

PSALTer results panel

$$\mathcal{S} = \iiint \int (\alpha_3 \mathcal{B}_\alpha \mathcal{B}^\alpha + \mathcal{B}^\alpha \mathcal{J}_\alpha + \alpha_2 \partial_\alpha \mathcal{B}^\alpha \partial_\beta \mathcal{B}^\beta + \alpha_1 \partial_\beta \mathcal{B}_\alpha \partial^\beta \mathcal{B}^\alpha) [t, x, y, z] dz dy dx dt$$

Wave operator

$$\begin{array}{cc} & \overset{0^+}{\mathcal{B}} \\ \overset{0^+}{\mathcal{B}} \dagger & \boxed{\alpha_3 + (\alpha_1 + \alpha_2) k^2} & \overset{1^-}{\mathcal{B}}_\alpha \\ & \overset{1^-}{\mathcal{B}} \dagger^\alpha & \boxed{\alpha_3 + \alpha_1 k^2} \end{array}$$

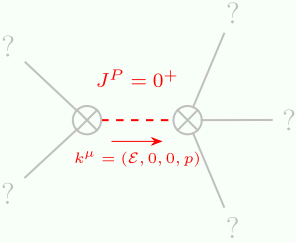
Saturated propagator

$$\begin{array}{cc} & \overset{0^+}{\mathcal{J}} \\ \overset{0^+}{\mathcal{J}} \dagger & \boxed{\frac{1}{\alpha_3 + (\alpha_1 + \alpha_2) k^2}} & \overset{1^-}{\mathcal{J}}_\alpha \\ & \overset{1^-}{\mathcal{J}} \dagger^\alpha & \boxed{\frac{1}{\alpha_3 + \alpha_1 k^2}} \end{array}$$

Source constraints

(No source constraints)

Massive spectrum

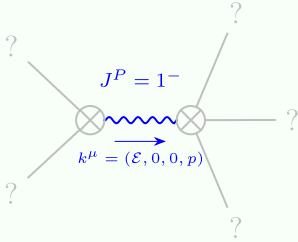


$J^P = 0^+$

$k^\mu = (\mathcal{E}, 0, 0, p)$

Massive particle

Pole residue:	$\frac{1}{\alpha_1 + \alpha_2} > 0$
Square mass:	$-\frac{\alpha_3}{\alpha_1 + \alpha_2} > 0$
Spin:	0
Parity:	Even



$J^P = 1^-$

$k^\mu = (\mathcal{E}, 0, 0, p)$

Massive particle

Pole residue:	$-\frac{1}{\alpha_1} > 0$
Square mass:	$-\frac{\alpha_3}{\alpha_1} > 0$
Spin:	1
Parity:	Odd

Massless spectrum

(No particles)

Unitarity conditions

(Demonstrably impossible)