PSALTer results panel

$$\mathcal{S} == \iiint\!\!\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} - 3\,r_{\cdot 3}\,\partial_\beta \mathcal{A}_{\iota}{}^{\theta}{}_{\theta}\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha} - 3\,r_{\cdot 3}\,\partial_\iota \mathcal{A}_{\beta}{}^{\theta}{}_{\theta}\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha} - 3\,r_{\cdot 3}\,\partial_\alpha \mathcal{A}^{\alpha\beta\iota}\,\partial_\theta \mathcal{A}_{\beta}{}^{\theta}{}_{\iota} + 6\,r_{\cdot 3}\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\partial_\theta \mathcal{A}_{\beta}{}^{\theta}{}_{\iota} - 3\,r_{\cdot 3}\,\partial_\alpha \mathcal{A}^{\alpha\beta\iota}\,\partial_\theta \mathcal{A}_{\iota}{}^{\theta}{}_{\beta} + 6\,r_{\cdot 3}\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\partial_\theta \mathcal{A}_{\iota}{}^{\theta}{}_{\beta} - 24\,r_{\cdot 3}\,\partial_\beta \mathcal{A}_{\iota\theta\alpha}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} + 6\,r_{\cdot 5}\,\partial_\iota \mathcal{A}_{\theta}{}^{\kappa}{}_{\kappa}\,\partial^{\theta}\mathcal{A}^{\alpha\iota}{}_{\alpha} - 6\,r_{\cdot 5}\,\partial_\theta \mathcal{A}_{\iota}{}^{\kappa}{}_{\kappa}\,\partial^{\theta}\mathcal{A}^{\alpha\iota}{}_{\alpha} + 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}) - 6\,r_{\cdot 5}\,\partial_\alpha \mathcal{A}^{\alpha\iota\theta}\,\partial_\kappa \mathcal{A}_{\iota}{}^{\kappa}{}_{\theta} + 12\,r_{\cdot 5}\,\partial^{\theta}\mathcal{A}^{\alpha\iota}{}_{\alpha}\,\partial_\kappa \mathcal{A}_{\iota}{}^{\kappa}{}_{\theta} + 6\,r_{\cdot 5}\,\partial_\alpha \mathcal{A}^{\alpha\iota\theta}\,\partial_\kappa \mathcal{A}_{\theta}{}^{\kappa}{}_{\iota} - 12\,r_{\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	$t_{\cdot 2}$

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

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

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

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

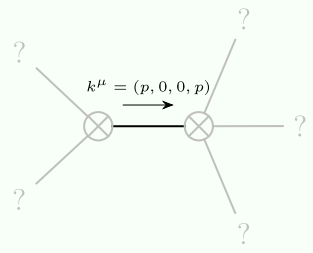
Source constraints

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
$i\,k\;1^+_{\cdot}\sigma^{\perp\,\alpha\beta} + 1^+_{\cdot}\tau^{\parallel\,\alpha\beta} == 0$	$\partial_\chi \partial^{\alpha} \tau\,(\Delta+\mathcal{K})^{\beta\chi} + \partial_\chi \partial^{\beta} \tau\,(\Delta+\mathcal{K})^{\chi\alpha} + \partial_\chi \partial^{\chi} \tau\,(\Delta+\mathcal{K})^{\alpha\beta} + 2\,\partial_\delta \partial_\chi \partial^{\alpha} \sigma^{\chi\beta\delta} + 2\,\partial_\delta \partial^{\delta} \partial_\chi \sigma^{\chi\alpha\beta} == \partial_\chi \partial^{\alpha} \tau\,(\Delta+\mathcal{K})^{\chi\beta} + \partial_\chi \partial^{\beta} \tau\,(\Delta+\mathcal{K})^{\alpha\chi} + \partial_\chi \partial^{\chi} \tau\,(\Delta+\mathcal{K})^{\beta\alpha} + 2\,\partial_\delta \partial_\chi \partial^{\beta} \sigma^{\chi\alpha\delta}$	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^{\delta} \sigma^{\alpha\beta\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:	$-\frac{2}{r_{\cdot 3}} + \frac{7}{2\,r_{\cdot 3}+r_{\cdot 5}} - \frac{24}{r_{\cdot 3}+2\,r_{\cdot 5}} > 0$
Polarisations:	2

Unitarity conditions

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