PSALTer results panel

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

Wave operator

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

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

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

Saturated propagator

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

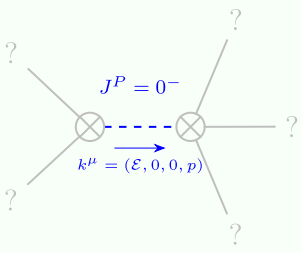
	$1^+_.\sigma^\parallel{}_{\alpha\beta}$	$1^+_.\sigma^\perp{}_{\alpha\beta}$	$1^+_.\tau^\parallel{}_{\alpha\beta}$	$1^-_.\sigma^\parallel{}_{\alpha}$	$1^-_.\sigma^\perp{}_{\alpha}$	$1^-_.\tau^\parallel{}_{\alpha}$	$1^-_.\tau^\perp{}_{\alpha}$
$1^+_.\sigma^\parallel\dagger^{\alpha\beta}$	0	$-\frac{\sqrt{2}}{t_{.}{}_{1}+k^2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

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

Source constraints

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

Massive spectrum



Massive particle

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

Massless spectrum

(No particles)

Unitarity conditions

$r_{.}{}_{2} < 0\ \&\&\ t_{.}{}_{1} < 0$