PSALTer results panel

$S ==$

$$\int\int\int\int\left(\frac{1}{6}\left(6\ \mathcal{A}^{\alpha\beta\chi}\ \sigma_{\alpha\beta\chi}+6\ f^{\alpha\beta}\ \tau\,(\Delta+\mathcal{K})_{\alpha\beta}-12\,r_{1}.\,\partial_{\beta}\mathcal{A}_{\prime}{}^{\theta}{}_{\theta}\partial^{\prime}\mathcal{A}^{\alpha\beta}{}_{\alpha}+12\,r_{1}.\,\partial_{\prime}\mathcal{A}_{\beta}{}^{\theta}{}_{\theta}\partial^{\prime}\mathcal{A}^{\alpha\beta}{}_{\alpha}+12\,r_{1}.\,\partial_{\alpha}\mathcal{A}^{\alpha\beta\prime}\,\partial_{\theta}\mathcal{A}_{\beta}{}^{\theta}{}_{\prime}-24\,r_{1}.\right.\right.$$
$$\partial^{\prime}\mathcal{A}^{\alpha\beta}{}_{\alpha}\partial_{\theta}\mathcal{A}_{\beta}{}^{\theta}{}_{\prime}-12\,r_{1}.\,\partial_{\alpha}\mathcal{A}^{\alpha\beta\prime}\,\partial_{\theta}\mathcal{A}_{\prime}{}^{\theta}{}_{\beta}+24\,r_{1}.\,\partial^{\prime}\mathcal{A}^{\alpha\beta}{}_{\alpha}\partial_{\theta}\mathcal{A}_{\prime}{}^{\theta}{}_{\beta}-8\,r_{1}.\,\partial_{\beta}\mathcal{A}_{\alpha\prime\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}+$$
$$8\,r_{2}.\,\partial_{\beta}\mathcal{A}_{\alpha\prime\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}+4\,r_{1}.\,\partial_{\beta}\mathcal{A}_{\alpha\theta\prime}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}-4\,r_{2}.\,\partial_{\beta}\mathcal{A}_{\alpha\theta\prime}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}-16\,r_{1}.\,\partial_{\beta}\mathcal{A}_{\prime\theta\alpha}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}+$$
$$4\,r_{2}.\,\partial_{\beta}\mathcal{A}_{\prime\theta\alpha}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}-4\,r_{1}.\,\partial_{\prime}\mathcal{A}_{\alpha\beta\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}-2\,r_{2}.\,\partial_{\prime}\mathcal{A}_{\alpha\beta\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}+4\,r_{1}.\,\partial_{\theta}\mathcal{A}_{\alpha\beta\prime}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}+$$
$$2\,r_{2}.\,\partial_{\theta}\mathcal{A}_{\alpha\beta\prime}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}+4\,r_{1}.\,\partial_{\theta}\mathcal{A}_{\alpha\prime\beta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}-4\,r_{2}.\,\partial_{\theta}\mathcal{A}_{\alpha\prime\beta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}+4\,t_{2}.\,\mathcal{A}_{\prime\theta\alpha}\,\partial^{\theta}f^{\alpha\prime}+$$
$$2\,t_{2}.\,\partial_{\alpha}f_{\prime\theta}\,\partial^{\theta}f^{\alpha\prime}-t_{2}.\,\partial_{\alpha}f_{\theta\prime}\,\partial^{\theta}f^{\alpha\prime}-t_{2}.\,\partial_{\prime}f_{\alpha\theta}\,\partial^{\theta}f^{\alpha\prime}+t_{2}.\,\partial_{\theta}f_{\alpha\prime}\,\partial^{\theta}f^{\alpha\prime}-t_{2}.\,\partial_{\theta}f_{\prime\alpha}\,\partial^{\theta}f^{\alpha\prime}-$$
$$\left.\left.4\,t_{2}.\,\mathcal{A}_{\alpha\theta\prime}\left(\mathcal{A}^{\alpha\prime\theta}+\partial^{\theta}f^{\alpha\prime}\right)+2\,t_{2}.\,\mathcal{A}_{\alpha\prime\theta}\left(\mathcal{A}^{\alpha\prime\theta}+2\,\partial^{\theta}f^{\alpha\prime}\right)\right)\right)[t,\,x,\,y,\,z]\,dz\,dy\,dx\,dt$$

Wave operator

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

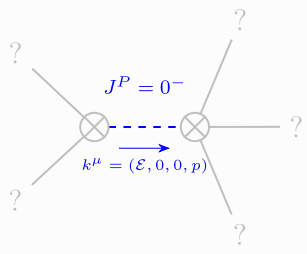
Saturated propagator

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

Source constraints

Spin-parity form	Covariant form	Multiplicities
$\overset{0}{.}{}^{+}\tau^{\perp} == 0$	$\partial_{\beta}\partial_{\alpha}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == 0$	1
$\overset{0}{.}{}^{+}\tau^{\parallel} == 0$	$\partial_{\beta}\partial_{\alpha}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == \partial_{\beta}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha}{}_{\alpha}$	1
$\overset{0}{.}{}^{+}\sigma^{\parallel} == 0$	$\partial_{\beta}\sigma^{\alpha}{}_{\alpha}{}^{\beta} == 0$	1
$\overset{1}{.}{}^{-}\tau^{\perp}{}^{\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\beta}$	3
$\overset{1}{.}{}^{-}\tau^{\parallel}{}^{\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}\tau\,(\Delta+\mathcal{K})^{\beta\alpha}$	3
$\overset{1}{.}{}^{-}\sigma^{\perp}{}^{\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\sigma^{\beta\alpha\chi} == 0$	3
$i\,k\ \overset{1}{.}{}^{+}\sigma^{\parallel}{}^{\alpha\beta}+\overset{1}{.}{}^{+}\tau^{\parallel}{}^{\alpha\beta} == 0$	$\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi}+\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\chi\alpha}+\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta}+\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta}+\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\alpha\beta\chi} ==$ $\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\beta}+\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\chi}+\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\beta\alpha}+\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta}+\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\beta\alpha\chi}$	3
$\overset{1}{.}{}^{+}\sigma^{\parallel}{}^{\alpha\beta} == \overset{1}{.}{}^{+}\sigma^{\perp}{}^{\alpha\beta}$	$3\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta}+\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\beta\alpha\chi}+2\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\chi\alpha\beta} == 3\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta}+\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\alpha\beta\chi}$	3
$\overset{2}{.}{}^{+}\tau^{\parallel}{}^{\alpha\beta} == 0$	$4\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\delta}+2\,\partial_{\delta}\partial^{\delta}\partial^{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi}+$ $3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta}+3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\beta\alpha}+2\ \eta^{\alpha\beta}\ \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\tau\,(\Delta+\mathcal{K})^{\chi\delta} ==$ $3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi}+3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\beta}+3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\chi}+$ $3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\chi\alpha}+2\ \eta^{\alpha\beta}\ \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi}$	5
$\overset{2}{.}{}^{+}\sigma^{\parallel}{}^{\alpha\beta} == 0$	$3\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta}+3\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta}+2\ \eta^{\alpha\beta}\ \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\sigma^{\chi}{}_{\chi}{}^{\delta} ==$ $2\,\partial_{\delta}\partial^{\beta}\partial^{\alpha}\sigma^{\chi}{}_{\chi}{}^{\delta}+3\left(\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\alpha\beta\chi}+\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\beta\alpha\chi}\right)$	5
Total expected gauge generators:		28

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

(There are no massless particles)

Gauge symmetries

(Not yet implemented in PSALTer)

Unitarity conditions

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

Validity assumptions

(Not yet implemented in PSALTer)