PSALTer results panel

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

Wave operator

	$\overset{0^+}{\cdot}\mathcal{A}^{\parallel}$	$\overset{0^+}{\cdot}f^{\parallel}$	$\overset{0^+}{\cdot}f^{\perp}$	$\overset{0^-}{\cdot}\mathcal{A}^{\parallel}$
$\overset{0^+}{\cdot}\mathcal{A}^{\parallel}\,\dagger$	$-t_{\cdot 1}$	$i\sqrt{2}\,k\,t_{\cdot 1}$	0	0
$\overset{0^+}{\cdot}f^{\parallel}\,\dagger$	$-i\sqrt{2}\,k\,t_{\cdot 1}$	$-2k^2 t_{\cdot 1}$	0	0
$\overset{0^+}{\cdot}f^{\perp}\,\dagger$	0	0	0	0
$\overset{0^-}{\cdot}\mathcal{A}^{\parallel}\,\dagger$	0	0	0	$-t_{\cdot 1}$

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

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

Saturated propagator

	$\overset{0^+}{\cdot}\sigma^{\parallel}$	$\overset{0^+}{\cdot}\tau^{\parallel}$	$\overset{0^+}{\cdot}\tau^{\perp}$	$\overset{0^-}{\cdot}\sigma^{\parallel}$
$\overset{0^+}{\cdot}\sigma^{\parallel}\,\dagger$	$-\frac{1}{\left(1+2k^2\right)^2 t_{\cdot 1}}$	$\frac{i\sqrt{2}\,k}{\left(1+2k^2\right)^2 t_{\cdot 1}}$	0	0
$\overset{0^+}{\cdot}\tau^{\parallel}\,\dagger$	$-\frac{i\sqrt{2}\,k}{\left(1+2k^2\right)^2 t_{\cdot 1}}$	$-\frac{2k^2}{\left(1+2k^2\right)^2 t_{\cdot 1}}$	0	0
$\overset{0^+}{\cdot}\tau^{\perp}\,\dagger$	0	0	0	0
$\overset{0^-}{\cdot}\sigma^{\parallel}\,\dagger$	0	0	0	$-\frac{1}{t_{\cdot 1}}$

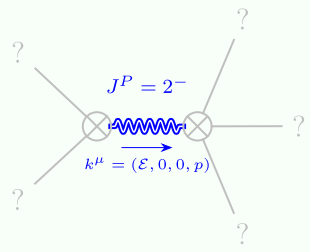
	$\overset{1^+}{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$\overset{1^+}{\cdot}\sigma^{\perp}{}_{\alpha\beta}$	$\overset{1^+}{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$\overset{1^-}{\cdot}\sigma^{\parallel}{}_{\alpha}$	$\overset{1^-}{\cdot}\sigma^{\perp}{}_{\alpha}$	$\overset{1^-}{\cdot}\tau^{\parallel}{}_{\alpha}$	$\overset{1^-}{\cdot}\tau^{\perp}{}_{\alpha}$
$\overset{1^+}{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	0	$-\frac{\sqrt{2}}{t_{\cdot 1}+k^2 t_{\cdot 1}}$	$-\frac{i\sqrt{2}\,k}{t_{\cdot 1}+k^2 t_{\cdot 1}}$	0	0	0	0
$\overset{1^+}{\cdot}\sigma^{\perp}\,\dagger^{\alpha\beta}$	$-\frac{\sqrt{2}}{t_{\cdot 1}+k^2 t_{\cdot 1}}$	$\frac{-2k^2\left(2r_{\cdot 1}+r_{\cdot 5}\right)+t_{\cdot 1}}{\left(1+k^2\right)^2 t_{\cdot 1}^2}$	$\frac{-2ik^3\left(2r_{\cdot 1}+r_{\cdot 5}\right)+ikt_{\cdot 1}}{\left(1+k^2\right)^2 t_{\cdot 1}^2}$	0	0	0	0
$\overset{1^+}{\cdot}\tau^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{i\sqrt{2}\,k}{t_{\cdot 1}+k^2 t_{\cdot 1}}$	$\frac{i\left(2k^3\left(2r_{\cdot 1}+r_{\cdot 5}\right)-kt_{\cdot 1}\right)}{\left(1+k^2\right)^2 t_{\cdot 1}^2}$	$\frac{-2k^4\left(2r_{\cdot 1}+r_{\cdot 5}\right)+k^2 t_{\cdot 1}}{\left(1+k^2\right)^2 t_{\cdot 1}^2}$	0	0	0	0
$\overset{1^-}{\cdot}\sigma^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	$\frac{\sqrt{2}}{t_{\cdot 1}+2k^2 t_{\cdot 1}}$	0	$\frac{2ik}{t_{\cdot 1}+2k^2 t_{\cdot 1}}$
$\overset{1^-}{\cdot}\sigma^{\perp}\,\dagger^{\alpha}$	0	0	0	$\frac{\sqrt{2}}{t_{\cdot 1}+2k^2 t_{\cdot 1}}$	$\frac{-2k^2\left(r_{\cdot 1}+r_{\cdot 5}\right)+t_{\cdot 1}}{\left(t_{\cdot 1}+2k^2 t_{\cdot 1}\right)^2}$	0	$-\frac{i\sqrt{2}\,k\left(2k^2\left(r_{\cdot 1}+r_{\cdot 5}\right)-t_{\cdot 1}\right)}{\left(t_{\cdot 1}+2k^2 t_{\cdot 1}\right)^2}$
$\overset{1^-}{\cdot}\tau^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$\overset{1^-}{\cdot}\tau^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{2ik}{t_{\cdot 1}+2k^2 t_{\cdot 1}}$	$\frac{i\sqrt{2}\,k\left(2k^2\left(r_{\cdot 1}+r_{\cdot 5}\right)-t_{\cdot 1}\right)}{\left(t_{\cdot 1}+2k^2 t_{\cdot 1}\right)^2}$	0	$\frac{-4k^4\left(r_{\cdot 1}+r_{\cdot 5}\right)+2k^2 t_{\cdot 1}}{\left(t_{\cdot 1}+2k^2 t_{\cdot 1}\right)^2}$

	$\overset{2^+}{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$\overset{2^+}{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$\overset{2^-}{\cdot}\sigma^{\parallel}{}_{\alpha\beta\chi}$
$\overset{2^+}{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{2}{\left(1+2k^2\right)^2 t_{\cdot 1}}$	$-\frac{2i\sqrt{2}\,k}{\left(1+2k^2\right)^2 t_{\cdot 1}}$	0
$\overset{2^+}{\cdot}\tau^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{2i\sqrt{2}\,k}{\left(1+2k^2\right)^2 t_{\cdot 1}}$	$\frac{4k^2}{\left(1+2k^2\right)^2 t_{\cdot 1}}$	0
$\overset{2^-}{\cdot}\sigma^{\parallel}\,\dagger^{\alpha\beta\chi}$	0	0	$\frac{2}{2k^2 r_{\cdot 1}+t_{\cdot 1}}$

Source constraints

Spin-parity form	Covariant form	Multiplicities
$\overset{0^+}{\cdot}\tau^{\perp} == 0$	$\partial_\beta\partial_\alpha \tau_{(\Delta+\mathcal{K})}{}^{\alpha\beta} == 0$	1
$-2\,i\,k\ \overset{0^+}{\cdot}\sigma^{\parallel} + \overset{0^+}{\cdot}\tau^{\parallel} == 0$	$\partial_\beta\partial_\alpha \tau_{(\Delta+\mathcal{K})}{}^{\alpha\beta} == \partial_\beta\partial^\beta \tau_{(\Delta+\mathcal{K})}{}^{\alpha}{}_{\alpha} + 2\,\partial_\chi\partial^\chi\partial_\beta \sigma^{\alpha}{}_{\alpha}{}^{\beta}$	1
$2\,i\,k\ \overset{1^-}{\cdot}\sigma^{\perp}{}^{\alpha} + \overset{1^-}{\cdot}\tau^{\perp}{}^{\alpha} == 0$	$\partial_\chi\partial_\beta\partial^\alpha \tau_{(\Delta+\mathcal{K})}{}^{\beta\chi} == \partial_\chi\partial^\chi\partial_\beta \tau_{(\Delta+\mathcal{K})}{}^{\alpha\beta} + 2\,\partial_\delta\partial^\delta\partial_\chi\partial_\beta \sigma^{\beta\alpha\chi}$	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
$i\,k\ \overset{1^+}{\cdot}\sigma^{\perp}{}^{\alpha\beta} + \overset{1^+}{\cdot}\tau^{\parallel}{}^{\alpha\beta} == 0$	$\partial_\chi\partial^\alpha \tau_{(\Delta+\mathcal{K})}{}^{\beta\chi} + \partial_\chi\partial^\beta \tau_{(\Delta+\mathcal{K})}{}^{\chi\alpha} + \partial_\chi\partial^\chi \tau_{(\Delta+\mathcal{K})}{}^{\alpha\beta} + 2\,\partial_\delta\partial_\chi\partial^\alpha \sigma^{\chi\beta\delta} + 2\,\partial_\delta\partial^\delta\partial_\chi \sigma^{\chi\alpha\beta} == \partial_\chi\partial^\alpha \tau_{(\Delta+\mathcal{K})}{}^{\chi\beta} + \partial_\chi\partial^\beta \tau_{(\Delta+\mathcal{K})}{}^{\alpha\chi} + \partial_\chi\partial^\chi \tau_{(\Delta+\mathcal{K})}{}^{\beta\alpha} + 2\,\partial_\delta\partial_\chi\partial^\beta \sigma^{\chi\alpha\delta}$	3
$-2\,i\,k\ \overset{2^+}{\cdot}\sigma^{\parallel}{}^{\alpha\beta} + \overset{2^+}{\cdot}\tau^{\parallel}{}^{\alpha\beta} == 0$	$-i\Big(4\,\partial_\delta\partial_\chi\partial^\beta\partial^\alpha \tau_{(\Delta+\mathcal{K})}{}^{\chi\delta} + 2\,\partial_\delta\partial^\delta\partial^\beta\partial^\alpha \tau_{(\Delta+\mathcal{K})}{}^{\chi}{}_{\chi} - 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\alpha \tau_{(\Delta+\mathcal{K})}{}^{\beta\chi} - 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\beta \tau_{(\Delta+\mathcal{K})}{}^{\chi\alpha} - 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\beta \tau_{(\Delta+\mathcal{K})}{}^{\alpha\chi} - 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\chi \tau_{(\Delta+\mathcal{K})}{}^{\alpha\beta} + 3\,\partial_\delta\partial^\delta\partial_\chi\partial^\chi \tau_{(\Delta+\mathcal{K})}{}^{\beta\alpha} + 4\,i\ k^\chi\ \partial_\epsilon\partial_\chi\partial^\beta\partial^\alpha \sigma^{\delta}{}_{\delta}{}^{\epsilon} - 6\,i\ k^\chi\ \partial_\epsilon\partial_\delta\partial_\chi\partial^\alpha \sigma^{\delta\beta\epsilon} - 6\,i\ k^\chi\ \partial_\epsilon\partial_\delta\partial_\chi\partial^\beta \sigma^{\delta\alpha\epsilon} + 6\,i\ k^\chi\ \partial_\epsilon\partial^\epsilon\partial_\delta\partial_\chi \sigma^{\alpha\beta\delta} + 6\,i\ k^\chi\ \partial_\epsilon\partial^\epsilon\partial_\delta\partial_\chi \sigma^{\beta\alpha\delta} + 2\ \eta^{\alpha\beta}\ \partial_\epsilon\partial^\epsilon\partial_\delta\partial^\delta \tau_{(\Delta+\mathcal{K})}{}^{\chi\delta} - 2\ \eta^{\alpha\beta}\ \partial_\epsilon\partial^\epsilon\partial_\delta\partial^\delta \tau_{(\Delta+\mathcal{K})}{}^{\chi}{}_{\chi} - 4\,i\ \eta^{\alpha\beta}\ k^\chi\ \partial_\phi\partial^\phi\partial_\epsilon\partial_\chi \sigma^{\delta}{}_{\delta}{}^{\epsilon}\Big) == 0$	5
Total expected gauge generators:		16

Massive spectrum



Massive particle

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

Massless spectrum

(No particles)

Unitarity conditions

$r_{\cdot 1} < 0\ \&\&\ t_{\cdot 1} > 0$