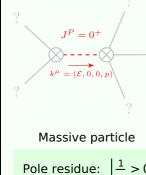# PSALTer results panel

$$\mathcal{S} = \iiiint \left(\varphi \left(\rho - \alpha_2 \, \varphi \right) + \alpha_1 \, \partial_\alpha \varphi \, \partial^\alpha \varphi \right)[t, \, x, \, y, \, z] \, dz \, dy \, dx \, dt$$

Wave operator

$$\overset{0^+}{\bullet}\varphi$$

$$\overset{0^+}{\bullet}\varphi \dagger \quad \boxed{-\alpha_2 + \alpha_1 \, k^2}$$

Saturated propagator

$$\overset{0^+}{\bullet}\rho$$

$$\overset{0^+}{\bullet}\rho \dagger \quad \boxed{\dfrac{1}{-\alpha_2 + \alpha_1 \, k^2}}$$

Source constraints

(No source constraints)

Massive spectrum

$J^P = 0^+$

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

Massive particle

Pole residue:	$\dfrac{1}{\alpha_1} > 0$
Square mass:	$\dfrac{\alpha_2}{\alpha_1} > 0$
Spin:	0
Parity:	Even

Massless spectrum

(No particles)

Unitarity conditions

$\alpha_1 > 0 \,\&\&\, \alpha_2 > 0$