PSALTer results panel

$$\mathcal{S} == \int\int\int\int (\frac{1}{6}(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}_{\iota}{}^{\theta}{}_{\theta}\partial^\iota\mathcal{A}^{\alpha\beta}{}_{\alpha} + 12\,r_{1}.\,\partial_\iota\mathcal{A}_{\beta}{}^{\theta}{}_{\theta}\partial^\iota\mathcal{A}^{\alpha\beta}{}_{\alpha} + 12\,r_{1}.\,\partial_\alpha\mathcal{A}^{\alpha\beta\iota}\partial_\theta\mathcal{A}_{\beta}{}^{\theta}{}_{\iota} - 24\,r_{1}.\,\partial^\iota\mathcal{A}^{\alpha\beta}{}_{\alpha}\partial_\theta\mathcal{A}_{\iota}{}^{\theta}{}_{\beta} + 24\,r_{1}.\,\partial^\iota\mathcal{A}^{\alpha\beta}{}_{\alpha}\partial_\theta\mathcal{A}_{\iota}{}^{\theta}{}_{\beta} - 8\,r_{1}.\,\partial_\beta\mathcal{A}_{\alpha\iota\theta}\partial^\theta\mathcal{A}^{\alpha\beta\iota} + 8\,r_{2}.\,\partial_\beta\mathcal{A}_{\alpha\iota\theta}\partial^\theta\mathcal{A}^{\alpha\beta\iota} + 4\,r_{1}.\,\partial_\beta\mathcal{A}_{\alpha\theta\iota}\partial^\theta\mathcal{A}^{\alpha\beta\iota} - 4\,r_{2}.\,\partial_\beta\mathcal{A}_{\alpha\theta\iota}\partial^\theta\mathcal{A}^{\alpha\beta\iota} - 16\,r_{1}.\,\partial_\beta\mathcal{A}_{\iota\theta\alpha}\partial^\theta\mathcal{A}^{\alpha\beta\iota} + 4\,r_{2}.\,\partial_\beta\mathcal{A}_{\iota\theta\alpha}\partial^\theta\mathcal{A}^{\alpha\beta\iota} - 4\,r_{1}.\,\partial_\iota\mathcal{A}_{\alpha\beta\theta}\partial^\theta\mathcal{A}^{\alpha\beta\iota} - 2\,r_{2}.\,\partial_\iota\mathcal{A}_{\alpha\beta\theta}\partial^\theta\mathcal{A}^{\alpha\beta\iota} + 4\,r_{1}.\,\partial_\theta\mathcal{A}_{\alpha\beta\iota}\partial^\theta\mathcal{A}^{\alpha\beta\iota} + 2\,r_{2}.\,\partial_\theta\mathcal{A}_{\alpha\beta\iota}\partial^\theta\mathcal{A}^{\alpha\beta\iota} + 4\,r_{1}.\,\partial_\theta\mathcal{A}_{\alpha\iota\beta}\partial^\theta\mathcal{A}^{\alpha\beta\iota} - 4\,r_{2}.\,\partial_\theta\mathcal{A}_{\alpha\iota\beta}\partial^\theta\mathcal{A}^{\alpha\beta\iota} + 4\,t_{2}.\,\mathcal{A}_{\iota\theta\alpha}\,\partial^\theta f^{\alpha\iota} + 2\,t_{2}.\,\partial_\alpha f_{\iota\theta}\partial^\theta f^{\alpha\iota} - t_{2}.\,\partial_\alpha f_{\theta\iota}\partial^\theta f^{\alpha\iota} - t_{2}.\,\partial_\iota f_{\alpha\theta}\partial^\theta f^{\alpha\iota} + t_{2}.\,\partial_\theta f_{\alpha\iota}\partial^\theta f^{\alpha\iota} - t_{2}.\,\partial_\theta f_{\iota\alpha}\partial^\theta f^{\alpha\iota} - 4\,t_{2}.\,\mathcal{A}_{\alpha\theta\iota}\,(\mathcal{A}^{\alpha\iota\theta} + \partial^\theta f^{\alpha\iota}) + 2\,t_{2}.\,\mathcal{A}_{\alpha\iota\theta}\,(\mathcal{A}^{\alpha\iota\theta} + 2\,\partial^\theta f^{\alpha\iota})))[t, x, y, z]\,dz\,dy\,dx\,dt$$

Wave operator

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

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

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

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

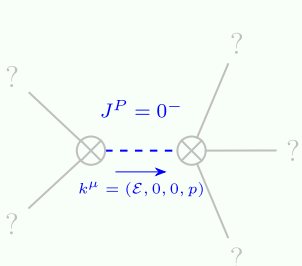
	$1^+_{.}\sigma^{\parallel}{}_{\alpha\beta}$	$1^+_{.}\sigma^{\perp}{}_{\alpha\beta}$	$1^+_{.}\tau^{\parallel}{}_{\alpha\beta}$	$1^-_{.}\sigma^{\parallel}{}_{\alpha}$	$1^-_{.}\sigma^{\perp}{}_{\alpha}$	$1^-_{.}\tau^{\parallel}{}_{\alpha}$	$1^-_{.}\tau^{\perp}{}_{\alpha}$
$1^+_{.}\sigma^{\parallel}\,\dagger^{\alpha\beta}$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

	$2^+_{.}\sigma^{\parallel}{}_{\alpha\beta}$	$2^+_{.}\tau^{\parallel}{}_{\alpha\beta}$	$2^-_{.}\sigma^{\parallel}{}_{\alpha\beta\chi}$
$2^+_{.}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	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
$0^+_{.}\tau^{\perp} == 0$	$\partial_\beta\partial_\alpha\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == 0$	1
$0^+_{.}\tau^{\parallel} == 0$	$\partial_\beta\partial_\alpha\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == \partial_\beta\partial^\beta\tau\,(\Delta+\mathcal{K})^{\alpha}{}_{\alpha}$	1
$0^+_{.}\sigma^{\parallel} == 0$	$\partial_\beta\sigma^{\alpha}{}_{\alpha}{}^{\beta} == 0$	1
$1^-_{.}\tau^{\perp\alpha} == 0$	$\partial_\chi\partial_\beta\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\beta\chi} == \partial_\chi\partial^\chi\partial_\beta\tau\,(\Delta+\mathcal{K})^{\alpha\beta}$	3
$1^-_{.}\tau^{\parallel\alpha} == 0$	$\partial_\chi\partial_\beta\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\beta\chi} == \partial_\chi\partial^\chi\partial_\beta\tau\,(\Delta+\mathcal{K})^{\beta\alpha}$	3
$1^-_{.}\sigma^{\perp\alpha} == 0$	$\partial_\chi\partial_\beta\sigma^{\beta\alpha\chi} == 0$	3
$i\,k\;1^+_{.}\sigma^{\parallel\alpha\beta} + 1^+_{.}\tau^{\parallel\alpha\beta} == 0$	$\partial_\chi\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\beta\chi} + \partial_\chi\partial^\beta\tau\,(\Delta+\mathcal{K})^{\chi\alpha} + \partial_\chi\partial^\chi\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + \partial_\delta\partial_\chi\partial^\beta\sigma^{\chi\alpha\delta} + \partial_\delta\partial^\delta\partial_\chi\sigma^{\alpha\beta\chi} == \partial_\chi\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\chi\beta} + \partial_\chi\partial^\beta\tau\,(\Delta+\mathcal{K})^{\alpha\chi} + \partial_\chi\partial^\chi\tau\,(\Delta+\mathcal{K})^{\beta\alpha} + \partial_\delta\partial_\chi\partial^\alpha\sigma^{\chi\beta\delta} + \partial_\delta\partial^\delta\partial_\chi\sigma^{\beta\alpha\chi}$	3
$1^+_{.}\sigma^{\parallel\alpha\beta} == 1^+_{.}\sigma^{\perp\alpha\beta}$	$3\,\partial_\delta\partial_\chi\partial^\alpha\sigma^{\chi\beta\delta} + \partial_\delta\partial^\delta\partial_\chi\sigma^{\beta\alpha\chi} + 2\,\partial_\delta\partial^\delta\partial_\chi\sigma^{\chi\alpha\beta} == 3\,\partial_\delta\partial_\chi\partial^\beta\sigma^{\chi\alpha\delta} + \partial_\delta\partial^\delta\partial_\chi\sigma^{\alpha\beta\chi}$	3
$2^+_{.}\tau^{\parallel\alpha\beta} == 0$	$4\,\partial_\delta\partial_\chi\partial^\beta\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\chi\delta} + 2\,\partial_\delta\partial^\delta\partial^\beta\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi} + 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\chi\tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\chi\tau\,(\Delta+\mathcal{K})^{\beta\alpha} + 2\;\eta^{\alpha\beta}\;\partial_\epsilon\partial^\epsilon\partial_\delta\partial_\chi\tau\,(\Delta+\mathcal{K})^{\chi\delta} == 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\beta\chi} + 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\chi\beta} + 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\beta\tau\,(\Delta+\mathcal{K})^{\alpha\chi} + 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\beta\tau\,(\Delta+\mathcal{K})^{\chi\alpha} + 2\;\eta^{\alpha\beta}\;\partial_\epsilon\partial^\epsilon\partial_\delta\partial^\delta\tau\,(\Delta+\mathcal{K})^{\chi}{}_{\chi}$	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:		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

(No particles)

Unitarity conditions

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