

$$\begin{aligned}
& \frac{-1/3i[12][24]^2(26)^2(2|1+6|4)^2s_{345}}{(12)[34][45](2|1+6|2)^3(2|1+6|3)(2|1+6|5)} + \\
& \frac{1/2i[12][13](16)[24](26)(2|1+6|4)^3}{(12)[34][45](2|1+6|2)^2(2|1+6|3)^2(2|1+6|5)} + \\
& \frac{[12][24](26)(2|1+6|4)^2(2/3i[14](16)+7/6i[24](26))}{(12)[34][45](2|1+6|2)^2(2|1+6|3)(2|1+6|5)} + \\
& \frac{-1i[12][13]^2(16)^2(2|1+6|4)^4}{(12)[34][45](2|1+6|2)(2|1+6|3)^3(2|1+6|5)s_{345}} + \\
& \frac{(16)[12][13](2|1+6|4)^3(-1/2i[14](16)-2i[24](26))}{(12)[34][45](2|1+6|2)(2|1+6|3)^2(2|1+6|5)s_{345}} + \\
& \frac{[12](2|1+6|4)^2(-1/3i[14]^2(16)^2-5/3i[14](16)[24](26)-11/6i[24]^2(26)^2)}{(12)[34][45](2|1+6|2)(2|1+6|3)(2|1+6|5)s_{345}} + \\
& \frac{(16)[16](3|1+6|2)(5|1+6|4)(6|2+3|1)s_{245}(5/64i(12)[12] \dots \langle 7 \text{ terms} \rangle \dots + 5/32i(35)[35])}{(1|2+3|6)(2|1+6|3)(4|1+6|5)\Delta_{624}^2} + \\
& \frac{(16)[16](3|1+6|2)(5|1+6|4)(6|2+3|1)s_{345}(5/64i(12)[12] \dots \langle 4 \text{ terms} \rangle \dots - 5/128i(25)[25])}{(1|2+3|6)(2|1+6|3)(4|1+6|5)\Delta_{624}^2} + \\
& \frac{(16)[16](45)[45](3|1+6|2)(5|1+6|4)(6|2+3|1)(5/32i(12)[12]+5/32i(13)[13])}{(1|2+3|6)(2|1+6|3)(4|1+6|5)\Delta_{624}^2} + \\
& \frac{[16](26)(2|1+6|4)^2(5/2i[13][14](16)^2-3/2i[12](16)(26)[34]+9/2i[13](16)[24](26)+2i[23][24](26)^2)}{(12)[45](2|1+6|3)^3(2|1+6|5)s_{345}} + \\
& \frac{[15]^2(16)(3|1+6|5)\Pi_{462}(-3/8i[12](23)[25](45) \dots \langle 3 \text{ terms} \rangle \dots - 1/4i[15][23](34)(35))}{[56](2|1+6|5)(4|1+6|5)^3\Delta_{624}} + \\
& \frac{(34)[15]^2(16)(3|1+6|5)(-3/2i[14](34)-1/2i[15](35))}{(23)[56](2|1+6|5)(4|1+6|5)^3} + \\
& \frac{[15]^2(16)(3|1+6|5)\Pi_{462}(-3/16i(12)[12]^2(23)[23](35) \dots \langle 15 \text{ terms} \rangle \dots + 3/16i[13][23](34)(35)^2(45))}{[56](2|1+6|5)(4|1+6|5)^2\Delta_{624}^2} + \\
& \frac{[15]^2(16)(-17/8i[12]^2(13)(23)(24)[24] \dots \langle 23 \text{ terms} \rangle \dots + 3/8i[13][25](34)(35)^2(45))}{[56](2|1+6|5)(4|1+6|5)^2\Delta_{624}^2} + \\
& \frac{[15]\Pi_{462}(7/2i(12)[12]^2(13)[15](36) \dots \langle 17 \text{ terms} \rangle \dots + 1/2i[15](16)[16][26](36)^2)}{[56](2|1+6|5)(4|1+6|5)^2\Delta_{624}^2} + \\
& \frac{\Omega_{462}(101/192i(13)^2[14]^3[15](34)(46) \dots \langle 8 \text{ terms} \rangle \dots + 101/192i[15]^2(34)(35)^2(45)^2(56))}{(23)[56](2|1+6|5)(4|1+6|5)\Delta_{624}^2} + \\
& \frac{\Omega_{462}(-101/32i(12)^3[12]^5(36) \dots \langle 239 \text{ terms} \rangle \dots + 1/16i[13]^2[23][26](34)(36)^3(46))}{[23](45)[56](2|1+6|5)(4|1+6|5)\Delta_{624}^2} + \\
& \frac{[15]^2(16)(27/64i(12)^2[12]^3(23)[24](35) \dots \langle 78 \text{ terms} \rangle \dots + 13/64i[13][23](34)(35)^3(45)^2)}{[56](2|1+6|5)(4|1+6|5)\Delta_{624}^2} + \\
& \frac{1/8i(13)^2[14]^3[15](34)(46) \dots \langle 15 \text{ terms} \rangle \dots + 1/8i[16]^2(36)^3(45)(46)[46]}{(23)[56](2|1+6|5)(4|1+6|5)\Delta_{624}} + \\
& \frac{-123/8i(12)^3[12]^5(36) \dots \langle 334 \text{ terms} \rangle \dots - 1/4i[13][16][26]^2[34](36)^3(46)}{[23](45)[56](2|1+6|5)(4|1+6|5)\Delta_{624}} + \\
& \frac{-5435/192i(12)^3[12]^5(13)[14](56) \dots \langle 339 \text{ terms} \rangle \dots + 1/8i[13]^3(15)[25]^2(35)^3(36)[45]}{[23](45)[56](2|1+6|5)\Delta_{624}^2} + \\
& (123456 \rightarrow \overline{654321}) + \\
& \frac{-1/4i(13)^2(15)[26][46]^2(6|2+3|1)\Pi_{624}}{(12)[56](1|2+3|6)^3\Delta_{624}} + \\
& \frac{-1i(13)^3[46]^3(6|2+3|1)}{(12)(23)[45][56](1|2+3|6)^3} + \\
& \frac{-3/16i(13)^2(15)[26][46]^2(6|2+3|1)^2\Pi_{624}}{(12)[56](1|2+3|6)^2\Delta_{624}^2} + \\
& \frac{(13)[46](6|2+3|1)(-3/8i[12](13)(15)[46]+3/8i(13)[14](15)[26]+3/8i(13)[23](35)[46]+3/8i(15)[26](35)[45])}{(12)[56](1|2+3|6)^2\Delta_{624}} + \\
& \frac{\Pi_{624}(-1/8i(12)(13)[16][24]^2(35) \dots \langle 13 \text{ terms} \rangle \dots + 1/8i(15)[26](35)^2(45)^2)}{(12)[56](1|2+3|6)^2\Delta_{624}} + \\
& \frac{(13)[46](3/2i(13)^2[14]^2+1i(13)[14](23)[24]+2i(13)[14](35)[45]+1/2i(35)^2(45)^2)}{(12)(23)[45][56](1|2+3|6)^2} + \\
& \frac{(16)[16](3|1+6|2)(5|1+6|4)(6|2+3|1)\Pi_{624}\Pi_{246}\Pi_{462}(-5/256is_{245}-5/256is_{345}-5/128i(45)[45])}{(1|2+3|6)(2|1+6|3)(4|1+6|5)\Delta_{624}^3} + \\
& \frac{1/48i(13)[46](6|2+3|1)(3|1+5|4)^2\Omega_{624}}{(12)(23)[45][56](1|2+3|6)\Delta_{624}^2} + \\
& \frac{(6|2+3|1)\Omega_{624}(-31/48i[12]^2(13)(15)^2[46] \dots \langle 16 \text{ terms} \rangle \dots + 1/24i(15)[24][26](35)^2(35))}{(12)[23](45)[56](1|2+3|6)\Delta_{624}^2} + \\
& \frac{(13)[46](6|2+3|1)^2(-27/64i[12](13)(15)[46] \dots \langle 4 \text{ terms} \rangle \dots - 13/64i(15)[26](35)[45])}{(12)[56](1|2+3|6)\Delta_{624}^2} + \\
& \frac{-5/8i(12)[12](13)^2[14]^2(23)[24] \dots \langle 60 \text{ terms} \rangle \dots + 1/8i(35)^3(45)[45]^4}{(12)(23)[45][56](1|2+3|6)\Delta_{624}} + \\
& \frac{-1/12i(12)^2[12]^2[23][24](35)^2 \dots \langle 35 \text{ terms} \rangle \dots + 1/12i(13)[13][23][25][34](35)^3}{(12)[23](45)[56](1|2+3|6)\Delta_{624}} + \\
& \frac{43/48i(12)^3[12](13)[14]^4[25](34)(36) \dots \langle 137 \text{ terms} \rangle \dots - 3/32i[14](26)(36)^5[36]^2[46]^2[56]}{(12)(23)[45][56](2|1+6|5)\Delta_{624}^2} + \\
& \frac{2821/192i(12)(13)^4[13]^3[14](56)^2 \dots \langle 849 \text{ terms} \rangle \dots - 2333/192i[16][26][35](36)^2[46](56)^4[56]}{(12)[23](45)(2|1+6|5)\Delta_{624}^2} + \\
& \frac{-5/32i(13)^4[13]^2[14]^3[35](36) \dots \langle 129 \text{ terms} \rangle \dots + 25/24i[15][34](36)^5[36]^2[46]^2}{(12)[45][56](2|1+6|5)\Delta_{624}^2} + \\
& \frac{101/192i[12](13)^3[13](14)[14]^3(26) \dots \langle 120 \text{ terms} \rangle \dots - 25/24i[16][34](36)^5[36]^2[46]}{(12)[56](2|1+6|5)\Delta_{624}^2} + \\
& \frac{98/3i(12)^3[12]^5(13)[14](56) \dots \langle 843 \text{ terms} \rangle \dots - 1/12i[13][15][25]^2[34](35)^4[35](56)}{[23](45)[56](2|1+6|5)\Delta_{624}^2} + \\
& \frac{117815/192i(12)^2[12]^4(13)[14](56)^2 \dots \langle 425 \text{ terms} \rangle \dots + 198987/64i[15][16][24][26](36)(56)^4[56]}{[23](45)(2|1+6|5)\Delta_{624}^2}
\end{aligned}$$