

$$\begin{aligned}
& \frac{3[56][35](26)(s_{124}-s_{134})[34](24)(56)(4|2+3|1]}{(2|1+4|3|^4\Delta_{14|23|56}} + \\
& \frac{(s_{124}-s_{134})(26)(4|2+3|1)(-15/4(14)[24][25][14][13](24)(12)\dots\langle 28 \text{ terms} \rangle\dots+3/4(12)[12][45](24)(23)[23]^2)}{(2|1+4|3|^3\Delta_{14|23|56}^2} + \\
& \frac{(s_{123}-s_{234})(s_{124}-s_{134})(s_{14}-s_{23})(3171/128(46)[35](13)[12]^2[34](24)(23)\dots\langle 81 \text{ terms} \rangle\dots+15/128(46)(23)^2[12][25][13](12)[23])}{(2|1+4|3|^2\Delta_{14|23|56}^3} + \\
& \frac{(s_{124}-s_{134})(s_{14}-s_{23})(4|2+3|1)(15/16(46)[24](23)[25][12][13](12)^2\dots\langle 30 \text{ terms} \rangle\dots-15/32(13)^3(46)(13)^3[45])}{(2|1+4|3|^2\Delta_{14|23|56}^3} + \\
& \frac{(s_{123}-s_{234})(s_{124}-s_{134})s_{56}(2085/256(46)[35](13)[12]^2[34](24)(23)\dots\langle 40 \text{ terms} \rangle\dots-105/128(46)[35](13)[12]^2[14](24)(12))}{(2|1+4|3|^2\Delta_{14|23|56}^3} + \\
& \frac{(s_{124}-s_{134})s_{56}(4|2+3|1)(15/16(46)[24](23)[25][12][13](12)^2\dots\langle 10 \text{ terms} \rangle\dots+105/64(14)[12]^2[45][13](12)^2(36))}{(2|1+4|3|^2\Delta_{14|23|56}^3} + \\
& \frac{-1/2(46)[35](s_{23}-s_{56})(13)[13](34)(23)[23]s_{134}}{(14)(2|1+4|3|^2\Delta_{14|23|56}^2} + \\
& \frac{-37/8(26)[24]^3[12][25](24)^4\dots\langle 243 \text{ terms} \rangle\dots+5/16(24)(13)[25][13]^2(24)^2(23)(36)[23]}{(2|1+4|3|^2\Delta_{14|23|56}^2} + \\
& \frac{(46)(34)[35]s_{134}(-1/413+1/2(23)[23]+1/4(34)[34])}{(14)\Delta_{14|23|56}(2|1+4|3|^2} + \\
& \frac{5/32s_{23}(34)^2(6|1+4|5)[23](s_{124}-s_{134})(s_{123}-s_{234})(s_{15}+s_{16}+s_{45}+s_{46})}{(14)\Delta_{14|23|56}^3(2|1+4|3|} + \\
& \frac{1/8(13)(34)^2(24)(6|1+4|5)[23]^2(s_{15}+s_{16}+s_{45}+s_{46})}{(14)^2\Delta_{14|23|56}^2(2|1+4|3|} + \\
& \frac{3/8(46)[24](13)^2[25][13]^2(34)(24)\dots\langle 32 \text{ terms} \rangle\dots+3/4(46)(13)[12][45](34)(24)(23)[23]^2}{(14)(2|1+4|3|\Delta_{14|23|56}^2} + \\
& \frac{(s_{23}-s_{56})(1/8(46)[35](13)^2[12][13](34)\dots\langle 17 \text{ terms} \rangle\dots-1/8(46)[25](34)(23)^2[23]^2)}{(14)(2|1+4|3|\Delta_{14|23|56}^2} + \\
& \frac{3/8[12]^3(34)(12)^3(36)[15]\dots\langle 22 \text{ terms} \rangle\dots-3/8(46)(13)[34][13][14](34)^3[45]}{(23)\Delta_{14|23|56}^2(2|1+4|3|} + \\
& \frac{(34)(s_{14}-s_{56})(1/8(46)[14][34][45](34)^2\dots\langle 14 \text{ terms} \rangle\dots-3/8(12)^2(36)[15](12)^2)}{(23)(2|1+4|3|\Delta_{14|23|56}^2} + \\
& \frac{1/2(46)[35](13)(34)^2[23]}{(14)^2\Delta_{14|23|56}(2|1+4|3|} + \\
& \frac{(34)(1/12(46)(34)[24][35]\dots\langle 6 \text{ terms} \rangle\dots+35/4(36)(34)[35][23])}{(14)\Delta_{14|23|56}(2|1+4|3|} + \\
& \frac{(13)(34)[15](1[13](36)+3/2(46)[14])}{(23)\Delta_{14|23|56}(2|1+4|3|} + \\
& (123456 \rightarrow 432165) + \\
& \frac{105/128(s_{124}-s_{134})s_{23}(s_{123}-s_{234})(s_{15}+s_{16}+s_{45}+s_{46})(6|1+4|5)s_{56}(4|2+3|1)(3|1+4|2)}{\Delta_{14|23|56}^4(2|1+4|3|}
\end{aligned}$$