PSALTer results panel

Wave operator and propagator

$$
\begin{aligned}
\mathcal{S} == \iiiint \Big(& \tfrac{1}{8} \big(-4 a_{0} \mathcal{A}_{\alpha\chi\beta} \mathcal{A}^{\alpha\beta\chi} + 8 \mathcal{A}^{\alpha\beta\chi} \mathcal{W}_{\alpha\beta\chi} + 8 \mathcal{T}^{\alpha\beta} h_{\alpha\beta} + 4 a_{0} h^{\alpha\beta} \partial_{\beta}\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi} - 4 a_{0} \mathcal{A}^{\alpha\beta\chi} \partial_{\beta}h_{\alpha\chi} + 2 a_{0} \mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_{\beta}h^{\chi}{}_{\chi} + 2 a_{0} h^{\alpha\beta} \partial_{\beta}\partial_{\alpha}h^{\chi}{}_{\chi} - a_{0} \partial_{\beta}h^{\chi}{}_{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} - \\
& 4 a_{0} h^{\alpha\beta} \partial_{\chi}\mathcal{A}_{\alpha}{}^{\chi}{}_{\beta} - 2 a_{0} h^{\alpha}{}_{\alpha} \partial_{\chi}\mathcal{A}^{\beta}{}_{\beta}{}^{\chi} + 2 a_{0} h^{\alpha}{}_{\alpha} \partial_{\chi}\mathcal{A}^{\beta\chi}{}_{\beta} + 2 a_{0} \partial^{\beta}h^{\alpha}{}_{\alpha}\partial_{\chi}h_{\beta}{}^{\chi} + 2 a_{0} \mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} (2 \mathcal{A}^{\chi}{}_{\beta\chi} - \partial_{\beta}h^{\chi}{}_{\chi} + 2 \partial_{\chi}h_{\beta}{}^{\chi}) - \\
& 2 h_{11} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\chi}\partial_{\alpha}h^{\delta}{}_{\delta} - 2 h_{12} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\chi}\partial_{\alpha}h^{\delta}{}_{\delta} + 4 h_{7} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\chi}\partial_{\alpha}h^{\delta}{}_{\delta} + 4 h_{8} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\chi}\partial_{\alpha}h^{\delta}{}_{\delta} - 4 a_{0} h^{\alpha\beta} \partial_{\chi}\partial_{\beta}h_{\alpha}{}^{\chi} + 2 a_{0} h^{\alpha}{}_{\alpha} \partial_{\chi}\partial_{\beta}h^{\beta\chi} + \\
& 2 h_{11} \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} + 2 h_{12} \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} + 2 a_{0} h^{\alpha\beta} \partial_{\chi}\partial^{\chi}h_{\alpha\beta} - 2 a_{0} h^{\alpha}{}_{\alpha} \partial_{\chi}\partial^{\chi}h^{\beta}{}_{\beta} - 4 h_{8} \partial_{\beta}\mathcal{A}_{\chi}{}^{\delta}{}_{\delta} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} - 4 h_{12} \partial_{\beta}\mathcal{A}^{\delta}{}_{\chi\delta} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} - \\
& 4 h_{7} \partial_{\chi}\mathcal{A}_{\beta}{}^{\delta}{}_{\delta} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} - 4 h_{11} \partial_{\chi}\mathcal{A}^{\delta}{}_{\beta\delta} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} + 2 h_{11} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} + 2 h_{12} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} - 4 h_{7} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} - 4 h_{8} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} - \\
& 2 h_{11} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} - 2 h_{12} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} - 2 a_{0} \partial_{\beta}h_{\alpha\chi} \partial^{\chi}h^{\alpha\beta} + a_{0} \partial_{\chi}h_{\alpha\beta} \partial^{\chi}h^{\alpha\beta} + h_{11} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} + h_{12} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} - \\
& h_{7} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} - h_{8} \partial_{\chi}\partial_{\beta}h^{\delta}{}_{\delta} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} - 4 h_{7} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\mathcal{A}_{\alpha}{}^{\delta}{}_{\chi} - 4 h_{8} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\mathcal{A}_{\alpha}{}^{\delta}{}_{\chi} + 4 h_{12} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\mathcal{A}_{\beta\chi}{}^{\delta} - 4 h_{11} \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} - \\
& 4 h_{12} \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} + 8 h_{7} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} + 8 h_{8} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} + 4 h_{11} \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} + 4 h_{12} \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} + \\
& 4 h_{11} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\mathcal{A}_{\chi\beta}{}^{\delta} - 2 h_{11} \partial_{\chi}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial_{\beta}h_{\alpha}{}^{\delta} - 2 h_{12} \partial_{\chi}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial_{\beta}h_{\alpha}{}^{\delta} + 2 h_{7} \partial_{\chi}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial_{\beta}h_{\alpha}{}^{\delta} + 2 h_{8} \partial_{\chi}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial_{\beta}h_{\alpha}{}^{\delta} - 2 h_{11} \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} - \\
& 2 h_{12} \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} - 2 h_{7} \partial_{\alpha}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} - 2 h_{8} \partial_{\alpha}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} - 2 h_{11} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} - 2 h_{12} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} + 4 h_{7} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} + \\
& 4 h_{8} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} + 2 h_{11} \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} + 2 h_{12} \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} + 2 h_{11} \partial^{\chi}\partial_{\alpha}h^{\alpha\beta} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} + 2 h_{12} \partial^{\chi}\partial_{\alpha}h^{\alpha\beta} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} - \\
& 2 h_{11} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} - 2 h_{12} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} + 2 h_{7} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} + 2 h_{8} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial_{\beta}h_{\chi}{}^{\delta} + 4 h_{11} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial_{\chi}h_{\alpha}{}^{\delta} + \\
& 4 h_{12} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial_{\chi}h_{\alpha}{}^{\delta} - 8 h_{7} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial_{\chi}h_{\alpha}{}^{\delta} - 8 h_{8} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial_{\chi}h_{\alpha}{}^{\delta} - 2 h_{11} \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} - 2 h_{12} \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} - 2 h_{7} \partial_{\alpha}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} - \\
& 2 h_{8} \partial_{\alpha}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} - 2 h_{11} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} - 2 h_{12} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} + 4 h_{7} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} + 4 h_{8} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} + \\
& 2 h_{11} \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} + 2 h_{12} \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} + 2 h_{11} \partial^{\chi}\partial_{\alpha}h^{\alpha\beta} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} + 2 h_{12} \partial^{\chi}\partial_{\alpha}h^{\alpha\beta} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} - 2 h_{11} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} - \\
& 2 h_{12} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} + 2 h_{7} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} + 2 h_{8} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial_{\chi}h_{\beta}{}^{\delta} + h_{11} \partial_{\chi}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial^{\delta}h_{\alpha\beta} + h_{12} \partial_{\chi}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial^{\delta}h_{\alpha\beta} - h_{7} \partial_{\chi}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial^{\delta}h_{\alpha\beta} - \\
& h_{8} \partial_{\chi}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial^{\delta}h_{\alpha\beta} - 2 h_{11} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial^{\delta}h_{\alpha\chi} - 2 h_{12} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial^{\delta}h_{\alpha\chi} + 4 h_{7} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial^{\delta}h_{\alpha\chi} + 4 h_{8} \partial_{\beta}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial^{\delta}h_{\alpha\chi} + 2 h_{11} \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial^{\delta}h_{\beta\chi} + \\
& 2 h_{12} \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi} \partial_{\delta}\partial^{\delta}h_{\beta\chi} + 2 h_{7} \partial_{\alpha}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial^{\delta}h_{\beta\chi} + 2 h_{8} \partial_{\alpha}\partial^{\chi}h^{\alpha\beta} \partial_{\delta}\partial^{\delta}h_{\beta\chi} + 2 h_{11} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial^{\delta}h_{\beta\chi} + 2 h_{12} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial^{\delta}h_{\beta\chi} - \\
& 4 h_{7} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial^{\delta}h_{\beta\chi} - 4 h_{8} \partial^{\chi}\mathcal{A}^{\alpha}{}_{\alpha}{}^{\beta} \partial_{\delta}\partial^{\delta}h_{\beta\chi} - 2 h_{11} \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_{\delta}\partial^{\delta}h_{\beta\chi} - 2 h_{12} \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_{\delta}\partial^{\delta}h_{\beta\chi} - 2 h_{11} \partial^{\chi}\partial_{\alpha}h^{\alpha\beta} \partial_{\delta}\partial^{\delta}h_{\beta\chi} - 2 h_{12} \partial^{\chi}\partial_{\alpha}h^{\alpha\beta} \partial_{\delta}\partial^{\delta}h_{\beta\chi} + \\
& 2 h_{11} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial^{\delta}h_{\beta\chi} + 2 h_{12} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial^{\delta}h_{\beta\chi} - 2 h_{7} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial^{\delta}h_{\beta\chi} - 2 h_{8} \partial^{\chi}\partial^{\beta}h^{\alpha}{}_{\alpha} \partial_{\delta}\partial^{\delta}h_{\beta\chi}\big)\Big)[t, x, y, z]\, dz\, dy\, dx\, dt
\end{aligned}
$$

Spin-parity form	Covariant form	Multiplicities
$0^{+}.\mathcal{T}^{\perp} == 0$	$\partial_{\beta}\partial_{\alpha}\mathcal{T}^{\alpha\beta} == 0$	1
$1^{-}.\mathcal{T}^{\perp\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\mathcal{T}^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}\mathcal{T}^{\alpha\beta}$	3
Total expected gauge generators:		4

	$3^{-}.\mathcal{W}_{s}^{\parallel}{}_{\alpha\beta\chi}$
$3^{-}.\mathcal{W}_{s}^{\parallel}\dagger^{\alpha\beta\chi}$	$-\frac{2}{a_{0}}$

	$3^{-}.\mathcal{A}_{s}^{\parallel}{}_{\alpha\beta\chi}$
$3^{-}.\mathcal{A}_{s}^{\parallel}\dagger^{\alpha\beta\chi}$	$-\frac{a_{0}}{2}$

	$1^{+}.\mathcal{A}_{s}^{\perp}{}_{\alpha\beta}$	$1^{-}.h^{\perp}{}_{\alpha}$	$1^{-}.\mathcal{A}_{s}^{\perp t}{}_{\alpha}$	$1^{-}.\mathcal{A}_{s}^{\parallel t}{}_{\alpha}$	$1^{-}.\mathcal{A}_{s}^{\perp h}{}_{\alpha}$	$1^{-}.\mathcal{A}_{s}^{\parallel h}{}_{\alpha}$
$1^{+}.\mathcal{A}_{s}^{\perp}\dagger^{\alpha\beta}$	$\frac{a_{0}}{4}$	0	0	0	0	0
$1^{-}.h^{\perp}\dagger^{\alpha}$	0	0	0	0	0	0
$1^{-}.\mathcal{A}_{s}^{\perp t}\dagger^{\alpha}$	0	0	$\frac{1}{6}(-k^{2}(h_{11}+h_{7})-2a_{0})$	$\frac{1}{6}\sqrt{5}(k^{2}(h_{12}+h_{8})+a_{0})$	$\frac{2k^{2}(h_{11}+h_{7})+a_{0}}{12\sqrt{2}}$	$\frac{1}{12}(k^{2}(h_{12}-2h_{8})+a_{0})$
$1^{-}.\mathcal{A}_{s}^{\parallel t}\dagger^{\alpha}$	0	0	$\frac{1}{6}\sqrt{5}(k^{2}(h_{12}+h_{8})+a_{0})$	$\frac{1}{6}(-5k^{2}(h_{11}+h_{7})+2a_{0})$	$\frac{1}{12}\sqrt{\frac{5}{2}}(-2k^{2}(h_{12}+h_{8})+a_{0})$	$\frac{1}{12}\sqrt{5}(-k^{2}(h_{11}-2h_{7})+a_{0})$
$1^{-}.\mathcal{A}_{s}^{\perp h}\dagger^{\alpha}$	0	0	$\frac{2k^{2}(h_{11}+h_{7})+a_{0}}{12\sqrt{2}}$	$\frac{1}{12}\sqrt{\frac{5}{2}}(-2k^{2}(h_{12}+h_{8})+a_{0})$	$\frac{1}{12}(-k^{2}(h_{11}+h_{7})+a_{0})$	$-\frac{k^{2}(h_{12}-2h_{8})+4a_{0}}{12\sqrt{2}}$
$1^{-}.\mathcal{A}_{s}^{\parallel h}\dagger^{\alpha}$	0	0	$\frac{1}{12}(k^{2}(h_{12}-2h_{8})+a_{0})$	$\frac{1}{12}\sqrt{5}(-k^{2}(h_{11}-2h_{7})+a_{0})$	$-\frac{k^{2}(h_{12}-2h_{8})+4a_{0}}{12\sqrt{2}}$	$\frac{1}{12}(k^{2}(4h_{11}-2h_{7})-a_{0})$

	$2^{+}.\mathcal{T}^{\parallel}{}_{\alpha\beta}$	$2^{+}.\mathcal{W}_{s}^{\parallel}{}_{\alpha\beta}$	$2^{+}.\mathcal{W}_{s}^{\perp}{}_{\alpha\beta}$	$2^{-}.\mathcal{W}_{s}^{\parallel}{}_{\alpha\beta\chi}$
$2^{+}.\mathcal{T}^{\parallel}\dagger^{\alpha\beta}$	$-\frac{2(k^{4}(h_{11}+h_{12})^{2}+4k^{2}(h_{11}+h_{12}-h_{7}-h_{8})a_{0}+4a_{0}^{2})}{k^{2}a_{0}^{3}}$	$-\frac{i\,k(k^{2}(h_{11}+h_{12})^{2}-4(h_{7}+h_{8})a_{0})}{\sqrt{3}\,a_{0}^{3}}$	$\frac{2i\sqrt{\frac{2}{3}}\,k(k^{2}(h_{11}+h_{12})^{2}+(3h_{11}+3h_{12}-4(h_{7}+h_{8}))a_{0})}{a_{0}^{3}}$	0
$2^{+}.\mathcal{W}_{s}^{\parallel}\dagger^{\alpha\beta}$	$\frac{i(k^{3}(h_{11}+h_{12})^{2}-4k(h_{7}+h_{8})a_{0})}{\sqrt{3}\,a_{0}^{3}}$	$-\frac{k^{4}(h_{11}+h_{12})^{2}-4k^{2}(h_{11}+h_{12}+h_{7}+h_{8})a_{0}+12a_{0}^{2}}{6a_{0}^{3}}$	$\frac{\sqrt{2}\,k^{2}(k^{2}(h_{11}+h_{12})^{2}-(h_{11}+h_{12}+4(h_{7}+h_{8}))a_{0})}{3a_{0}^{3}}$	0
$2^{+}.\mathcal{W}_{s}^{\perp}\dagger^{\alpha\beta}$	$-\frac{2i\sqrt{\frac{2}{3}}(k^{3}(h_{11}+h_{12})^{2}+k(3h_{11}+3h_{12}-4(h_{7}+h_{8}))a_{0})}{a_{0}^{3}}$	$\frac{\sqrt{2}\,k^{2}(k^{2}(h_{11}+h_{12})^{2}-(h_{11}+h_{12}+4(h_{7}+h_{8}))a_{0})}{3a_{0}^{3}}$	$-\frac{4(k^{4}(h_{11}+h_{12})^{2}+2k^{2}(h_{11}+h_{12}-2(h_{7}+h_{8}))a_{0}-3a_{0}^{2})}{3a_{0}^{3}}$	0
$2^{-}.\mathcal{W}_{s}^{\parallel}\dagger^{\alpha\beta\chi}$	0	0	0	$\frac{4}{a_{0}}$

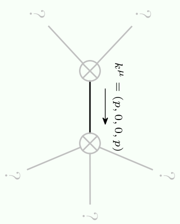
	$2^{+}.h^{\parallel}{}_{\alpha\beta}$	$2^{+}.\mathcal{A}_{s}^{\parallel}{}_{\alpha\beta}$	$2^{+}.\mathcal{A}_{s}^{\perp}{}_{\alpha\beta}$	$2^{-}.\mathcal{A}_{s}^{\parallel}{}_{\alpha\beta\chi}$
$2^{+}.h^{\parallel}\dagger^{\alpha\beta}$	$\frac{1}{8}(k^{4}(h_{11}+h_{12}-h_{7}-h_{8})-k^{2}a_{0})$	$-\frac{i\,k^{3}(h_{7}+h_{8})}{4\sqrt{3}}$	$\frac{i\,k^{3}(3h_{11}+3h_{12}-4(h_{7}+h_{8}))}{8\sqrt{6}}$	0
$2^{+}.\mathcal{A}_{s}^{\parallel}\dagger^{\alpha\beta}$	$\frac{i\,k^{3}(h_{7}+h_{8})}{4\sqrt{3}}$	$\frac{1}{6}(-k^{2}(h_{11}+h_{12}+h_{7}+h_{8})-3a_{0})$	$-\frac{k^{2}(h_{11}+h_{12}+4(h_{7}+h_{8}))}{12\sqrt{2}}$	0
$2^{+}.\mathcal{A}_{s}^{\perp}\dagger^{\alpha\beta}$	$-\frac{i\,k^{3}(3h_{11}+3h_{12}-4(h_{7}+h_{8}))}{8\sqrt{6}}$	$-\frac{k^{2}(h_{11}+h_{12}+4(h_{7}+h_{8}))}{12\sqrt{2}}$	$\frac{1}{6}k^{2}(h_{11}+h_{12}-2(h_{7}+h_{8}))+\frac{a_{0}}{4}$	0
$2^{-}.\mathcal{A}_{s}^{\parallel}\dagger^{\alpha\beta\chi}$	0	0	0	$\frac{a_{0}}{4}$

	$0^{+}.\mathcal{T}^{\perp}$	$0^{+}.\mathcal{T}^{\parallel}$	$0^{+}.\mathcal{W}_{s}^{\perp t}$	$0^{+}.\mathcal{W}_{s}^{\parallel}$	$0^{+}.\mathcal{W}_{s}^{\perp h}$
$0^{+}.\mathcal{T}^{\perp}\dagger$	0	0	0	0	0
$0^{+}.\mathcal{T}^{\parallel}\dagger$	0	$\frac{4(2k^{2}(-h_{11}-h_{12}+h_{7}+h_{8})+a_{0})}{k^{2}a_{0}^{2}}$	$-\frac{4i\,k(h_{11}+h_{12})}{\sqrt{3}\,a_{0}^{2}}$	$-\frac{4i\,k(h_{11}+h_{12}-h_{7}-h_{8})}{\sqrt{3}\,a_{0}^{2}}$	$\frac{8i\sqrt{\frac{2}{3}}\,k(h_{11}+h_{12}-h_{7}-h_{8})}{a_{0}^{2}}$
$0^{+}.\mathcal{W}_{s}^{\perp t}\dagger$	0	$\frac{4i\,k(h_{11}+h_{12})}{\sqrt{3}\,a_{0}^{2}}$	$-\frac{6k^{2}(h_{11}+h_{12}+h_{7}+h_{8})+a_{0}}{3a_{0}^{2}}$	$\frac{-2k^{2}(h_{11}+h_{12})+5a_{0}}{3a_{0}^{2}}$	$\frac{2\sqrt{2}(2k^{2}(h_{11}+h_{12})+a_{0})}{3a_{0}^{2}}$
$0^{+}.\mathcal{W}_{s}^{\parallel}\dagger$	0	$\frac{4i\,k(h_{11}+h_{12}-h_{7}-h_{8})}{\sqrt{3}\,a_{0}^{2}}$	$\frac{-2k^{2}(h_{11}+h_{12})+5a_{0}}{3a_{0}^{2}}$	$-\frac{2k^{2}(h_{11}+h_{12}-h_{7}-h_{8})+a_{0}}{3a_{0}^{2}}$	$\frac{2\sqrt{2}(2k^{2}(h_{11}+h_{12}-h_{7}-h_{8})+a_{0})}{3a_{0}^{2}}$
$0^{+}.\mathcal{W}_{s}^{\perp h}\dagger$	0	$-\frac{8i\sqrt{\frac{2}{3}}\,k(h_{11}+h_{12}-h_{7}-h_{8})}{a_{0}^{2}}$	$\frac{2\sqrt{2}(2k^{2}(h_{11}+h_{12})+a_{0})}{3a_{0}^{2}}$	$\frac{2\sqrt{2}(2k^{2}(h_{11}+h_{12}-h_{7}-h_{8})+a_{0})}{3a_{0}^{2}}$	$-\frac{8(2k^{2}(h_{11}+h_{12}-h_{7}-h_{8})+a_{0})}{3a_{0}^{2}}$

	$0^{+}.h^{\perp}$	$0^{+}.h^{\parallel}$	$0^{+}.\mathcal{A}_{s}^{\perp t}$	$0^{+}.\mathcal{A}_{s}^{\parallel}$	$0^{+}.\mathcal{A}_{s}^{\perp h}$
$0^{+}.h^{\perp}\dagger$	0	0	0	0	0
$0^{+}.h^{\parallel}\dagger$	0	$\frac{1}{4}k^{2}(2k^{2}(h_{11}+h_{12}-h_{7}-h_{8})+a_{0})$	0	$\frac{i\,k^{3}(h_{7}+h_{8})}{2\sqrt{3}}$	$\frac{i\,k^{3}(6h_{11}+6h_{12}-5(h_{7}+h_{8}))}{4\sqrt{6}}$
$0^{+}.\mathcal{A}_{s}^{\perp t}\dagger$	0	0	0	$\frac{a_{0}}{2}$	$\frac{a_{0}}{4\sqrt{2}}$
$0^{+}.\mathcal{A}_{s}^{\parallel}\dagger$	0	$-\frac{i\,k^{3}(h_{7}+h_{8})}{2\sqrt{3}}$	$\frac{a_{0}}{2}$	$-\frac{2}{3}k^{2}(h_{11}+h_{12}+h_{7}+h_{8})$	$\frac{2k^{2}(-2h_{11}-2h_{12}+h_{7}+h_{8})+3a_{0}}{12\sqrt{2}}$
$0^{+}.\mathcal{A}_{s}^{\perp h}\dagger$	0	$-\frac{i\,k^{3}(6h_{11}+6h_{12}-5(h_{7}+h_{8}))}{4\sqrt{6}}$	$\frac{a_{0}}{4\sqrt{2}}$	$\frac{2k^{2}(-2h_{11}-2h_{12}+h_{7}+h_{8})+3a_{0}}{12\sqrt{2}}$	$\frac{1}{12}(k^{2}(8h_{11}+8h_{12}-7(h_{7}+h_{8}))-3a_{0})$

Massive and massless spectra

Massless particle



Pole residue:	$-\frac{1}{a_{0}} > 0$
Polarisations:	2

(No particles)

Unitarity conditions

$$(h_{11} \mid h_{7}) \in \mathbb{R}\ \&\&\ a_{0} < 0\ \&\&\ h_{8} < h_{7}\ \&\&\ \left(\frac{1}{2}(2h_{11}+h_{7}-h_{8}) - \frac{1}{2}\sqrt{\frac{5}{3}}\sqrt{h_{7}^{2}-2h_{7}h_{8}+h_{8}^{2}} \le h_{12} < h_{11}\ \|\ h_{11} < h_{12} \le \frac{1}{2}(2h_{11}+h_{7}-h_{8}) + \frac{1}{2}\sqrt{\frac{5}{3}}\sqrt{h_{7}^{2}-2h_{7}h_{8}+h_{8}^{2}}\right)$$