

PSALTer results panel

$$S == \int \int \int \int \left( \alpha_2 \cdot h_{\alpha \beta} h^{\alpha \beta} - \alpha_3 \cdot h_{\alpha}^{\alpha} h_{\beta}^{\beta} + h^{\alpha \beta} \mathcal{T}_{\alpha \beta} + \frac{1}{2} \alpha_1 \cdot \left( \partial_{\beta} h^{\chi}_{\chi} \partial^{\beta} h^{\alpha}_{\alpha} + 2 \partial_{\alpha} h^{\alpha \beta} \partial_{\chi} h_{\beta}^{\chi} - 2 \partial^{\beta} h^{\alpha}_{\alpha} \partial_{\chi} h_{\beta}^{\chi} - \partial_{\chi} h_{\alpha \beta} \partial^{\chi} h^{\alpha \beta} \right) \right) [t, \chi, y, z] d z d y d \chi d t$$

Wave operator

$$\begin{array}{cc} \begin{array}{c} \textcolor{black}{\mathbb{0}^+} h^{\perp} \\ \textcolor{black}{\mathbb{0}^+} h^{\parallel} \end{array} & \begin{array}{c} \textcolor{black}{\mathbb{0}^+} h^{\perp} \\ \textcolor{black}{\mathbb{0}^+} h^{\parallel} \end{array} \\ \begin{array}{c} \textcolor{black}{\mathbb{0}^+} h^{\perp} \dagger \\ \textcolor{black}{\mathbb{0}^+} h^{\parallel} \dagger \end{array} & \begin{array}{c} \alpha_2 \cdot - \alpha_3 \\ - \sqrt{3} \alpha_3 \end{array} \begin{array}{c} - \sqrt{3} \alpha_3 \\ \alpha_2 \cdot - 3 \alpha_3 + \alpha_1 \cdot k^2 \end{array} \\ & \textcolor{black}{\mathbb{1}^-} h^{\perp} \alpha \end{array}$$

$$\begin{array}{cc} \textcolor{black}{\mathbb{1}^-} h^{\perp} \dagger^{\alpha} & \begin{array}{c} \alpha_2 \cdot \\ 2 \end{array} \\ \textcolor{black}{\mathbb{2}^+} h^{\parallel} \dagger^{\alpha \beta} & \begin{array}{c} \alpha_2 \cdot k^2 \\ \alpha_2 \cdot - \frac{1}{2} \end{array} \end{array}$$

Saturated propagator

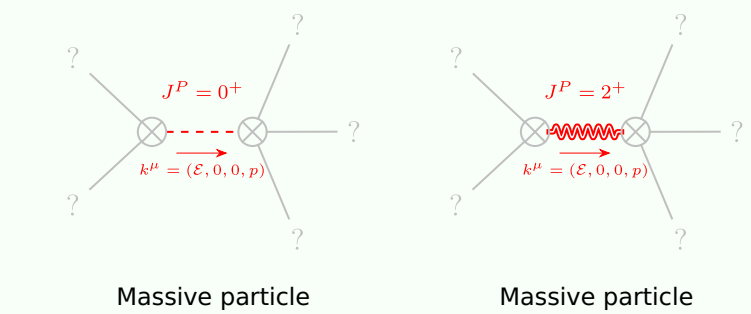
$$\begin{array}{cc} \textcolor{black}{\mathbb{0}^+} \mathcal{T}^{\perp} & \textcolor{black}{\mathbb{0}^+} \mathcal{T}^{\parallel} \\ \textcolor{black}{\mathbb{0}^+} \mathcal{T}^{\perp} \dagger & \begin{array}{c} \frac{1}{\alpha_2 \cdot + \alpha_3 \cdot \left( -1 - \frac{3 \alpha_3}{\alpha_2 \cdot - 3 \alpha_3 + \alpha_1 \cdot k^2} \right)} \\ \sqrt{3} \alpha_3 \end{array} \\ \textcolor{black}{\mathbb{0}^+} \mathcal{T}^{\parallel} \dagger & \begin{array}{c} \frac{\sqrt{3} \alpha_3}{\alpha_2 \cdot \left( \alpha_2 \cdot - 4 \alpha_3 \right) + \alpha_1 \cdot \left( \alpha_2 \cdot - \alpha_3 \right) k^2} \\ \frac{1}{\frac{\alpha_3 \cdot \left( \alpha_2 \cdot - 4 \alpha_3 \right)}{\alpha_2 \cdot - \alpha_3} + \alpha_1 \cdot k^2} \end{array} \end{array}$$

$$\begin{array}{cc} \textcolor{black}{\mathbb{1}^-} \mathcal{T}^{\perp} \alpha & \begin{array}{c} \frac{1}{\alpha_2 \cdot} \\ \textcolor{black}{\mathbb{1}^-} \mathcal{T}^{\perp} \dagger^{\alpha} \end{array} \\ \textcolor{black}{\mathbb{2}^+} \mathcal{T}^{\parallel} \dagger^{\alpha \beta} & \begin{array}{c} \frac{1}{\alpha_2 \cdot k^2} \\ \alpha_2 \cdot - \frac{1}{2} \end{array} \end{array}$$

Source constraints

(No source constraints)

Massive spectrum



Pole residue:	$\frac{\alpha_2 \cdot ^2 - 2 \alpha_2 \cdot \alpha_3 + 4 \alpha_3 \cdot ^2}{\alpha_1 \cdot (\alpha_2 \cdot - \alpha_3)^2} > 0$
Square mass:	$-\frac{\alpha_1 \cdot (\alpha_2 \cdot - 4 \alpha_3)}{\alpha_1 \cdot (\alpha_2 \cdot - \alpha_3)} > 0$
Spin:	0
Parity:	Even

Pole residue:	$-\frac{2}{\alpha_1} > 0$
Square mass:	$\frac{2 \alpha_2 \cdot}{\alpha_1} > 0$
Spin:	2
Parity:	Even

Massless spectrum

(No particles)

Unitarity conditions

(Demonstrably impossible)