PSALTer results panel

$$S == \int\int\int\int\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_{\cdot 2}\,\partial_\beta\mathcal{A}_{\alpha\,\imath\,\theta}\,\partial^\theta\mathcal{A}^{\alpha\beta\,\imath} - 4\,r_{\cdot 2}\,\partial_\beta\mathcal{A}_{\alpha\theta\,\imath}\,\partial^\theta\mathcal{A}^{\alpha\beta\,\imath} + 4\,r_{\cdot 2}\,\partial_\beta\mathcal{A}_{\imath\,\theta\alpha}\,\partial^\theta\mathcal{A}^{\alpha\beta\,\imath} - 2\,r_{\cdot 2}\,\partial_\imath\mathcal{A}_{\alpha\beta\theta}\,\partial^\theta\mathcal{A}^{\alpha\beta\,\imath} + 2\,r_{\cdot 2}\,\partial_\theta\mathcal{A}_{\alpha\beta\,\imath}\,\partial^\theta\mathcal{A}^{\alpha\beta\,\imath} - 4\,r_{\cdot 2}\,\partial_\theta\mathcal{A}_{\alpha\,\imath\,\beta}\,\partial^\theta\mathcal{A}^{\alpha\beta\,\imath} + 6\,r_{\cdot 5}\,\partial_\imath\mathcal{A}_\theta{}^\kappa{}_\kappa\,\partial^\theta\mathcal{A}^{\alpha\,\imath}{}_\alpha - 6\,r_{\cdot 5}\,\partial_\theta\mathcal{A}_\imath{}^\kappa{}_\kappa\,\partial^\theta\mathcal{A}^{\alpha\,\imath}{}_\alpha + 4\,t_{\cdot 2}\,\mathcal{A}_{\imath\,\theta\alpha}\,\partial^\theta f^{\alpha\,\imath} + 2\,t_{\cdot 2}\,\partial_\alpha f_{\imath\,\theta}\,\partial^\theta f^{\alpha\,\imath} - t_{\cdot 2}\,\partial_\alpha f_{\theta\,\imath}\,\partial^\theta f^{\alpha\,\imath} - t_{\cdot 2}\,\partial_\imath f_{\alpha\theta}\,\partial^\theta f^{\alpha\,\imath} + t_{\cdot 2}\,\partial_\theta f_{\alpha\,\imath}\,\partial^\theta f^{\alpha\,\imath} - t_{\cdot 2}\,\partial_\theta f_{\imath\,\alpha}\,\partial^\theta f^{\alpha\,\imath} - 4\,t_{\cdot 2}\,\mathcal{A}_{\alpha\theta\,\imath}\left(\mathcal{A}^{\alpha\,\imath\,\theta} + \partial^\theta f^{\alpha\,\imath}\right) + 2\,t_{\cdot 2}\,\mathcal{A}_{\alpha\,\imath\,\theta}\left(\mathcal{A}^{\alpha\,\imath\,\theta} + 2\,\partial^\theta f^{\alpha\,\imath}\right) - 6\,r_{\cdot 5}\,\partial_\alpha\mathcal{A}^{\alpha\,\imath\,\theta}\,\partial_\kappa\mathcal{A}_\imath{}^\kappa{}_\theta + 12\,r_{\cdot 5}\,\partial^\theta\mathcal{A}^{\alpha\,\imath}{}_\alpha\,\partial_\kappa\mathcal{A}_\imath{}^\kappa{}_\theta + 6\,r_{\cdot 5}\,\partial_\alpha\mathcal{A}^{\alpha\,\imath\,\theta}\,\partial_\kappa\mathcal{A}_\theta{}^\kappa{}_\imath - 12\,r_{\cdot 5}\,\partial^\theta\mathcal{A}^{\alpha\,\imath}{}_\alpha\,\partial_\kappa\mathcal{A}_\theta{}^\kappa{}_\imath\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	$k^2\,r_{\cdot 2} + t_{\cdot 2}$

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

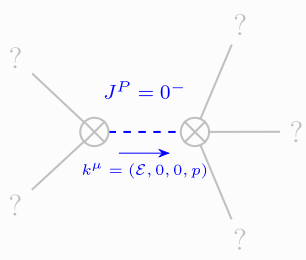
	${}^{1^+}_{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	${}^{1^+}_{\cdot}\sigma^{\perp}{}_{\alpha\beta}$	${}^{1^+}_{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	${}^{1^-}_{\cdot}\sigma^{\parallel}{}_{\alpha}$	${}^{1^-}_{\cdot}\sigma^{\perp}{}_{\alpha}$	${}^{1^-}_{\cdot}\tau^{\parallel}{}_{\alpha}$	${}^{1^-}_{\cdot}\tau^{\perp}{}_{\alpha}$
${}^{1^+}_{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{1}{k^2\,r_{\cdot 5}}$	$-\frac{\sqrt{2}}{k^2\,r_{\cdot 5} + k^4\,r_{\cdot 5}}$	$-\frac{i\,\sqrt{2}}{k\,r_{\cdot 5} + k^3\,r_{\cdot 5}}$	0	0	0	0
${}^{1^+}_{\cdot}\sigma^{\perp}\,\dagger^{\alpha\beta}$	$-\frac{\sqrt{2}}{k^2\,r_{\cdot 5} + k^4\,r_{\cdot 5}}$	$\frac{3\,k^2\,r_{\cdot 5} + 2\,t_{\cdot 2}}{(k+k^3)^2\,r_{\cdot 5}\,t_{\cdot 2}}$	$\frac{i\left(3\,k^2\,r_{\cdot 5} + 2\,t_{\cdot 2}\right)}{k\,(1+k^2)^2\,r_{\cdot 5}\,t_{\cdot 2}}$	0	0	0	0
${}^{1^+}_{\cdot}\tau^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{i\,\sqrt{2}}{k\,r_{\cdot 5} + k^3\,r_{\cdot 5}}$	$-\frac{i\left(3\,k^2\,r_{\cdot 5} + 2\,t_{\cdot 2}\right)}{k\,(1+k^2)^2\,r_{\cdot 5}\,t_{\cdot 2}}$	$\frac{3\,k^2\,r_{\cdot 5} + 2\,t_{\cdot 2}}{(1+k^2)^2\,r_{\cdot 5}\,t_{\cdot 2}}$	0	0	0	0
${}^{1^-}_{\cdot}\sigma^{\parallel}\,\dagger^{\alpha}$	0	0	0	$\frac{1}{k^2\,r_{\cdot 5}}$	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
${}^{0^+}_{\cdot}\tau^{\perp} == 0$	xAct`xTensor`Private`Reconstruct[Symmetry[4, $-\partial^{\bullet 4}\partial^{\bullet 3}\tau\,(\Delta+\mathcal{K})^{\bullet 1\bullet 2}$, {●1 → a, ●2 → b, ●3 → -a, ●4 → -b}, StrongGenSet[{3, 4}, GenSet[{(3,4)}]]], {1, {a , -a , b , -b}[{1, 3, 5, 2}]}] == 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
${}^{0^+}_{\cdot}\sigma^{\parallel} == 0$	$\partial_\beta\sigma^{\alpha\ \beta}_{\ \alpha} == 0$	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
$i\,k\ {}^{1^+}_{\cdot}\sigma^{\perp\,\alpha\beta} + {}^{1^+}_{\cdot}\tau^{\parallel\,\alpha\beta} == 0$	$\partial_\chi\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\beta\chi} + \partial_\chi\partial^\beta\tau\,(\Delta+\mathcal{K})^{\chi\alpha} + \partial_\chi\partial^\chi\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 2\,\partial_\delta\partial_\chi\partial^\alpha\sigma^{\chi\beta\delta} + 2\,\partial_\delta\partial^\delta\partial_\chi\sigma^{\chi\alpha\beta} == \partial_\chi\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\chi\beta} + \partial_\chi\partial^\beta\tau\,(\Delta+\mathcal{K})^{\alpha\chi} + \partial_\chi\partial^\chi\tau\,(\Delta+\mathcal{K})^{\beta\alpha} + 2\,\partial_\delta\partial_\chi\partial^\beta\sigma^{\chi\alpha\delta}$	3
${}^{2^-}_{\cdot}\sigma^{\parallel\,\alpha\beta\chi} == 0$	$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} + 2\,\partial_\epsilon\partial^\epsilon\partial_\delta\partial^\chi\sigma^{\delta\alpha\beta} + 4\,\partial_\epsilon\partial^\epsilon\partial_\delta\partial^\chi\sigma^{\beta\alpha\delta} + 2\,\partial_\epsilon\partial^\epsilon\partial_\delta\partial^\beta\sigma^{\delta\alpha\chi} + 3\,\eta^{\beta\chi}\,\partial_\phi\partial^\phi\partial_\epsilon\partial^\alpha\sigma^{\delta\ \epsilon}_{\ \delta} + 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^\chi\sigma^{\alpha\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\ \epsilon}_{\ \delta} + 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
${}^{2^+}_{\cdot}\tau^{\parallel\,\alpha\beta} == 0$	$4\,\partial_\delta\partial_\chi\partial^\beta\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\chi\delta} + 2\,\partial_\delta\partial^\delta\partial^\beta\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi} + 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\chi\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\beta\tau\,(\Delta+\mathcal{K})^{\alpha\chi} + 2\,\eta^{\alpha\beta}\,\partial_\epsilon\partial^\epsilon\partial_\delta\partial_\chi\tau\,(\Delta+\mathcal{K})^{\chi\delta} == 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\beta\chi} + 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\beta\tau\,(\Delta+\mathcal{K})^{\chi\alpha} + 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\chi\beta} + 2\,\eta^{\alpha\beta}\,\partial_\epsilon\partial^\epsilon\partial_\delta\partial^\delta\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi}$	5
${}^{2^+}_{\cdot}\sigma^{\parallel\,\alpha\beta} == 0$	$3\,\partial_\delta\partial_\chi\partial^\alpha\sigma^{\chi\beta\delta} + 3\,\partial_\delta\partial_\chi\partial^\beta\sigma^{\chi\alpha\delta} + 2\,\eta^{\alpha\beta}\,\partial_\epsilon\partial^\epsilon\partial_\delta\sigma^{\chi\ \delta}_{\ \chi} == 2\,\partial_\delta\partial^\beta\partial^\alpha\sigma^{\chi\ \delta}_{\ \chi} + 3\left(\partial_\delta\partial^\delta\partial_\chi\sigma^{\alpha\beta\chi} + \partial_\delta\partial^\delta\partial_\chi\sigma^{\beta\alpha\chi}\right)$	5
Total expected gauge generators:		30

Massive spectrum



Massive particle

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

Massless spectrum

(There are no massless particles)

Gauge symmetries

(Not yet implemented in PSALTer)

Unitarity conditions

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

Validity assumptions

(Not yet implemented in PSALTer)