PSALTer results panel

$$S == \iiiint \left(\frac{1}{6}\left(6\,\mathcal{A}^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi} + 6\,f^{\alpha\beta}\,\tau_{(\Delta+\mathcal{K})\alpha\beta} + 8\,r_{2}\,\partial_{\beta}\mathcal{A}_{\alpha\iota\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} - 4\,r_{2}\,\partial_{\beta}\mathcal{A}_{\alpha\theta\iota}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} + 4\,r_{2}\,\partial_{\beta}\mathcal{A}_{\iota\theta\alpha}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} - 2\,r_{2}\,\partial_{\iota}\mathcal{A}_{\alpha\beta\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} + 2\,r_{2}\,\partial_{\theta}\mathcal{A}_{\alpha\beta\iota}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} - 4\,r_{2}\,\partial_{\theta}\mathcal{A}_{\alpha\iota\beta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} + 4\,t_{2}\,\mathcal{A}_{\iota\theta\alpha}\,\partial^{\theta}f^{\alpha\iota} + 2\,t_{2}\,\partial_{\alpha}f_{\iota\theta}\,\partial^{\theta}f^{\alpha\iota} - t_{2}\,\partial_{\alpha}f_{\theta\iota}\,\partial^{\theta}f^{\alpha\iota} - t_{2}\,\partial_{\iota}f_{\alpha\theta}\,\partial^{\theta}f^{\alpha\iota} + t_{2}\,\partial_{\theta}f_{\alpha\iota}\,\partial^{\theta}f^{\alpha\iota} - t_{2}\,\partial_{\theta}f_{\iota\alpha}\,\partial^{\theta}f^{\alpha\iota} - 4\,t_{2}\,\mathcal{A}_{\alpha\theta\iota}\left(\mathcal{A}^{\alpha\iota\theta} + \partial^{\theta}f^{\alpha\iota}\right) + 2\,t_{2}\,\mathcal{A}_{\alpha\iota\theta}\left(\mathcal{A}^{\alpha\iota\theta} + 2\,\partial^{\theta}f^{\alpha\iota}\right)\right)\right][t, x, y, z]\,dz\,dy\,dx\,dt$$

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	$k^2\,r_{2} + t_{2}$

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

	$2^{+}_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$2^{+}_{\cdot}f^{\parallel}{}_{\alpha\beta}$	$2^{-}_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta\chi}$
$2^{+}_{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta}$	0	0	0
$2^{+}_{\cdot}f^{\parallel}\,\dagger^{\alpha\beta}$	0	0	0
$2^{-}_{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta\chi}$	0	0	0

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	$\frac{1}{k^2\,r_{2} + t_{2}}$

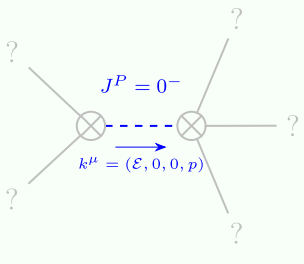
	$1^{+}_{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$1^{+}_{\cdot}\sigma^{\perp}{}_{\alpha\beta}$	$1^{+}_{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$1^{-}_{\cdot}\sigma^{\parallel}{}_{\alpha}$	$1^{-}_{\cdot}\sigma^{\perp}{}_{\alpha}$	$1^{-}_{\cdot}\tau^{\parallel}{}_{\alpha}$	$1^{-}_{\cdot}\tau^{\perp}{}_{\alpha}$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

	$2^{+}_{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$2^{+}_{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$2^{-}_{\cdot}\sigma^{\parallel}{}_{\alpha\beta\chi}$
$2^{+}_{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	0	0	0
$2^{+}_{\cdot}\tau^{\parallel}\,\dagger^{\alpha\beta}$	0	0	0
$2^{-}_{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta\chi}$	0	0	0

Source constraints

Spin-parity form	Covariant form	Multiplicities
$0^{+}_{\cdot}\tau^{\perp} == 0$	$\partial_{\beta}\partial_{\alpha}\tau_{(\Delta+\mathcal{K})}{}^{\alpha\beta} == 0$	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
$0^{+}_{\cdot}\sigma^{\parallel} == 0$	$\partial_{\beta}\sigma^{\alpha}{}_{\alpha}{}^{\beta} == 0$	1
$1^{-}_{\cdot}\tau^{\perp}{}^{\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau_{(\Delta+\mathcal{K})}{}^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}\tau_{(\Delta+\mathcal{K})}{}^{\alpha\beta}$	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
$1^{-}_{\cdot}\sigma^{\perp}{}^{\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\sigma^{\beta\alpha\chi} == 0$	3
$1^{-}_{\cdot}\sigma^{\parallel}{}^{\alpha} == 0$	$\partial_{\delta}\partial^{\alpha}\sigma^{\chi}{}_{\chi}{}^{\delta} + \partial_{\delta}\partial^{\delta}\sigma^{\chi\alpha}{}_{\chi} == \partial_{\delta}\partial_{\chi}\sigma^{\chi\alpha\delta}$	3
$i\,k\;1^{+}_{\cdot}\sigma^{\parallel}{}^{\alpha\beta} + 1^{+}_{\cdot}\tau^{\parallel}{}^{\alpha\beta} == 0$	$\partial_{\chi}\partial^{\alpha}\tau_{(\Delta+\mathcal{K})}{}^{\beta\chi} + \partial_{\chi}\partial^{\beta}\tau_{(\Delta+\mathcal{K})}{}^{\chi\alpha} + \partial_{\chi}\partial^{\chi}\tau_{(\Delta+\mathcal{K})}{}^{\alpha\beta} + \partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\alpha\beta\chi} == \partial_{\chi}\partial^{\alpha}\tau_{(\Delta+\mathcal{K})}{}^{\chi\beta} + \partial_{\chi}\partial^{\beta}\tau_{(\Delta+\mathcal{K})}{}^{\alpha\chi} + \partial_{\chi}\partial^{\chi}\tau_{(\Delta+\mathcal{K})}{}^{\beta\alpha} + \partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\beta\alpha\chi}$	3
$1^{+}_{\cdot}\sigma^{\parallel}{}^{\alpha\beta} == 1^{+}_{\cdot}\sigma^{\perp}{}^{\alpha\beta}$	$3\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\beta\alpha\chi} + 2\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\chi\alpha\beta} == 3\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\alpha\beta\chi}$	3
$2^{-}_{\cdot}\sigma^{\parallel}{}^{\alpha\beta\chi} == 0$	$3\,\partial_{\epsilon}\partial_{\delta}\partial^{\chi}\partial^{\alpha}\sigma^{\delta\beta\epsilon} + 3\,\partial_{\epsilon}\partial^{\epsilon}\partial^{\chi}\partial^{\alpha}\sigma^{\delta\beta}{}_{\delta} + 2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\beta}\sigma^{\alpha\chi\delta} + 4\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\beta}\sigma^{\chi\alpha\delta} + 2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\alpha\beta\chi} + 3\,\eta^{\beta\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\alpha}\sigma^{\delta}{}_{\delta}{}^{\epsilon} + 3\,\eta^{\alpha\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\delta}\sigma^{\delta\beta\epsilon} + 3\,\eta^{\beta\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\epsilon}\sigma^{\delta\alpha}{}_{\delta} == 3\,\partial_{\epsilon}\partial_{\delta}\partial^{\chi}\partial^{\beta}\sigma^{\delta\alpha\epsilon} + 3\,\partial_{\epsilon}\partial^{\epsilon}\partial^{\chi}\partial^{\beta}\sigma^{\delta\alpha}{}_{\delta} + 2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\beta\chi\delta} + 4\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\chi\beta\delta} + 2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\beta\alpha\chi} + 4\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\chi\alpha\beta} + 3\,\eta^{\alpha\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\beta}\sigma^{\delta}{}_{\delta}{}^{\epsilon} + 3\,\eta^{\beta\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\delta}\sigma^{\delta\alpha\epsilon} + 3\,\eta^{\alpha\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\epsilon}\sigma^{\delta\beta}{}_{\delta}$	5
$2^{+}_{\cdot}\tau^{\parallel}{}^{\alpha\beta} == 0$	$4\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\tau_{(\Delta+\mathcal{K})}{}^{\chi\delta} + 2\,\partial_{\delta}\partial^{\delta}\partial^{\beta}\partial^{\alpha}\tau_{(\Delta+\mathcal{K})}{}^{\chi}{}_{\chi} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau_{(\Delta+\mathcal{K})}{}^{\alpha\beta} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau_{(\Delta+\mathcal{K})}{}^{\beta\alpha} + 2\,\eta^{\alpha\beta}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\tau_{(\Delta+\mathcal{K})}{}^{\chi\delta} == 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau_{(\Delta+\mathcal{K})}{}^{\beta\chi} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau_{(\Delta+\mathcal{K})}{}^{\chi\beta} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau_{(\Delta+\mathcal{K})}{}^{\alpha\chi} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau_{(\Delta+\mathcal{K})}{}^{\chi\alpha} + 2\,\eta^{\alpha\beta}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\tau_{(\Delta+\mathcal{K})}{}^{\chi}{}_{\chi}$	5
$2^{+}_{\cdot}\sigma^{\parallel}{}^{\alpha\beta} == 0$	$3\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta} + 3\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta} + 2\,\eta^{\alpha\beta}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\sigma^{\chi}{}_{\chi}{}^{\delta} == 2\,\partial_{\delta}\partial^{\beta}\partial^{\alpha}\sigma^{\chi}{}_{\chi}{}^{\delta} + 3\left(\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\alpha\beta\chi} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\beta\alpha\chi}\right)$	5
Total expected gauge generators:		36

Massive spectrum



Massive particle

Pole residue:	$-\frac{1}{r_{2}} > 0$
Square mass:	$-\frac{t_{2}}{r_{2}} > 0$
Spin:	0
Parity:	Odd

Massless spectrum

(No particles)

Unitarity conditions

$r_{2} < 0$ && $t_{2} > 0$