PSALTer results panel

$$\mathcal{S} == \iiiint \Big(h^{\alpha\beta}\,\mathcal{T}_{\alpha\beta} - \alpha_{2}\,\partial^{\beta}h^{\alpha}{}_{\alpha}\,\partial_{\chi}h_{\beta}{}^{\chi} + \tfrac{1}{2}\,\alpha_{1}\,\big(\partial_{\beta}h^{\chi}{}_{\chi}\,\partial^{\beta}h^{\alpha}{}_{\alpha} + 2\,\partial_{\alpha}h^{\alpha\beta}\,\partial_{\chi}h_{\beta}{}^{\chi} - \partial_{\chi}h_{\alpha\beta}\,\partial^{\chi}h^{\alpha\beta}\big)\Big)[t, x, y, z]\, dz\, dy\, dx\, dt$$

Wave operator

$$\begin{array}{c|cc} & 0^{+}.h^{\perp} & 0^{+}.h^{\parallel} \\ \hline 0^{+}.h^{\perp}\dagger & (\alpha_{1}-\alpha_{2})k^{2} & \frac{1}{2}\sqrt{3}\,(\alpha_{1}-\alpha_{2})k^{2} \\ 0^{+}.h^{\parallel}\dagger & \frac{1}{2}\sqrt{3}\,(\alpha_{1}-\alpha_{2})k^{2} & \alpha_{1}k^{2} \end{array}$$

$$\begin{array}{c|c} & 1^{-}.h^{\perp}{}_{\alpha} \\ \hline 1^{-}.h^{\perp}\dagger^{\alpha} & 0 \end{array}$$

$$\begin{array}{c|c} & 2^{+}.h^{\parallel}{}_{\alpha\beta} \\ \hline 2^{+}.h^{\parallel}\dagger^{\alpha\beta} & -\frac{\alpha_{1}k^{2}}{2} \end{array}$$

Saturated propagator

$$\begin{array}{c|cc} & 0^{+}.\mathcal{T}^{\perp} & 0^{+}.\mathcal{T}^{\parallel} \\ \hline 0^{+}.\mathcal{T}^{\perp}\dagger & \frac{4\alpha_{1}}{(\alpha_{1}-\alpha_{2})(\alpha_{1}+3\alpha_{2})k^{2}} & -\frac{2\sqrt{3}}{(\alpha_{1}+3\alpha_{2})k^{2}} \\ 0^{+}.\mathcal{T}^{\parallel}\dagger & -\frac{2\sqrt{3}}{(\alpha_{1}+3\alpha_{2})k^{2}} & \frac{4}{(\alpha_{1}+3\alpha_{2})k^{2}} \end{array}$$

$$\begin{array}{c|c} & 1^{-}.\mathcal{T}^{\perp}{}_{\alpha} \\ \hline 1^{-}.\mathcal{T}^{\perp}\dagger^{\alpha} & 0 \end{array}$$

$$\begin{array}{c|c} & 2^{+}.\mathcal{T}^{\parallel}{}_{\alpha\beta} \\ \hline 2^{+}.\mathcal{T}^{\parallel}\dagger^{\alpha\beta} & -\frac{2}{\alpha_{1}k^{2}} \end{array}$$

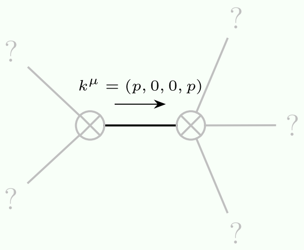
Source constraints

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

Massive spectrum

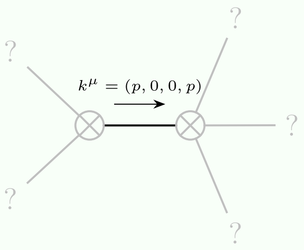
(No particles)

Massless spectrum



Massless particle

Pole residue:	$-\frac{p^{2}}{\alpha_{1}} > 0$
Polarisations:	2



Massless particle

Pole residue:	$\frac{(\alpha_{1}^{2}-2\alpha_{1}\alpha_{2}+5\alpha_{2}^{2})p^{2}}{\alpha_{1}(\alpha_{1}-\alpha_{2})(\alpha_{1}+3\alpha_{2})} > 0$
Polarisations:	1

Unitarity conditions

$\alpha_{1} < 0$ && $(\alpha_{2} < \alpha_{1} \mid\mid \alpha_{2} > -\frac{\alpha_{1}}{3})$