PSALTer results panel

Wave operator and propagator

	$1^+_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$1^+_{\cdot}\mathcal{A}^{\perp}{}_{\alpha\beta}$	$1^+_{\cdot}f^{\parallel}{}_{\alpha\beta}$	$1^-_{\cdot}\mathcal{B}_{\alpha}$	$1^-_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha}$	$1^-_{\cdot}\mathcal{A}^{\perp}{}_{\alpha}$	$1^-_{\cdot}f^{\parallel}{}_{\alpha}$	$1^-_{\cdot}f^{\perp}{}_{\alpha}$
$1^+_{\cdot}\mathcal{A}^{\parallel}\dagger^{\alpha\beta}$	$\frac{1}{6}(-6\lambda+6k^2(2r_3+r_5)+t_1+4t_2)$	$-\frac{6\lambda+t_1-2t_2}{3\sqrt{2}}$	$-\frac{i\,k(6\lambda+t_1-2t_2)}{3\sqrt{2}}$	0	0	0 0		0
$1^+_{\cdot}\mathcal{A}^{\perp}\dagger^{\alpha\beta}$	$-\frac{6\lambda+t_1-2t_2}{3\sqrt{2}}$	$\frac{t_1+t_2}{3}$	$\frac{1}{3}i\,k(t_1+t_2)$	0	0	0 0		0
$1^+_{\cdot}f^{\parallel}\dagger^{\alpha\beta}$	$\frac{i\,k(6\lambda+t_1-2t_2)}{3\sqrt{2}}$	$-\frac{1}{3}i\,k(t_1+t_2)$	$\frac{1}{3}k^2(t_1+t_2)$	0	0	0 0		0
$1^-_{\cdot}\mathcal{B}\dagger^{\alpha}$	0	0	0	$\frac{1}{2}(-12\lambda+v+k^2(-4c_1+8(r_1+r_4+r_5)))$	$\frac{1}{6}(-12\lambda+v+k^2(-5c_1+12(r_1+r_4+r_5)))$	$\frac{2k^2c_1+12\lambda-v}{6\sqrt{2}}$	0	$\frac{1}{6}i\,k(2k^2c_1+12\lambda-v)$
$1^-_{\cdot}\mathcal{A}^{\parallel}\dagger^{\alpha}$	0	0	0	$\frac{1}{6}(-12\lambda+v+k^2(-5c_1+12(r_1+r_4+r_5)))$	$\frac{1}{18}(-6\lambda+v-6k^2(c_1-3(r_1+r_4+r_5))+3t_1)$	$\frac{3k^2c_1+24\lambda-v+6t_1}{18\sqrt{2}}$	0	$\frac{1}{18}i\,k(3k^2c_1+24\lambda-v+6t_1)$
$1^-_{\cdot}\mathcal{A}^{\perp}\dagger^{\alpha}$	0	0	0	$\frac{2k^2c_1+12\lambda-v}{6\sqrt{2}}$	$\frac{3k^2c_1+24\lambda-v+6t_1}{18\sqrt{2}}$	$\frac{1}{36}(12\lambda+v+12t_1)$	0	$\frac{i\,k(12\lambda+v+12t_1)}{18\sqrt{2}}$
$1^-_{\cdot}f^{\parallel}\dagger^{\alpha}$	0	0	0	0	0	0 0		0
$1^-_{\cdot}f^{\perp}\dagger^{\alpha}$	0	0	0	$-\frac{1}{6}i\,k(2k^2c_1+12\lambda-v)$ -	$\frac{1}{18}i\,k(3k^2c_1+24\lambda-v+6t_1)$	$-\frac{i\,k(12\lambda+v+12t_1)}{18\sqrt{2}}$	0	$\frac{1}{18}k^2(12\lambda+v+12t_1)$

$$
\begin{aligned}
S == \iiiint \Big(& \phi\,\rho + \sigma^{\alpha\beta\chi}\,\mathcal{A}_{\alpha\beta\chi} + \tau^{\alpha\beta}\,f_{\alpha\beta} + \mathcal{T}^{\alpha}\,\mathcal{B}_{\alpha} - \tfrac{1}{18}v\,(\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\mathcal{A}_{\beta}{}^{\chi}{}_{\chi} + 6\,\mathcal{A}_{\alpha}{}^{\beta}{}_{\beta}\,\mathcal{B}^{\alpha} - 9\,\mathcal{B}_{\alpha}\,\mathcal{B}^{\alpha} - \\
& 6\,\mathcal{B}^{\alpha}\,\partial_{\alpha}f^{\beta}{}_{\beta} + 6\,\mathcal{B}^{\alpha}\,\partial_{\beta}f_{\alpha}{}^{\beta} - 2\,\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi}\,\partial_{\beta}f^{\alpha\beta} + 2\,\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}f^{\alpha}{}_{\alpha} - \partial_{\beta}f^{\chi}{}_{\chi}\partial^{\beta}f^{\alpha}{}_{\alpha} - \partial_{\beta}f^{\alpha\beta}\partial_{\chi}f_{\alpha}{}^{\chi} + 2\,\partial^{\beta}f^{\alpha}{}_{\alpha}\partial_{\chi}f_{\beta}{}^{\chi}) + \\
& \tfrac{1}{6}\lambda\,(8\,\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\mathcal{A}_{\beta}{}^{\chi}{}_{\chi} + 24\,\mathcal{A}_{\alpha}{}^{\beta}{}_{\beta}\,\mathcal{B}^{\alpha} - 36\,\mathcal{B}_{\alpha}\,\mathcal{B}^{\alpha} - 36\,\partial_{\alpha}\mathcal{B}^{\alpha} + 12\,f^{\alpha\beta}\,\partial_{\beta}\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi} - 12\,\partial_{\beta}\mathcal{A}^{\alpha\beta}{}_{\alpha} - 4\,\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi}\,\partial_{\beta}f^{\alpha\beta} - 24\,f^{\alpha\beta}\,\partial_{\beta}\mathcal{B}_{\alpha} + \\
& 24\,f^{\alpha}{}_{\alpha}\,\partial_{\beta}\mathcal{B}^{\beta} + 4\,\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}f^{\alpha}{}_{\alpha} - 2\,\partial_{\beta}f^{\chi}{}_{\chi}\partial^{\beta}f^{\alpha}{}_{\alpha} - 12\,f^{\alpha\beta}\,\partial_{\chi}\mathcal{A}_{\alpha}{}^{\chi}{}_{\beta} + 12\,f^{\alpha}{}_{\alpha}\,\partial_{\chi}\mathcal{A}^{\beta\chi}{}_{\beta} - 2\,\partial_{\beta}f^{\alpha\beta}\partial_{\chi}f_{\alpha}{}^{\chi} + 4\,\partial^{\beta}f^{\alpha}{}_{\alpha}\partial_{\chi}f_{\beta}{}^{\chi} - \\
& 6\,\partial_{\alpha}f_{\beta\chi}\partial^{\chi}f^{\alpha\beta} - 3\,\partial_{\alpha}f_{\chi\beta}\partial^{\chi}f^{\alpha\beta} + 3\,\partial_{\beta}f_{\alpha\chi}\partial^{\chi}f^{\alpha\beta} + 3\,\partial_{\chi}f_{\alpha\beta}\partial^{\chi}f^{\alpha\beta} + 3\,\partial_{\chi}f_{\beta\alpha}\partial^{\chi}f^{\alpha\beta} + 12\,\mathcal{A}_{\alpha\chi\beta}(\mathcal{A}^{\alpha\beta\chi} + \partial^{\chi}f^{\alpha\beta})) + \\
& \tfrac{1}{6}t_2\,((4\,\mathcal{A}_{\beta\chi\alpha} + 2\,\partial_{\alpha}f_{\beta\chi} - \partial_{\alpha}f_{\chi\beta} - \partial_{\beta}f_{\alpha\chi} + \partial_{\chi}f_{\alpha\beta} - \partial_{\chi}f_{\beta\alpha})\partial^{\chi}f^{\alpha\beta} - 4\,\mathcal{A}_{\alpha\chi\beta}(\mathcal{A}^{\alpha\beta\chi} + \partial^{\chi}f^{\alpha\beta}) + 2\,\mathcal{A}_{\alpha\beta\chi}(\mathcal{A}^{\alpha\beta\chi} + 2\,\partial^{\chi}f^{\alpha\beta})) + \\
& \tfrac{1}{3}t_1\,(\mathcal{A}^{\alpha\beta}{}_{\alpha}\,\mathcal{A}_{\beta}{}^{\chi}{}_{\chi} - 2\,\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi}\,\partial_{\beta}f^{\alpha\beta} + 2\,\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}f^{\alpha}{}_{\alpha} - \partial_{\beta}f^{\chi}{}_{\chi}\partial^{\beta}f^{\alpha}{}_{\alpha} - \partial_{\beta}f^{\alpha\beta}\partial_{\chi}f_{\alpha}{}^{\chi} + 2\,\partial^{\beta}f^{\alpha}{}_{\alpha}\partial_{\chi}f_{\beta}{}^{\chi} + 2\,\mathcal{A}_{\beta\chi\alpha}\,\partial^{\chi}f^{\alpha\beta} - 2\,\partial_{\alpha}f_{\beta\chi}\partial^{\chi}f^{\alpha\beta} - \\
& 2\,\partial_{\alpha}f_{\chi\beta}\partial^{\chi}f^{\alpha\beta} + \partial_{\beta}f_{\alpha\chi}\partial^{\chi}f^{\alpha\beta} + 2\,\partial_{\chi}f_{\alpha\beta}\partial^{\chi}f^{\alpha\beta} + \partial_{\chi}f_{\beta\alpha}\partial^{\chi}f^{\alpha\beta} + \mathcal{A}_{\alpha\beta\chi}(\mathcal{A}^{\alpha\beta\chi} + 2\,\partial^{\chi}f^{\alpha\beta}) + \mathcal{A}_{\alpha\chi\beta}(\mathcal{A}^{\alpha\beta\chi} + 4\,\partial^{\chi}f^{\alpha\beta})) + \\
& r_5\,(4\,\partial_{\alpha}\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}\mathcal{B}^{\alpha} - 4\,\partial_{\alpha}\mathcal{B}_{\beta}\partial^{\beta}\mathcal{B}^{\alpha} - 4\,\partial_{\beta}\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi}\,\partial^{\beta}\mathcal{B}^{\alpha} + 4\,\partial_{\beta}\mathcal{B}_{\alpha}\partial^{\beta}\mathcal{B}^{\alpha} + 4\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\mathcal{A}_{\alpha}{}^{\chi}{}_{\beta} - 4\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\mathcal{A}_{\beta}{}^{\chi}{}_{\alpha} + \\
& \partial_{\beta}\mathcal{A}_{\chi}{}^{\delta}{}_{\delta}\,\partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} - \partial_{\chi}\mathcal{A}_{\beta}{}^{\delta}{}_{\delta}\,\partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} - \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi}\,\partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} + 2\,\partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha}\partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} + \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi}\,\partial_{\delta}\mathcal{A}_{\chi}{}^{\delta}{}_{\beta} - 2\,\partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha}\partial_{\delta}\mathcal{A}_{\chi}{}^{\delta}{}_{\beta}) - \\
& \tfrac{1}{3}c_1\,(5\,\partial_{\alpha}\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}\mathcal{B}^{\alpha} - 6\,\partial_{\alpha}\mathcal{B}_{\beta}\partial^{\beta}\mathcal{B}^{\alpha} - 5\,\partial_{\beta}\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi}\,\partial^{\beta}\mathcal{B}^{\alpha} + 6\,\partial_{\beta}\mathcal{B}_{\alpha}\partial^{\beta}\mathcal{B}^{\alpha} + 3\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\mathcal{A}_{\alpha}{}^{\chi}{}_{\beta} + \partial_{\beta}\partial^{\chi}f^{\alpha\beta}\,\partial_{\chi}\mathcal{A}_{\alpha}{}^{\delta}{}_{\delta} - \\
& 3\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\mathcal{A}_{\beta}{}^{\chi}{}_{\alpha} + 2\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\partial_{\alpha}f_{\beta}{}^{\chi} - 2\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\partial_{\beta}f_{\alpha}{}^{\chi} + \partial_{\beta}\mathcal{A}_{\chi}{}^{\delta}{}_{\delta}\,\partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} - \partial_{\chi}\mathcal{A}_{\beta}{}^{\delta}{}_{\delta}\,\partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} - \\
& \partial_{\alpha}\mathcal{A}_{\chi}{}^{\delta}{}_{\delta}\,\partial^{\chi}\partial_{\beta}f^{\alpha\beta} - \partial_{\beta}\partial^{\chi}f^{\alpha\beta}\,\partial_{\delta}\mathcal{A}_{\alpha}{}^{\delta}{}_{\chi} + \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha}\partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} + \partial^{\chi}\partial_{\beta}f^{\alpha\beta}\,\partial_{\delta}\mathcal{A}_{\chi}{}^{\delta}{}_{\alpha} - \partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha}\partial_{\delta}\mathcal{A}_{\chi}{}^{\delta}{}_{\beta}) + \\
& r_4\,(-4\,\partial_{\alpha}\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}\mathcal{B}^{\alpha} + 4\,\partial_{\alpha}\mathcal{B}_{\beta}\partial^{\beta}\mathcal{B}^{\alpha} - 4\,\partial_{\beta}\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi}\,\partial^{\beta}\mathcal{B}^{\alpha} + 4\,\partial_{\beta}\mathcal{B}_{\alpha}\partial^{\beta}\mathcal{B}^{\alpha} + 4\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\mathcal{A}_{\alpha}{}^{\chi}{}_{\beta} + 4\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\mathcal{A}_{\beta}{}^{\chi}{}_{\alpha} + \\
& 8\,\partial_{\alpha}\mathcal{B}^{\alpha}(2\,\partial_{\beta}\mathcal{B}^{\beta} + \partial_{\chi}\mathcal{A}^{\beta\chi}{}_{\beta}) - \partial_{\beta}\mathcal{A}_{\chi}{}^{\delta}{}_{\delta}\,\partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} - \partial_{\chi}\mathcal{A}_{\beta}{}^{\delta}{}_{\delta}\,\partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha} - \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi}\,\partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} + 2\,\partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha}\partial_{\delta}\mathcal{A}_{\beta}{}^{\delta}{}_{\chi} - \\
& \partial_{\alpha}\mathcal{A}^{\alpha\beta\chi}\,\partial_{\delta}\mathcal{A}_{\chi}{}^{\delta}{}_{\beta} + 2\,\partial^{\chi}\mathcal{A}^{\alpha\beta}{}_{\alpha}\partial_{\delta}\mathcal{A}_{\chi}{}^{\delta}{}_{\beta}) + \tfrac{1}{3}r_2\,(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})\partial^{\delta}\mathcal{A}^{\alpha\beta\chi} - \\
& 4\,r_3\,(\partial_{\alpha}\mathcal{B}^{\alpha}\partial_{\beta}\mathcal{B}^{\beta} - 2\,\partial_{\alpha}\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}\mathcal{B}^{\alpha} + 2\,\partial_{\alpha}\mathcal{B}_{\beta}\partial^{\beta}\mathcal{B}^{\alpha} + 2\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\mathcal{A}_{\beta}{}^{\chi}{}_{\alpha} + \partial_{\beta}\mathcal{A}_{\chi\delta\alpha}\partial^{\delta}\mathcal{A}^{\alpha\beta\chi}) + \\
& \tfrac{2}{3}r_1\,(6\,\partial_{\alpha}\mathcal{B}^{\alpha}\partial_{\beta}\mathcal{B}^{\beta} - 6\,\partial_{\alpha}\mathcal{A}_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}\mathcal{B}^{\alpha} + 6\,\partial_{\alpha}\mathcal{B}_{\beta}\partial^{\beta}\mathcal{B}^{\alpha} - 6\,\partial_{\beta}\mathcal{A}_{\alpha}{}^{\chi}{}_{\chi}\,\partial^{\beta}\mathcal{B}^{\alpha} + 6\,\partial_{\beta}\mathcal{B}_{\alpha}\partial^{\beta}\mathcal{B}^{\alpha} + \\
& 6\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\mathcal{A}_{\alpha}{}^{\chi}{}_{\beta} + 6\,\partial^{\beta}\mathcal{B}^{\alpha}\partial_{\chi}\mathcal{A}_{\beta}{}^{\chi}{}_{\alpha} - 2\,\partial_{\beta}\mathcal{A}_{\alpha\chi\delta}\partial^{\delta}\mathcal{A}^{\alpha\beta\chi} + \partial_{\beta}\mathcal{A}_{\alpha\delta\chi}\partial^{\delta}\mathcal{A}^{\alpha\beta\chi} + 2\,\partial_{\beta}\mathcal{A}_{\chi\delta\alpha}\partial^{\delta}\mathcal{A}^{\alpha\beta\chi} - \\
& \partial_{\chi}\mathcal{A}_{\alpha\beta\delta}\partial^{\delta}\mathcal{A}^{\alpha\beta\chi} + \partial_{\delta}\mathcal{A}_{\alpha\beta\chi}\partial^{\delta}\mathcal{A}^{\alpha\beta\chi} + \partial_{\delta}\mathcal{A}_{\alpha\chi\beta}\partial^{\delta}\mathcal{A}^{\alpha\beta\chi}))[t,x,y,z]\,dz\,dy\,dx\,dt
\end{aligned}
$$

	$0^+_{\cdot}\mathcal{B}$	$0^+_{\cdot}\phi$	$0^+_{\cdot}\mathcal{A}^{\parallel}$	$0^+_{\cdot}f^{\parallel}$	$0^+_{\cdot}f^{\perp}$	$0^-_{\cdot}\mathcal{A}^{\parallel}$
$0^+_{\cdot}\mathcal{B}\dagger$	$-6\lambda+\frac{v}{2}+12k^2(r_1-r_3+2r_4)$	0	$\frac{12\lambda-v-24k^2(r_1-r_3+2r_4)}{2\sqrt{6}}$	$-\frac{i\,k(12\lambda-v)}{2\sqrt{3}}$	0	0
$0^+_{\cdot}\phi\dagger$	0 0		0 0		0	0
$0^+_{\cdot}\mathcal{A}^{\parallel}\dagger$	$\frac{12\lambda-v-24k^2(r_1-r_3+2r_4)}{2\sqrt{6}}$	0	$-\lambda+\frac{v}{12}+2k^2(r_1-r_3+2r_4)$	$\frac{i\,k(12\lambda-v)}{6\sqrt{2}}$	0	0
$0^+_{\cdot}f^{\parallel}\dagger$	$\frac{i\,k(12\lambda-v)}{2\sqrt{3}}$	0	$-\frac{i\,k(12\lambda-v)}{6\sqrt{2}}$	$\frac{k^2 v}{6}$	0	0
$0^+_{\cdot}f^{\perp}\dagger$	0 0		0 0		0	0
$0^-_{\cdot}\mathcal{A}^{\parallel}\dagger$	0 0		0 0		0	$-2\lambda+k^2 r_2+t_2$

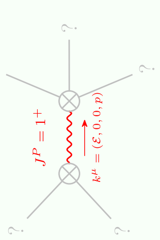
	$0^+_{\cdot}\mathcal{T}$	$0^+_{\cdot}\rho$	$0^+_{\cdot}\sigma^{\parallel}$	$0^+_{\cdot}\tau^{\parallel}$	$0^+_{\cdot}\tau^{\perp}$	$0^-_{\cdot}\sigma^{\parallel}$
$0^+_{\cdot}\mathcal{T}\dagger$	$\frac{6v}{49(-12\lambda^2+\lambda v+2k^2v(r_1-r_3+2r_4))}$	0	$-\frac{\sqrt{6}\,v}{49(-12\lambda^2+\lambda v+2k^2v(r_1-r_3+2r_4))}$	$\frac{i\sqrt{3}(12\lambda-v)}{7k(-12\lambda^2+\lambda v+2k^2v(r_1-r_3+2r_4))}$	0	0
$0^+_{\cdot}\rho\dagger$	0 0		0	0 0		0
$0^+_{\cdot}\sigma^{\parallel}\dagger$	$\frac{\sqrt{6}\,v}{588\lambda^2-49v(\lambda+2k^2(r_1-r_3+2r_4))}$	0	$\frac{v}{49(-12\lambda^2+\lambda v+2k^2v(r_1-r_3+2r_4))}$	$\frac{i}{7\sqrt{2}\,k\left(\lambda+\frac{2k^2v(r_1-r_3+2r_4)}{-12\lambda+v}\right)}$	0	0
$0^+_{\cdot}\tau^{\parallel}\dagger$	$\frac{i\sqrt{3}(12\lambda-v)}{84k\lambda^2-7kv(\lambda+2k^2(r_1-r_3+2r_4))}$	0	$-\frac{i}{7\sqrt{2}\,k\left(\lambda+\frac{2k^2v(r_1-r_3+2r_4)}{-12\lambda+v}\right)}$	$\frac{-12\lambda+v+24k^2(r_1-r_3+2r_4)}{2k^2(-12\lambda^2+\lambda v+2k^2v(r_1-r_3+2r_4))}$	0	0
$0^+_{\cdot}\tau^{\perp}\dagger$	0 0		0	0 0		0
$0^-_{\cdot}\sigma^{\parallel}\dagger$	0 0		0	0	0	$\frac{1}{-2\lambda+k^2r_2+t_2}$

	$2^+_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$2^+_{\cdot}f^{\parallel}{}_{\alpha\beta}$	$2^-_{\cdot}\mathcal{A}^{\parallel}{}_{\alpha\beta\chi}$
$2^+_{\cdot}\mathcal{A}^{\parallel}\dagger^{\alpha\beta}$	$\lambda+k^2(2r_1-2r_3+r_4)+\frac{t_1}{2}$	$-\frac{i\,k(2\lambda+t_1)}{\sqrt{2}}$	0
$2^+_{\cdot}f^{\parallel}\dagger^{\alpha\beta}$	$\frac{i\,k(2\lambda+t_1)}{\sqrt{2}}$	$k^2(\lambda+t_1)$	0
$2^-_{\cdot}\mathcal{A}^{\parallel}\dagger^{\alpha\beta\chi}$	0 0		$\lambda+k^2r_1+\frac{t_1}{2}$

	$2^+_{\cdot}\sigma^{\parallel}{}_{\alpha\beta}$	$2^+_{\cdot}\tau^{\parallel}{}_{\alpha\beta}$	$2^-_{\cdot}\sigma^{\parallel}{}_{\alpha\beta\chi}$
$2^+_{\cdot}\sigma^{\parallel}\dagger^{\alpha\beta}$	$\frac{k^2(\lambda+t_1)}{k^4(2r_1-2r_3+r_4)(\lambda+t_1)-\frac{1}{2}k^2\lambda(2\lambda+t_1)}$	$\frac{i\sqrt{2}(2\lambda+t_1)}{2k^3(2r_1-2r_3+r_4)(\lambda+t_1)-k\,\lambda(2\lambda+t_1)}$	0
$2^+_{\cdot}\tau^{\parallel}\dagger^{\alpha\beta}$	$-\frac{i\sqrt{2}(2\lambda+t_1)}{2k^3(2r_1-2r_3+r_4)(\lambda+t_1)-k\,\lambda(2\lambda+t_1)}$	$\frac{\lambda+k^2(2r_1-2r_3+r_4)+\frac{t_1}{2}}{k^4(2r_1-2r_3+r_4)(\lambda+t_1)-\frac{1}{2}k^2\lambda(2\lambda+t_1)}$	0
$2^-_{\cdot}\sigma^{\parallel}\dagger^{\alpha\beta\chi}$	0	0	$\frac{1}{\lambda+k^2r_1+\frac{t_1}{2}}$

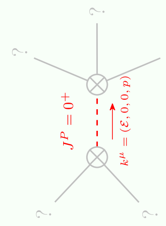
Spin-parity form	Covariant form	Multiplicities
$0^+_{\cdot}\tau^{\perp} == 0$	$\partial_{\beta}\partial_{\alpha}\tau^{\alpha\beta} == 0$	1
$2\,0^+_{\cdot}\sigma^{\parallel} + 0^+_{\cdot}\mathcal{T} == 0$	$\partial_{\alpha}\mathcal{T}^{\alpha} == 2\,\partial_{\beta}\sigma^{\alpha}{}_{\alpha}{}^{\beta}$	1
$0^+_{\cdot}\rho == 0$	$\rho == 0$	1
$2\,i\,k\,1^-_{\cdot}\sigma^{\parallel\alpha} + 1^-_{\cdot}\tau^{\perp\alpha} - i\,k\,1^-_{\cdot}\mathcal{T}^{\alpha} == 0$	$\partial_{\chi}\partial^{\chi}\partial_{\beta}\tau^{\alpha\beta} + \partial_{\chi}\partial^{\chi}\partial_{\beta}\partial^{\alpha}\mathcal{T}^{\beta} + 2\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial_{\beta}\sigma^{\beta\alpha\chi} == \partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau^{\beta\chi} + \partial_{\chi}\partial^{\chi}\partial_{\beta}\partial^{\beta}\mathcal{T}^{\alpha} + 2(\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\beta}{}_{\beta}{}^{\chi} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\sigma^{\beta\alpha}{}_{\beta})$	3
$1^-_{\cdot}\tau^{\parallel\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}\tau^{\beta\alpha}$	3
$2\,1^-_{\cdot}\sigma^{\parallel\alpha} == 2\,1^-_{\cdot}\sigma^{\perp\alpha} + 1^-_{\cdot}\mathcal{T}^{\alpha}$	$\partial_{\beta}\partial^{\alpha}\mathcal{T}^{\beta} == \partial_{\beta}\partial^{\beta}\mathcal{T}^{\alpha} + 2(\partial_{\chi}\partial^{\alpha}\sigma^{\beta}{}_{\beta}{}^{\chi} + \partial_{\chi}\partial^{\chi}\sigma^{\beta\alpha}{}_{\beta})$	3
$i\,k\,1^+_{\cdot}\sigma^{\perp\alpha\beta} + 1^+_{\cdot}\tau^{\parallel\alpha\beta} == 0$	$\partial_{\chi}\partial^{\alpha}\tau^{\beta\chi} + \partial_{\chi}\partial^{\beta}\tau^{\chi\alpha} + \partial_{\chi}\partial^{\chi}\tau^{\alpha\beta} + 2\,\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\,\beta\delta} + 2\,\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\chi\alpha\beta} == \partial_{\chi}\partial^{\alpha}\tau^{\chi\beta} + \partial_{\chi}\partial^{\beta}\tau^{\alpha\chi} + \partial_{\chi}\partial^{\chi}\tau^{\beta\alpha} + 2\,\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta}$	3
Total expected gauge generators:		15

Massive and massless spectra



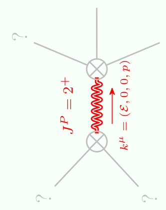
Massive particle

Pole residue:	$\frac{3(r_5t_1^2-t_1^2t_2+2r_5t_2^2-t_1t_2^2+4\lambda^2(6r_3+3r_5+t_1+t_2)+2\lambda(2r_5t_1+t_1^2+4r_3(t_1-2t_2)-4r_5t_2-t_2^2)+2r_3(t_1^2+2t_2^2))}{(2r_3+r_5)(t_1+t_2)(12\lambda^2+2r_5t_1+6\lambda(t_1-t_2)+2r_5t_2-3t_1t_2+4r_3(t_1+t_2))} > 0$
Square mass:	$\frac{3(2\lambda+t_1)(2\lambda-t_2)}{2(2r_3+r_5)(t_1+t_2)} > 0$
Spin:	1
Parity:	Even



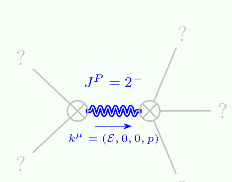
Massive particle

Pole residue:	$\frac{1}{14}\left(-\frac{7}{\lambda}+\frac{84}{v}+\frac{1}{r_1-r_3+2r_4}\right) > 0$
Square mass:	$\frac{12\lambda^2-\lambda v}{2vr_1-2vr_3+4vr_4} > 0$
Spin:	0
Parity:	Even



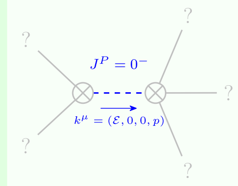
Massive particle

Pole residue:	$\frac{\lambda^2+(2r_1-2r_3+r_4)t_1+\lambda(4r_1-4r_3+2r_4+t_1)}{\lambda(2r_1-2r_3+r_4)(\lambda+t_1)} > 0$
Square mass:	$\frac{\lambda(2\lambda+t_1)}{2(2r_1-2r_3+r_4)(\lambda+t_1)} > 0$
Spin:	2
Parity:	Even



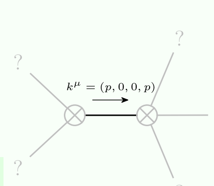
Massive particle

Pole residue:	$-\frac{1}{r_1} > 0$
Square mass:	$-\frac{2\lambda+t_1}{2r_1} > 0$
Spin:	2
Parity:	Odd



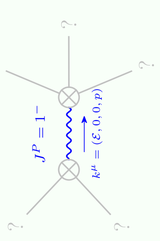
Massive particle

Pole residue:	$-\frac{1}{r_2} > 0$
Square mass:	$\frac{2\lambda-t_2}{r_2} > 0$
Spin:	0
Parity:	Odd



Massless particle

Pole residue:	$-\frac{1}{\lambda} > 0$
Polarisations:	2



Massive particle

Pole residue:

$$
\begin{aligned}
(792\,& c_1^2\lambda - 288\,c_1\lambda^2 + 21\,c_1^2 v - 24\,c_1\lambda v - 3168\,c_1\lambda r_1 + 288\,\lambda^2 r_1 - 84\,c_1 v r_1 + 48\,\lambda v r_1 + \\
& 2v^2r_1 + 2160\,\lambda r_1^2 + 180\,v r_1^2 - 3168\,c_1\lambda r_4 + 288\,\lambda^2 r_4 - 84\,c_1 v r_4 + 48\,\lambda v r_4 + \\
& 2v^2r_4 + 4320\,\lambda r_1r_4 + 360\,v r_1r_4 + 2160\,\lambda r_4^2 + 180\,v r_4^2 - 3168\,c_1\lambda r_5 + \\
& 288\,\lambda^2 r_5 - 84\,c_1 v r_5 + 48\,\lambda v r_5 + 2\,v^2 r_5 + 4320\,\lambda r_1r_5 + 360\,v r_1r_5 + 4320\,\lambda r_4r_5 + \\
& 360\,v r_4r_5 + 2160\,\lambda r_5^2 + 180\,v r_5^2 + 522\,c_1^2t_1 - 432\,c_1\lambda t_1 - 12\,c_1 v t_1 - 2088\,c_1r_1t_1 + \\
& 576\,\lambda r_1t_1 + 48\,v r_1t_1 + 2160\,r_1^2t_1 - 2088\,c_1r_4t_1 + 576\,\lambda r_4t_1 + 48\,v r_4t_1 + \\
& 4320\,r_1r_4t_1 + 2160\,r_4^2t_1 - 2088\,c_1r_5t_1 + 576\,\lambda r_5t_1 + 48\,v r_5t_1 + 4320\,r_1r_5t_1 + \\
& 4320\,r_4r_5t_1 + 2160\,r_5^2t_1 - 144\,c_1t_1^2 + 288\,r_1t_1^2 + 288\,r_4t_1^2 + 288\,r_5t_1^2 + 42\,c_1 \\
& \sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 12\lambda\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& v\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 90r_1\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 90r_4\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 90r_5\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 12t_1\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2})/ \\
(720\,& c_1^2\lambda^2 + 60\,c_1^2\lambda v - 2880\,c_1\lambda^2 r_1 - 240\,c_1\lambda v r_1 + 1440\,\lambda^2 r_1^2 + \\
& 240\,\lambda v r_1^2 + 10\,v^2 r_1^2 - 2880\,c_1\lambda^2 r_4 - 240\,c_1\lambda v r_4 + 2880\,\lambda^2 r_1 r_4 + \\
& 480\,\lambda v r_1 r_4 + 20\,v^2 r_1 r_4 + 1440\,\lambda^2 r_4^2 + 240\,\lambda v r_4^2 + 10\,v^2 r_4^2 - \\
& 2880\,c_1\lambda^2 r_5 - 240\,c_1\lambda v r_5 + 2880\,\lambda^2 r_1 r_5 + 480\,\lambda v r_1 r_5 + \\
& 20\,v^2 r_1 r_5 + 2880\,\lambda^2 r_4 r_5 + 480\,\lambda v r_4 r_5 + 20\,v^2 r_4 r_5 + 1440\,\lambda^2 r_5^2 + \\
& 240\,\lambda v r_5^2 + 10\,v^2 r_5^2 + 1080\,c_1^2\lambda t_1 + 30\,c_1^2 v t_1 - 4320\,c_1\lambda r_1 t_1 - \\
& 120\,c_1 v r_1 t_1 + 2880\,\lambda r_1^2 t_1 + 240\,v r_1^2 t_1 - 4320\,c_1\lambda r_4 t_1 - 120\,c_1 v r_4 t_1 + \\
& 5760\,\lambda r_1 r_4 t_1 + 480\,v r_1 r_4 t_1 + 2880\,\lambda r_4^2 t_1 + 240\,v r_4^2 t_1 - \\
& 4320\,c_1\lambda r_5 t_1 - 120\,c_1 v r_5 t_1 + 5760\,\lambda r_1 r_5 t_1 + 480\,v r_1 r_5 t_1 + \\
& 5760\,\lambda r_4 r_5 t_1 + 480\,v r_4 r_5 t_1 + 2880\,\lambda r_5^2 t_1 + 240\,v r_5^2 t_1 + 360\,c_1^2 t_1^2 - \\
& 1440\,c_1 r_1 t_1^2 + 1440\,r_1^2 t_1^2 - 1440\,c_1 r_4 t_1^2 + 2880\,r_1 r_4 t_1^2 + 1440\,r_4^2 t_1^2 - \\
& 1440\,c_1 r_5 t_1^2 + 2880\,r_1 r_5 t_1^2 + 2880\,r_4 r_5 t_1^2 + 1440\,r_5^2 t_1^2 - \tfrac{7}{2}c_1^2 \\
& \sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} + \\
& 60c_1\lambda\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 60\lambda r_1\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 5vr_1\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 60\lambda r_4\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 5vr_4\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 60\lambda r_5\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 5vr_5\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} + \\
& 30c_1t_1\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 60r_1t_1\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 60r_4t_1\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2} - \\
& 60r_5t_1\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2}) > 0
\end{aligned}
$$

Square mass: $-\frac{12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1)+\sqrt{-12c_1^2(12\lambda-v)(2\lambda+t_1)+(12c_1(2\lambda+t_1)-2(r_1+r_4+r_5)(12\lambda+v+12t_1))^2}}{2c_1^2} > 0$

Spin: 1

Parity: Odd

Unitarity conditions

(Timeout after 10 seconds)