PSALTer results panel

$$\mathcal{S} == \int\int\int\int \Big(\mathcal{A}^{\alpha\beta\chi}{}_{\alpha\beta\chi} + f^{\alpha\beta}{}_{\alpha\beta} - \frac{1}{2} r_{\cdot 3} \Big(\partial_\beta \mathcal{A}_{\prime}{}^{\theta}{}_{\theta} \partial^{\prime} \mathcal{A}^{\alpha\beta}{}_{\alpha} + \partial_{\prime} \mathcal{A}_{\beta}{}^{\theta}{}_{\theta} \partial^{\prime} \mathcal{A}^{\alpha\beta}{}_{\alpha} + \partial_\alpha \mathcal{A}^{\alpha\beta\prime} \partial_\theta \mathcal{A}_{\beta}{}^{\theta}{}_{\prime} - 2 \partial^{\prime} \mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_\theta \mathcal{A}_{\prime}{}^{\theta}{}_{\beta} + \partial_\alpha \mathcal{A}^{\alpha\beta\prime} \partial_\theta \mathcal{A}_{\prime}{}^{\theta}{}_{\beta} - 2 \partial^{\prime} \mathcal{A}^{\alpha\beta}{}_{\alpha} \partial_\theta \mathcal{A}_{\prime}{}^{\theta}{}_{\beta} + 8 \partial_\beta \mathcal{A}_{\prime\theta\alpha} \partial^\theta \mathcal{A}^{\alpha\beta\prime} \Big) + r_{\cdot 5} \Big(\partial_{\prime} \mathcal{A}_{\theta}{}^{\kappa}{}_{\kappa} \partial^\theta \mathcal{A}^{\alpha\prime}{}_{\alpha} - \partial_\theta \mathcal{A}_{\prime}{}^{\kappa}{}_{\kappa} \partial^\theta \mathcal{A}^{\alpha\prime}{}_{\alpha} - \Big(\partial_\alpha \mathcal{A}^{\alpha\prime\theta} - 2 \partial^\theta \mathcal{A}^{\alpha\prime}{}_{\alpha} \Big) \Big(\partial_\kappa \mathcal{A}_{\prime}{}^{\kappa}{}_{\theta} - \partial_\kappa \mathcal{A}_{\theta}{}^{\kappa}{}_{\prime} \Big) \Big) \Big) [t, x, y, z] \, dz \, dy \, dx \, dt$$

Wave operator

	$\overset{0^+}{\cdot}\mathcal{A}^{\parallel}$	$\overset{0^+}{\cdot}f^{\parallel}$	$\overset{0^+}{\cdot}f^{\perp}$	$\overset{0^-}{\cdot}\mathcal{A}^{\parallel}$
$\overset{0^+}{\cdot}\mathcal{A}^{\parallel}\,\dagger$	0	0	0	0
$\overset{0^+}{\cdot}f^{\parallel}\,\dagger$	0	0	0	0
$\overset{0^+}{\cdot}f^{\perp}\,\dagger$	0	0	0	0
$\overset{0^-}{\cdot}\mathcal{A}^{\parallel}\,\dagger$	0	0	0	0

	$\overset{1^+}{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$\overset{1^+}{\cdot}\mathcal{A}^{\perp}{}_{\alpha\beta}$	$\overset{1^+}{\cdot}f^{\parallel}{}_{\alpha\beta}$	$\overset{1^-}{\cdot}\mathcal{A}^{\parallel}{}_{\alpha}$	$\overset{1^-}{\cdot}\mathcal{A}^{\perp}{}_{\alpha}$	$\overset{1^-}{\cdot}f^{\parallel}{}_{\alpha}$	$\overset{1^-}{\cdot}f^{\perp}{}_{\alpha}$
$\overset{1^+}{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha\beta}$	$k^2 \left(2 r_{\cdot 3} + r_{\cdot 5}\right)$	0	0	0	0	0	0
$\overset{1^+}{\cdot}\mathcal{A}^{\perp}\,\dagger^{\alpha\beta}$	0	0	0	0	0	0	0
$\overset{1^+}{\cdot}f^{\parallel}\,\dagger^{\alpha\beta}$	0	0	0	0	0	0	0
$\overset{1^-}{\cdot}\mathcal{A}^{\parallel}\,\dagger^{\alpha}$	0	0	0	$\frac{1}{2} k^2 \left(r_{\cdot 3} + 2 r_{\cdot 5}\right)$	0	0	0
$\overset{1^-}{\cdot}\mathcal{A}^{\perp}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$\overset{1^-}{\cdot}f^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$\overset{1^-}{\cdot}f^{\perp}\,\dagger^{\alpha}$	0	0	0	0	0	0	0

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

Saturated propagator

	$\overset{0^+}{\cdot}\sigma^{\parallel}$	$\overset{0^+}{\cdot}\tau^{\parallel}$	$\overset{0^+}{\cdot}\tau^{\perp}$	$\overset{0^-}{\cdot}\sigma^{\parallel}$
$\overset{0^+}{\cdot}\sigma^{\parallel}\,\dagger$	0	0	0	0
$\overset{0^+}{\cdot}\tau^{\parallel}\,\dagger$	0	0	0	0
$\overset{0^+}{\cdot}\tau^{\perp}\,\dagger$	0	0	0	0
$\overset{0^-}{\cdot}\sigma^{\parallel}\,\dagger$	0	0	0	0

	$\overset{1^+}{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$\overset{1^+}{\cdot}\sigma^{\perp}{}_{\alpha\beta}$	$\overset{1^+}{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$\overset{1^-}{\cdot}\sigma^{\parallel}{}_{\alpha}$	$\overset{1^-}{\cdot}\sigma^{\perp}{}_{\alpha}$	$\overset{1^-}{\cdot}\tau^{\parallel}{}_{\alpha}$	$\overset{1^-}{\cdot}\tau^{\perp}{}_{\alpha}$
$\overset{1^+}{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{1}{k^2 \left(2 r_{\cdot 3} + r_{\cdot 5}\right)}$	0	0	0	0	0	0
$\overset{1^+}{\cdot}\sigma^{\perp}\,\dagger^{\alpha\beta}$	0	0	0	0	0	0	0
$\overset{1^+}{\cdot}\tau^{\parallel}\,\dagger^{\alpha\beta}$	0	0	0	0	0	0	0
$\overset{1^-}{\cdot}\sigma^{\parallel}\,\dagger^{\alpha}$	0	0	0	$\frac{2}{k^2 \left(r_{\cdot 3} + 2 r_{\cdot 5}\right)}$	0	0	0
$\overset{1^-}{\cdot}\sigma^{\perp}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$\overset{1^-}{\cdot}\tau^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$\overset{1^-}{\cdot}\tau^{\perp}\,\dagger^{\alpha}$	0	0	0	0	0	0	0

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

Source constraints

Spin-parity form	Covariant form	Multiplicities
$\overset{0^-}{\cdot}\sigma^{\parallel} == 0$	$\epsilon \eta_{\alpha\beta\chi\delta} \partial^\delta \sigma^{\alpha\beta\chi} == 0$	1
$\overset{0^+}{\cdot}\tau^{\perp} == 0$	$\partial_\beta \partial_\alpha \tau \, (\Delta + \mathcal{K})^{\alpha\beta} == 0$	1
$\overset{0^+}{\cdot}\tau^{\parallel} == 0$	$\partial_\beta \partial_\alpha \tau \, (\Delta + \mathcal{K})^{\alpha\beta} == \partial_\beta \partial^\beta \tau \, (\Delta + \mathcal{K})^{\alpha}{}_{\alpha}$	1
$\overset{0^+}{\cdot}\sigma^{\parallel} == 0$	$\partial_\beta \sigma^{\alpha}{}_{\alpha}{}^{\beta} == 0$	1
$\overset{1^-}{\cdot}\tau^{\perp\,\alpha} == 0$	$\partial_\chi \partial_\beta \partial^\alpha \tau \, (\Delta + \mathcal{K})^{\beta\chi} == \partial_\chi \partial^\chi \partial_\beta \tau \, (\Delta + \mathcal{K})^{\alpha\beta}$	3
$\overset{1^-}{\cdot}\tau^{\parallel\,\alpha} == 0$	$\partial_\chi \partial_\beta \partial^\alpha \tau \, (\Delta + \mathcal{K})^{\beta\chi} == \partial_\chi \partial^\chi \partial_\beta \tau \, (\Delta + \mathcal{K})^{\beta\alpha}$	3
$\overset{1^-}{\cdot}\sigma^{\perp\,\alpha} == 0$	$\partial_\chi \partial_\beta \sigma^{\beta\alpha\chi} == 0$	3
$\overset{1^+}{\cdot}\tau^{\parallel\,\alpha\beta} == 0$	$\partial_\chi \partial^\alpha \tau \, (\Delta + \mathcal{K})^{\beta\chi} + \partial_\chi \partial^\beta \tau \, (\Delta + \mathcal{K})^{\chi\alpha} + \partial_\chi \partial^\chi \tau \, (\Delta + \mathcal{K})^{\alpha\beta} == \partial_\chi \partial^\alpha \tau \, (\Delta + \mathcal{K})^{\chi\beta} + \partial_\chi \partial^\beta \tau \, (\Delta + \mathcal{K})^{\alpha\chi} + \partial_\chi \partial^\chi \tau \, (\Delta + \mathcal{K})^{\beta\alpha}$	3
$\overset{1^+}{\cdot}\sigma^{\perp\,\alpha\beta} == 0$	$\partial_\delta \partial_\chi \partial^\alpha \sigma^{\chi\beta\delta} + \partial_\delta \partial^\delta \partial_\chi \sigma^{\chi\alpha\beta} == \partial_\delta \partial_\chi \partial^\beta \sigma^{\chi\alpha\delta}$	3
$\overset{2^-}{\cdot}\sigma^{\parallel\,\alpha\beta\chi} == 0$	$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^\delta \sigma^{\alpha\beta\chi} + 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^\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
$\overset{2^+}{\cdot}\tau^{\parallel\,\alpha\beta} == 0$	$4 \partial_\delta \partial_\chi \partial^\beta \partial^\alpha \tau \, (\Delta + \mathcal{K})^{\chi\delta} + 2 \partial_\delta \partial^\delta \partial^\beta \partial^\alpha \tau \, (\Delta + \mathcal{K})^{\chi}{}_{\chi} + 3 \partial_\delta \partial^\delta \partial_\chi \partial^\chi \tau \, (\Delta + \mathcal{K})^{\alpha\beta} + 3 \partial_\delta \partial^\delta \partial_\chi \partial^\chi \tau \, (\Delta + \mathcal{K})^{\beta\alpha} + 2 \eta^{\alpha\beta} \partial_\epsilon \partial^\epsilon \partial_\delta \partial_\chi \tau \, (\Delta + \mathcal{K})^{\chi\delta} == 3 \partial_\delta \partial^\delta \partial_\chi \partial^\alpha \tau \, (\Delta + \mathcal{K})^{\beta\chi} + 3 \partial_\delta \partial^\delta \partial_\chi \partial^\alpha \tau \, (\Delta + \mathcal{K})^{\chi\beta} + 3 \partial_\delta \partial^\delta \partial_\chi \partial^\beta \tau \, (\Delta + \mathcal{K})^{\alpha\chi} + 3 \partial_\delta \partial^\delta \partial_\chi \partial^\beta \tau \, (\Delta + \mathcal{K})^{\chi\alpha} + 2 \eta^{\alpha\beta} \partial_\epsilon \partial^\epsilon \partial_\delta \partial^\delta \tau \, (\Delta + \mathcal{K})^{\chi}{}_{\chi}$	5
Total expected gauge generators:		29

Massive spectrum

(No particles)

Massless spectrum

Massless particle

Pole residue:	$-\frac{2}{r_{\cdot 3}} + \frac{3}{2 r_{\cdot 3} + r_{\cdot 5}} - \frac{16}{r_{\cdot 3} + 2 r_{\cdot 5}} > 0$
Polarisations:	2

Unitarity conditions

$$\left(r_{\cdot 3} < 0 \;\&\&\; \left(r_{\cdot 5} < -\frac{r_{\cdot 3}}{2} \;||\; r_{\cdot 5} > -2 r_{\cdot 3}\right)\right) || \left(r_{\cdot 3} > 0 \;\&\&\; -2 r_{\cdot 3} < r_{\cdot 5} < -\frac{r_{\cdot 3}}{2}\right)$$