

$$\begin{aligned}
& \frac{-1/2i[15](3|1+6|5)^3(4|2+3|1)^2\Pi_{462}}{[16](23)[56](2|1+6|5)(4|1+6|5)^4} + \\
& \frac{-1/4i[15][25](46)(3|1+6|5)^2(4|2+3|1)(5|1+6|4)\Pi_{462}}{[56](2|1+6|5)(4|1+6|5)^3\Delta_{624}} + \\
& \frac{[15](3|1+6|5)^2(4|2+3|1)(1/2i[12](23)(24)[24] \dots \langle 9 \text{ terms} \rangle \dots -1i[13](34)(35)[45])}{[16](23)[56](2|1+6|5)(4|1+6|5)^3} + \\
& \frac{[15](3|1+6|5)(5|1+6|4)\Pi_{462}(-1/8i[12]^2(13)(14)^2[14][15](26) \dots \langle 105 \text{ terms} \rangle \dots -3/16i[15][24](34)^3[34]^2(46))}{[56](2|1+6|5)(4|1+6|5)^2\Delta_{624}^2} + \\
& \frac{[15](3|1+6|5)(3/2i[12]^2(13)[14](23)(24) \dots \langle 22 \text{ terms} \rangle \dots +1/2i[13][14](34)^2(35)[45])}{[16](23)[56](2|1+6|5)(4|1+6|5)^2} + \\
& \frac{[15](5|1+6|4)(5/16i(12)^3[12]^4(13)[15](36) \dots \langle 147 \text{ terms} \rangle \dots -5/4i[13](15)[15](23)[25](26)[26]^2(36)^2)}{[56](2|1+6|5)(4|1+6|5)\Delta_{624}^2} + \\
& \frac{[15](5|1+6|4)\Pi_{462}(-21/32i(12)^2[12]^3(13)[15](36) \dots \langle 120 \text{ terms} \rangle \dots +1/4i[15](23)[25]^2(35)(36)[36](56))}{[56](2|1+6|5)(4|1+6|5)\Delta_{624}^2} + \\
& \frac{[15](5|1+6|4)(15/8i(12)[12]^2(13)[15](36) \dots \langle 34 \text{ terms} \rangle \dots -2i[15][25](35)(36)^2[36])}{[56](2|1+6|5)(4|1+6|5)\Delta_{624}} + \\
& \frac{[15]\Pi_{462}(11/4i(12)[12]^2(13)[14](36) \dots \langle 29 \text{ terms} \rangle \dots +1/2i[16][24](36)^3[36])}{[56](2|1+6|5)(4|1+6|5)\Delta_{624}} + \\
& \frac{1/2i(12)[12]^4[15](23)^3 \dots \langle 45 \text{ terms} \rangle \dots -1/2i[13][14]^2[15](34)^3(35)[45]}{[16](23)[56](2|1+6|5)(4|2+3|1)(4|1+6|5)} + \\
& \frac{[15](-1283/32i(13)^2[13]^2[14]^2(15)[24](34)(36) \dots \langle 262 \text{ terms} \rangle \dots -71/32i[12](35)^2[45]^2(56)^3[56]^2)}{[56](2|1+6|5)\Delta_{624}^2} + \\
& \frac{[15](1085/8i(13)[13][14][24](35)(36) \dots \langle 8 \text{ terms} \rangle \dots +33/2i[12](35)^2[45]^2(56))}{[56](2|1+6|5)\Delta_{624}} + \\
& (123456 \rightarrow \overline{654321}) + \\
& \frac{-1/2i(13)^3[46]^3s_{123}^2\Pi_{624}}{(12)(23)[45][56](1|2+3|6)^4} + \\
& \frac{(13)[46]s_{123}^2\Pi_{624}(1/4i[12](13)(15)[46]-1/4i(13)[14](15)[26]-1/4i(13)[23](35)[46]-1/4i(15)[26](35)[45])}{(12)[56](1|2+3|6)^3\Delta_{624}} + \\
& \frac{(13)^2[46]^2s_{123}(-1/2i(12)[12](13)[14] \dots \langle 15 \text{ terms} \rangle \dots +1/2i(23)[24](45)[45])}{(12)(23)[45][56](1|2+3|6)^3} + \\
& \frac{-3/16i(13)^2(15)[26][46]^2(6|2+3|1)^2s_{123}\Pi_{624}}{(12)[56](1|2+3|6)^2\Delta_{624}^2} + \\
& \frac{(13)[46](6|2+3|1)s_{123}(3/4i[12](13)(15)[46]+1/4i(13)[14](15)[26]-3/4i(13)[23](35)[46]+1/4i(15)[26](35)[45])}{(12)[56](1|2+3|6)^2\Delta_{624}} + \\
& \frac{(13)[46]s_{123}\Pi_{624}(-1/4i(12)[12][24](35) \dots \langle 7 \text{ terms} \rangle \dots +1/4i[23](35)^2[45])}{(12)[56](1|2+3|6)^2\Delta_{624}} + \\
& \frac{(13)[46](1/2i(12)[12](13)^2[14]^2 \dots \langle 24 \text{ terms} \rangle \dots -1/2i(23)^2[24]^2(45)[45])}{(12)(23)[45][56](1|2+3|6)^2} + \\
& \frac{5/128i(16)[16](23)[23](45)[45](3|1+6|2)(5|1+6|4)(6|2+3|1)\Pi_{624}\Pi_{246}\Pi_{462}}{(1|2+3|6)(2|1+6|3)(4|1+6|5)\Delta_{624}^3} + \\
& \frac{(16)[16](23)[23](45)[45](3|1+6|2)(5|1+6|4)(6|2+3|1)(5/32i\Pi_{624}-5/32i\Pi_{246}-5/32i\Pi_{462})}{(1|2+3|6)(2|1+6|3)(4|1+6|5)\Delta_{624}^2} + \\
& \frac{(13)[46](6|2+3|1)^2s_{123}(-1/8i[12](13)(15)[46] \dots \langle 4 \text{ terms} \rangle \dots -1/2i(15)[26](35)[45])}{(12)[56](1|2+3|6)\Delta_{624}^2} + \\
& \frac{(13)[46](6|2+3|1)\Pi_{624}(1/8i(12)^2[12]^2[24](35) \dots \langle 21 \text{ terms} \rangle \dots +1/16i(15)[15][23](35)^2[45])}{(12)[56](1|2+3|6)\Delta_{624}^2} + \\
& \frac{(13)[46](-1/4i[12](13)[14][23](26)(35) \dots \langle 20 \text{ terms} \rangle \dots +1/4i[15][24](35)^2[35](56))}{(12)[56](1|2+3|6)\Delta_{624}} + \\
& \frac{(13)[46]\Pi_{624}(-1/4i[12][14](15)(36) \dots \langle 3 \text{ terms} \rangle \dots -1/4i[16][24](36)(56))}{(12)[56](1|2+3|6)\Delta_{624}} + \\
& \frac{-5/2i(13)^3[14]^3 \dots \langle 4 \text{ terms} \rangle \dots +1/2i(23)^3[24]^3}{(12)(23)[45][56](1|2+3|6)} + \\
& \frac{1/2i(12)[12]^2(15)[24](35) \dots \langle 7 \text{ terms} \rangle \dots +1/2i[24]^3(25)(34)(45)}{(12)(23)[45][56](1|2+3|6)} + \\
& \frac{1/2i(12)[12]^3(14)(15)[24](25) \dots \langle 99 \text{ terms} \rangle \dots +1/2i[24]^3(25)(34)[35](45)^2}{(12)(23)(45)[56](1|2+6|3)(4|1+5|6)} + \\
& \frac{9/2i(12)[12][14]^2(16)^3(56) \dots \langle 38 \text{ terms} \rangle \dots -2i(16)[24](26)[45](56)^3[56]}{(12)(16)(1|2+6|3)(2|1+6|5)(6|1+2|3)} + \\
& \frac{-1/2i(12)[12]^3[16]^2(23)(36) \dots \langle 33 \text{ terms} \rangle \dots +6i[12][16]^3(34)[34](36)^2}{[16][56](2|1+6|5)(4|2+3|1)(4|1+5|6)} + \\
& \frac{-1315/32i(13)^2[13]^2[14]^2(15)[24](34)(36) \dots \langle 639 \text{ terms} \rangle \dots -45/8i[12](36)^2[46]^2(56)^3[56]^2}{(12)[56]\Delta_{624}^2} + \\
& \frac{-597/8i(13)[13][14][24](35)(36) \dots \langle 23 \text{ terms} \rangle \dots -17/2i[14][26](36)^2[46](56)}{(12)[56]\Delta_{624}}
\end{aligned}$$