} - j^{sa} - 1)} \sum_{n_i = n + \mathbb{k}_1}^n \sum_{n_{ik} = n + \mathbb{k}_2}^{(j_{ik} - n_{ik} - 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{(j_{ik} - n_{ik} - j_{sa} - \mathbb{k}_2)} n_{ik} \cdot (j_{ik} - n_{ik} - j_{sa} - \mathbb{k}_2)$$

$$\frac{(j_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (j_{ik} - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}.$$

$$\frac{(j_{ik} - n_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (j_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=l}^{()} \sum_{(j_{ik} = j_{sa}^{ik} + j_{sa}^{ik} - j_{sa})}^{()} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s}^{l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} + j_{sa}^{ik} - j_{ik})}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!}.$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - l)!}.$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbf{n} - l_i - j_{sa})! \cdot (l_i + j_{sa}^s - j_{sa} - s)!}$$

$$\left((D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$j_{sa}^s \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^{ik} \geq 6 \wedge j_{sa}^s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=l}^{(l_{sa} + \mathbf{n} + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik} + 1)}^{l_{sa} - l + 1} \sum_{j_{sa} = l_{sa} + \mathbf{n} - D}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{l=l_{sa}-l+1}^{(l_s+j_{sa}^{ik})} \sum_{j_{sa}^{ik}+j_{sa}-D-j_{sa}}^{l_{sa}-l+1} j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$

$$\sum_{k=l} \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-D-s)}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k+j_{sa}^{ik}-l_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-l_{k1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k2})}^{()}$$

$$\frac{(n_{ik} + l_{k1} + j_{sa}^{ik} - s - n - j_{sa})!}{(n_{ik} + j_{ik} + l_{k1} - n - n - j_{sa})! (n + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - 1)! (j_{ik} - j_{sa}^{ik} - 1)!}$$

$$\frac{(D - 1)!}{(D + j_{sa}^{ik} + s - n - j_{sa})! (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1) \vee$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} \geq l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq l_i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_{z^D} j_{sa}^{sa} = \sum_{k=l}^{j_{sa}^{sa} + j_{sa}^{ik} - j_{sa}^{sa} - l + j_{sa}^{ik} + 1} \sum_{(j_{ik} = j_{sa}^{sa} + \mathbf{n} - D)} \sum_{j_{sa} = l_{sa} + \mathbf{n} - D} \sum_{n}^{j_{ik} - \mathbb{K}_1 + 1} \sum_{n_{ik} = \mathbf{n} + \mathbb{K}_2 - j_{ik} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
& \sum_{k=l}^{(l_{ik}-l+1)} \sum_{(j_{ik}=l_{ik}+n-D)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_i - n_{sa} - \mathbb{k}_1 - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(n_i - j_{ik} - \mathbb{k}_1 + 1)! \cdot (j_{ik} - j^{sa} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{l_s+j_{sa}-l} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - n - n - j_{sa}^s)! \cdot (n + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\left((D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l}_i \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l}_i \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{sa} - j_{sa} + 1 > \mathbf{l}_s \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1) \wedge$$

$$D + s - \mathbf{n} < \mathbf{l}_i \leq D + \mathbf{l}_{sa} + s - \mathbf{n} - j_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l}_i \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l} \neq \mathbf{l}_i \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D < \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_{ik}, j^{sa}} = & \sum_{k=l} \sum_{(j_{ik}=l_{ik}+n-D)}^{(l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa}^{ik} - l_{sa} - s)!}{(D + j_{sa}^{ik} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{(j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa})}^{(l_{ik}-l+1)} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{sa}-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=l}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_i + \mathbf{n} + j_{sa}^{ik} - D - s)}^{(j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n=\mathbf{n} + \mathbb{K}}^n \sum_{(n_{is} = n - j_{ik})}^{(n_i + \mathbb{K} + 1)}$$

$$\frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} + \mathbb{K}_1 - \mathbf{n} - j_{sa}^s)! \cdot (j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(j_{sa}^{ik} - j_{ik} - l - 1)!}{(j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + l_i - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_i \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq \mathbf{n} + j_{sa}^{ik} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_i \neq l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa}) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_{ik}, j_{sa}} = \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} j^{sa} = l_{ik}+n+j_{sa}-D-j_{sa}^{ik} \\ \sum_{n_i=n+k}^{(n_i-j_{sa}-k_1+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}+j^{sa}-n-1} \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\ \sum_{k=l}^{()} \sum_{(j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa})} \sum_{l_s+j_{sa}-l}^{l_s+j_{sa}-l} j^{sa} = l_i+n+j_{sa}-D-s$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}+j_{sa}^{ik}-j_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^i-j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s + j_{sa}^{ik} - j_{ik} - l)! \cdot (j_{ik} - l - 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - j_{sa}^{ik} - j_{ik} - l - 1)! \cdot (\mathbf{n} - j_{sa}^{ik} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_{sa} \leq D + j_{sa}^i - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 = l_i \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{ik} < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\},$$

$$s \geq 6 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 - \mathbb{k}_1 = 2 \wedge \mathbb{k} = \mathbb{k}_1 - \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=\mathbf{l}} \sum_{(j_{ik}=j_{sa}^{ik})}^{(\quad)} \sum_{j^{sa}=j_{sa}} \right)$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \Bigg) + \\
& \left(\sum_{k=i}^n \sum_{l=0}^{\binom{D}{l}} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-l+1} \right. \\
& \sum_{n_i=n+l}^n \sum_{n_{ik}=n+l-j_{ik}+1}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - n_{ik} - l_{k_1} - 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(n_{sa} - j_{ik} - l_{k_2} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=i}^n \sum_{l=0}^{\binom{D}{l}} \sum_{j_{sa}=j_{sa}} \\
& \sum_{n_i=n+l}^n \sum_{n_{ik}=n_i-j_{ik}-l_{k_1}+1}^{\binom{D}{l}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_{ik} + l_{k_1} + j_{sa}^{ik} - s - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k_1} - n - n - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} = & \sum_{k=0}^{(\mathbf{l}_{ik}-j_{ik}-\mathbf{l}+1)} \sum_{j_{ik}=j_{sa}^{ik}}^{(\mathbf{l}_{ik}-j_{ik}-\mathbf{l}+1)} \sum_{j_{sa}=j_{sa}}^{(\mathbf{l}_{sa}-\mathbf{l}+1)} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \\ & \frac{(n_i-j_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_{sa}^{ik}-n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!} \cdot \\ & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j_{sa}-j_{sa}^{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa})!} \cdot \\ & \frac{(\mathbf{l}_{ik}-\mathbf{l}-j_{sa}^{ik})!}{(\mathbf{l}_{ik}-j_{ik}-\mathbf{l}+1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \\ & \frac{(D+j_{sa}-\mathbf{l}_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-\mathbf{l}_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}-s)!} - \end{aligned}$$

$$\sum_{k=0}^{(\mathbf{l}_{ik}-j_{ik}-\mathbf{l}+1)} \sum_{j_{ik}=j_{sa}^{ik}}^{(\mathbf{l}_{ik}-j_{ik}-\mathbf{l}+1)} \sum_{j_{sa}=j_{sa}}^{(\mathbf{l}_{sa}-\mathbf{l}+1)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\mathbf{l}_{ik}-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}^{n_{sa}=n-j_{sa}+1}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{j_{sa}=j_{sa}}^{l_{sa}-{}_i l+1} \sum_{k={}_i l}^{()} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!} \cdot \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} \binom{D-i-j}{i, j, D-i-j}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\infty)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}}^{(\infty)} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (n-s)!} \cdot \frac{(D-l_i)!}{(D+s-l_i-l_j)! \cdot (n-s)!}$$

$$D \geq \mathbf{n} < n \wedge l = i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \leq 2 \wedge \mathbb{k}_z = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$$

$$\sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} \binom{D-i-j}{i, j, D-i-j} \frac{l_{ik}+j_{sa}-i l-j_{sa}^{ik}+1}{j_{sa}^{sa}} \sum_{j_{sa}=j_{sa}}^{(\infty)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=i}^n \sum_{(j_{ik}=j_{sa}^{ik})}^{()} \sum_{j_{sa}=j_{sa}^{ik}}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2}^{()}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - n - j_{sa}^s)!}{(n_{ik} + j_{ik} - n - n_{sa} - \mathbb{k}_2 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - s - n - l_i)!}{(n - s)!}$$

$$D \geq n < n \wedge l = i l \wedge l_s \leq D - n + 1$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = i l \wedge l_s > 0 \wedge$$

$$j_{sa}^{ik} \leq j_{sa} - j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^{ik}\} \wedge$$

$$s \geq 6, n = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + 1 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{k=i}^n \sum_{(j_{ik}=j_{sa}^{ik})}^{(l_{sa}+j_{sa}^{ik}-i l-j_{sa}+1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - {}_i l)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!}.$$

$$\sum_{k=0}^{n_{ik}-1} \sum_{(j_{ik}=j_{sa}^{ik})} \Gamma_{j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}-n_i-j_{ik}-\mathbb{k}_1-1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > \mathbf{n} \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}, \dots, j_{sa}^i, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: Z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z^S{}_{j_{ik}, j^{sa}} = \sum_{k={}_i l}^{(l_{ik} - {}_i l + 1)} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{ik} - j_{ik} - l_i + j_{sa}^i)!}{(l_{ik} - j_{ik} - l_i + j_{sa}^i)! \cdot (j_{ik} - j_{sa}^i - 1)!} \cdot \\
& \frac{(j_{sa}^i - l_i - s)!}{(D + s - \mathbf{n} - l_i - s)!} \cdot \\
& \sum_{k=0}^{(\cdot)} \sum_{l_i} \sum_{j_{sa}^i} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)} \sum_{n_{sa}=\mathbf{n}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(\cdot)} \\
& \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l = l_i \wedge l_i \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^a + j_{sa}^{ik} - j_{sa}^a \wedge$$

$$j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fzS_{j_{ik}, j^{sa}} = \sum_{k= {}_i l} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)} \sum_{n_{sa}=\mathbf{n}+j_{ik}-j^{sa}+1} \frac{(l_{sa}+j_{sa}^{ik}-{}_i l-j_{sa}+1)}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-j_{sa}^{ik}+1)!} \cdot \frac{(n_i-j_{ik}-\mathbb{k}_1+1)}{(j^{sa}-j_{ik}-1)!} \cdot \frac{n_{ik}+j_{ik}-j^{sa}-1}{(n_{ik}-n_{sa}-\mathbb{k}_2+1)!} \cdot \frac{(n_i-n_{ik}-1)!}{(n_{sa}-j_{sa}^{ik}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(n_{ik}-n_{sa}-\mathbb{k}_2+1)!}{({}_i l-j_{sa}^{ik})!} \cdot \frac{(n_{sa}-1)!}{(j_{ik}-j_{sa}^{ik}-1)! \cdot (j_{ik}-j_{sa}^{ik}-1)!} \cdot \frac{(n_{sa}+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}-s)!} - \sum_{k= {}_i l} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_{ik}+\mathbb{k}_1+j_{sa}^{ik}-s-\mathbf{n}-j_{sa}^s)!}{(n_{ik}+j_{ik}+\mathbb{k}_1-\mathbf{n}-\mathbf{n}-j_{sa}^s)! \cdot (\mathbf{n}-s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-s)!}.$$

$$\left((D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge \right.$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j_{sa}} = \sum_{i=0}^{n-l} \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{ik}-{}_i l+1)} \sum_{j_{sa}=j_{sa}}^{l_{sa}-{}_i l+1} \sum_{n=n+\mathbb{K}}^n \sum_{(n_{ik}=n+\mathbb{K}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{K}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{K}_2} \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} (j_{ik} = j_{sa}^{ik}) j^{sa} = j_{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)}{(D + s - l_i - l)!} \cdot (n - s)!$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} + 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \leq 2 \wedge \mathbb{k}_z = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$$

$$j_{ik} j^{sa} = \left(\sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} (j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}) \sum_{j^{sa}=j_{sa}}^{l_{ik}+j_{sa}-{}_i l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\begin{aligned}
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} + \\
& \left(\sum_{k=i l}^{(j^{sa} + j_{sa}^{ik} - j_{sa} - 1)} \sum_{(j_{ik} = j_{sa}^{ik})} l_{ik} + j_{sa} - i l - j_{sa}^{ik} \sum_{j_{sa} = j_{sa} + 1} \right. \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K} - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i l}^{(l_{ik} - i l + 1)} \sum_{(j_{ik} = j_{sa}^{ik})} l_{sa} - i l + 1 \sum_{j_{sa} = l_{ik} + j_{sa} - i l - j_{sa}^{ik} + 2} \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{ik} = n + \mathbb{K}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{K}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{K}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{K}_2)!} \cdot
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_{ik} - {}_i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - {}_i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!}.$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg)$$

$$\sum_{k=0}^{\infty} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}-j_{ik}-\mathbb{k}_1) \wedge n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l = {}_i l \wedge l_{sa} \leq D - j_{sa} - \mathbf{n} \wedge$$

$$j_{sa}^{ik} \leq j_{sa}^{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} - 1 \leq j^{sa} - \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge j_{sa}^{ik} + j_{sa}^{ik} > l_{ik} \wedge$$

$$\mathbf{n} \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_{ik}, j^{sa}} = \left(\sum_{k=0}^{\infty} \sum_{({}_i l}^{l_{ik} - {}_i l + 1)} \sum_{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \left(\frac{(j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} - s)!} \right) + \\
& \left(\sum_{k=i l}^{(l_{ik} - i l - 1)} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{l_{sa}-i l+1} \right) \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i l - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - i l + 1)! \cdot (j_{ik} - j_{sa}^{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$

$$\sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} \binom{(\quad)}{i} \binom{(\quad)}{j} \binom{(\quad)}{k} j^{sa} = j_{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}} \frac{(n_{ik} + \mathbb{k}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{k}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (n-s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (n-s)!}$$

$$D \geq \mathbf{n} < n \wedge l = i l \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - \mathbf{n} > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - \mathbf{n} \wedge j_{sa}^s < j_{sa}^{ik} - \mathbf{n} \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 0 \bullet s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z \cdot z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$f_Z S_{j_{ik}, j^{sa}} = \sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} \binom{(\quad)}{i} \binom{(\quad)}{j} \binom{(\quad)}{k} j^{sa} = j_{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=1}^n \sum_{i=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}}^{(n)} j_{sa}^{sa} = j_{sa}^{sa}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{(n)} \sum_{n_{sa}=n-l_{k_1}-l_{k_2}}^{(n)} j_{ik}^{sa} = j_{sa}^{sa}$$

$$\frac{(n_{ik} + l_{k_1} + j_{sa}^{ik} - n - j_{sa}^s)!}{(n_{ik} + j_{ik} + l_{k_1} - n - n_{sa}^s)! \cdot (n - s)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}_1, j_{sa}^{ik}, \dots, \mathbb{K}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 2 \wedge \mathbb{K} = \mathbb{K}_1 + \mathbb{K}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_{ik}, j_{sa}} &= \sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \sum_{j_{sa}^{ik} = j_{sa}}^{l_{sa} - i_{l+1}} \\ &\sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{n_{ik} = n_i - j_{ik} - \mathbb{K}_1 + 1}^{(n_i - j_{ik} - \mathbb{K}_1 + 1)} \sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2} \\ &\frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{K}_1 + 1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{K}_2 - 1)!}{(j_{sa}^{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - \mathbb{K}_2)!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} - j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} - \\ &\sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \sum_{j_{sa}^{ik} = j_{sa}}^{l_{sa} - i_{l+1}} \\ &\sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{n_{ik} = n_i - j_{ik} - \mathbb{K}_1 + 1}^{(\quad)} \sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{K}_2}^{(\quad)} \\ &\frac{(n_{ik} + \mathbb{K}_1 + j_{sa}^{ik} - s - \mathbf{n} - j_{sa}^s)!}{(n_{ik} + j_{ik} + \mathbb{K}_1 - \mathbf{n} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} - s)!} \cdot \\ &\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!} \end{aligned}$$

DİZİN

B

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.1.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.1.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.2.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.2.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.3.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.1.1/230-231

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.1.1/187-188

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.1.1/321

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.2.1/230-231

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.2.1/187-188

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.2.1/321

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.3.1/230-231

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.3.1/187-188

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.3.1/321

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.4.1.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.4.1.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.4.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.4.2.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.4.2.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.4.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.4.3.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.4.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.4.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu

simetrisinin son durumunun bulunabileceği olaylara göre

- tek kalan simetrik olasılık, 2.3.3.1.1.1.1.1/233
- tek kalan düzgün simetrik olasılık, 2.3.3.2.1.1.1.1/190
- tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.1.1/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

- tek kalan simetrik olasılık, 2.3.3.1.1.1.2.1/233
- tek kalan düzgün simetrik olasılık, 2.3.3.2.1.1.2.1/190
- tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.2.1/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

- tek kalan simetrik olasılık, 2.3.3.1.1.1.3.1/233
- tek kalan düzgün simetrik olasılık, 2.3.3.2.1.1.3.1/190
- tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.3.1/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

- tek kalan simetrik olasılık, 2.3.3.1.1.1.4.1/3-4
- tek kalan düzgün simetrik olasılık, 2.3.3.2.1.1.4.1/190
- tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.4.1/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

- tek kalan simetrik olasılık, 2.3.3.1.1.6.2.1/3-4
- tek kalan düzgün simetrik olasılık, 2.3.3.2.1.6.2.1/3-4
- tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.6.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu

bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

- tek kalan simetrik olasılık, 2.3.3.1.1.6.3.1/3-4
- tek kalan düzgün simetrik olasılık, 2.3.3.2.1.6.3.1/3-4
- tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.6.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin durumuna bağlı

- tek kalan simetrik olasılık, 2.3.3.1.1.1.1.1/190
- tek kalan düzgün simetrik olasılık, 2.3.3.2.1.1.1.1/80-81
- tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.1.1/165

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin durumuna bağlı

- tek kalan simetrik olasılık, 2.3.3.1.1.1.2.1/118
- tek kalan düzgün simetrik olasılık, 2.3.3.2.1.1.2.1/80-81
- tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.2.1/165

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin durumuna bağlı

- tek kalan simetrik olasılık, 2.3.3.1.1.1.3.1/118
- tek kalan düzgün simetrik olasılık, 2.3.3.2.1.1.3.1/80-81
- tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.3.1/165

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

- tek kalan simetrik olasılık, 2.3.3.1.2.1.1.1/4
- tek kalan düzgün simetrik olasılık, 2.3.3.2.2.1.1.1/3-4
- tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.2.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.1.2.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.1.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.1.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.1.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.1.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.2.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.2.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.2.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımsız simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.2.2.1/7-8

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.2.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.2.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.2.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.2.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.2.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.4.1.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.4.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.4.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımsız simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.4.2.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.4.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.4.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımlı simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.4.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.4.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.4.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.6.1.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.6.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.6.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımsız simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.6.2.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.6.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.6.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımlı simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.6.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.6.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.6.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.7.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.7.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.7.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
bağımsız simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.7.2.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.7.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.7.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumda
bağımlı simetrinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.2.7.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.2.7.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.2.7.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımlı durumda
ve herhangi bir durumunun bulunabileceği
olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.2.8.1.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.2.8.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.2.8.1.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımlı durumda
simetrinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.1.2.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.1.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.1.2.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımlı durumda
simetrinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.1.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.1.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.1.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımlı durumda
simetrinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.2.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.2.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.2.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumda
bağımsız simetrinin ilk ve herhangi bir
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.2.2.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.2.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.2.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumda
bağımlı simetrinin ilk ve herhangi bir
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.2.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.2.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.2.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımlı durumda
simetrinin herhangi iki durumuna bağlı

tek kalan simetrik olasılık,
2.3.3.1.4.1.1.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.4.1.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.4.1.1.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin herhangi iki durumuna bağlı

tek kalan simetrik olasılık,
2.3.3.1.4.1.2.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.4.1.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.4.1.2.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin herhangi iki durumuna bağlı

tek kalan simetrik olasılık,
2.3.3.1.4.1.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.4.1.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.4.1.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.4.1.1.1/839-840

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin durumunun bulunabileceği
olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.4.1.2.1/839-840

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin durumunun bulunabileceği
olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.4.1.3.1/839-840

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin ilk
ve herhangi iki durumunun bulunabileceği
olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.1.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.1.1.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.5.1.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk ve herhangi iki durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.1.2.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.1.2.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.5.1.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk ve herhangi iki durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.1.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.1.3.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.5.1.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
simetrisinin ilk ve herhangi iki durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.2.1.1/6

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.2.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.5.2.1.1/10

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımsız simetrisinin ilk ve herhangi iki
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.2.2.1/6

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.2.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.5.2.2.1/10

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin ilk ve herhangi iki
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.2.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.2.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.5.2.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.1.1.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.1.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.1.2.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.1.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.1.3.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.1.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.2.1.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.2.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.2.2.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.2.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk ve herhangi iki

durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.2.3.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.2.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.1.1.1/4

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.1.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.1.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.1.2.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.1.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.1.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.1.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.1.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.1.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.2.1.1/6

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.2.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.2.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.2.2.1/6

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.2.2.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.2.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumda
bağımlı simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.2.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.2.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.2.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.4.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.4.1.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.4.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
bağımsız simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.4.2.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.4.2.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.4.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
bağımlı simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.4.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.4.3.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.4.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.6.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.6.1.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.6.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
bağımsız simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.6.2.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.6.2.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.6.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
bağımsız simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.6.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.6.3.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.6.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.7.1.1/6

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.7.1.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.7.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
bağımsız simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.7.2.1/6

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.7.2.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.7.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
bağımlı simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.7.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.7.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.7.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrinin ilk
herhangi bir ve son durumunun
bulunabileceği olaylara göre herhangi bir
ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.1.1.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.1.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.1.2.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.1.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.1.3.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.1.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
simetrinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.2.1.1/11

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.2.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımsız simetrinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.2.2.1/11

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.2.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.2.3.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.2.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
simetrinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.4.1.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.4.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımlı simetrinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.4.2.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.4.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımlı simetrinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.4.3.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.4.3.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
simetrinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.6.1.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.6.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımsız simetrinin ilk herhangi bir ve son

durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.6.2.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.6.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.6.3.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.6.3.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.7.1.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.7.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.7.2.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.7.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.7.3.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.7.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.1.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.1.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.1.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.1.2.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.1.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.1.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.1.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.1.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.1.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.2.1.1/7

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.2.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.2.1.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.2.2.1/7

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.2.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.2.2.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.2.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.2.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.2.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.4.1.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.4.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.4.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.4.2.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.4.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.4.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.4.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.4.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.4.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.6.1.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.6.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.6.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.6.2.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.6.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.6.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.6.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.6.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.6.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.7.1/7

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.7.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.7.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.7.2.1/7

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.7.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.7.2.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.7.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.7.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.7.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.1.1.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.1.1.1/10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.1.2.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.1.2.1/10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.1.3.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.1.3.1/10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.2.1.1/15

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.2.1.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.2.2.1/15-16

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.2.2.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.2.3.1/9-10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.2.3.1/10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi iki ve son

durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.4.1.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.4.1.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.4.2.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.4.2.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.4.3.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.4.3.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.6.1.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.6.1.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.6.2.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.6.2.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.6.3.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.6.3.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.7.1.1/15-16

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.7.1.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.7.2.1/15-16

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.7.2.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.7.3.1/9-10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.7.3.1/9-10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.1.1.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.1.1.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.1.2.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.1.2.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk herhangi iki ve son

durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.1.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.1.3.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.2.1.1/17-18

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.2.1.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.2.2.1/17

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.2.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.2.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.2.3.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.4.1.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.4.1.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.4.2.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.4.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.4.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.4.3.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.6.1.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.6.1.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.6.2.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.6.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.6.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.6.3.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.7.1.1/17

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.7.1.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son

durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.7.2.1/17

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.7.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.7.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.7.3.1/10-11

VDOİHİ’de Olasılık ve İhtimal konularının tanım ve eşitlikleri verilmektedir. Ayrıca VDOİHİ’de olasılık ve ihtimalin uygulama alanlarına da yer verilmektedir. VDOİHİ konu anlatım ciltleri ve soru, problem ve ispat çözümlerinden oluşmaktadır. Bu cilt bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz olasılık dağılımlardan, bağımsız olasılıklı durumla başlayıp ilk bağımlı durumu bağımlı olasılıklı dağılımın ilk bağımlı durumu hariç dağılımın başlayabileceği diğer bir bağımlı durum olan ve bağımsız olasılıklı durumla başlayan dağılımın aynı ilk bağımlı durumuyla başlayan dağılımlarda, simetrisinin herhangi iki durumuna bağlı tek kalan düzgün olmayan simetrik olasılığın, tanım ve eşitliklerinden oluşmaktadır.

VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin herhangi iki durumuna bağlı tek kalan düzgün olmayan simetrik olasılık kapsamında, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlardan, bağımsız olasılıklı durumla başlayıp ilk bağımlı durumu bağımlı olasılıklı dağılımın ilk bağımlı durumu hariç dağılımın başlayabileceği diğer bir bağımlı durum olan ve bağımsız olasılıklı durumla başlayan dağılımın aynı ilk bağımlı durumuyla başlayan dağılımlarda, simetrisinin herhangi iki durumuna bağlı tek kalan düzgün olmayan simetrik olasılığın, tanım ve eşitlikleri verilmektedir.

VDOİHİ’nin diğer ciltlerinde olduğu gibi bu ciltte de verilen ana eşitlikler, olasılık tablolarından elde edilen verilerle üretilmiştir. Diğer eşitlikler ise ana eşitliklerden teorik yöntemle üretilmiştir. Eşitlik ve tanımların üretilmesinde diğer kaynak kullanılmamıştır.