PSALTer results panel

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$$\int\int\int\int\left(\frac{1}{6}\left(-4\,t_{.3}\,\mathcal{A}^{\alpha\prime}{}_{\alpha}\,\mathcal{A}_{\prime}{}^{\theta}{}_{\theta}+6\,\mathcal{A}^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi}+6\,f^{\alpha\beta}\,\tau\,(\Delta+\mathcal{K})_{\alpha\beta}+8\,t_{.3}\,\mathcal{A}_{\alpha}{}^{\theta}{}_{\theta}\,\partial_{\prime}f^{\alpha\prime}-3\,r_{.3}\,\partial_{\beta}\mathcal{A}_{\prime}{}^{\theta}{}_{\theta}\,\partial^{\prime}\mathcal{A}^{\alpha\beta}{}_{\alpha}-3\,r_{.3}\,\partial_{\prime}\mathcal{A}_{\beta}{}^{\theta}{}_{\theta}\,\partial^{\prime}\mathcal{A}^{\alpha\beta}{}_{\alpha}-8\,t_{.3}\,\mathcal{A}_{\prime}{}^{\theta}{}_{\theta}\,\partial^{\prime}f^{\alpha}{}_{\alpha}+4\,t_{.3}\,\partial_{\prime}f^{\theta}{}_{\theta}\right.\right.$$
$$\partial^{\prime}f^{\alpha}{}_{\alpha}-3\,r_{.3}\,\partial_{\alpha}\mathcal{A}^{\alpha\beta\prime}\,\partial_{\theta}\mathcal{A}_{\beta}{}^{\theta}{}_{\prime}+6\,r_{.3}\,\partial^{\prime}\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\partial_{\theta}\mathcal{A}_{\beta}{}^{\theta}{}_{\prime}-3\,r_{.3}\,\partial_{\alpha}\mathcal{A}^{\alpha\beta\prime}\,\partial_{\theta}\mathcal{A}_{\prime}{}^{\theta}{}_{\beta}+6\,r_{.3}\,\partial^{\prime}\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\partial_{\theta}\mathcal{A}_{\prime}{}^{\theta}{}_{\beta}+4\,t_{.3}\,\partial_{\prime}f^{\alpha\prime}\,\partial_{\theta}f_{\alpha}{}^{\theta}-$$
$$8\,t_{.3}\,\partial^{\prime}f^{\alpha}{}_{\alpha}\,\partial_{\theta}f_{\prime}{}^{\theta}+8\,r_{.2}\,\partial_{\beta}\mathcal{A}_{\alpha\prime\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}-4\,r_{.2}\,\partial_{\beta}\mathcal{A}_{\alpha\theta\prime}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}+4\,r_{.2}\,\partial_{\beta}\mathcal{A}_{\prime\theta\alpha}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}-24\,r_{.3}\,\partial_{\beta}\mathcal{A}_{\prime\theta\alpha}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}-$$
$$2\,r_{.2}\,\partial_{\prime}\mathcal{A}_{\alpha\beta\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}+2\,r_{.2}\,\partial_{\theta}\mathcal{A}_{\alpha\beta\prime}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}-4\,r_{.2}\,\partial_{\theta}\mathcal{A}_{\alpha\prime\beta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\prime}+6\,r_{.5}\,\partial_{\prime}\mathcal{A}_{\theta}{}^{\kappa}{}_{\kappa}\,\partial^{\theta}\mathcal{A}^{\alpha\prime}{}_{\alpha}-6\,r_{.5}\,\partial_{\theta}\mathcal{A}_{\prime}{}^{\kappa}{}_{\kappa}\,\partial^{\theta}\mathcal{A}^{\alpha\prime}{}_{\alpha}-$$
$$\left.\left.6\,r_{.5}\,\partial_{\alpha}\mathcal{A}^{\alpha\prime\theta}\,\partial_{\kappa}\mathcal{A}_{\prime}{}^{\kappa}{}_{\theta}+12\,r_{.5}\,\partial^{\theta}\mathcal{A}^{\alpha\prime}{}_{\alpha}\,\partial_{\kappa}\mathcal{A}_{\prime}{}^{\kappa}{}_{\theta}+6\,r_{.5}\,\partial_{\alpha}\mathcal{A}^{\alpha\prime\theta}\,\partial_{\kappa}\mathcal{A}_{\theta}{}^{\kappa}{}_{\prime}-12\,r_{.5}\,\partial^{\theta}\mathcal{A}^{\alpha\prime}{}_{\alpha}\,\partial_{\kappa}\mathcal{A}_{\theta}{}^{\kappa}{}_{\prime}\right)\right)[t,\,x,\,y,\,z]\,dz\,dy\,dx\,dt$$

Wave operator

	$\overset{0}{\cdot}{}^{+}\mathcal{A}^{\parallel}$	$\overset{0}{\cdot}{}^{+}f^{\parallel}$	$\overset{0}{\cdot}{}^{+}f^{\perp}$	$\overset{0}{\cdot}{}^{-}\mathcal{A}^{\parallel}$
$\overset{0}{\cdot}{}^{+}\mathcal{A}^{\parallel}\,\dagger$	$t_{.3}$	$-i\sqrt{2}\,k\,t_{.3}$	0	0
$\overset{0}{\cdot}{}^{+}f^{\parallel}\,\dagger$	$i\sqrt{2}\,k\,t_{.3}$	$2\,k^2\,t_{.3}$	0	0
$\overset{0}{\cdot}{}^{+}f^{\perp}\,\dagger$	0	0	0	0
$\overset{0}{\cdot}{}^{-}\mathcal{A}^{\parallel}\,\dagger$	0	0	0	$k^2\,r_{.2}$

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

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

	$\overset{0}{\cdot}{}^{+}\sigma^{\parallel}$	$\overset{0}{\cdot}{}^{+}\tau^{\parallel}$	$\overset{0}{\cdot}{}^{+}\tau^{\perp}$	$\overset{0}{\cdot}{}^{-}\sigma^{\parallel}$
$\overset{0}{\cdot}{}^{+}\sigma^{\parallel}\,\dagger$	$\frac{1}{\left(1+2\,k^2\right)^2\,t_{.3}}$	$-\frac{i\,\sqrt{2}\,k}{\left(1+2\,k^2\right)^2\,t_{.3}}$	0	0
$\overset{0}{\cdot}{}^{+}\tau^{\parallel}\,\dagger$	$\frac{i\,\sqrt{2}\,k}{\left(1+2\,k^2\right)^2\,t_{.3}}$	$\frac{2\,k^2}{\left(1+2\,k^2\right)^2\,t_{.3}}$	0	0
$\overset{0}{\cdot}{}^{+}\tau^{\perp}\,\dagger$	0	0	0	0
$\overset{0}{\cdot}{}^{-}\sigma^{\parallel}\,\dagger$	0	0	0	$\frac{1}{k^2\,r_{.2}}$

	$\overset{1}{\cdot}{}^{+}\sigma^{\parallel}{}_{\alpha\beta}$	$\overset{1}{\cdot}{}^{+}\sigma^{\perp}{}_{\alpha\beta}$	$\overset{1}{\cdot}{}^{+}\tau^{\parallel}{}_{\alpha\beta}$	$\overset{1}{\cdot}{}^{-}\sigma^{\parallel}{}_{\alpha}$	$\overset{1}{\cdot}{}^{-}\sigma^{\perp}{}_{\alpha}$	$\overset{1}{\cdot}{}^{-}\tau^{\parallel}{}_{\alpha}$	$\overset{1}{\cdot}{}^{-}\tau^{\perp}{}_{\alpha}$
$\overset{1}{\cdot}{}^{+}\sigma^{\parallel}\,\dagger^{\alpha\beta}$	$\frac{1}{k^2\left(2\,r_{.3}+r_{.5}\right)}$	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	$\frac{2}{k^2\left(r_{.3}+2\,r_{.5}\right)}$	$\frac{2\,\sqrt{2}}{k^2\left(1+2\,k^2\right)\left(r_{.3}+2\,r_{.5}\right)}$	0	$\frac{4\,i}{k\left(1+2\,k^2\right)\left(r_{.3}+2\,r_{.5}\right)}$
$\overset{1}{\cdot}{}^{-}\sigma^{\perp}\,\dagger^{\alpha}$	0	0	0	$\frac{2\,\sqrt{2}}{k^2\left(1+2\,k^2\right)\left(r_{.3}+2\,r_{.5}\right)}$	$\frac{3\,k^2\left(r_{.3}+2\,r_{.5}\right)+4\,t_{.3}}{\left(k+2\,k^3\right)^2\left(r_{.3}+2\,r_{.5}\right)t_{.3}}$	0	$\frac{i\,\sqrt{2}\,\left(3\,k^2\left(r_{.3}+2\,r_{.5}\right)+4\,t_{.3}\right)}{k\left(1+2\,k^2\right)^2\left(r_{.3}+2\,r_{.5}\right)t_{.3}}$
$\overset{1}{\cdot}{}^{-}\tau^{\parallel}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$\overset{1}{\cdot}{}^{-}\tau^{\perp}\,\dagger^{\alpha}$	0	0	0	$-\frac{4\,i}{k\left(1+2\,k^2\right)\left(r_{.3}+2\,r_{.5}\right)}$	$-\frac{i\,\sqrt{2}\,\left(3\,k^2\left(r_{.3}+2\,r_{.5}\right)+4\,t_{.3}\right)}{k\left(1+2\,k^2\right)^2\left(r_{.3}+2\,r_{.5}\right)t_{.3}}$	0	$\frac{6\,k^2\left(r_{.3}+2\,r_{.5}\right)+8\,t_{.3}}{\left(1+2\,k^2\right)^2\left(r_{.3}+2\,r_{.5}\right)t_{.3}}$

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

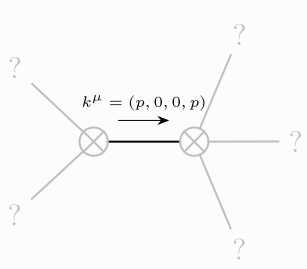
Source constraints

Spin-parity form	Covariant form	Multiplicities
$\overset{0}{\cdot}{}^{+}\tau^{\perp}$ == 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	$\partial_{\beta}\partial_{\alpha}\tau\,(\Delta+\mathcal{K})^{\alpha\beta}$ == $\partial_{\beta}\partial^{\beta}\tau\,(\Delta+\mathcal{K})^{\alpha}{}_{\alpha}+2\,\partial_{\chi}\partial^{\chi}\partial_{\beta}\sigma^{\alpha\ \beta}_{\ \alpha}$	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
$\overset{1}{\cdot}{}^{+}\tau^{\parallel}{}^{\alpha\beta}$ == 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	$3\,\partial_{\epsilon}\partial_{\delta}\partial^{\chi}\partial^{\alpha}\sigma^{\delta\beta\epsilon}+3\,\partial_{\epsilon}\partial^{\epsilon}\partial^{\chi}\partial^{\alpha}\sigma^{\delta\beta}{}_{\delta}+2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\beta}\sigma^{\alpha\chi\delta}+4\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\beta}\sigma^{\chi\alpha\delta}+2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\beta}\sigma^{\delta\alpha\chi}+2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\chi}\sigma^{\beta\alpha\delta}+$ $4\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\chi}\sigma^{\delta\alpha\beta}+2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\alpha\beta\chi}+3\,\eta^{\beta\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\alpha}\sigma^{\delta}{}_{\delta}{}^{\epsilon}+3\,\eta^{\alpha\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\delta}\sigma^{\delta\beta\epsilon}+3\,\eta^{\beta\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\epsilon}\sigma^{\delta\alpha}{}_{\delta}$ == $3\,\partial_{\epsilon}\partial_{\delta}\partial^{\chi}\partial^{\beta}\sigma^{\delta\alpha\epsilon}+3\,\partial_{\epsilon}\partial^{\epsilon}\partial^{\chi}\partial^{\beta}\sigma^{\delta\alpha}{}_{\delta}+2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\beta\chi\delta}+4\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\chi\beta\delta}+2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\beta\chi\alpha}+2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\chi\alpha\beta}+$ $2\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\beta\alpha\chi}+4\,\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\chi\alpha\beta}+3\,\eta^{\alpha\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\beta}\sigma^{\delta}{}_{\delta}{}^{\epsilon}+3\,\eta^{\beta\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\delta}\sigma^{\delta\alpha\epsilon}+3\,\eta^{\alpha\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial^{\epsilon}\sigma^{\delta\beta}{}_{\delta}$	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:			24

Massive spectrum

(There are no massive particles)

Massless spectrum



Massless particle

Pole residue:	$-\frac{26}{r_{.3}}+\frac{39}{2\,r_{.3}+r_{.5}}-\frac{216}{r_{.3}+2\,r_{.5}}>0$
Polarisations:	2

Gauge symmetries

(Not yet implemented in PSALTer)

Unitarity conditions

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

Validity assumptions

(Not yet implemented in PSALTer)