PSALTer results panel

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

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	$-t_{1}$

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

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

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	$-\frac{1}{t_{1}}$

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

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

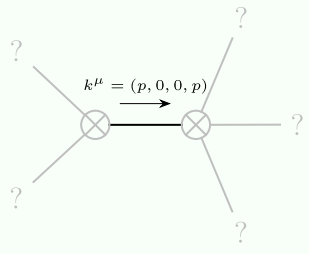
Source constraints

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

Massive spectrum

(No particles)

Massless spectrum



Massless particle

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

Unitarity conditions

$r_{5} < 0\;\&\&\;\left(t_{1} < 0 \,\|\, t_{1} > 0\right)$