

PSALter results panel

Wave operator and propagator

Spin-parity form	Covariant form	Multiplicities
#2 $0^+ \chi == 0$	$\partial_\beta \partial_\alpha \chi^{\alpha\beta} == 0$	1
Total expected gauge generators:		1

$\begin{matrix} \#1 \\ 1^- \\ \psi^+ \end{matrix} \begin{matrix} \alpha \\ \psi^+ \end{matrix}$

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$$S == \iiint \left\{ \psi^{\alpha\beta} \chi_{\alpha\beta} + \frac{(\partial_\nu \psi_\mu \partial_\rho \psi_\mu \partial^\rho \psi^\mu)_\nu}{4\kappa} \right\} [t, x, y, z] d^3z d^3y d^3x$$

$\begin{matrix} \#1 \\ 0^+ \\ \psi^+ \end{matrix} \begin{matrix} \alpha\beta \\ \psi^+ \end{matrix}$

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Massive and massless spectra

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

$\begin{matrix} \text{Quartic pole} \end{matrix}$

$\text{Pole residue: } 0 < \kappa \&\& \kappa > 0$ $\text{Polarisations: } 2$

(No particles)

Massless particle $\text{Pole residue: } -\kappa > 0$ $\text{Polarisations: } 5$

Massless particle $\text{Pole residue: } \kappa > 0$ $\text{Polarisations: } 2$

$k^\mu = (p, 0, 0, p)$ $k^\mu = (p, 0, 0, p)$

$\begin{matrix} \text{Massless particle} \end{matrix}$

Unitarity conditions