PSALTer results panel

$$S == \int\int\int\int (\mathcal{A}^{\alpha\beta\chi}\ \sigma_{\alpha\beta\chi} + f^{\alpha\beta}\ \tau(\Delta+\mathcal{K})_{\alpha\beta} - \frac{1}{2}\,\alpha._0 (\mathcal{A}_{\alpha\chi\beta}\ \mathcal{A}^{\alpha\beta\chi} + \mathcal{A}^{\alpha\beta}{}_{\alpha}\ \mathcal{A}_{\beta}{}^{\chi}{}_{\chi} + 2\ f^{\alpha\beta}\ \partial_\beta \mathcal{A}_{\alpha}{}^{\chi}{}_{\chi} - 2\,\partial_\beta \mathcal{A}^{\alpha\beta}{}_{\alpha} - 2\ f^{\alpha\beta}\ \partial_\chi \mathcal{A}_{\alpha}{}^{\chi}{}_{\beta} + 2\ f^{\alpha}{}_{\alpha}\ \partial_\chi \mathcal{A}^{\beta\chi}{}_{\beta}) +$$
$$\beta._1 (2\ \mathcal{A}^{\alpha\beta}{}_{\alpha}\ \mathcal{A}_{\beta}{}^{\chi}{}_{\chi} - 4\ \mathcal{A}_{\alpha}{}^{\chi}{}_{\chi}\ \partial_\beta f^{\alpha\beta} + 4\ \mathcal{A}_{\beta}{}^{\chi}{}_{\chi}\ \partial^\beta f^{\alpha}{}_{\alpha} - 2\,\partial_\beta f^{\chi}{}_{\chi}\,\partial^\beta f^{\alpha}{}_{\alpha} - 2\,\partial_\beta f^{\alpha\beta}\,\partial_\chi f_{\alpha}{}^{\chi} + 4\,\partial^\beta f^{\alpha}{}_{\alpha}\,\partial_\chi f_{\beta}{}^{\chi} -$$
$$2\,\partial_\alpha f_{\beta\chi}\,\partial^\chi f^{\alpha\beta} - \partial_\alpha f_{\chi\beta}\,\partial^\chi f^{\alpha\beta} + \partial_\beta f_{\alpha\chi}\,\partial^\chi f^{\alpha\beta} + \partial_\chi f_{\alpha\beta}\,\partial^\chi f^{\alpha\beta} + \partial_\chi f_{\beta\alpha}\,\partial^\chi f^{\alpha\beta} + 2\ \mathcal{A}_{\alpha\chi\beta}\ (\mathcal{A}^{\alpha\beta\chi} + 2\,\partial^\chi f^{\alpha\beta})) +$$
$$\frac{1}{3}\,\alpha._3 (4\,\partial_\beta \mathcal{A}_{\alpha\chi\delta} - 2\,\partial_\beta \mathcal{A}_{\alpha\delta\chi} + 2\,\partial_\beta \mathcal{A}_{\chi\delta\alpha} - \partial_\chi \mathcal{A}_{\alpha\beta\delta} + \partial_\delta \mathcal{A}_{\alpha\beta\chi} - 2\,\partial_\delta \mathcal{A}_{\alpha\chi\beta})\,\partial^\delta \mathcal{A}^{\alpha\beta\chi})[t, x, y, z]\,dz\,dy\,dx\,dt$$

Wave operator

	$0^+_.\mathcal{A}^{\parallel}$	$0^+_.f^{\parallel}$	$0^+_.f^{\perp}$	$0^-_.\mathcal{A}^{\parallel}$
$0^+_.\mathcal{A}^{\parallel}\,\dagger$	$\frac{1}{2}\,(\alpha._0 - 4\,\beta._1)$	$-\frac{i\,(\alpha._0 - 4\,\beta._1)\,k}{\sqrt{2}}$	0	0
$0^+_.f^{\parallel}\,\dagger$	$\frac{i\,(\alpha._0 - 4\,\beta._1)\,k}{\sqrt{2}}$	$-4\,\beta._1\,k^2$	0	0
$0^+_.f^{\perp}\,\dagger$	0	0	0	0
$0^-_.\mathcal{A}^{\parallel}\,\dagger$	0	0	0	$\frac{\alpha._0}{2} - 2\,\beta._1 + \alpha._3\,k^2$

	$1^+_.\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$1^+_.\mathcal{A}^{\perp}{}_{\alpha\beta}$	$1^+_.f^{\parallel}{}_{\alpha\beta}$	$1^-_.\mathcal{A}^{\parallel}{}_{\alpha}$	$1^-_.\mathcal{A}^{\perp}{}_{\alpha}$	$1^-_.f^{\parallel}{}_{\alpha}$	$1^-_.f^{\perp}{}_{\alpha}$
$1^+_.\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{1}{4}\,(\alpha._0 - 4\,\beta._1)$	$\frac{\alpha._0 - 4\,\beta._1}{2\sqrt{2}}$	$\frac{i\,(\alpha._0 - 4\,\beta._1)\,k}{2\sqrt{2}}$	0	0	0	0
$1^+_.\mathcal{A}^{\perp}\,\dagger^{\alpha\beta}$	$\frac{\alpha._0 - 4\,\beta._1}{2\sqrt{2}}$	0	0	0	0	0	0
$1^+_.f^{\parallel}\,\dagger^{\alpha\beta}$	$-\frac{i\,(\alpha._0 - 4\,\beta._1)\,k}{2\sqrt{2}}$	0	0	0	0	0	0
$1^-_.\mathcal{A}^{\parallel}\,\dagger^{\alpha}$	0	0	0	$\frac{1}{4}\,(\alpha._0 - 4\,\beta._1)$	$-\frac{\alpha._0 - 4\,\beta._1}{2\sqrt{2}}$	0	$-\frac{1}{2}\,i\,(\alpha._0 - 4\,\beta._1)\,k$
$1^-_.\mathcal{A}^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{\alpha._0 - 4\,\beta._1}{2\sqrt{2}}$	0	0	0
$1^-_.f^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$1^-_.f^{\perp}\,\dagger^{\alpha}$	0	0	0	$\frac{1}{2}\,i\,(\alpha._0 - 4\,\beta._1)\,k$	0	0	0

	$2^+_.\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$2^+_.f^{\parallel}{}_{\alpha\beta}$	$2^-_.\mathcal{A}^{\parallel}{}_{\alpha\beta\chi}$
$2^+_.\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta}$	$-\frac{\alpha._0}{4} + \beta._1$	$\frac{i\,(\alpha._0 - 4\,\beta._1)\,k}{2\sqrt{2}}$	0
$2^+_.f^{\parallel}\,\dagger^{\alpha\beta}$	$-\frac{i\,(\alpha._0 - 4\,\beta._1)\,k}{2\sqrt{2}}$	$2\,\beta._1\,k^2$	0
$2^-_.\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta\chi}$	0	0	$-\frac{\alpha._0}{4} + \beta._1$

Saturated propagator

	$0^+_.\sigma^{\parallel}$	$0^+_.\tau^{\parallel}$	$0^+_.\tau^{\perp}$	$0^-_.\sigma^{\parallel}$
$0^+_.\sigma^{\parallel}\,\dagger$	$\frac{8\,\beta._1}{\alpha._0{}^2 - 4\,\alpha._0\,\beta._1}$	$-\frac{i\sqrt{2}}{\alpha._0\,k}$	0	0
$0^+_.\tau^{\parallel}\,\dagger$	$\frac{i\sqrt{2}}{\alpha._0\,k}$	$-\frac{1}{\alpha._0\,k^2}$	0	0
$0^+_.\tau^{\perp}\,\dagger$	0	0	0	0
$0^-_.\sigma^{\parallel}\,\dagger$	0	0	0	$\frac{2}{\alpha._0 - 4\,\beta._1 + 2\,\alpha._3\,k^2}$

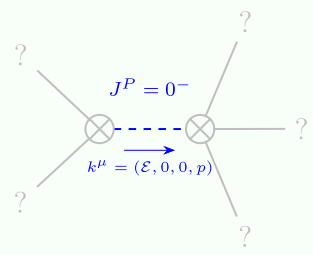
	$1^+_.\sigma^{\parallel}{}_{\alpha\beta}$	$1^+_.\sigma^{\perp}{}_{\alpha\beta}$	$1^+_.\tau^{\parallel}{}_{\alpha\beta}$	$1^-_.\sigma^{\parallel}{}_{\alpha}$	$1^-_.\sigma^{\perp}{}_{\alpha}$	$1^-_.\tau^{\parallel}{}_{\alpha}$	$1^-_.\tau^{\perp}{}_{\alpha}$
$1^+_.\sigma^{\parallel}\,\dagger^{\alpha\beta}$	0	$\frac{2\sqrt{2}}{(\alpha._0 - 4\,\beta._1)(1+k^2)}$	$\frac{2\,i\sqrt{2}\,k}{(\alpha._0 - 4\,\beta._1)(1+k^2)}$	0	0	0	0
$1^+_.\sigma^{\perp}\,\dagger^{\alpha\beta}$	$\frac{2\sqrt{2}}{(\alpha._0 - 4\,\beta._1)(1+k^2)}$	$-\frac{2}{(\alpha._0 - 4\,\beta._1)(1+k^2)^2}$	$-\frac{2\,i\,k}{(\alpha._0 - 4\,\beta._1)(1+k^2)^2}$	0	0	0	0
$1^+_.\tau^{\parallel}\,\dagger^{\alpha\beta}$	$-\frac{2\,i\sqrt{2}\,k}{(\alpha._0 - 4\,\beta._1)(1+k^2)}$	$\frac{2\,i\,k}{(\alpha._0 - 4\,\beta._1)(1+k^2)^2}$	$-\frac{2\,k^2}{(\alpha._0 - 4\,\beta._1)(1+k^2)^2}$	0	0	0	0
$1^-_.\sigma^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	$-\frac{2\sqrt{2}}{(\alpha._0 - 4\,\beta._1)(1+2\,k^2)}$	0	$-\frac{4\,i\,k}{(\alpha._0 - 4\,\beta._1)(1+2\,k^2)}$
$1^-_.\sigma^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{2\sqrt{2}}{(\alpha._0 - 4\,\beta._1)(1+2\,k^2)}$	$-\frac{2}{(\alpha._0 - 4\,\beta._1)(1+2\,k^2)^2}$	0	$-\frac{2\,i\sqrt{2}\,k}{(\alpha._0 - 4\,\beta._1)(1+2\,k^2)^2}$
$1^-_.\tau^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$1^-_.\tau^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{4\,i\,k}{(\alpha._0 - 4\,\beta._1)(1+2\,k^2)}$	$-\frac{2\,i\sqrt{2}\,k}{(\alpha._0 - 4\,\beta._1)(1+2\,k^2)^2}$	0	$-\frac{4\,k^2}{(\alpha._0 - 4\,\beta._1)(1+2\,k^2)^2}$

	$2^+_.\sigma^{\parallel}{}_{\alpha\beta}$	$2^+_.\tau^{\parallel}{}_{\alpha\beta}$	$2^-_.\sigma^{\parallel}{}_{\alpha\beta\chi}$
$2^+_.\sigma^{\parallel}\,\dagger^{\alpha\beta}$	$-\frac{16\,\beta._1}{\alpha._0{}^2 - 4\,\alpha._0\,\beta._1}$	$\frac{2\,i\sqrt{2}}{\alpha._0\,k}$	0
$2^+_.\tau^{\parallel}\,\dagger^{\alpha\beta}$	$-\frac{2\,i\sqrt{2}}{\alpha._0\,k}$	$\frac{2}{\alpha._0\,k^2}$	0
$2^-_.\sigma^{\parallel}\,\dagger^{\alpha\beta\chi}$	0	0	$\frac{1}{\frac{\alpha._0}{4} - \beta._1}$

Source constraints

Spin-parity form	Covariant form	Multiplicities
$0^+_.\tau^{\perp} == 0$	$\partial_\beta\partial_\alpha \tau(\Delta+\mathcal{K})^{\alpha\beta} == 0$	1
$2\,i\,k\ 1^-_.\sigma^{\perp\,\alpha} + 1^-_.\tau^{\perp\,\alpha} == 0$	$\partial_\chi\partial_\beta\partial^\alpha \tau(\Delta+\mathcal{K})^{\beta\chi} == \partial_\chi\partial^\chi\partial_\beta \tau(\Delta+\mathcal{K})^{\alpha\beta} + 2\,\partial_\delta\partial^\delta\partial_\chi\partial_\beta\sigma^{\beta\alpha\chi}$	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
Total expected gauge generators:		10

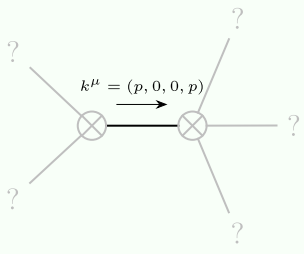
Massive spectrum



Massive particle

Pole residue:	$-\frac{1}{\alpha._3} > 0$
Square mass:	$-\frac{\alpha._0 - 4\,\beta._1}{2\,\alpha._3} > 0$
Spin:	0
Parity:	Odd

Massless spectrum



Massless particle

Pole residue:	$\frac{p^2}{\alpha._0} > 0$
Polarisations:	2

Unitarity conditions

$$\alpha._0 > 0\ \&\&\ \alpha._3 < 0\ \&\&\ \beta._1 < \frac{\alpha._0}{4}$$