PSALTer results panel

$$\mathcal{S} == \int\int\int\int \Big(\frac{1}{6}\,(6\,\mathcal{A}^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi} + 6\,f^{\alpha\beta}\,\tau(\Delta+\mathcal{K})_{\alpha\beta} - 3r_{\cdot 3}\,\partial_\beta\mathcal{A}_{\iota}{}^{\theta}{}_{\theta}\,\partial^\iota\mathcal{A}^{\alpha\beta}{}_{\alpha} - 3r_{\cdot 3}\,\partial_\iota\mathcal{A}_{\beta}{}^{\theta}{}_{\theta}\,\partial^\iota\mathcal{A}^{\alpha\beta}{}_{\alpha} - 3r_{\cdot 3}\,\partial_\alpha\mathcal{A}^{\alpha\beta\iota}\,\partial_\theta\mathcal{A}_{\beta}{}^{\theta}{}_{\iota} + 6r_{\cdot 3}\,\partial^\iota\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\partial_\theta\mathcal{A}_{\beta}{}^{\theta}{}_{\iota} - 3r_{\cdot 3}\,\partial_\alpha\mathcal{A}^{\alpha\beta\iota}\,\partial_\theta\mathcal{A}_{\iota}{}^{\theta}{}_{\beta} + 6r_{\cdot 3}\,\partial^\iota\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\partial_\theta\mathcal{A}_{\iota}{}^{\theta}{}_{\beta} - 24r_{\cdot 3}\,\partial_\beta\mathcal{A}_{\iota\theta\alpha}\,\partial^\theta\mathcal{A}^{\alpha\beta\iota} + 6r_{\cdot 5}\,\partial_\iota\mathcal{A}_{\theta}{}^{\kappa}{}_{\kappa}\,\partial^\theta\mathcal{A}^{\alpha\iota}{}_{\alpha} - 6r_{\cdot 5}\,\partial_\theta\mathcal{A}_{\iota}{}^{\kappa}{}_{\kappa}\,\partial^\theta\mathcal{A}^{\alpha\iota}{}_{\alpha} + 4t_{\cdot 2}\,\mathcal{A}_{\iota\theta\alpha}\,\partial^\theta f^{\alpha\iota} + 2t_{\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} - 4t_{\cdot 2}\,\mathcal{A}_{\alpha\theta\iota}\,(\mathcal{A}^{\alpha\iota\theta} + \partial^\theta f^{\alpha\iota}) + 2t_{\cdot 2}\,\mathcal{A}_{\alpha\iota\theta}\,(\mathcal{A}^{\alpha\iota\theta} + 2\,\partial^\theta f^{\alpha\iota}) - 6r_{\cdot 5}\,\partial_\alpha\mathcal{A}^{\alpha\iota\theta}\,\partial_\kappa\mathcal{A}_{\iota}{}^{\kappa}{}_{\theta} + 12r_{\cdot 5}\,\partial^\theta\mathcal{A}^{\alpha\iota}{}_{\alpha}\,\partial_\kappa\mathcal{A}_{\iota}{}^{\kappa}{}_{\theta} + 6r_{\cdot 5}\,\partial_\alpha\mathcal{A}^{\alpha\iota\theta}\,\partial_\kappa\mathcal{A}_{\theta}{}^{\kappa}{}_{\iota} - 12r_{\cdot 5}\,\partial^\theta\mathcal{A}^{\alpha\iota}{}_{\alpha}\,\partial_\kappa\mathcal{A}_{\theta}{}^{\kappa}{}_{\iota})\Big)[t, x, y, z]\,dz\,dy\,dx\,dt$$

Wave operator

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

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

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

Saturated propagator

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

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

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

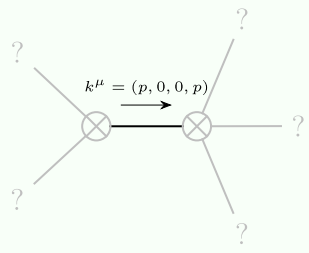
Source constraints

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

Massive spectrum

(No particles)

Massless spectrum



Massless particle

Pole residue:	$-\frac{2}{r_{\cdot 3}} + \frac{7}{2r_{\cdot 3}+r_{\cdot 5}} - \frac{24}{r_{\cdot 3}+2r_{\cdot 5}} > 0$
Polarisations:	2

Unitarity conditions

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