PSALTer results panel

$$S == \int\int\int\int\Big(\frac{1}{6}\Big(2\,t_{1.}\,\mathcal{A}^{\alpha\,\prime}{}_{\alpha}\,\mathcal{A}_{\prime}{}^{\theta}{}_{\theta}+6\,\mathcal{A}^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi}+6\,f^{\alpha\beta}\,\tau\,(\Delta+\mathcal{K})_{\alpha\beta}-4\,t_{1.}\,\mathcal{A}_{\alpha}{}^{\theta}{}_{\theta}\,\partial_{\prime}f^{\alpha\,\prime}+4\,t_{1.}\,\mathcal{A}_{\prime}{}^{\theta}{}_{\theta}\,\partial^{\prime}f^{\alpha}{}_{\alpha}-$$
$$2\,t_{1.}\,\partial_{\prime}f^{\theta}{}_{\theta}\,\partial^{\prime}f^{\alpha}{}_{\alpha}-2\,t_{1.}\,\partial_{\prime}f^{\alpha\,\prime}\,\partial_{\theta}f_{\alpha}{}^{\theta}+4\,t_{1.}\,\partial^{\prime}f^{\alpha}{}_{\alpha}\,\partial_{\theta}f_{\prime}{}^{\theta}+8\,r_{2.}\,\partial_{\beta}\mathcal{A}_{\alpha\,\prime\,\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\,\prime}-4\,r_{2.}\,\partial_{\beta}\mathcal{A}_{\alpha\theta\,\prime}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\,\prime}+4\,r_{2.}\,\partial_{\beta}\mathcal{A}_{\prime\,\theta\alpha}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\,\prime}-$$
$$2\,r_{2.}\,\partial_{\prime}\mathcal{A}_{\alpha\beta\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\,\prime}+2\,r_{2.}\,\partial_{\theta}\mathcal{A}_{\alpha\beta\,\prime}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\,\prime}-4\,r_{2.}\,\partial_{\theta}\mathcal{A}_{\alpha\,\prime\,\beta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\,\prime}+6\,r_{5.}\,\partial_{\prime}\mathcal{A}_{\theta}{}^{\kappa}{}_{\kappa}\,\partial^{\theta}\mathcal{A}^{\alpha\,\prime}{}_{\alpha}-6\,r_{5.}\,\partial_{\theta}\mathcal{A}_{\prime}{}^{\kappa}{}_{\kappa}\,\partial^{\theta}\mathcal{A}^{\alpha\,\prime}{}_{\alpha}-$$
$$6\,t_{1.}\,\partial_{\alpha}f_{\prime\,\theta}\,\partial^{\theta}f^{\alpha\,\prime}-3\,t_{1.}\,\partial_{\alpha}f_{\theta\,\prime}\,\partial^{\theta}f^{\alpha\,\prime}+3\,t_{1.}\,\partial_{\prime}f_{\alpha\theta}\,\partial^{\theta}f^{\alpha\,\prime}+3\,t_{1.}\,\partial_{\theta}f_{\alpha\,\prime}\,\partial^{\theta}f^{\alpha\,\prime}+3\,t_{1.}\,\partial_{\theta}f_{\prime\,\alpha}\,\partial^{\theta}f^{\alpha\,\prime}+6\,t_{1.}\,\mathcal{A}_{\alpha\theta\,\prime}\,\Big(\mathcal{A}^{\alpha\,\prime\,\theta}+2\,\partial^{\theta}f^{\alpha\,\prime}\Big)-$$
$$6\,r_{5.}\,\partial_{\alpha}\mathcal{A}^{\alpha\,\prime\,\theta}\,\partial_{\kappa}\mathcal{A}_{\prime}{}^{\kappa}{}_{\theta}+12\,r_{5.}\,\partial^{\theta}\mathcal{A}^{\alpha\,\prime}{}_{\alpha}\,\partial_{\kappa}\mathcal{A}_{\prime}{}^{\kappa}{}_{\theta}+6\,r_{5.}\,\partial_{\alpha}\mathcal{A}^{\alpha\,\prime\,\theta}\,\partial_{\kappa}\mathcal{A}_{\theta}{}^{\kappa}{}_{\prime}-12\,r_{5.}\,\partial^{\theta}\mathcal{A}^{\alpha\,\prime}{}_{\alpha}\,\partial_{\kappa}\mathcal{A}_{\theta}{}^{\kappa}{}_{\prime}\Big)\Big)[t,\,x,\,y,\,z]\,dz\,dy\,dx\,dt$$

Wave operator

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

	$\overset{1^+}{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$\overset{1^+}{\cdot}\mathcal{A}^{\perp}{}_{\alpha\beta}$	$\overset{1^+}{\cdot}f^{\parallel}{}_{\alpha\beta}$	$\overset{1^-}{\cdot}\mathcal{A}^{\parallel}{}_{\alpha}$	$\overset{1^-}{\cdot}\mathcal{A}^{\perp}{}_{\alpha}$	$\overset{1^-}{\cdot}f^{\parallel}{}_{\alpha}$	$\overset{1^-}{\cdot}f^{\perp}{}_{\alpha}$
$\overset{1^+}{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta}$	$k^2\,r_{5.}-\frac{t_{1.}}{2}$	$-\frac{t_{1.}}{\sqrt{2}}$	$-\frac{i\,k\,t_{1.}}{\sqrt{2}}$	0	0	0	0
$\overset{1^+}{\cdot}\mathcal{A}^{\perp}\,\dagger^{\alpha\beta}$	$-\frac{t_{1.}}{\sqrt{2}}$	0	0	0	0	0	0
$\overset{1^+}{\cdot}f^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{i\,k\,t_{1.}}{\sqrt{2}}$	0	0	0	0	0	0
$\overset{1^-}{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha}$	0	0	0	$k^2\,r_{5.}+\frac{t_{1.}}{6}$	$\frac{t_{1.}}{3\sqrt{2}}$	0	$\frac{i\,k\,t_{1.}}{3}$
$\overset{1^-}{\cdot}\mathcal{A}^{\perp}\,\dagger^{\alpha}$	0	0	0	$\frac{t_{1.}}{3\sqrt{2}}$	$\frac{t_{1.}}{3}$	0	$\frac{1}{3}\,i\,\sqrt{2}\,k\,t_{1.}$
$\overset{1^-}{\cdot}f^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$\overset{1^-}{\cdot}f^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{1}{3}\,i\,k\,t_{1.}$	$-\frac{1}{3}\,i\,\sqrt{2}\,k\,t_{1.}$	0	$\frac{2\,k^2\,t_{1.}}{3}$

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

Saturated propagator

	$\overset{0^+}{\cdot}\sigma^{\parallel}$	$\overset{0^+}{\cdot}\tau^{\parallel}$	$\overset{0^+}{\cdot}\tau^{\perp}$	$\overset{0^-}{\cdot}\sigma^{\parallel}$
$\overset{0^+}{\cdot}\sigma^{\parallel}\,\dagger$	0	0	0	0
$\overset{0^+}{\cdot}\tau^{\parallel}\,\dagger$	0	0	0	0
$\overset{0^+}{\cdot}\tau^{\perp}\,\dagger$	0	0	0	0
$\overset{0^-}{\cdot}\sigma^{\parallel}\,\dagger$	0	0	0	$\frac{1}{k^2\,r_{2.}-t_{1.}}$

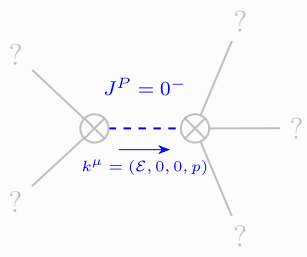
	$\overset{1^+}{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$\overset{1^+}{\cdot}\sigma^{\perp}{}_{\alpha\beta}$	$\overset{1^+}{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$\overset{1^-}{\cdot}\sigma^{\parallel}{}_{\alpha}$	$\overset{1^-}{\cdot}\sigma^{\perp}{}_{\alpha}$	$\overset{1^-}{\cdot}\tau^{\parallel}{}_{\alpha}$	$\overset{1^-}{\cdot}\tau^{\perp}{}_{\alpha}$
$\overset{1^+}{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	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
$\overset{1^+}{\cdot}\sigma^{\perp}\,\dagger^{\alpha\beta}$	$-\frac{\sqrt{2}}{t_{1.}+k^2\,t_{1.}}$	$\frac{-2\,k^2\,r_{5.}+t_{1.}}{(1+k^2)^2\,t_{1.}^{\,2}}$	$-\frac{i\left(2\,k^3\,r_{5.}-k\,t_{1.}\right)}{(1+k^2)^2\,t_{1.}^{\,2}}$	0	0	0	0
$\overset{1^+}{\cdot}\tau^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{i\,\sqrt{2}\,k}{t_{1.}+k^2\,t_{1.}}$	$\frac{i\left(2\,k^3\,r_{5.}-k\,t_{1.}\right)}{(1+k^2)^2\,t_{1.}^{\,2}}$	$\frac{-2\,k^4\,r_{5.}+k^2\,t_{1.}}{(1+k^2)^2\,t_{1.}^{\,2}}$	0	0	0	0
$\overset{1^-}{\cdot}\sigma^{\parallel}\,\dagger^{\alpha}$	0	0	0	$\frac{1}{k^2\,r_{5.}}$	$-\frac{1}{\sqrt{2}\left(k^2\,r_{5.}+2\,k^4\,r_{5.}\right)}$	0	$-\frac{i}{k\,r_{5.}+2\,k^3\,r_{5.}}$
$\overset{1^-}{\cdot}\sigma^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{1}{\sqrt{2}\left(k^2\,r_{5.}+2\,k^4\,r_{5.}\right)}$	$\frac{6\,k^2\,r_{5.}+t_{1.}}{2\left(k+2\,k^3\right)^2\,r_{5.}\,t_{1.}}$	0	$\frac{i\left(6\,k^2\,r_{5.}+t_{1.}\right)}{\sqrt{2}\,k\left(1+2\,k^2\right)^2\,r_{5.}\,t_{1.}}$
$\overset{1^-}{\cdot}\tau^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$\overset{1^-}{\cdot}\tau^{\perp}\,\dagger^{\alpha}$	0	0	0	$\frac{i}{k\,r_{5.}+2\,k^3\,r_{5.}}$	$-\frac{i\left(6\,k^2\,r_{5.}+t_{1.}\right)}{\sqrt{2}\,k\left(1+2\,k^2\right)^2\,r_{5.}\,t_{1.}}$	0	$\frac{6\,k^2\,r_{5.}+t_{1.}}{\left(1+2\,k^2\right)^2\,r_{5.}\,t_{1.}}$

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

Source constraints

Spin-parity form	Covariant form	Multiplicities
$\overset{0^+}{\cdot}\tau^{\perp} == 0$	$\partial_{\beta}\partial_{\alpha}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == 0$	1
$\overset{0^+}{\cdot}\tau^{\parallel} == 0$	$\partial_{\beta}\partial_{\alpha}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == \partial_{\beta}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha}{}_{\alpha}$	1
$\overset{0^+}{\cdot}\sigma^{\parallel} == 0$	$\partial_{\beta}\sigma^{\alpha}{}_{\alpha}{}^{\beta} == 0$	1
$2\,i\,k\,\overset{1^-}{\cdot}\sigma^{\perp}{}^{\alpha}+\overset{1^-}{\cdot}\tau^{\perp}{}^{\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\beta}+2\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial_{\beta}\sigma^{\beta\alpha\chi}$	3
$\overset{1^-}{\cdot}\tau^{\parallel}{}^{\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}\tau\,(\Delta+\mathcal{K})^{\beta\alpha}$	3
$i\,k\,\overset{1^+}{\cdot}\sigma^{\perp}{}^{\alpha\beta}+\overset{1^+}{\cdot}\tau^{\parallel}{}^{\alpha\beta} == 0$	$\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi}+\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\chi\alpha}+\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta}+2\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta}+2\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\chi\alpha\beta} ==$ $\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\beta}+\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\chi}+\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\beta\alpha}+2\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta}$	3
$-2\,i\,k\,\overset{2^+}{\cdot}\sigma^{\parallel}{}^{\alpha\beta}+\overset{2^+}{\cdot}\tau^{\parallel}{}^{\alpha\beta} == 0$	$-i\Big(4\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\delta}+2\,\partial_{\delta}\partial^{\delta}\partial^{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi}-3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi}-3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\beta}-3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\chi}-$ $3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\chi\alpha}+3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta}+3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\beta\alpha}+4\,i\,k^{\chi}\,\partial_{\epsilon}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\sigma^{\delta}{}_{\delta}{}^{\epsilon}-$ $6\,i\,k^{\chi}\,\partial_{\epsilon}\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\delta\beta\epsilon}-6\,i\,k^{\chi}\,\partial_{\epsilon}\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\delta\alpha\epsilon}+6\,i\,k^{\chi}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\sigma^{\alpha\beta\delta}+6\,i\,k^{\chi}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\sigma^{\beta\alpha\delta}+$ $2\,\eta^{\alpha\beta}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\tau\,(\Delta+\mathcal{K})^{\chi\delta}-2\,\eta^{\alpha\beta}\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi}-4\,i\,\eta^{\alpha\beta}\,k^{\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\chi}\sigma^{\delta}{}_{\delta}{}^{\epsilon}\Big) == 0$	5
Total expected gauge generators:		17

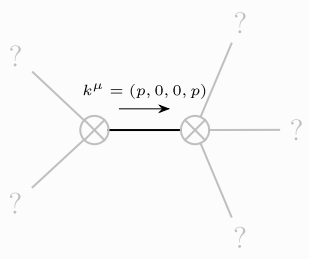
Massive spectrum



Massive particle

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

Massless spectrum



Massless particle

Pole residue:	$-\frac{7}{r_{5.}}-\frac{2\,p^2}{t_{1.}}-\frac{4\,r_{5.}\,p^4}{t_{1.}^{\,2}} > 0$
Polarisations:	2

Gauge symmetries

(Not yet implemented in PSALTer)

Unitarity conditions

$r_{2.} < 0 \;\&\&\; t_{1.} < 0 \;\&\&\; r_{5.} < 0$

Validity assumptions

(Not yet implemented in PSALTer)