PSALTer results panel

$$S = \iiiint \frac{1}{6}\Big(6\,\mathcal{A}^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi} + 6\,f^{\alpha\beta}{}_{\tau}(\Delta+\mathcal{K})_{\alpha\beta} - 18\,r_{3}\,\partial_{\beta}\mathcal{A}_{\iota}{}^{\theta}{}_{\theta}\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha} - 6\,r_{3}\,\partial_{\iota}\mathcal{A}_{\iota}{}^{\theta}{}_{\theta}\,\partial^{\iota}\mathcal{A}^{\alpha\beta} -$$
$$6\,r_{3}\,\partial_{\alpha}\mathcal{A}^{\alpha\beta\iota}\,\partial_{\theta}\mathcal{A}_{\beta}{}^{\theta}{}_{\iota} + 12\,r_{3}\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\partial_{\theta}\mathcal{A}_{\beta}{}^{\theta}{}_{\iota} - 18\,r_{3}\,\partial_{\alpha}\mathcal{A}^{\alpha\beta\iota}\,\partial_{\theta}\mathcal{A}_{\iota}{}^{\theta}{}_{\beta} + 36\,r_{3}\,\partial^{\iota}\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\partial_{\theta}\mathcal{A}_{\iota}{}^{\theta}{}_{\beta} +$$
$$8\,r_{2}\,\partial_{\beta}\mathcal{A}_{\alpha\iota\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} - 4\,r_{2}\,\partial_{\beta}\mathcal{A}_{\alpha\theta\iota}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} + 4\,r_{2}\,\partial_{\beta}\mathcal{A}_{\iota\theta\alpha}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} - 24\,r_{3}\,\partial_{\beta}\mathcal{A}_{\iota\theta\alpha}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} -$$
$$2\,r_{2}\,\partial_{\iota}\mathcal{A}_{\alpha\beta\theta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} + 2\,r_{2}\,\partial_{\theta}\mathcal{A}_{\alpha\beta\iota}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} - 4\,r_{2}\,\partial_{\theta}\mathcal{A}_{\alpha\iota\beta}\,\partial^{\theta}\mathcal{A}^{\alpha\beta\iota} + 4\,t_{2}\,\mathcal{A}_{\iota\theta\alpha}\,\partial^{\theta}f^{\alpha\iota} +$$
$$2\,t_{2}\,\partial_{\alpha}f_{\iota\theta}\,\partial^{\theta}f^{\alpha\iota} - t_{2}\,\partial_{\alpha}f_{\theta\iota}\,\partial^{\theta}f^{\alpha\iota} - t_{2}\,\partial_{\iota}f_{\alpha\theta}\,\partial^{\theta}f^{\alpha\iota} + t_{2}\,\partial_{\theta}f_{\alpha\iota}\,\partial^{\theta}f^{\alpha\iota} - t_{2}\,\partial_{\theta}f_{\iota\alpha}\,\partial^{\theta}f^{\alpha\iota} -$$
$$4\,t_{2}\,\mathcal{A}_{\alpha\theta\iota}\left(\mathcal{A}^{\alpha\iota\theta} + \partial^{\theta}f^{\alpha\iota}\right) + 2\,t_{2}\,\mathcal{A}_{\alpha\iota\theta}\left(\mathcal{A}^{\alpha\iota\theta} + 2\,\partial^{\theta}f^{\alpha\iota}\right)\Big)[t, x, y, z]\,dz\,dy\,dx\,dt$$

Wave operator

Saturated propagator

Source constraints

Spin-parity form	Covariant form	Multiplicities
$\overset{0^+}{}\tau^{\perp} == 0$	$\partial_{\beta}\partial_{\alpha\tau}(\Delta+\mathcal{K})^{\alpha\beta} == 0$	1
$\overset{0^+}{}f^{\parallel} == 0$	$\partial_{\beta}\partial_{\alpha\tau}(\Delta+\mathcal{K})^{\alpha\beta} = \partial_{\beta}\partial^{\beta}{}_{\tau}(\Delta+\mathcal{K})_{\alpha}{}^{\alpha}$	1
$\overset{1^+}{}\tau^{\perp\,\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}{}_{\tau}(\Delta+\mathcal{K})^{\beta\chi} = \partial_{\chi}\partial^{\chi}\partial_{\beta\tau}(\Delta+\mathcal{K})^{\alpha\beta}$	3
$\overset{1^+}{}f^{\parallel\,\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}{}_{\tau}(\Delta+\mathcal{K})^{\beta\chi} = \partial_{\chi}\partial^{\chi}\partial_{\beta\tau}(\Delta+\mathcal{K})^{\beta\alpha}$	3
$\overset{1^-}{}\sigma^{\perp\,\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\sigma^{\beta\alpha\chi} == 0$	3
$i\,k\;\overset{1^-}{}\sigma^{\perp\,\alpha\beta} + \overset{1^-}{}\tau^{\parallel\,\alpha\beta} == 0$	$\partial_{\chi}\partial^{\alpha}{}_{\tau}(\Delta+\mathcal{K})^{\beta\chi} + \partial_{\chi}\partial^{\beta}{}_{\tau}(\Delta+\mathcal{K})^{\chi\alpha} + \partial_{\chi}\partial^{\chi}{}_{\tau}(\Delta+\mathcal{K})_{\tau}{}^{\alpha\beta} + 2\,\partial_{\delta}\partial_{\chi}\sigma^{\chi\beta\delta} + 2\,\partial_{\delta}\partial_{\chi}\sigma^{\chi\alpha\beta} ==$	3
	$\partial_{\chi}\partial^{\alpha}{}_{\tau}(\Delta+\mathcal{K})^{\chi\beta} + \partial_{\chi}\partial^{\beta}{}_{\tau}(\Delta+\mathcal{K})^{\alpha\chi} + \partial_{\chi}\partial^{\chi}{}_{\tau}(\Delta+\mathcal{K})^{\beta\alpha} + 2\,\partial_{\delta}\partial_{\chi}\sigma^{\chi\alpha\delta}$	
$\overset{2^-}{}\sigma^{\parallel\,\alpha\beta\chi} == 0$	$3\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\delta\beta\epsilon} + 3\,\partial_{\epsilon}\partial_{\chi}\partial^{\alpha}\sigma^{\delta\beta}{}_{\delta} + 2\,\partial_{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\alpha\chi\delta} + 4\,\partial_{\epsilon}\partial_{\delta}\partial^{\beta}\sigma^{\chi\alpha\delta} +$	5
	$2\,\partial_{\epsilon}\partial_{\delta}\partial^{\beta}\sigma^{\delta\alpha\chi} + 2\,\partial_{\epsilon}\partial_{\delta}\partial^{\chi}\sigma^{\beta\alpha\delta} + 4\,\partial_{\epsilon}\partial_{\delta}\partial^{\chi}\sigma^{\delta\alpha\beta} + 2\,\partial_{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\alpha\beta\chi} +$	
	$3\,\eta^{\beta\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\sigma^{\alpha\epsilon}{}_{\delta} + 3\,\eta^{\alpha\chi}\,\partial_{\phi}\partial_{\epsilon}\partial_{\delta}\sigma^{\delta\beta\epsilon} + 3\,\eta^{\beta\chi}\,\partial_{\phi}\partial_{\epsilon}\partial^{\phi}\sigma^{\alpha\epsilon}{}_{\delta} ==$	
	$3\,\partial_{\epsilon}\partial_{\delta}\partial^{\chi}\sigma^{\delta\alpha\epsilon} + 3\,\partial_{\epsilon}\partial_{\delta}\partial^{\chi}\sigma^{\alpha\delta}{}_{\alpha} + 2\,\partial_{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\beta\chi\delta} + 4\,\partial_{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\chi\beta\delta} +$	
	$2\,\partial_{\epsilon}\partial_{\delta}\partial^{\alpha}\sigma^{\delta\beta\chi} + 2\,\partial_{\epsilon}\partial_{\delta}\partial^{\chi}\sigma^{\alpha\beta\delta} + 2\,\partial_{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\beta\alpha\chi} + 4\,\partial_{\epsilon}\partial_{\delta}\partial^{\delta}\sigma^{\chi\alpha\beta} +$	
	$3\,\eta^{\alpha\chi}\,\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\sigma^{\beta\epsilon}{}_{\delta} + 3\,\eta^{\beta\chi}\,\partial_{\phi}\partial_{\epsilon}\partial_{\delta}\sigma^{\delta\alpha\epsilon} + 3\,\eta^{\alpha\chi}\,\partial_{\phi}\partial_{\epsilon}\partial^{\phi}\sigma^{\beta\epsilon}{}_{\delta}$	
$\overset{2^+}{}\tau^{\parallel\,\alpha\beta} == 0$	$4\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\partial^{\alpha}{}_{\tau}(\Delta+\mathcal{K})^{\chi\delta} + 2\,\partial_{\delta}\partial^{\delta}\partial^{\beta}{}_{\tau}(\Delta+\mathcal{K})^{\alpha}{}_{\chi} +$	5
	$3\,\partial_{\delta}\partial_{\chi}\partial^{\chi}{}_{\tau}(\Delta+\mathcal{K})^{\alpha\beta} + 3\,\partial_{\delta}\partial_{\chi}\partial^{\chi}{}_{\tau}(\Delta+\mathcal{K})^{\beta\alpha} + 2\,\eta^{\alpha\beta}\,\partial_{\delta}\partial^{\epsilon}\partial_{\delta}\partial_{\chi\tau}(\Delta+\mathcal{K})^{\chi\delta} ==$	
	$3\,\partial_{\delta}\partial_{\chi}\partial^{\chi}{}_{\tau}(\Delta+\mathcal{K})^{\beta\chi} + 3\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}{}_{\tau}(\Delta+\mathcal{K})^{\chi\beta} + 3\,\partial_{\delta}\partial_{\chi}\partial^{\beta}{}_{\tau}(\Delta+\mathcal{K})^{\alpha\chi} +$	
	$3\,\partial_{\delta}\partial^{\delta}\partial^{\beta}{}_{\tau}(\Delta+\mathcal{K})^{\chi\alpha} + 2\,\eta^{\alpha\beta}\,\partial_{\delta}\partial^{\epsilon}\partial_{\delta}\partial^{\chi}{}_{\tau}(\Delta+\mathcal{K})^{\chi}{}_{\chi}$	
$\overset{2^+}{}\sigma^{\parallel\,\alpha\beta} == 0$	$3\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta} + 3\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\alpha\delta} + 2\,\eta^{\alpha\beta}\,\partial_{\delta}\partial^{\epsilon}\partial_{\delta}\sigma^{\chi}{}_{\chi}{}^{\delta} ==$	5
	$2\,\partial_{\delta}\partial^{\beta}\partial_{\chi}\sigma^{\chi}{}_{\chi} + 3\left(\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\beta\chi\delta} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\beta\alpha\chi}\right)$	
Total expected gauge generators:		29

Massive spectrum

Massive particle	
Pole residue:	$-\dfrac{1}{r_{2}} > 0$
Square mass:	$-\dfrac{t_{2}}{r_{2}} > 0$
Spin:	0
Parity:	Odd

Massless spectrum

(There are no massless particles)

Gauge symmetries

(Not yet implemented in PSALTer)

Unitarity conditions

$r_{2} < 0 \,\&\&\, t_{2} > 0$

Validity assumptions

(Not yet implemented in PSALTer)