PSALTer results panel

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

Wave operator

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

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

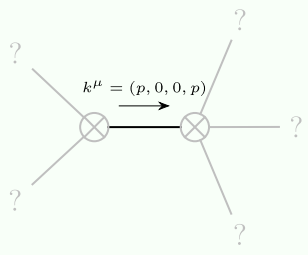
Source constraints

Spin-parity form	Covariant form	Multiplicities
$0^-_\cdot\sigma^\parallel == 0$	True	1
$0^+_\cdot\tau^\perp == 0$	$\partial_\beta\partial_\alpha\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == 0$	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
$0^+_\cdot\sigma^\parallel == 0$	$\partial_\beta\sigma^{\alpha}{}_{\alpha}{}^{\beta} == 0$	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
$1^+_\cdot\tau^{\parallel\,\alpha\beta} == 0$	$\partial_\chi\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\beta\chi} + \partial_\chi\partial^\beta\tau\,(\Delta+\mathcal{K})^{\chi\alpha} + \partial_\chi\partial^\chi\tau\,(\Delta+\mathcal{K})^{\alpha\beta} == \partial_\chi\partial^\alpha\tau\,(\Delta+\mathcal{K})^{\chi\beta} + \partial_\chi\partial^\beta\tau\,(\Delta+\mathcal{K})^{\alpha\chi} + \partial_\chi\partial^\chi\tau\,(\Delta+\mathcal{K})^{\beta\alpha}$	3
$1^+_\cdot\sigma^{\perp\,\alpha\beta} == 0$	$\partial_\delta\partial_\chi\partial^\alpha\sigma^{\chi\beta\delta} + \partial_\delta\partial^\delta\partial_\chi\sigma^{\chi\alpha\beta} == \partial_\delta\partial_\chi\partial^\beta\sigma^{\chi\alpha\delta}$	3
$2^-_\cdot\sigma^{\parallel\,\alpha\beta\chi} == 0$	$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^{\alpha\beta\delta} + 2\,\partial_\epsilon\partial^\epsilon\partial_\delta\partial^\alpha\sigma^{\delta\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^\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:		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

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