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} - 6\, r_{3}\, \partial_{\beta}\mathcal{A}_{\iota}{}^{\theta}{}_{\theta}\, \partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha} - 6\, r_{3}\, \partial_{\alpha}\mathcal{A}^{\alpha\beta\iota}\, \partial_{\theta}\mathcal{A}_{\iota}{}^{\theta}{}_{\beta} + 12\, r_{3}\, \partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha}\, \partial_{\theta}\mathcal{A}_{\iota}{}^{\theta}{}_{\beta} + 8\, r_{2}\, \partial_{\beta}\mathcal{A}_{\alpha\iota\theta}\, \partial^{\theta}\mathcal{A}^{\alpha\beta\iota} - 4\, r_{2}\, \partial_{\beta}\mathcal{A}_{\alpha\theta\iota}\, \partial^{\theta}\mathcal{A}^{\alpha\beta\iota} + 4\, r_{2}\, \partial_{\beta}\mathcal{A}_{\iota\theta\alpha}\, \partial^{\theta}\mathcal{A}^{\alpha\beta\iota} - 24\, r_{3}\, \partial_{\beta}\mathcal{A}_{\iota\theta\alpha}\, \partial^{\theta}\mathcal{A}^{\alpha\beta\iota} - 2\, r_{2}\, \partial_{\iota}\mathcal{A}_{\alpha\beta\theta}\, \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_{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	$k^2\, r_{2} + t_{2}$

	$1^+_{.}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$1^+_{.}\mathcal{A}^{\perp}{}_{\alpha\beta}$	$1^+_{.}f^{\parallel}{}_{\alpha\beta}$	$1^-_{.}\mathcal{A}^{\parallel}{}_{\alpha}$	$1^-_{.}\mathcal{A}^{\perp}{}_{\alpha}$	$1^-_{.}f^{\parallel}{}_{\alpha}$	$1^-_{.}f^{\perp}{}_{\alpha}$
$1^+_{.}\mathcal{A}^{\parallel}\dagger^{\alpha\beta}$	$\frac{1}{6}(9k^2\, r_{3} + 4\, t_{2})$	$\frac{\sqrt{2}\, t_{2}}{3}$	$\frac{1}{3}\, i\, \sqrt{2}\, k\, t_{2}$	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	0	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

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

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	$\frac{1}{k^2\, r_{2} + t_{2}}$

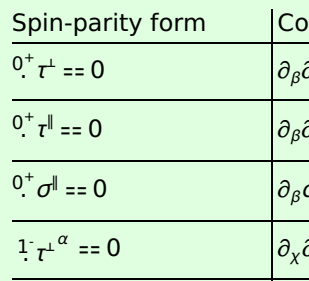
	$1^+_{.}\sigma^{\parallel}{}_{\alpha\beta}$	$1^+_{.}\sigma^{\perp}{}_{\alpha\beta}$	$1^+_{.}\tau^{\parallel}{}_{\alpha\beta}$	$1^-_{.}\sigma^{\parallel}{}_{\alpha}$	$1^-_{.}\sigma^{\perp}{}_{\alpha}$	$1^-_{.}\tau^{\parallel}{}_{\alpha}$	$1^-_{.}\tau^{\perp}{}_{\alpha}$
$1^+_{.}\sigma^{\parallel}\dagger^{\alpha\beta}$	$\frac{2}{3\, k^2\, r_{3}}$	$-\frac{2\, \sqrt{2}}{3\, k^2\, r_{3} + 3\, k^4\, r_{3}}$	$-\frac{2\, i\, \sqrt{2}}{3\, k\, r_{3} + 3\, k^3\, r_{3}}$	0	0	0	0
$1^+_{.}\sigma^{\perp}\dagger^{\alpha\beta}$	$-\frac{2\, \sqrt{2}}{3\, k^2\, r_{3} + 3\, k^4\, r_{3}}$	$\frac{9\, k^2\, r_{3} + 4\, t_{2}}{3\, (k + k^3)^2\, r_{3}\, t_{2}}$	$\frac{i\, (9\, k^2\, r_{3} + 4\, t_{2})}{3\, k\, (1 + k^2)^2\, r_{3}\, t_{2}}$	0	0	0	0
$1^+_{.}\tau^{\parallel}\dagger^{\alpha\beta}$	$\frac{2\, i\, \sqrt{2}}{3\, k\, r_{3} + 3\, k^3\, r_{3}}$	$-\frac{i\, (9\, k^2\, r_{3} + 4\, t_{2})}{3\, k\, (1 + k^2)^2\, r_{3}\, t_{2}}$	$\frac{9\, k^2\, r_{3} + 4\, t_{2}}{3\, (1 + k^2)^2\, r_{3}\, t_{2}}$	0	0	0	0
$1^-_{.}\sigma^{\parallel}\dagger^{\alpha}$	0	0	0	0	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

	$2^+_{.}\sigma^{\parallel}{}_{\alpha\beta}$	$2^+_{.}\tau^{\parallel}{}_{\alpha\beta}$	$2^-_{.}\sigma^{\parallel}{}_{\alpha\beta\chi}$
$2^+_{.}\sigma^{\parallel}\dagger^{\alpha\beta}$	$-\frac{2}{3\, k^2\, r_{3}}$	0	0
$2^+_{.}\tau^{\parallel}\dagger^{\alpha\beta}$	0	0	0
$2^-_{.}\sigma^{\parallel}\dagger^{\alpha\beta\chi}$	0	0	0

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
$1^-_{.}\sigma^{\parallel}{}^{\alpha} == 0$	$\partial_{\delta}\partial^{\alpha}\sigma^{\chi}{}_{\chi}{}^{\delta} + \partial_{\delta}\partial^{\delta}\sigma^{\chi\alpha}{}_{\chi} == \partial_{\delta}\partial_{\chi}\sigma^{\chi\alpha\delta}$	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
$2^-_{.}\sigma^{\parallel}{}^{\alpha\beta\chi} == 0$	$3\, \partial_{\epsilon}\partial_{\delta}\partial^{\chi}\partial^{\alpha}\sigma^{\delta\beta\epsilon} + 3\, \partial_{\epsilon}\partial^{\epsilon}\partial^{\chi}\partial^{\alpha}\sigma^{\delta\beta}{}_{\delta} + 2\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\beta}\sigma^{\alpha\chi\delta} + 4\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\beta}\sigma^{\chi\alpha\delta} + 2\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\beta}\sigma^{\delta\alpha\chi} + 2\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\chi}\sigma^{\beta\alpha\delta} + 4\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\chi}\sigma^{\delta\alpha\beta} + 2\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\alpha\beta\chi} + 3\, \eta^{\beta\chi}\, \partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\alpha}\sigma^{\delta}{}_{\delta}{}^{\epsilon} + 3\, \eta^{\alpha\chi}\, \partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\delta}\sigma^{\delta\beta\epsilon} + 3\, \eta^{\beta\chi}\, \partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\epsilon}\sigma^{\delta\alpha}{}_{\delta} == 3\, \partial_{\epsilon}\partial_{\delta}\partial^{\chi}\partial^{\beta}\sigma^{\delta\alpha\epsilon} + 3\, \partial_{\epsilon}\partial^{\epsilon}\partial^{\chi}\partial^{\beta}\sigma^{\delta\alpha}{}_{\delta} + 2\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\beta\chi\delta} + 4\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\chi\beta\delta} + 2\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\delta\beta\chi} + 2\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\chi}\sigma^{\alpha\beta\delta} + 2\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\beta\alpha\chi} + 4\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\chi\alpha\beta} + 3\, \eta^{\alpha\chi}\, \partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\beta}\sigma^{\delta}{}_{\delta}{}^{\epsilon} + 3\, \eta^{\beta\chi}\, \partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\delta}\sigma^{\delta\alpha\epsilon} + 3\, \eta^{\alpha\chi}\, \partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\epsilon}\sigma^{\delta\beta}{}_{\delta}$	5
$2^+_{.}\tau^{\parallel}{}^{\alpha\beta} == 0$	$4\, \partial_{\delta}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\tau\, (\Delta+\mathcal{K})^{\chi\delta} + 2\, \partial_{\delta}\partial^{\delta}\partial^{\beta}\partial^{\alpha}\tau\, (\Delta+\mathcal{K})^{\chi}{}_{\chi} + 3\, \partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau\, (\Delta+\mathcal{K})^{\alpha\beta} + 3\, \partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau\, (\Delta+\mathcal{K})^{\beta\alpha} + 2\, \eta^{\alpha\beta}\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\tau\, (\Delta+\mathcal{K})^{\chi\delta} == 3\, \partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau\, (\Delta+\mathcal{K})^{\beta\chi} + 3\, \partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau\, (\Delta+\mathcal{K})^{\chi\alpha} + 3\, \partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau\, (\Delta+\mathcal{K})^{\alpha\chi} + 2\, \eta^{\alpha\beta}\, \partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\tau\, (\Delta+\mathcal{K})^{\chi}{}_{\chi}$	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

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