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_{\cdot 1}\, \partial_\beta \mathcal{A}_\iota{}^\theta{}_\theta\, \partial^\iota \mathcal{A}^{\alpha\beta}{}_\alpha - 24\, r_{\cdot 3}\, \partial_\beta \mathcal{A}_\iota{}^\theta{}_\theta\, \partial^\iota \mathcal{A}^{\alpha\beta}{}_\alpha + 12\, r_{\cdot 1}\, \partial_\iota \mathcal{A}_\beta{}^\theta{}_\theta\, \partial^\iota \mathcal{A}^{\alpha\beta}{}_\alpha + 12\, r_{\cdot 1}\, \partial_\alpha \mathcal{A}^{\alpha\beta\iota}\, \partial_\theta \mathcal{A}_\beta{}^\theta{}_\iota - 24\, r_{\cdot 1}\, \partial^\iota \mathcal{A}^{\alpha\beta}{}_\alpha\, \partial_\theta \mathcal{A}_\beta{}^\theta{}_\iota + 12\, r_{\cdot 1}\, \partial_\alpha \mathcal{A}^{\alpha\beta\iota}\, \partial_\theta \mathcal{A}_\iota{}^\theta{}_\beta - 24\, r_{\cdot 3}\, \partial_\alpha \mathcal{A}^{\alpha\beta\iota}\, \partial_\theta \mathcal{A}_\iota{}^\theta{}_\beta - 24\, r_{\cdot 1}\, \partial^\iota \mathcal{A}^{\alpha\beta}{}_\alpha\, \partial_\theta \mathcal{A}_\iota{}^\theta{}_\beta + 48\, r_{\cdot 3}\, \partial^\iota \mathcal{A}^{\alpha\beta}{}_\alpha\, \partial_\theta \mathcal{A}_\iota{}^\theta{}_\beta - 8\, r_{\cdot 1}\, \partial_\beta \mathcal{A}_{\alpha\iota\theta}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} + 8\, r_{\cdot 2}\, \partial_\beta \mathcal{A}_{\alpha\iota\theta}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} + 4\, r_{\cdot 1}\, \partial_\beta \mathcal{A}_{\alpha\theta\iota}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} - 4\, r_{\cdot 2}\, \partial_\beta \mathcal{A}_{\alpha\theta\iota}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} + 8\, r_{\cdot 1}\, \partial_\beta \mathcal{A}_{\iota\theta\alpha}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} + 4\, r_{\cdot 2}\, \partial_\beta \mathcal{A}_{\iota\theta\alpha}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} - 24\, r_{\cdot 3}\, \partial_\beta \mathcal{A}_{\iota\theta\alpha}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} - 4\, r_{\cdot 1}\, \partial_\iota \mathcal{A}_{\alpha\beta\theta}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} - 2\, r_{\cdot 2}\, \partial_\iota \mathcal{A}_{\alpha\beta\theta}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} + 4\, r_{\cdot 1}\, \partial_\theta \mathcal{A}_{\alpha\beta\iota}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} + 2\, r_{\cdot 2}\, \partial_\theta \mathcal{A}_{\alpha\beta\iota}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} + 4\, r_{\cdot 1}\, \partial_\theta \mathcal{A}_{\alpha\iota\beta}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} - 4\, r_{\cdot 2}\, \partial_\theta \mathcal{A}_{\alpha\iota\beta}\, \partial^\theta \mathcal{A}^{\alpha\beta\iota} + 4\, t_{\cdot 2}\, \mathcal{A}_{\iota\theta\alpha}\, \partial^\theta f^{\alpha\iota} + 2\, t_{\cdot 2}\, \partial_\alpha f_{\iota\theta}\, \partial^\theta f^{\alpha\iota} - t_{\cdot 2}\, \partial_\alpha f_{\theta\iota}\, \partial^\theta f^{\alpha\iota} - t_{\cdot 2}\, \partial_\iota f_{\alpha\theta}\, \partial^\theta f^{\alpha\iota} + t_{\cdot 2}\, \partial_\theta f_{\alpha\iota}\, \partial^\theta f^{\alpha\iota} - t_{\cdot 2}\, \partial_\theta f_{\iota\alpha}\, \partial^\theta f^{\alpha\iota} - 4\, t_{\cdot 2}\, \mathcal{A}_{\alpha\theta\iota}\, (\mathcal{A}^{\alpha\iota\theta} + \partial^\theta f^{\alpha\iota}) + 2\, t_{\cdot 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

	$0^+_\cdot \mathcal{A}^\parallel$	$0^+_\cdot f^\parallel$	$0^+_\cdot f^\perp$	$0^-_\cdot \mathcal{A}^\parallel$
$0^+_\cdot \mathcal{A}^\parallel\,\dagger$	$6k^2(-r_{\cdot 1}+r_{\cdot 3})$	0	0	0
$0^+_\cdot f^\parallel\,\dagger$	0	0	0	0
$0^+_\cdot f^\perp\,\dagger$	0	0	0	0
$0^-_\cdot \mathcal{A}^\parallel\,\dagger$	0	0	0	$k^2 r_{\cdot 2} + t_{\cdot 2}$

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

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

Saturated propagator

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

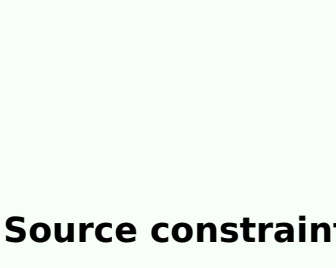
	$1^+_\cdot \sigma^\parallel{}_{\alpha\beta}$	$1^+_\cdot \sigma^\perp{}_{\alpha\beta}$	$1^+_\cdot \tau^\parallel{}_{\alpha\beta}$	$1^-_\cdot \sigma^\parallel{}_\alpha$	$1^-_\cdot \sigma^\perp{}_\alpha$	$1^-_\cdot \tau^\parallel{}_\alpha$	$1^-_\cdot \tau^\perp{}_\alpha$
$1^+_\cdot \sigma^\parallel\,\dagger^{\alpha\beta}$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

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

Source constraints

Spin-parity form	Covariant form	Multiplicities
$0^+_\cdot \tau^\perp == 0$	$\partial_\beta \partial_\alpha \tau\, (\Delta+\mathcal{K})^{\alpha\beta} == 0$	1
$0^+_\cdot \tau^\parallel == 0$	$\partial_\beta \partial_\alpha \tau\, (\Delta+\mathcal{K})^{\alpha\beta} == \partial_\beta \partial^\beta \tau\, (\Delta+\mathcal{K})^\alpha{}_\alpha$	1
$1^-_\cdot \tau^{\perp\,\alpha} == 0$	$\partial_\chi \partial_\beta \partial^\alpha \tau\, (\Delta+\mathcal{K})^{\beta\chi} == \partial_\chi \partial^\chi \partial_\beta \tau\, (\Delta+\mathcal{K})^{\alpha\beta}$	3
$1^-_\cdot \tau^{\parallel\,\alpha} == 0$	$\partial_\chi \partial_\beta \partial^\alpha \tau\, (\Delta+\mathcal{K})^{\beta\chi} == \partial_\chi \partial^\chi \partial_\beta \tau\, (\Delta+\mathcal{K})^{\beta\alpha}$	3
$1^-_\cdot \sigma^{\perp\,\alpha} == 0$	$\partial_\chi \partial_\beta \sigma^{\beta\alpha\chi} == 0$	3
$i k\ 1^+_\cdot \sigma^{\parallel\,\alpha\beta} + 1^+_\cdot \tau^{\parallel\,\alpha\beta} == 0$	$\partial_\chi \partial^\alpha \tau\, (\Delta+\mathcal{K})^{\beta\chi} + \partial_\chi \partial^\beta \tau\, (\Delta+\mathcal{K})^{\chi\alpha} + \partial_\chi \partial^\chi \tau\, (\Delta+\mathcal{K})^{\alpha\beta} + \partial_\delta \partial_\chi \partial^\beta \sigma^{\chi\alpha\delta} + \partial_\delta \partial^\delta \partial_\chi \sigma^{\alpha\beta\chi} == \partial_\chi \partial^\alpha \tau\, (\Delta+\mathcal{K})^{\chi\beta} + \partial_\chi \partial^\beta \tau\, (\Delta+\mathcal{K})^{\alpha\chi} + \partial_\chi \partial^\chi \tau\, (\Delta+\mathcal{K})^{\beta\alpha} + \partial_\delta \partial_\chi \partial^\alpha \sigma^{\chi\beta\delta} + \partial_\delta \partial^\delta \partial_\chi \sigma^{\beta\alpha\chi}$	3
$1^+_\cdot \sigma^{\parallel\,\alpha\beta} == 1^+_\cdot \sigma^{\perp\,\alpha\beta}$	$3\, \partial_\delta \partial_\chi \partial^\alpha \sigma^{\chi\beta\delta} + \partial_\delta \partial^\delta \partial_\chi \sigma^{\beta\alpha\chi} + 2\, \partial_\delta \partial^\delta \partial_\chi \sigma^{\chi\alpha\beta} == 3\, \partial_\delta \partial_\chi \partial^\beta \sigma^{\chi\alpha\delta} + \partial_\delta \partial^\delta \partial_\chi \sigma^{\alpha\beta\chi}$	3
$2^+_\cdot \tau^{\parallel\,\alpha\beta} == 0$	$4\, \partial_\delta \partial_\chi \partial^\beta \partial^\alpha \tau\, (\Delta+\mathcal{K})^{\chi\delta} + 2\, \partial_\delta \partial^\delta \partial^\beta \partial^\alpha \tau\, (\Delta+\mathcal{K})^\chi{}_\chi + 3\, \partial_\delta \partial^\delta \partial_\chi \partial^\chi \tau\, (\Delta+\mathcal{K})^{\alpha\beta} + 3\, \partial_\delta \partial^\delta \partial_\chi \partial^\chi \tau\, (\Delta+\mathcal{K})^{\beta\alpha} + 2\ \eta^{\alpha\beta}\ \partial_\epsilon \partial^\epsilon \partial_\delta \partial_\chi \tau\, (\Delta+\mathcal{K})^{\chi\delta} == 3\, \partial_\delta \partial^\delta \partial_\chi \partial^\alpha \tau\, (\Delta+\mathcal{K})^{\beta\chi} + 3\, \partial_\delta \partial^\delta \partial_\chi \partial^\alpha \tau\, (\Delta+\mathcal{K})^{\chi\beta} + 3\, \partial_\delta \partial^\delta \partial_\chi \partial^\beta \tau\, (\Delta+\mathcal{K})^{\alpha\chi} + 3\, \partial_\delta \partial^\delta \partial_\chi \partial^\beta \tau\, (\Delta+\mathcal{K})^{\chi\alpha} + 2\ \eta^{\alpha\beta}\ \partial_\epsilon \partial^\epsilon \partial_\delta \partial^\delta \tau\, (\Delta+\mathcal{K})^\chi{}_\chi$	5
$2^+_\cdot \sigma^{\parallel\,\alpha\beta} == 0$	$3\, \partial_\delta \partial_\chi \partial^\alpha \sigma^{\chi\beta\delta} + 3\, \partial_\delta \partial_\chi \partial^\beta \sigma^{\chi\alpha\delta} + 2\ \eta^{\alpha\beta}\ \partial_\epsilon \partial^\epsilon \partial_\delta \sigma^\chi{}_\chi{}^\delta == 2\, \partial_\delta \partial^\beta \partial^\alpha \sigma^\chi{}_\chi{}^\delta + 3\, (\partial_\delta \partial^\delta \partial_\chi \sigma^{\alpha\beta\chi} + \partial_\delta \partial^\delta \partial_\chi \sigma^{\beta\alpha\chi})$	5
Total expected gauge generators:		27

Massive spectrum



Massive particle

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

Massless spectrum

(No particles)

Unitarity conditions

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