PSALTer results panel

$$S == \int\int\int\int\Big(\mathcal{A}^{\alpha\beta\chi}\ \sigma_{\alpha\beta\chi} + f^{\alpha\beta}\ \tau\,(\Delta+\mathcal{K})_{\alpha\beta} - 2\,r_3\Big(\partial_\beta\mathcal{A}_{\iota}{}^{\theta}{}_{\theta}\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha} + \partial_\iota\mathcal{A}_{\beta}{}^{\theta}{}_{\theta}\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha} + \partial_\alpha\mathcal{A}^{\alpha\beta\iota}\,\partial_\theta\mathcal{A}_{\beta}{}^{\theta}{}_{\iota} - 2\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\partial_\theta\mathcal{A}_{\beta}{}^{\theta}{}_{\iota} + \partial_\alpha\mathcal{A}^{\alpha\beta\iota}\,\partial_\theta\mathcal{A}_{\iota}{}^{\theta}{}_{\beta} - 2\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\partial_\theta\mathcal{A}_{\iota}{}^{\theta}{}_{\beta} + 2\,\partial_\beta\mathcal{A}_{\iota\theta\alpha}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota}\Big) + \frac{1}{6}\,t_1\Big(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}\,\big(\mathcal{A}^{\alpha\iota\theta} + 2\,\partial^{\theta}f^{\alpha\iota}\big)\Big) + r_5\Big(\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} - \Big(\partial_\alpha\mathcal{A}^{\alpha\iota\theta} - 2\,\partial^{\theta}\mathcal{A}^{\alpha\iota}{}_{\alpha}\Big)\Big(\partial_\kappa\mathcal{A}_{\iota}{}^{\kappa}{}_{\theta} - \partial_\kappa\mathcal{A}_{\theta}{}^{\kappa}{}_{\iota}\Big)\Big)\Big)\Big][t,\,x,\,y,\,z]\,dz\,dy\,dx\,dt$$

Wave operator

	$0^+_\bullet\mathcal{A}^{\parallel}$	$0^+_\bullet f^{\parallel}$	$0^+_\bullet f^{\perp}$	$0^-_\bullet\mathcal{A}^{\parallel}$
$0^+_\bullet\mathcal{A}^{\parallel\,\dagger}$	$6\,k^2\,r_3$	0	0	0
$0^+_\bullet f^{\parallel\,\dagger}$	0	0	0	0
$0^+_\bullet f^{\perp\,\dagger}$	0	0	0	0
$0^-_\bullet\mathcal{A}^{\parallel\,\dagger}$	0	0	0	$-t_1$

	$1^+_\bullet\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$1^+_\bullet\mathcal{A}^{\perp}{}_{\alpha\beta}$	$1^+_\bullet f^{\parallel}{}_{\alpha\beta}$	$1^-_\bullet\mathcal{A}^{\parallel}{}_{\alpha}$	$1^-_\bullet\mathcal{A}^{\perp}{}_{\alpha}$	$1^-_\bullet f^{\parallel}{}_{\alpha}$	$1^-_\bullet f^{\perp}{}_{\alpha}$
$1^+_\bullet\mathcal{A}^{\parallel\,\dagger\,\alpha\beta}$	$k^2\left(2\,r_3+r_5\right)-\frac{t_1}{2}$	$-\frac{t_1}{\sqrt{2}}$	$-\frac{i\,k\,t_1}{\sqrt{2}}$	0	0	0	0
$1^+_\bullet\mathcal{A}^{\perp\,\dagger\,\alpha\beta}$	$-\frac{t_1}{\sqrt{2}}$	0	0	0	0	0	0
$1^+_\bullet f^{\parallel\,\dagger\,\alpha\beta}$	$\frac{i\,k\,t_1}{\sqrt{2}}$	0	0	0	0	0	0
$1^-_\bullet\mathcal{A}^{\parallel\,\dagger\,\alpha}$	0	0	0	$k^2\left(2\,r_3+r_5\right)+\frac{t_1}{6}$	$\frac{t_1}{3\sqrt{2}}$	0	$\frac{i\,k\,t_1}{3}$
$1^-_\bullet\mathcal{A}^{\perp\,\dagger\,\alpha}$	0	0	0	$\frac{t_1}{3\sqrt{2}}$	$\frac{t_1}{3}$	0	$\frac{1}{3}\,i\,\sqrt{2}\,k\,t_1$
$1^-_\bullet f^{\parallel\,\dagger\,\alpha}$	0	0	0	0	0	0	0
$1^-_\bullet f^{\perp\,\dagger\,\alpha}$	0	0	0	$-\frac{1}{3}\,i\,k\,t_1$	$-\frac{1}{3}\,i\,\sqrt{2}\,k\,t_1$	0	$\frac{2\,k^2\,t_1}{3}$

	$2^+_\bullet\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$2^+_\bullet f^{\parallel}{}_{\alpha\beta}$	$2^-_\bullet\mathcal{A}^{\parallel}{}_{\alpha\beta\chi}$
$2^+_\bullet\mathcal{A}^{\parallel\,\dagger\,\alpha\beta}$	$\frac{t_1}{2}$	$-\frac{i\,k\,t_1}{\sqrt{2}}$	0
$2^+_\bullet f^{\parallel\,\dagger\,\alpha\beta}$	$\frac{i\,k\,t_1}{\sqrt{2}}$	$k^2\,t_1$	0
$2^-_\bullet\mathcal{A}^{\parallel\,\dagger\,\alpha\beta\chi}$	0	0	$\frac{t_1}{2}$

Saturated propagator

	$0^+_\bullet\sigma^{\parallel}$	$0^+_\bullet\tau^{\parallel}$	$0^+_\bullet\tau^{\perp}$	$0^-_\bullet\sigma^{\parallel}$
$0^+_\bullet\sigma^{\parallel\,\dagger}$	$\frac{1}{6\,k^2\,r_3}$	0	0	0
$0^+_\bullet\tau^{\parallel\,\dagger}$	0	0	0	0
$0^+_\bullet\tau^{\perp\,\dagger}$	0	0	0	0
$0^-_\bullet\sigma^{\parallel\,\dagger}$	0	0	0	$-\frac{1}{t_1}$

	$1^+_\bullet\sigma^{\parallel}{}_{\alpha\beta}$	$1^+_\bullet\sigma^{\perp}{}_{\alpha\beta}$	$1^+_\bullet\tau^{\parallel}{}_{\alpha\beta}$	$1^-_\bullet\sigma^{\parallel}{}_{\alpha}$	$1^-_\bullet\sigma^{\perp}{}_{\alpha}$	$1^-_\bullet\tau^{\parallel}{}_{\alpha}$	$1^-_\bullet\tau^{\perp}{}_{\alpha}$
$1^+_\bullet\sigma^{\parallel\,\dagger\,\alpha\beta}$	0	$-\frac{\sqrt{2}}{t_1+k^2\,t_1}$	$-\frac{i\,\sqrt{2}\,k}{t_1+k^2\,t_1}$	0	0	0	0
$1^+_\bullet\sigma^{\perp\,\dagger\,\alpha\beta}$	$-\frac{\sqrt{2}}{t_1+k^2\,t_1}$	$\frac{-2\,k^2\left(2\,r_3+r_5\right)+t_1}{(1+k^2)^2\,t_1^2}$	$\frac{-2\,i\,k^3\left(2\,r_3+r_5\right)+i\,k\,t_1}{(1+k^2)^2\,t_1^2}$	0	0	0	0
$1^+_\bullet\tau^{\parallel\,\dagger\,\alpha\beta}$	$\frac{i\,\sqrt{2}\,k}{t_1+k^2\,t_1}$	$\frac{i\left(2\,k^3\left(2\,r_3+r_5\right)-k\,t_1\right)}{(1+k^2)^2\,t_1^2}$	$\frac{-2\,k^4\left(2\,r_3+r_5\right)+k^2\,t_1}{(1+k^2)^2\,t_1^2}$	0	0	0	0
$1^-_\bullet\sigma^{\parallel\,\dagger\,\alpha}$	0	0	0	$\frac{1}{k^2\left(2\,r_3+r_5\right)}$	$-\frac{1}{\sqrt{2}\left(k^2+2\,k^4\right)\left(2\,r_3+r_5\right)}$	0	$-\frac{i}{k\left(1+2\,k^2\right)\left(2\,r_3+r_5\right)}$
$1^-_\bullet\sigma^{\perp\,\dagger\,\alpha}$	0	0	0	$-\frac{1}{\sqrt{2}\left(k^2+2\,k^4\right)\left(2\,r_3+r_5\right)}$	$\frac{6\,k^2\left(2\,r_3+r_5\right)+t_1}{2\left(k+2\,k^3\right)^2\left(2\,r_3+r_5\right)t_1}$	0	$\frac{i\left(6\,k^2\left(2\,r_3+r_5\right)+t_1\right)}{\sqrt{2}\,k\left(1+2\,k^2\right)^2\left(2\,r_3+r_5\right)t_1}$
$1^-_\bullet\tau^{\parallel\,\dagger\,\alpha}$	0	0	0	0	0	0	0
$1^-_\bullet\tau^{\perp\,\dagger\,\alpha}$	0	0	0	$\frac{i}{k\left(1+2\,k^2\right)\left(2\,r_3+r_5\right)}$	$-\frac{i\left(6\,k^2\left(2\,r_3+r_5\right)+t_1\right)}{\sqrt{2}\,k\left(1+2\,k^2\right)^2\left(2\,r_3+r_5\right)t_1}$	0	$\frac{6\,k^2\left(2\,r_3+r_5\right)+t_1}{\left(1+2\,k^2\right)^2\left(2\,r_3+r_5\right)t_1}$

	$2^+_\bullet\sigma^{\parallel}{}_{\alpha\beta}$	$2^+_\bullet\tau^{\parallel}{}_{\alpha\beta}$	$2^-_\bullet\sigma^{\parallel}{}_{\alpha\beta\chi}$
$2^+_\bullet\sigma^{\parallel\,\dagger\,\alpha\beta}$	$\frac{2}{\left(1+2\,k^2\right)^2\,t_1}$	$-\frac{2\,i\,\sqrt{2}\,k}{\left(1+2\,k^2\right)^2\,t_1}$	0
$2^+_\bullet\tau^{\parallel\,\dagger\,\alpha\beta}$	$\frac{2\,i\,\sqrt{2}\,k}{\left(1+2\,k^2\right)^2\,t_1}$	$\frac{4\,k^2}{\left(1+2\,k^2\right)^2\,t_1}$	0
$2^-_\bullet\sigma^{\parallel\,\dagger\,\alpha\beta\chi}$	0	0	$\frac{2}{t_1}$

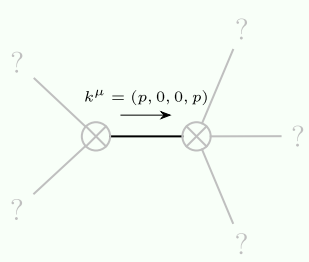
Source constraints

Spin-parity form	Covariant form	Multiplicities
$0^+_\bullet\tau^{\perp} == 0$	$\partial_\beta\partial_\alpha\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == 0$	1
$0^+_\bullet\tau^{\parallel} == 0$	$\partial_\beta\partial_\alpha\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == \partial_\beta\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha}{}_{\alpha}$	1
$2\,i\,k\ 1^-_\bullet\sigma^{\perp\,\alpha} + 1^-_\bullet\tau^{\perp\,\alpha} == 0$	$\partial_\chi\partial_\beta\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} == \partial_\chi\partial^{\chi}\partial_\beta\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 2\,\partial_\delta\partial^{\delta}\partial_\chi\partial_\beta\sigma^{\beta\alpha\chi}$	3
$1^-_\bullet\tau^{\parallel\,\alpha} == 0$	$\partial_\chi\partial_\beta\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} == \partial_\chi\partial^{\chi}\partial_\beta\tau\,(\Delta+\mathcal{K})^{\beta\alpha}$	3
$i\,k\ 1^+_\bullet\sigma^{\perp\,\alpha\beta} + 1^+_\bullet\tau^{\parallel\,\alpha\beta} == 0$	$\partial_\chi\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} + \partial_\chi\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\chi\alpha} + \partial_\chi\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 2\,\partial_\delta\partial_\chi\partial^{\alpha}\sigma^{\chi\beta\delta} + 2\,\partial_\delta\partial^{\delta}\partial_\chi\sigma^{\chi\alpha\beta} == \partial_\chi\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\beta} + \partial_\chi\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\chi} + \partial_\chi\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\beta\alpha} + 2\,\partial_\delta\partial_\chi\partial^{\beta}\sigma^{\chi\alpha\delta}$	3
$-2\,i\,k\ 2^+_\bullet\sigma^{\parallel\,\alpha\beta} + 2^+_\bullet\tau^{\parallel\,\alpha\beta} == 0$	$-i\Big(4\,\partial_\delta\partial_\chi\partial^{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\delta} + 2\,\partial_\delta\partial^{\delta}\partial^{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi} - 3\,\partial_\delta\partial^{\delta}\partial_\chi\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} - 3\,\partial_\delta\partial^{\delta}\partial_\chi\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} - 3\,\partial_\delta\partial^{\delta}\partial_\chi\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\chi} - 3\,\partial_\delta\partial^{\delta}\partial_\chi\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 3\,\partial_\delta\partial^{\delta}\partial_\chi\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\beta\alpha} + 4\,i\ k^{\chi}\ \partial_\epsilon\partial_\chi\partial^{\beta}\partial^{\alpha}\sigma^{\delta}{}_{\delta}{}^{\epsilon} - 6\,i\ k^{\chi}\ \partial_\epsilon\partial_\delta\partial_\chi\partial^{\alpha}\sigma^{\delta\beta\epsilon} - 6\,i\ k^{\chi}\ \partial_\epsilon\partial_\delta\partial_\chi\partial^{\beta}\sigma^{\delta\alpha\epsilon} + 6\,i\ k^{\chi}\ \partial_\epsilon\partial^{\epsilon}\partial_\delta\partial_\chi\sigma^{\alpha\beta\delta} + 6\,i\ k^{\chi}\ \partial_\epsilon\partial^{\epsilon}\partial_\delta\partial_\chi\sigma^{\beta\alpha\delta} + 2\ \eta^{\alpha\beta}\ \partial_\epsilon\partial^{\epsilon}\partial_\delta\partial^{\delta}\tau\,(\Delta+\mathcal{K})^{\chi\delta} - 2\ \eta^{\alpha\beta}\ \partial_\epsilon\partial^{\epsilon}\partial_\delta\partial^{\delta}\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi} - 4\,i\ \eta^{\alpha\beta}\ k^{\chi}\ \partial_\phi\partial^{\phi}\partial_\epsilon\partial_\chi\sigma^{\delta}{}_{\delta}{}^{\epsilon}\Big) == 0$	5
Total expected gauge generators:		16

Massive spectrum

(No particles)

Massless spectrum



Massless particle

Pole residue:	$-\frac{7}{2\,r_3+r_5} + \frac{-2\,t_1\,p^2-4\,(2\,r_3+r_5)\,p^4}{t_1^2} > 0$
Polarisations:	2

Unitarity conditions

$r_3 \in \mathbb{R}\ \&\&\ r_5 < -2\,r_3\ \&\&\ \left(t_1 < 0 \,||\, t_1 > 0\right)$