PSALTer results panel

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

Wave operator

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

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

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

Saturated propagator

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

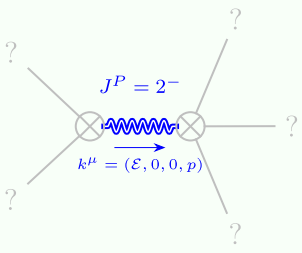
	$1^{+}_{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$1^{+}_{\cdot}\sigma^{\perp}{}_{\alpha\beta}$	$1^{+}_{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$1^{-}_{\cdot}\sigma^{\parallel}{}_{\alpha}$	$1^{-}_{\cdot}\sigma^{\perp}{}_{\alpha}$	$1^{-}_{\cdot}\tau^{\parallel}{}_{\alpha}$	$1^{-}_{\cdot}\tau^{\perp}{}_{\alpha}$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

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

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

Massive spectrum



Massive particle

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

Massless spectrum

(No particles)

Unitarity conditions

$r_{1} < 0\ \&\&\ t_{1} > 0$