

PSALTer results panel

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

Wave operator

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

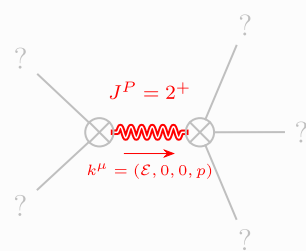
Saturated propagator

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

Source constraints

(There are no source constraints and no gauge symmetries)

Massive spectrum



Massive particle

Pole residue:	$-\frac{2}{\alpha_{\dot{1}}} > 0$
Square mass:	$\frac{2 \alpha_{\dot{2}}}{\alpha_{\dot{1}}} > 0$
Spin:	2
Parity:	Even

Massless spectrum

(There are no massless particles)

Gauge symmetries

(Not yet implemented in PSALTer)

Unitarity conditions

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

Validity assumptions

(Not yet implemented in PSALTer)