

PSALTer results panel

$$S == \iiint\int (\rho \varphi + h^{\alpha\beta} \mathcal{T}_{\alpha\beta} + \alpha_{\cdot 2} \partial_{\alpha} \varphi \partial^{\alpha} \varphi + \frac{1}{2} \alpha_{\cdot 1} (\partial_{\beta} h^{\chi}_{\cdot \chi} \partial^{\beta} h^{\alpha}_{\cdot \alpha} + 2 \partial_{\alpha} h^{\alpha\beta} \partial_{\chi} h^{\chi}_{\cdot \beta} - 2 \partial^{\beta} h^{\alpha}_{\cdot \alpha} \partial_{\chi} h^{\chi}_{\cdot \beta} - \partial_{\chi} h_{\alpha\beta} \partial^{\chi} h^{\alpha\beta})) [t, \chi, y, z] dz dy dx dt$$

Wave operator

$0^+ \varphi \dagger$

$0^+ h^{\perp} \dagger$

$0^+ h^{\parallel} \dagger$

$\alpha_{\cdot 2} k^2$

0

0

0

0

0

0

0

$\alpha_{\cdot 1} k^2$

$1^- h^{\perp}_{\cdot \alpha}$

0

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

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

$-\frac{\alpha_{\cdot 1} k^2}{2}$

Saturated propagator

$0^+ \rho \dagger$

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

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

$\frac{1}{\alpha_{\cdot 2} k^2}$

0

0

0

0

0

0

0

$\frac{1}{\alpha_{\cdot 1} k^2}$

$1^- \mathcal{T}^{\perp}_{\cdot \alpha}$

0

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

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

$-\frac{2}{\alpha_{\cdot 1} k^2}$

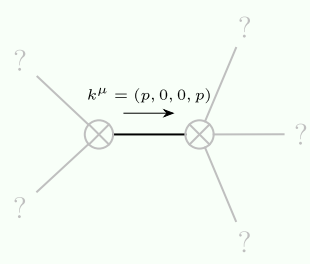
Source constraints

Spin-parity form	Covariant form	Multiplicities
$0^+ \mathcal{T}^{\perp} == 0$	$\partial_{\beta} \partial_{\alpha} \mathcal{T}^{\alpha\beta} == 0$	1
$1^- \mathcal{T}^{\perp \alpha} == 0$	$\partial_{\chi} \partial_{\beta} \partial^{\alpha} \mathcal{T}^{\beta\chi} == \partial_{\chi} \partial^{\chi} \partial_{\beta} \mathcal{T}^{\alpha\beta}$	3
Total expected gauge generators:		4

Massive spectrum

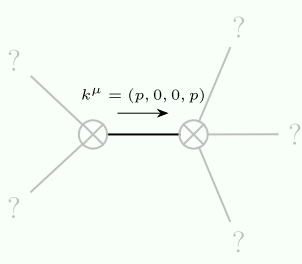
(No particles)

Massless spectrum



Massless particle

Pole residue:	$\left \frac{1}{\alpha_{\cdot 2}} \right > 0$
Polarisations:	1



Massless particle

Pole residue:	$\left -\frac{p^2}{\alpha_{\cdot 1}} \right > 0$
Polarisations:	2

Unitarity conditions

$$\alpha_{\cdot 1} < 0 \ \&\& \ \alpha_{\cdot 2} > 0$$