

PSALter results panel

$$\mathcal{S} = \int \int \int \int (h^{\alpha\beta} \mathcal{T}_{\alpha\beta} + 2 \alpha_1 (-\partial_\nu h_{\mu\rho} + \partial_\rho h_{\mu\nu}) \partial^\rho h^{\mu\nu}) [t, x, y, z] dz dy dx dt$$

Wave operator

$0^+ h^\perp$

$0^+ h^\parallel$

$0^+ h^\perp \dagger$

$0^+ h^\parallel \dagger$

0

0

0

$2 \alpha_1 k^2$

$1^- h^\perp_\alpha$

$1^- h^\perp \dagger^\alpha$

$1^- h^\perp_\alpha$

$2^+ h^\parallel_{\alpha\beta}$

$2^+ h^\parallel \dagger^{\alpha\beta}$

$2 \alpha_1 k^2$

Saturated propagator

$0^+ \mathcal{T}^\perp$

$0^+ \mathcal{T}^\parallel$

$0^+ \mathcal{T}^\perp \dagger$

$0^+ \mathcal{T}^\parallel \dagger$

0

0

0

$\frac{1}{2 \alpha_1 k^2}$

$1^- \mathcal{T}^\perp_\alpha$

$1^- \mathcal{T}^\perp \dagger^\alpha$

$1^- \mathcal{T}^\perp_\alpha$

$2^+ \mathcal{T}^\parallel_{\alpha\beta}$

$2^+ \mathcal{T}^\parallel \dagger^{\alpha\beta}$

$\frac{1}{2 \alpha_1 k^2}$

Source constraints

Spin-parity form	Covariant form	Multiplicities
$0^+ \mathcal{T}^\perp == 0$	$\partial_\beta \partial_\alpha \mathcal{T}^{\alpha\beta} == 0$	1
Total expected gauge generators:		1

Massive spectrum

(No particles)

Massless spectrum

<div><div><div>Failed</div><div>Massless particle</div></div><div><div>Pole residue:</div><div>$-\frac{p^2}{\alpha_1} > 0$</div></div><div><div>Polarisations:</div><div>2</div></div></div>	<div><div><div>Failed</div><div>Massless particle</div></div><div><div>Pole residue:</div><div>$\frac{p^2}{\alpha_1} > 0$</div></div><div><div>Polarisations:</div><div>5</div></div></div>
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Unitarity conditions

(Demonstrably impossible)