

PSALTer results panel

$$S == \iiint\!\!\!\int\!\!\!\left(h^{\alpha\beta}\,\mathcal{T}_{\alpha\beta} + \frac{1}{2}\,\alpha_{\dot{2}}\,\partial_{\beta}h^{\chi}_{\dot{\chi}}\,\partial^{\beta}h^{\alpha}_{\dot{\alpha}} + \alpha_{\dot{1}}\left(\partial_{\alpha}h^{\alpha\beta}\,\partial_{\chi}h^{\chi}_{\beta} - \partial^{\beta}h^{\alpha}_{\dot{\alpha}}\,\partial_{\chi}h^{\chi}_{\beta} - \frac{1}{2}\,\partial_{\chi}h_{\alpha\beta}\,\partial^{\chi}h^{\alpha\beta}\right)\right)[t,\,x,\,y,\,z]dz\,dy\,dx\,dt$$

Wave operator

$$\begin{array}{cc} \begin{array}{c} \Theta^+ h^\perp \\ \Theta^+ h^\parallel \end{array} & \begin{array}{c} \Theta^+ h^\parallel \\ \Theta^+ h^\parallel \end{array} \\ \begin{array}{c} \Theta^+ h^\perp \uparrow \\ \Theta^+ h^\parallel \uparrow \end{array} & \begin{array}{cc} \frac{1}{2}\left(-\alpha_{\dot{1}} + \alpha_{\dot{2}}\right)k^2 & \frac{1}{2}\sqrt{3}\left(-\alpha_{\dot{1}} + \alpha_{\dot{2}}\right)k^2 \\ \frac{1}{2}\sqrt{3}\left(-\alpha_{\dot{1}} + \alpha_{\dot{2}}\right)k^2 & -\frac{1}{2}\left(\alpha_{\dot{1}} - 3\alpha_{\dot{2}}\right)k^2 \end{array} \end{array} \begin{array}{c} 1^- h^\perp_\alpha \\ 1^- h^\perp_\uparrow^\alpha \\ 2^+ h^\parallel_{\alpha\beta} \\ 2^+ h^\parallel_\uparrow^{\alpha\beta} \end{array} \begin{array}{cc} \begin{array}{c} 0 \\ 0 \end{array} & \begin{array}{c} 2^+ h^\parallel_{\alpha\beta} \\ -\frac{\alpha_{\dot{1}}k^2}{2} \end{array} \end{array}$$

Saturated propagator

$$\begin{array}{cc} \begin{array}{c} \Theta^+ \mathcal{T}^\perp \\ \Theta^+ \mathcal{T}^\parallel \end{array} & \begin{array}{c} \Theta^+ \mathcal{T}^\parallel \\ \Theta^+ \mathcal{T}^\parallel \end{array} \\ \begin{array}{c} \Theta^+ \mathcal{T}^\perp \uparrow \\ \Theta^+ \mathcal{T}^\parallel \uparrow \end{array} & \begin{array}{cc} \frac{\alpha_{\dot{1}} - 3\alpha_{\dot{2}}}{\alpha_{\dot{1}}\left(\alpha_{\dot{1}} - \alpha_{\dot{2}}\right)k^2} & -\frac{\sqrt{3}}{\alpha_{\dot{1}}k^2} \\ -\frac{\sqrt{3}}{\alpha_{\dot{1}}k^2} & \frac{1}{\alpha_{\dot{1}}k^2} \end{array} \end{array} \begin{array}{c} 1^- \mathcal{T}^\perp_\alpha \\ 1^- \mathcal{T}^\perp_\uparrow^\alpha \\ 2^+ \mathcal{T}^\parallel_{\alpha\beta} \\ 2^+ \mathcal{T}^\parallel_\uparrow^{\alpha\beta} \end{array} \begin{array}{cc} \begin{array}{c} 0 \\ 0 \end{array} & \begin{array}{c} 2^+ \mathcal{T}^\parallel_{\alpha\beta} \\ -\frac{2}{\alpha_{\dot{1}}k^2} \end{array} \end{array}$$

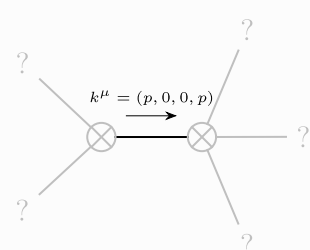
Source constraints

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

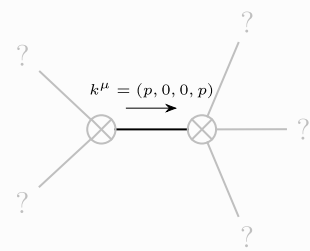
(There are no massive particles)

Massless spectrum



Massless particle

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



Massless particle

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

Gauge symmetries

(Not yet implemented in PSALTer)

Unitarity conditions

$$\alpha_{\dot{1}} < 0 \ \&\& \ \alpha_{\dot{2}} > \alpha_{\dot{1}}$$

Validity assumptions

(Not yet implemented in PSALTer)