PSALTer results panel

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

Wave operator

	$0^+_{.}\mathcal{A}^{\parallel}$	$0^+_{.}f^{\parallel}$	$0^+_{.}f^{\perp}$	$0^-_{.}\mathcal{A}^{\parallel}$
$0^+_{.}\mathcal{A}^{\parallel}\,\dagger$	$t_{.3}$	$-i\,\sqrt{2}\,k\,t_{.3}$	0	0
$0^+_{.}f^{\parallel}\,\dagger$	$i\,\sqrt{2}\,k\,t_{.3}$	$2\,k^2\,t_{.3}$	0	0
$0^+_{.}f^{\perp}\,\dagger$	0	0	0	0
$0^-_{.}\mathcal{A}^{\parallel}\,\dagger$	0	0	0	0

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

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

Saturated propagator

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

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

	$2^+_{.}\sigma^{\parallel}{}_{\alpha\beta}$	$2^+_{.}\tau^{\parallel}{}_{\alpha\beta}$	$2^-_{.}\sigma^{\parallel}{}_{\alpha\beta\chi}$
$2^+_{.}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	0	0	0
$2^+_{.}\tau^{\parallel}\,\dagger^{\alpha\beta}$	0	0	0
$2^-_{.}\sigma^{\parallel}\,\dagger^{\alpha\beta\chi}$	0	0	$\frac{1}{k^2\,r_{.1}}$

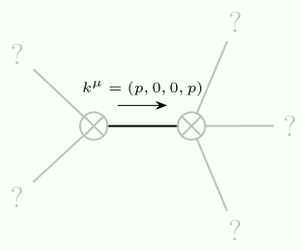
Source constraints

Spin-parity form	Covariant form	Multiplicities
$0^-_{.}\sigma^{\parallel} == 0$	$\epsilon\,\eta_{\alpha\beta\chi\delta}\,\partial^{\delta}\sigma^{\alpha\beta\chi} == 0$	1
$0^+_{.}\tau^{\perp} == 0$	$\partial_{\beta}\partial_{\alpha}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == 0$	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
$1^+_{.}\tau^{\parallel\,\alpha\beta} == 0$	$\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} + \partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\chi\alpha} + \partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == \partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\beta} + \partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\chi} + \partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\beta\alpha}$	3
$1^+_{.}\sigma^{\perp\,\alpha\beta} == 0$	$\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\chi\alpha\beta} == \partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta}$	3
$2^+_{.}\tau^{\parallel\,\alpha\beta} == 0$	$4\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\delta} + 2\,\partial_{\delta}\partial^{\delta}\partial^{\beta}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau\,(\Delta+\mathcal{K})^{\beta\alpha} + 2\;\eta^{\alpha\beta}\;\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\tau\,(\Delta+\mathcal{K})^{\chi\delta} ==$ $3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\beta\chi} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau\,(\Delta+\mathcal{K})^{\chi\beta} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha\chi} + 3\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\chi\alpha} + 2\;\eta^{\alpha\beta}\;\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi}$	5
$2^+_{.}\sigma^{\parallel\,\alpha\beta} == 0$	$3\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta} + 3\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta} + 2\;\eta^{\alpha\beta}\;\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\sigma^{\chi}{}_{\chi}{}^{\delta} == 2\,\partial_{\delta}\partial^{\beta}\partial^{\alpha}\sigma^{\chi}{}_{\chi}{}^{\delta} + 3\,(\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\alpha\beta\chi} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\beta\alpha\chi})$	5
Total expected gauge generators:		25

Massive spectrum

(No particles)

Massless spectrum



Massless particle

Pole residue:	$-\frac{3}{r_{.1}} - \frac{4}{r_{.1}+r_{.5}} + \frac{9}{2\,r_{.1}+r_{.5}} > 0$
Polarisations:	2

Unitarity conditions

$$(r_{.1} < 0\;\&\&\;(r_{.5} < -r_{.1}\;||\;r_{.5} > -2\,r_{.1}))\;||\;(r_{.1} > 0\;\&\&\;-2\,r_{.1} < r_{.5} < -r_{.1})$$