PSALTer results panel

$$\mathcal{S} == \int\int\int\int \left(\mathcal{A}^{\alpha\beta\chi}\ \sigma_{\alpha\beta\chi} + f^{\alpha\beta}\ \tau\,(\Delta+\mathcal{K})_{\alpha\beta} + \frac{1}{6}\,t_{\cdot 1}\,(2\,\mathcal{A}^{\alpha\iota}{}_{\alpha}\ \mathcal{A}_{\iota}{}^{\theta}{}_{\theta} - 4\,\mathcal{A}_{\alpha}{}^{\theta}{}_{\theta}\,\partial_{\iota} f^{\alpha\iota} + 4\,\mathcal{A}_{\iota}{}^{\theta}{}_{\theta}\,\partial^{\iota} f^{\alpha}{}_{\alpha} - 2\,\partial_{\iota} f^{\theta}{}_{\theta}\,\partial^{\iota} f^{\alpha}{}_{\alpha} - 2\,\partial_{\iota} f^{\alpha\iota}\,\partial_{\theta} f_{\alpha}{}^{\theta} + 4\,\partial^{\iota} f^{\alpha}{}_{\alpha}\,\partial_{\theta} f_{\iota}{}^{\theta} - 6\,\partial_{\alpha} f_{\iota\theta}\,\partial^{\theta} f^{\alpha\iota} - 3\,\partial_{\alpha} f_{\theta\iota}\,\partial^{\theta} f^{\alpha\iota} + 3\,\partial_{\iota} f_{\alpha\theta}\,\partial^{\theta} f^{\alpha\iota} + 3\,\partial_{\theta} f_{\alpha\iota}\,\partial^{\theta} f^{\alpha\iota} + 3\,\partial_{\theta} f_{\iota\alpha}\,\partial^{\theta} f^{\alpha\iota} + 6\,\mathcal{A}_{\alpha\theta\iota}\,(\mathcal{A}^{\alpha\iota\theta} + 2\,\partial^{\theta} f^{\alpha\iota})) + \frac{r_{\cdot}}{5}\,(\partial_{\iota}\mathcal{A}_{\theta}{}^{\kappa}{}_{\kappa}\,\partial^{\theta}\mathcal{A}^{\alpha\iota}{}_{\alpha} - \partial_{\theta}\mathcal{A}_{\iota}{}^{\kappa}{}_{\kappa}\,\partial^{\theta}\mathcal{A}^{\alpha\iota}{}_{\alpha} - (\partial_{\alpha}\mathcal{A}^{\alpha\iota\theta} - 2\,\partial^{\theta}\mathcal{A}^{\alpha\iota}{}_{\alpha})\,(\partial_{\kappa}\mathcal{A}_{\iota}{}^{\kappa}{}_{\theta} - \partial_{\kappa}\mathcal{A}_{\theta}{}^{\kappa}{}_{\iota}))) \right)[t, x, y, z]\,dz\,dy\,dx\,dt$$

Wave operator

	$0^+_{\cdot}\mathcal{A}^{\parallel}$	$0^+_{\cdot}f^{\parallel}$	$0^+_{\cdot}f^{\perp}$	$0^-_{\cdot}\mathcal{A}^{\parallel}$
$0^+_{\cdot}\mathcal{A}^{\parallel}\,\dagger$	0	0	0	0
$0^+_{\cdot}f^{\parallel}\,\dagger$	0	0	0	0
$0^+_{\cdot}f^{\perp}\,\dagger$	0	0	0	0
$0^-_{\cdot}\mathcal{A}^{\parallel}\,\dagger$	0	0	0	$-t_{\cdot 1}$

	$1^+_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$1^+_{\cdot}\mathcal{A}^{\perp}{}_{\alpha\beta}$	$1^+_{\cdot}f^{\parallel}{}_{\alpha\beta}$	$1^-_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha}$	$1^-_{\cdot}\mathcal{A}^{\perp}{}_{\alpha}$	$1^-_{\cdot}f^{\parallel}{}_{\alpha}$	$1^-_{\cdot}f^{\perp}{}_{\alpha}$
$1^+_{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta}$	$k^2 r_{\cdot 5} - \frac{t_{\cdot 1}}{2}$	$-\frac{t_{\cdot 1}}{\sqrt{2}}$	$-\frac{i\,k\,t_{\cdot 1}}{\sqrt{2}}$	0	0	0	0
$1^+_{\cdot}\mathcal{A}^{\perp}\,\dagger^{\alpha\beta}$	$-\frac{t_{\cdot 1}}{\sqrt{2}}$	0	0	0	0	0	0
$1^+_{\cdot}f^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{i\,k\,t_{\cdot 1}}{\sqrt{2}}$	0	0	0	0	0	0
$1^-_{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha}$	0	0	0	$k^2 r_{\cdot 5} + \frac{t_{\cdot 1}}{6}$	$\frac{t_{\cdot 1}}{3\sqrt{2}}$	0	$\frac{i\,k\,t_{\cdot 1}}{3}$
$1^-_{\cdot}\mathcal{A}^{\perp}\,\dagger^{\alpha}$	0	0	0	$\frac{t_{\cdot 1}}{3\sqrt{2}}$	$\frac{t_{\cdot 1}}{3}$	0	$\frac{1}{3}\,i\,\sqrt{2}\,k\,t_{\cdot 1}$
$1^-_{\cdot}f^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$1^-_{\cdot}f^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{1}{3}\,i\,k\,t_{\cdot 1}$	$-\frac{1}{3}\,i\,\sqrt{2}\,k\,t_{\cdot 1}$	0	$\frac{2\,k^2 t_{\cdot 1}}{3}$

	$2^+_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$2^+_{\cdot}f^{\parallel}{}_{\alpha\beta}$	$2^-_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta\chi}$
$2^+_{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{t_{\cdot 1}}{2}$	$-\frac{i\,k\,t_{\cdot 1}}{\sqrt{2}}$	0
$2^+_{\cdot}f^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{i\,k\,t_{\cdot 1}}{\sqrt{2}}$	$k^2 t_{\cdot 1}$	0
$2^-_{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta\chi}$	0	0	$\frac{t_{\cdot 1}}{2}$

Saturated propagator

	$0^+_{\cdot}\sigma^{\parallel}$	$0^+_{\cdot}\tau^{\parallel}$	$0^+_{\cdot}\tau^{\perp}$	$0^-_{\cdot}\sigma^{\parallel}$
$0^+_{\cdot}\sigma^{\parallel}\,\dagger$	0	0	0	0
$0^+_{\cdot}\tau^{\parallel}\,\dagger$	0	0	0	0
$0^+_{\cdot}\tau^{\perp}\,\dagger$	0	0	0	0
$0^-_{\cdot}\sigma^{\parallel}\,\dagger$	0	0	0	$-\frac{1}{t_{\cdot 1}}$

	$1^+_{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$1^+_{\cdot}\sigma^{\perp}{}_{\alpha\beta}$	$1^+_{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$1^-_{\cdot}\sigma^{\parallel}{}_{\alpha}$	$1^-_{\cdot}\sigma^{\perp}{}_{\alpha}$	$1^-_{\cdot}\tau^{\parallel}{}_{\alpha}$	$1^-_{\cdot}\tau^{\perp}{}_{\alpha}$
$1^+_{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	0	$-\frac{\sqrt{2}}{t_{\cdot 1}+k^2 t_{\cdot 1}}$	$-\frac{i\,\sqrt{2}\,k}{t_{\cdot 1}+k^2 t_{\cdot 1}}$	0	0	0	0
$1^+_{\cdot}\sigma^{\perp}\,\dagger^{\alpha\beta}$	$-\frac{\sqrt{2}}{t_{\cdot 1}+k^2 t_{\cdot 1}}$	$\frac{-2k^2 r_{\cdot 5}+t_{\cdot 1}}{(1+k^2)^2 t_{\cdot 1}^2}$	$-\frac{i\,(2k^3 r_{\cdot 5}-k t_{\cdot 1})}{(1+k^2)^2 t_{\cdot 1}^2}$	0	0	0	0
$1^+_{\cdot}\tau^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{i\,\sqrt{2}\,k}{t_{\cdot 1}+k^2 t_{\cdot 1}}$	$\frac{i\,(2k^3 r_{\cdot 5}-k t_{\cdot 1})}{(1+k^2)^2 t_{\cdot 1}^2}$	$\frac{-2k^4 r_{\cdot 5}+k^2 t_{\cdot 1}}{(1+k^2)^2 t_{\cdot 1}^2}$	0	0	0	0
$1^-_{\cdot}\sigma^{\parallel}\,\dagger^{\alpha}$	0	0	0	$\frac{1}{k^2 r_{\cdot 5}}$	$-\frac{1}{\sqrt{2}\,(k^2 r_{\cdot 5}+2k^4 r_{\cdot 5})}$	0	$-\frac{i}{k\,r_{\cdot 5}+2k^3 r_{\cdot 5}}$
$1^-_{\cdot}\sigma^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{1}{\sqrt{2}\,(k^2 r_{\cdot 5}+2k^4 r_{\cdot 5})}$	$\frac{6k^2 r_{\cdot 5}+t_{\cdot 1}}{2\,(k+2k^3)^2 r_{\cdot 5}\,t_{\cdot 1}}$	0	$\frac{i\,(6k^2 r_{\cdot 5}+t_{\cdot 1})}{\sqrt{2}\,k\,(1+2k^2)^2 r_{\cdot 5}\,t_{\cdot 1}}$
$1^-_{\cdot}\tau^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$1^-_{\cdot}\tau^{\perp}\,\dagger^{\alpha}$	0	0	0	$\frac{i}{k\,r_{\cdot 5}+2k^3 r_{\cdot 5}}$	$-\frac{i\,(6k^2 r_{\cdot 5}+t_{\cdot 1})}{\sqrt{2}\,k\,(1+2k^2)^2 r_{\cdot 5}\,t_{\cdot 1}}$	0	$\frac{6k^2 r_{\cdot 5}+t_{\cdot 1}}{(1+2k^2)^2 r_{\cdot 5}\,t_{\cdot 1}}$

	$2^+_{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$2^+_{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$2^-_{\cdot}\sigma^{\parallel}{}_{\alpha\beta\chi}$
$2^+_{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{2}{(1+2k^2)^2 t_{\cdot 1}}$	$-\frac{2\,i\,\sqrt{2}\,k}{(1+2k^2)^2 t_{\cdot 1}}$	0
$2^+_{\cdot}\tau^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{2\,i\,\sqrt{2}\,k}{(1+2k^2)^2 t_{\cdot 1}}$	$\frac{4k^2}{(1+2k^2)^2 t_{\cdot 1}}$	0
$2^-_{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta\chi}$	0	0	$\frac{2}{t_{\cdot 1}}$

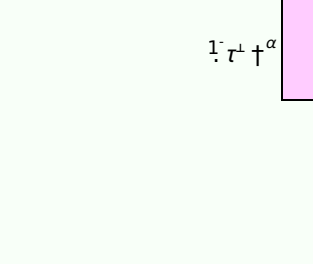
Source constraints

Spin-parity form	Covariant form	Multiplicities
$0^+_{\cdot}\sigma^{\parallel} == 0$	$\partial_{\beta}\sigma^{\alpha}{}_{\alpha}{}^{\beta} == 0$	1
$0^+_{\cdot}\tau^{\parallel} == 0$	$\partial_{\beta}\partial_{\alpha}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == \partial_{\beta}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha}{}_{\alpha}$	1
$0^+_{\cdot}\tau^{\perp} == 0$	$\partial_{\beta}\partial_{\alpha}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == 0$	1
$2\,i\,k\ 1^-_{\cdot}\sigma^{\perp\,\alpha} + 1^-_{\cdot}\tau^{\perp\,\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 2\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial_{\beta}\sigma^{\beta\alpha\chi}$	3
$1^-_{\cdot}\tau^{\parallel\,\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}\tau\,(\Delta+\mathcal{K})^{\beta\alpha}$	3
$i\,k\ 1^+_{\cdot}\sigma^{\alpha\beta} + 1^+_{\cdot}\tau^{\parallel\,\alpha\beta} == 0$	$\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} + \partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\chi} + \partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 2\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta} + 2\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\chi\alpha\beta} == \partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\beta} + \partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\chi} + \partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\beta\alpha} + 2\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta}$	3
$-2\,i\,k\ 2^+_{\cdot}\sigma^{\parallel\,\alpha\beta} + 2^+_{\cdot}\tau^{\parallel\,\alpha\beta} == 0$	$-i\,(4\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\delta} + 2\,\partial_{\delta}\partial^{\delta}\partial^{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi} - 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} - 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\chi\alpha} - 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\chi\alpha} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\beta\alpha} + 4\,i\,k^{\chi}\,\partial_{\epsilon}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\sigma^{\delta}{}_{\delta}{}^{\epsilon} - 6\,i\,k^{\chi}\,\partial_{\epsilon}\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\delta\beta\epsilon} - 6\,i\,k^{\chi}\,\partial_{\epsilon}\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\delta\alpha\epsilon} + 6\,i\,k^{\chi}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\sigma^{\alpha\beta\delta} + 6\,i\,k^{\chi}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\sigma^{\beta\alpha\delta} + 2\,\eta^{\alpha\beta}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\tau\,(\Delta+\mathcal{K})^{\chi\delta} - 2\,\eta^{\alpha\beta}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi} - 4\,i\,\eta^{\alpha\beta}\,k^{\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\chi}\sigma^{\delta}{}_{\delta}{}^{\epsilon}) == 0$	5
Total expected gauge generators:		17

Massive spectrum

(No particles)

Massless spectrum



Massless particle

Pole residue:	$-\frac{7}{r_{\cdot 5}} - \frac{2p^2}{t_{\cdot 1}} - \frac{4\,r_{\cdot 5}\,p^4}{t_{\cdot 1}^2} > 0$
Polarisations:	2

Unitarity conditions

$r_{\cdot 5} < 0\ \&\&\ (t_{\cdot 1} < 0\ ||\ t_{\cdot 1} > 0)$