PSALTer results panel

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

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

	$1^+_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$1^+_{\cdot}\mathcal{A}^{\perp}{}_{\alpha\beta}$	$1^+_{\cdot}f^{\parallel}{}_{\alpha\beta}$	$1^-_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha}$	$1^-_{\cdot}\mathcal{A}^{\perp}{}_{\alpha}$	$1^-_{\cdot}f^{\parallel}{}_{\alpha}$	$1^-_{\cdot}f^{\perp}{}_{\alpha}$
$1^+_{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{1}{6}(t_{1\cdot}+4t_{2\cdot})$	$-\frac{t_{1\cdot}-2t_{2\cdot}}{3\sqrt{2}}$	$-\frac{ik(t_{1\cdot}-2t_{2\cdot})}{3\sqrt{2}}$	0	0	0	0
$1^+_{\cdot}\mathcal{A}^{\perp}\,\dagger^{\alpha\beta}$	$-\frac{t_{1\cdot}-2t_{2\cdot}}{3\sqrt{2}}$	$\frac{t_{1\cdot}+t_{2\cdot}}{3}$	$\frac{1}{3}ik(t_{1\cdot}+t_{2\cdot})$	0	0	0	0
$1^+_{\cdot}f^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{ik(t_{1\cdot}-2t_{2\cdot})}{3\sqrt{2}}$	$-\frac{1}{3}ik(t_{1\cdot}+t_{2\cdot})$	$\frac{1}{3}k^2(t_{1\cdot}+t_{2\cdot})$	0	0	0	0
$1^-_{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha}$	0	0	0	$\frac{t_{1\cdot}}{6}$	$\frac{t_{1\cdot}}{3\sqrt{2}}$	0	$\frac{ikt_{1\cdot}}{3}$
$1^-_{\cdot}\mathcal{A}^{\perp}\,\dagger^{\alpha}$	0	0	0	$\frac{t_{1\cdot}}{3\sqrt{2}}$	$\frac{t_{1\cdot}}{3}$	0	$\frac{1}{3}i\sqrt{2}\,kt_{1\cdot}$
$1^-_{\cdot}f^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$1^-_{\cdot}f^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{1}{3}ikt_{1\cdot}$	$-\frac{1}{3}i\sqrt{2}\,kt_{1\cdot}$	0	$\frac{2k^2t_{1\cdot}}{3}$

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

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

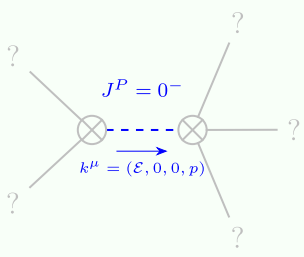
	$1^+_{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$1^+_{\cdot}\sigma^{\perp}{}_{\alpha\beta}$	$1^+_{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$1^-_{\cdot}\sigma^{\parallel}{}_{\alpha}$	$1^-_{\cdot}\sigma^{\perp}{}_{\alpha}$	$1^-_{\cdot}\tau^{\parallel}{}_{\alpha}$	$1^-_{\cdot}\tau^{\perp}{}_{\alpha}$
$1^+_{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{2(t_{1\cdot}+t_{2\cdot})}{3t_{1\cdot}t_{2\cdot}}$	$\frac{\sqrt{2}(t_{1\cdot}-2t_{2\cdot})}{3(1+k^2)t_{1\cdot}t_{2\cdot}}$	$\frac{i\sqrt{2}\,k(t_{1\cdot}-2t_{2\cdot})}{3(1+k^2)t_{1\cdot}t_{2\cdot}}$	0	0	0	0
$1^+_{\cdot}\sigma^{\perp}\,\dagger^{\alpha\beta}$	$\frac{\sqrt{2}(t_{1\cdot}-2t_{2\cdot})}{3(1+k^2)t_{1\cdot}t_{2\cdot}}$	$\frac{t_{1\cdot}+4t_{2\cdot}}{3(1+k^2)^2t_{1\cdot}t_{2\cdot}}$	$\frac{ik(t_{1\cdot}+4t_{2\cdot})}{3(1+k^2)^2t_{1\cdot}t_{2\cdot}}$	0	0	0	0
$1^+_{\cdot}\tau^{\parallel}\,\dagger^{\alpha\beta}$	$-\frac{i\sqrt{2}\,k(t_{1\cdot}-2t_{2\cdot})}{3(1+k^2)t_{1\cdot}t_{2\cdot}}$	$-\frac{ik(t_{1\cdot}+4t_{2\cdot})}{3(1+k^2)^2t_{1\cdot}t_{2\cdot}}$	$\frac{k^2(t_{1\cdot}+4t_{2\cdot})}{3(1+k^2)^2t_{1\cdot}t_{2\cdot}}$	0	0	0	0
$1^-_{\cdot}\sigma^{\parallel}\,\dagger^{\alpha}$	0	0	0	$\frac{6}{(3+4k^2)^2t_{1\cdot}}$	$\frac{6\sqrt{2}}{(3+4k^2)^2t_{1\cdot}}$	0	$\frac{12ik}{(3+4k^2)^2t_{1\cdot}}$
$1^-_{\cdot}\sigma^{\perp}\,\dagger^{\alpha}$	0	0	0	$\frac{6\sqrt{2}}{(3+4k^2)^2t_{1\cdot}}$	$\frac{12}{(3+4k^2)^2t_{1\cdot}}$	0	$\frac{12i\sqrt{2}\,k}{(3+4k^2)^2t_{1\cdot}}$
$1^-_{\cdot}\tau^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$1^-_{\cdot}\tau^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{12ik}{(3+4k^2)^2t_{1\cdot}}$	$-\frac{12i\sqrt{2}\,k}{(3+4k^2)^2t_{1\cdot}}$	0	$\frac{24k^2}{(3+4k^2)^2t_{1\cdot}}$

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

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
$2ik\ 1^-_{\cdot}\sigma^{\parallel\alpha} + 1^-_{\cdot}\tau^{\perp\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\beta\chi} + 2(\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\beta}{}_{\beta}{}^{\chi} - \partial_{\delta}\partial^{\delta}\partial_{\chi}\partial_{\beta}\sigma^{\beta\alpha\chi} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\sigma^{\beta\alpha}{}_{\beta}) == \partial_{\chi}\partial^{\chi}\partial_{\beta}\tau(\Delta+\mathcal{K})^{\alpha\beta}$	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
$1^-_{\cdot}\sigma^{\parallel\alpha} == 1^-_{\cdot}\sigma^{\perp\alpha}$	$\partial_{\chi}\partial^{\alpha}\sigma^{\beta}{}_{\beta}{}^{\chi} + \partial_{\chi}\partial^{\chi}\sigma^{\beta\alpha}{}_{\beta} == 0$	3
$ik\ 1^+_{\cdot}\sigma^{\perp\alpha\beta} + 1^+_{\cdot}\tau^{\parallel\alpha\beta} == 0$	$\partial_{\chi}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\beta\chi} + \partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\chi\alpha} + \partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\alpha\beta} + 2\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta} + 2\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\chi\alpha\beta} == \partial_{\chi}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\chi\beta} + \partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\alpha\chi} + \partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\beta\alpha} + 2\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta}$	3
$-2ik\ 2^+_{\cdot}\sigma^{\parallel\alpha\beta} + 2^+_{\cdot}\tau^{\parallel\alpha\beta} == 0$	$-i(4\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\chi\delta} + 2\,\partial_{\delta}\partial^{\delta}\partial^{\beta}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\chi}{}_{\chi} - 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\beta\chi} - 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\chi\beta} - 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\alpha\chi} - 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\alpha\beta} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\beta\alpha} + 4ik^{\chi}\,\partial_{\epsilon}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\sigma^{\delta}{}_{\delta}{}^{\epsilon} - 6ik^{\chi}\,\partial_{\epsilon}\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\delta\beta\epsilon} - 6ik^{\chi}\,\partial_{\epsilon}\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\delta\alpha\epsilon} + 6ik^{\chi}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\sigma^{\alpha\beta\delta} + 6ik^{\chi}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\sigma^{\beta\alpha\delta} + 2\,\eta^{\alpha\beta}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\tau(\Delta+\mathcal{K})^{\chi\delta} - 2\,\eta^{\alpha\beta}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\tau(\Delta+\mathcal{K})^{\chi}{}_{\chi} - 4i\,\eta^{\alpha\beta}\,k^{\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\chi}\sigma^{\delta}{}_{\delta}{}^{\epsilon}) == 0$	5
Total expected gauge generators:			20

Massive spectrum



Massive particle

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

Massless spectrum

(No particles)

Unitarity conditions

$r_{2\cdot} < 0 \;\&\&\; t_{2\cdot} > 0$