PSALTer results panel

$$\mathcal{S}==\iiiint\Big(\mathcal{A}^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi}+f^{\alpha\beta}\,\tau(\Delta+\mathcal{K})_{\alpha\beta}-\frac{1}{2}\alpha_{0}\big(\mathcal{A}_{\alpha\chi\beta}\,\mathcal{A}^{\alpha\beta\chi}+\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}+2f^{\alpha\beta}\,\partial_{\beta}\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi}-2\partial_{\beta}\mathcal{A}^{\alpha\beta}{}_{\alpha}-2f^{\alpha\beta}\,\partial_{\chi}\mathcal{A}_{\alpha}{}^{\chi}{}_{\beta}+2f^{\alpha}{}_{\alpha}\,\partial_{\chi}\mathcal{A}^{\beta\chi}{}_{\beta}\big)+\beta_{1}\big(2\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}-4\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi}\,\partial_{\beta}f^{\alpha\beta}+4\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}f^{\alpha}{}_{\alpha}-2\partial_{\beta}f^{\chi}{}_{\chi}\,\partial^{\beta}f^{\alpha}{}_{\alpha}-2\partial_{\beta}f^{\alpha\beta}\,\partial_{\chi}f_{\alpha}{}^{\chi}+4\partial^{\beta}f^{\alpha}{}_{\alpha}\,\partial_{\chi}f_{\beta}{}^{\chi}-2\partial_{\alpha}f_{\beta\chi}\,\partial^{\chi}f^{\alpha\beta}-\partial_{\alpha}f_{\chi\beta}\,\partial^{\chi}f^{\alpha\beta}+\partial_{\beta}f_{\alpha\chi}\,\partial^{\chi}f^{\alpha\beta}+\partial_{\chi}f_{\alpha\beta}\,\partial^{\chi}f^{\alpha\beta}+\partial_{\chi}f_{\beta\alpha}\,\partial^{\chi}f^{\alpha\beta}+2\mathcal{A}_{\alpha\chi\beta}\,(\mathcal{A}^{\alpha\beta\chi}+2\partial^{\chi}f^{\alpha\beta})\big)+\frac{1}{3}\alpha_{3}\big(4\partial_{\beta}\mathcal{A}_{\alpha\chi\delta}-2\partial_{\beta}\mathcal{A}_{\alpha\delta\chi}+2\partial_{\beta}\mathcal{A}_{\chi\delta\alpha}-\partial_{\chi}\mathcal{A}_{\alpha\beta\delta}+\partial_{\delta}\mathcal{A}_{\alpha\beta\chi}-2\partial_{\delta}\mathcal{A}_{\alpha\chi\beta}\big)\partial^{\delta}\mathcal{A}^{\alpha\beta\chi}\Big)[t,x,y,z]\,dz\,dy\,dx\,dt$$

Wave operator

	${}^{0^+}\mathcal{A}^{\parallel}$	${}^{0^+}f^{\parallel}$	${}^{0^+}f^{\perp}$	${}^{0^-}\mathcal{A}^{\parallel}$
${}^{0^+}\mathcal{A}^{\parallel}\dagger$	$\frac{1}{2}(\alpha_{0}-4\beta_{1})$	$-\frac{i(\alpha_{0}-4\beta_{1})k}{\sqrt{2}}$	0	0
${}^{0^+}f^{\parallel}\dagger$	$\frac{i(\alpha_{0}-4\beta_{1})k}{\sqrt{2}}$	$-4\beta_{1}k^{2}$	0	0
${}^{0^+}f^{\perp}\dagger$	0	0	0	0
${}^{0^-}\mathcal{A}^{\parallel}\dagger$	0	0	0	$\frac{\alpha_{0}}{2}-2\beta_{1}+\alpha_{3}k^{2}$

	${}^{1^+}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	${}^{1^+}\mathcal{A}^{\perp}{}_{\alpha\beta}$	${}^{1^+}f^{\parallel}{}_{\alpha\beta}$	${}^{1^-}\mathcal{A}^{\parallel}{}_{\alpha}$	${}^{1^-}\mathcal{A}^{\perp}{}_{\alpha}$	${}^{1^-}f^{\parallel}{}_{\alpha}$	${}^{1^-}f^{\perp}{}_{\alpha}$
${}^{1^+}\mathcal{A}^{\parallel}\dagger^{\alpha\beta}$	$\frac{1}{4}(\alpha_{0}-4\beta_{1})$	$\frac{\alpha_{0}-4\beta_{1}}{2\sqrt{2}}$	$\frac{i(\alpha_{0}-4\beta_{1})k}{2\sqrt{2}}$	0	0	0	0
${}^{1^+}\mathcal{A}^{\perp}\dagger^{\alpha\beta}$	$\frac{\alpha_{0}-4\beta_{1}}{2\sqrt{2}}$	0	0	0	0	0	0
${}^{1^+}f^{\parallel}\dagger^{\alpha\beta}$	$-\frac{i(\alpha_{0}-4\beta_{1})k}{2\sqrt{2}}$	0	0	0	0	0	0
${}^{1^-}\mathcal{A}^{\parallel}\dagger^{\alpha}$	0	0	0	$\frac{1}{4}(\alpha_{0}-4\beta_{1})$	$-\frac{\alpha_{0}-4\beta_{1}}{2\sqrt{2}}$	0	$-\frac{1}{2}i(\alpha_{0}-4\beta_{1})k$
${}^{1^-}\mathcal{A}^{\perp}\dagger^{\alpha}$	0	0	0	$-\frac{\alpha_{0}-4\beta_{1}}{2\sqrt{2}}$	0	0	0
${}^{1^-}f^{\parallel}\dagger^{\alpha}$	0	0	0	0	0	0	0
${}^{1^-}f^{\perp}\dagger^{\alpha}$	0	0	0	$\frac{1}{2}i(\alpha_{0}-4\beta_{1})k$	0	0	0

	${}^{2^+}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	${}^{2^+}f^{\parallel}{}_{\alpha\beta}$	${}^{2^-}\mathcal{A}^{\parallel}{}_{\alpha\beta\chi}$
${}^{2^+}\mathcal{A}^{\parallel}\dagger^{\alpha\beta}$	$-\frac{\alpha_{0}}{4}+\beta_{1}$	$\frac{i(\alpha_{0}-4\beta_{1})k}{2\sqrt{2}}$	0
${}^{2^+}f^{\parallel}\dagger^{\alpha\beta}$	$-\frac{i(\alpha_{0}-4\beta_{1})k}{2\sqrt{2}}$	$2\beta_{1}k^{2}$	0
${}^{2^-}\mathcal{A}^{\parallel}\dagger^{\alpha\beta\chi}$	0	0	$-\frac{\alpha_{0}}{4}+\beta_{1}$

Saturated propagator

	${}^{0^+}\sigma^{\parallel}$	${}^{0^+}\tau^{\parallel}$	${}^{0^+}\tau^{\perp}$	${}^{0^-}\sigma^{\parallel}$
${}^{0^+}\sigma^{\parallel}\dagger$	$\frac{8\beta_{1}}{\alpha_{0}^{2}-4\alpha_{0}\beta_{1}}$	$-\frac{i\sqrt{2}}{\alpha_{0}k}$	0	0
${}^{0^+}\tau^{\parallel}\dagger$	$\frac{i\sqrt{2}}{\alpha_{0}k}$	$-\frac{1}{\alpha_{0}k^{2}}$	0	0
${}^{0^+}\tau^{\perp}\dagger$	0	0	0	0
${}^{0^-}\sigma^{\parallel}\dagger$	0	0	0	$\frac{2}{\alpha_{0}-4\beta_{1}+2\alpha_{3}k^{2}}$

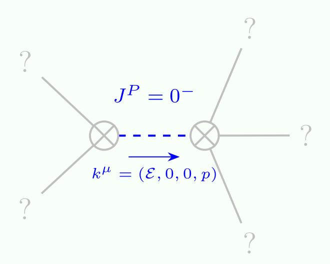
	${}^{1^+}\sigma^{\parallel}{}_{\alpha\beta}$	${}^{1^+}\sigma^{\perp}{}_{\alpha\beta}$	${}^{1^+}\tau^{\parallel}{}_{\alpha\beta}$	${}^{1^-}\sigma^{\parallel}{}_{\alpha}$	${}^{1^-}\sigma^{\perp}{}_{\alpha}$	${}^{1^-}\tau^{\parallel}{}_{\alpha}$	${}^{1^-}\tau^{\perp}{}_{\alpha}$
${}^{1^+}\sigma^{\parallel}\dagger^{\alpha\beta}$	0	$\frac{2\sqrt{2}}{(\alpha_{0}-4\beta_{1})(1+k^{2})}$	$\frac{2i\sqrt{2}k}{(\alpha_{0}-4\beta_{1})(1+k^{2})}$	0	0	0	0
${}^{1^+}\sigma^{\perp}\dagger^{\alpha\beta}$	$\frac{2\sqrt{2}}{(\alpha_{0}-4\beta_{1})(1+k^{2})}$	$-\frac{2}{(\alpha_{0}-4\beta_{1})(1+k^{2})^{2}}$	$-\frac{2ik}{(\alpha_{0}-4\beta_{1})(1+k^{2})^{2}}$	0	0	0	0
${}^{1^+}\tau^{\parallel}\dagger^{\alpha\beta}$	$-\frac{2i\sqrt{2}k}{(\alpha_{0}-4\beta_{1})(1+k^{2})}$	$\frac{2ik}{(\alpha_{0}-4\beta_{1})(1+k^{2})^{2}}$	$-\frac{2k^{2}}{(\alpha_{0}-4\beta_{1})(1+k^{2})^{2}}$	0	0	0	0
${}^{1^-}\sigma^{\parallel}\dagger^{\alpha}$	0	0	0	0	$-\frac{2\sqrt{2}}{(\alpha_{0}-4\beta_{1})(1+2k^{2})}$	0	$-\frac{4ik}{(\alpha_{0}-4\beta_{1})(1+2k^{2})}$
${}^{1^-}\sigma^{\perp}\dagger^{\alpha}$	0	0	0	$-\frac{2\sqrt{2}}{(\alpha_{0}-4\beta_{1})(1+2k^{2})}$	$-\frac{2}{(\alpha_{0}-4\beta_{1})(1+2k^{2})^{2}}$	0	$-\frac{2i\sqrt{2}k}{(\alpha_{0}-4\beta_{1})(1+2k^{2})^{2}}$
${}^{1^-}\tau^{\parallel}\dagger^{\alpha}$	0	0	0	0	0	0	0
${}^{1^-}\tau^{\perp}\dagger^{\alpha}$	0	0	0	$\frac{4ik}{(\alpha_{0}-4\beta_{1})(1+2k^{2})}$	$\frac{2i\sqrt{2}k}{(\alpha_{0}-4\beta_{1})(1+2k^{2})^{2}}$	0	$-\frac{4k^{2}}{(\alpha_{0}-4\beta_{1})(1+2k^{2})^{2}}$

	${}^{2^+}\sigma^{\parallel}{}_{\alpha\beta}$	${}^{2^+}\tau^{\parallel}{}_{\alpha\beta}$	${}^{2^-}\sigma^{\parallel}{}_{\alpha\beta\chi}$
${}^{2^+}\sigma^{\parallel}\dagger^{\alpha\beta}$	$-\frac{16\beta_{1}}{\alpha_{0}^{2}-4\alpha_{0}\beta_{1}}$	$\frac{2i\sqrt{2}}{\alpha_{0}k}$	0
${}^{2^+}\tau^{\parallel}\dagger^{\alpha\beta}$	$-\frac{2i\sqrt{2}}{\alpha_{0}k}$	$\frac{2}{\alpha_{0}k^{2}}$	0
${}^{2^-}\sigma^{\parallel}\dagger^{\alpha\beta\chi}$	0	0	$\frac{1}{-\frac{\alpha_{0}}{4}+\beta_{1}}$

Source constraints

Spin-parity form	Covariant form	Multiplicities
${}^{0^+}\tau^{\perp}==0$	$\partial_{\beta}\partial_{\alpha}\tau(\Delta+\mathcal{K})^{\alpha\beta}==0$	1
$2ik\,{}^{1^-}\sigma^{\perp\alpha}+{}^{1^-}\tau^{\perp\alpha}==0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\beta\chi}==\partial_{\chi}\partial^{\chi}\partial_{\beta}\tau(\Delta+\mathcal{K})^{\alpha\beta}+2\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial_{\beta}\sigma^{\beta\alpha\chi}$	3
${}^{1^-}\tau^{\parallel\alpha}==0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\beta\chi}==\partial_{\chi}\partial^{\chi}\partial_{\beta}\tau(\Delta+\mathcal{K})^{\beta\alpha}$	3
$ik\,{}^{1^+}\sigma^{\perp\alpha\beta}+{}^{1^+}\tau^{\parallel\alpha\beta}==0$	$\partial_{\chi}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\beta\chi}+\partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\chi\alpha}+\partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\alpha\beta}+2\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta}+2\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\chi\alpha\beta}==\partial_{\chi}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\chi\beta}+\partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\alpha\chi}+\partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\beta\alpha}+2\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta}$	3
Total expected gauge generators:		10

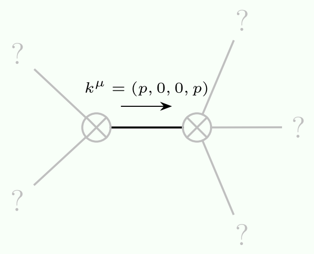
Massive spectrum



Massive particle

Pole residue:	$-\frac{1}{\alpha_{3}}>0$
Square mass:	$-\frac{\alpha_{0}-4\beta_{1}}{2\alpha_{3}}>0$
Spin:	0
Parity:	Odd

Massless spectrum



Massless particle

Pole residue:	$\frac{p^{2}}{\alpha_{0}}>0$
Polarisations:	2

Unitarity conditions

$\alpha_{0}>0\ \&\&\ \alpha_{3}<0\ \&\&\ \beta_{1}<\frac{\alpha_{0}}{4}$