PSALTer results panel

Wave operator and propagator

	$^{1^+}\sigma^{\parallel}{}_{\alpha\beta}$	$^{1^+}\sigma^{\perp}{}_{\alpha\beta}$	$^{1^+}\tau^{\parallel}{}_{\alpha\beta}$	$^{1^-}\sigma^{\parallel}{}_{\alpha}$	$^{1^-}\sigma^{\perp}{}_{\alpha}$	$^{1^-}\tau^{\parallel}{}_{\alpha}$	$^{1^-}\tau^{\perp}{}_{\alpha}$
$^{1^+}\sigma^{\parallel}\dagger^{\alpha\beta}$	$\frac{8(2\beta_1-\beta_2)}{16(\beta_1-\beta_2)(2\beta_1+\beta_2)+4(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)k^2-4\beta_1(\mathcal{M}_{Pl}^2)+10\beta_2(\mathcal{M}_{Pl}^2)-(\mathcal{M}_{Pl}^2)^2}$	$-\frac{2\sqrt{2}(4\beta_1-6\beta_2+(\mathcal{M}_{Pl}^2))}{(1+k^2)(16(\beta_1-\beta_2)(2\beta_1+\beta_2)+4(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)k^2-4\beta_1(\mathcal{M}_{Pl}^2)+10\beta_2(\mathcal{M}_{Pl}^2)-(\mathcal{M}_{Pl}^2)^2)}$	$-\frac{2i\sqrt{2}k(4\beta_1-6\beta_2+(\mathcal{M}_{Pl}^2))}{(1+k^2)(16(\beta_1-\beta_2)(2\beta_1+\beta_2)+4(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)k^2-4\beta_1(\mathcal{M}_{Pl}^2)+10\beta_2(\mathcal{M}_{Pl}^2)-(\mathcal{M}_{Pl}^2)^2)}$	0	0 0		0
$^{1^+}\sigma^{\perp}\dagger^{\alpha\beta}$	$\frac{2\sqrt{2}(4\beta_1-6\beta_2+(\mathcal{M}_{Pl}^2))}{(1+k^2)(-16(\beta_1-\beta_2)(2\beta_1+\beta_2)-4(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)k^2+4\beta_1(\mathcal{M}_{Pl}^2)-10\beta_2(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)}$	$\frac{2(12\beta_1-10\beta_2+2(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)k^2+(\mathcal{M}_{Pl}^2))}{(1+k^2)^2(16(\beta_1-\beta_2)(2\beta_1+\beta_2)+4(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)k^2-4\beta_1(\mathcal{M}_{Pl}^2)+10\beta_2(\mathcal{M}_{Pl}^2)-(\mathcal{M}_{Pl}^2)^2)}$	$\frac{2ik(12\beta_1-10\beta_2+2(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)k^2+(\mathcal{M}_{Pl}^2))}{(1+k^2)^2(16(\beta_1-\beta_2)(2\beta_1+\beta_2)+4(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)k^2-4\beta_1(\mathcal{M}_{Pl}^2)+10\beta_2(\mathcal{M}_{Pl}^2)-(\mathcal{M}_{Pl}^2)^2)}$	0	0 0		0
$^{1^+}\tau^{\parallel}\dagger^{\alpha\beta}$	$-\frac{2i\sqrt{2}k(4\beta_1-6\beta_2+(\mathcal{M}_{Pl}^2))}{(1+k^2)(-16(\beta_1-\beta_2)(2\beta_1+\beta_2)-4(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)k^2+4\beta_1(\mathcal{M}_{Pl}^2)-10\beta_2(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)}$	$\frac{2ik(12\beta_1-10\beta_2+2(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)k^2+(\mathcal{M}_{Pl}^2))}{(1+k^2)^2(-16(\beta_1-\beta_2)(2\beta_1+\beta_2)-4(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)k^2+4\beta_1(\mathcal{M}_{Pl}^2)-10\beta_2(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)}$	$\frac{2k^2(12\beta_1-10\beta_2+2(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)k^2+(\mathcal{M}_{Pl}^2))}{(1+k^2)^2(16(\beta_1-\beta_2)(2\beta_1+\beta_2)+4(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)k^2-4\beta_1(\mathcal{M}_{Pl}^2)+10\beta_2(\mathcal{M}_{Pl}^2)-(\mathcal{M}_{Pl}^2)^2)}$	0	0 0		0
$^{1^-}\sigma^{\parallel}\dagger^{\alpha}$	0	0	0	$\frac{4(2\beta_1+\beta_2+\beta_3)}{(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}$	$\frac{2\sqrt{2}(2\beta_3+(\mathcal{M}_{Pl}^2))}{(1+2k^2)(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}$	0	$\frac{4ik(2\beta_3+(\mathcal{M}_{Pl}^2))}{(1+2k^2)(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}$
$^{1^-}\sigma^{\perp}\dagger^{\alpha}$	0	0	0	$\frac{2\sqrt{2}(2\beta_3+(\mathcal{M}_{Pl}^2))}{(1+2k^2)(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}$	$\frac{2(4\beta_1+2\beta_2+4\beta_3+(\mathcal{M}_{Pl}^2))}{(1+2k^2)^2(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}$	0	$\frac{2i\sqrt{2}k(4\beta_1+2\beta_2+4\beta_3+(\mathcal{M}_{Pl}^2))}{(1+2k^2)^2(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}$
$^{1^-}\tau^{\parallel}\dagger^{\alpha}$	0	0	0	0	0 0		0
$^{1^-}\tau^{\perp}\dagger^{\alpha}$	0	0	0	$-\frac{4ik(2\beta_3+(\mathcal{M}_{Pl}^2))}{(1+2k^2)(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}$	$-\frac{2i\sqrt{2}k(4\beta_1+2\beta_2+4\beta_3+(\mathcal{M}_{Pl}^2))}{(1+2k^2)^2(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}$	0	$\frac{4k^2(4\beta_1+2\beta_2+4\beta_3+(\mathcal{M}_{Pl}^2))}{(1+2k^2)^2(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}$

	$^{1^+}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$^{1^+}\mathcal{A}^{\perp}{}_{\alpha\beta}$	$^{1^+}f^{\parallel}{}_{\alpha\beta}$	$^{1^-}\mathcal{A}^{\parallel}{}_{\alpha}$	$^{1^-}\mathcal{A}^{\perp}{}_{\alpha}$	$^{1^-}f^{\parallel}{}_{\alpha}$	$^{1^-}f^{\perp}{}_{\alpha}$
$^{1^+}\mathcal{A}^{\parallel}\dagger^{\alpha\beta}$	$\frac{1}{4}(12\beta_1-10\beta_2+2(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)k^2+(\mathcal{M}_{Pl}^2))$	$\frac{4\beta_1-6\beta_2+(\mathcal{M}_{Pl}^2)}{2\sqrt{2}}$	$\frac{ik(4\beta_1-6\beta_2+(\mathcal{M}_{Pl}^2))}{2\sqrt{2}}$	0 0		0	0
$^{1^+}\mathcal{A}^{\perp}\dagger^{\alpha\beta}$	$\frac{4\beta_1-6\beta_2+(\mathcal{M}_{Pl}^2)}{2\sqrt{2}}$	$2\beta_1-\beta_2$	$i(2\beta_1-\beta_2)k$	0 0		0	0
$^{1^+}f^{\parallel}\dagger^{\alpha\beta}$	$-\frac{ik(4\beta_1-6\beta_2+(\mathcal{M}_{Pl}^2))}{2\sqrt{2}}$	$-i(2\beta_1-\beta_2)k$	$(2\beta_1-\beta_2)k^2$	0 0		0	0
$^{1^-}\mathcal{A}^{\parallel}\dagger^{\alpha}$	0	0	0	$\beta_1+\frac{\beta_2}{2}+\beta_3+\frac{(\mathcal{M}_{Pl}^2)}{4}$	$-\frac{2\beta_3+(\mathcal{M}_{Pl}^2)}{2\sqrt{2}}$	0	$-\frac{1}{2}ik(2\beta_3+(\mathcal{M}_{Pl}^2))$
$^{1^-}\mathcal{A}^{\perp}\dagger^{\alpha}$	0	0	0	$-\frac{2\beta_3+(\mathcal{M}_{Pl}^2)}{2\sqrt{2}}$	$\frac{1}{2}(2\beta_1+\beta_2+\beta_3)$	0	$\frac{i(2\beta_1+\beta_2+\beta_3)k}{\sqrt{2}}$
$^{1^-}f^{\parallel}\dagger^{\alpha}$	0	0	0	0	0 0		0
$^{1^-}f^{\perp}\dagger^{\alpha}$	0	0	0	$\frac{1}{2}ik(2\beta_3+(\mathcal{M}_{Pl}^2))$	$-\frac{i(2\beta_1+\beta_2+\beta_3)k}{\sqrt{2}}$	0	$(2\beta_1+\beta_2+\beta_3)k^2$

$$
\begin{aligned}
S == \iiiint\Big(&\mathcal{A}^{\alpha\beta\chi}\ \sigma_{\alpha\beta\chi} + f^{\alpha\beta}\ \tau(\Delta+\mathcal{K})_{\alpha\beta} - \\
&\tfrac{1}{2}(\mathcal{M}_{Pl}^2)(\mathcal{A}_{\iota\kappa\theta}\ \mathcal{A}^{\iota\theta\kappa} + \mathcal{A}^{\iota\theta}{}_{\iota}\ \mathcal{A}_{\theta}{}^{\kappa}{}_{\kappa} + 2f^{\iota\theta}\ \partial_{\theta}\mathcal{A}_{\iota}{}^{\kappa}{}_{\kappa} - \\
&\quad 2\partial_{\theta}\mathcal{A}^{\iota\theta}{}_{\iota} - 2f^{\iota\theta}\ \partial_{\kappa}\mathcal{A}_{\iota}{}^{\kappa}{}_{\theta} + 2f^{\iota}{}_{\iota}\ \partial_{\kappa}\mathcal{A}^{\theta\kappa}{}_{\theta}) + \\
&\beta_3(-\mathcal{A}^{\iota\theta}{}_{\iota}\ \mathcal{A}_{\theta}{}^{\kappa}{}_{\kappa} + 2\ \mathcal{A}_{\iota}{}^{\kappa}{}_{\kappa}\ \partial_{\theta}f^{\iota\theta} - 2\ \mathcal{A}_{\theta}{}^{\kappa}{}_{\kappa}\ \partial^{\theta}f^{\iota}{}_{\iota} + \\
&\quad \partial_{\theta}f^{\kappa}{}_{\kappa}\,\partial^{\theta}f^{\iota}{}_{\iota} + \partial_{\theta}f^{\iota\theta}\,\partial_{\kappa}f_{\iota}{}^{\kappa} - 2\,\partial^{\theta}f^{\iota}{}_{\iota}\,\partial_{\kappa}f_{\theta}{}^{\kappa}) + \\
&2\alpha_4(4\partial_{\iota}\mathcal{A}_{\alpha\theta\kappa} - 2\partial_{\iota}\mathcal{A}_{\alpha\kappa\theta} - \partial_{\theta}\mathcal{A}_{\alpha\iota\kappa} + \partial_{\kappa}\mathcal{A}_{\alpha\iota\theta} - 2\partial_{\kappa}\mathcal{A}_{\alpha\theta\iota}) \\
&\quad \partial^{\kappa}\mathcal{A}^{\alpha\iota\theta} - \alpha_2(\partial_{\theta}\mathcal{A}_{\iota}{}^{\kappa}{}_{\kappa}\ \partial^{\theta}\mathcal{A}^{\alpha\iota}{}_{\alpha} + \partial_{\alpha}\mathcal{A}^{\alpha\iota\theta}\ \partial_{\kappa}\mathcal{A}_{\iota}{}^{\kappa}{}_{\theta} - \\
&\quad 2\partial^{\theta}\mathcal{A}^{\alpha\iota}{}_{\alpha}\ \partial_{\kappa}\mathcal{A}_{\iota}{}^{\kappa}{}_{\theta} - 4\partial_{\iota}\mathcal{A}_{\alpha\theta\kappa}\ \partial^{\kappa}\mathcal{A}^{\alpha\iota\theta} + \\
&\quad 2\partial_{\iota}\mathcal{A}_{\alpha\kappa\theta}\ \partial^{\kappa}\mathcal{A}^{\alpha\iota\theta} + 2\ \partial_{\kappa}\mathcal{A}_{\alpha\theta\iota}\ \partial^{\kappa}\mathcal{A}^{\alpha\iota\theta}) + \\
&2\beta_1(-\mathcal{A}_{\iota\kappa\theta}\ \mathcal{A}^{\iota\theta\kappa} + (2\ \mathcal{A}_{\theta\kappa\iota} - \partial_{\iota}f_{\kappa\theta} + \partial_{\kappa}f_{\iota\theta})\partial^{\kappa}f^{\iota\theta} + \\
&\quad \mathcal{A}_{\iota\theta\kappa}\ (\mathcal{A}^{\iota\theta\kappa} + 2\ \partial^{\kappa}f^{\iota\theta})) + \\
&\beta_2((-2\ \mathcal{A}_{\theta\kappa\iota} - 2\ \partial_{\iota}f_{\theta\kappa} + \partial_{\theta}f_{\iota\kappa} + \partial_{\kappa}f_{\theta\iota})\partial^{\kappa}f^{\iota\theta} - \\
&\quad \mathcal{A}_{\iota\theta\kappa}\ (\mathcal{A}^{\iota\theta\kappa} + 2\ \partial^{\kappa}f^{\iota\theta}) + \\
&\quad \mathcal{A}_{\iota\kappa\theta}\ (3\ \mathcal{A}^{\iota\theta\kappa} + 4\ \partial^{\kappa}f^{\iota\theta})) + 4\ \alpha_1\partial_{\theta}\mathcal{A}^{\iota\theta}{}_{\iota}\,\partial_{\lambda}\mathcal{A}^{\kappa\lambda}{}_{\kappa} - \\
&\alpha_3(\partial_{\kappa}\mathcal{A}_{\lambda}{}^{\zeta}{}_{\zeta}\ \partial^{\lambda}\mathcal{A}^{\theta\kappa}{}_{\theta} + (\partial_{\theta}\mathcal{A}^{\theta\kappa\lambda} - 2\ \partial^{\lambda}\mathcal{A}^{\theta\kappa}{}_{\theta})\partial_{\zeta}\mathcal{A}_{\lambda}{}^{\zeta}{}_{\kappa}) + \\
&4\alpha_6\,\partial_{\iota}\mathcal{A}_{\lambda\zeta\alpha}\partial^{\zeta}\mathcal{A}^{\alpha\iota\lambda}\Big)[t,x,y,z]\,dz\,dy\,dx\,dt
\end{aligned}
$$

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

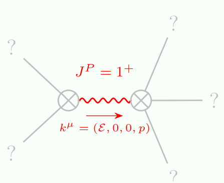
	$^{2^+}\mathcal{A}^{\parallel}{}_{\alpha\beta}$	$^{2^+}f^{\parallel}{}_{\alpha\beta}$	$^{2^-}\mathcal{A}^{\parallel}{}_{\alpha\beta\chi}$
$^{2^+}\mathcal{A}^{\parallel}\dagger^{\alpha\beta}$	$\frac{1}{4}(4\beta_1+2\beta_2+2(-3\alpha_2+\alpha_3-4\alpha_4+4\alpha_6)k^2-(\mathcal{M}_{Pl}^2))$	$-\frac{ik(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))}{2\sqrt{2}}$	0
$^{2^+}f^{\parallel}\dagger^{\alpha\beta}$	$\frac{ik(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))}{2\sqrt{2}}$	$(2\beta_1+\beta_2)k^2$	0
$^{2^-}\mathcal{A}^{\parallel}\dagger^{\alpha\beta\chi}$	0	0	$\beta_1+\frac{\beta_2}{2}-\alpha_2k^2-\frac{(\mathcal{M}_{Pl}^2)}{4}$

	$^{0^+}\sigma^{\parallel}$	$^{0^+}\tau^{\parallel}$	$^{0^+}\tau^{\perp}$	$^{0^-}\sigma^{\parallel}$
$^{0^+}\sigma^{\parallel}\dagger$	$\frac{1}{2(3\alpha_1+\alpha_3-\alpha_4+\alpha_6)k^2+\frac{1}{2}(\mathcal{M}_{Pl}^2)(-1-\frac{(\mathcal{M}_{Pl}^2)}{2\beta_1+\beta_2+3\beta_3})}$	$-\frac{i\sqrt{2}(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}{k(-4(3\alpha_1+\alpha_3-\alpha_4+\alpha_6)(2\beta_1+\beta_2+3\beta_3)k^2+(2\beta_1+\beta_2+3\beta_3)(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)}$	0	0
$^{0^+}\tau^{\parallel}\dagger$	$\frac{i\sqrt{2}(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}{k((\mathcal{M}_{Pl}^2)^2+(2\beta_1+\beta_2+3\beta_3)(-4(3\alpha_1+\alpha_3-\alpha_4+\alpha_6)k^2+(\mathcal{M}_{Pl}^2)))}$	$-\frac{2\beta_1+\beta_2+3\beta_3+4(3\alpha_1+\alpha_3-\alpha_4+\alpha_6)k^2+(\mathcal{M}_{Pl}^2)}{k^2(-4(3\alpha_1+\alpha_3-\alpha_4+\alpha_6)(2\beta_1+\beta_2+3\beta_3)k^2+(2\beta_1+\beta_2+3\beta_3)(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)}$	0	0
$^{0^+}\tau^{\perp}\dagger$	0	0	0	0
$^{0^-}\sigma^{\parallel}\dagger$	0	0	0	$\frac{2}{8\beta_1-8\beta_2+4(\alpha_2+3\alpha_4)k^2+(\mathcal{M}_{Pl}^2)}$

	$^{0^+}\mathcal{A}^{\parallel}$	$^{0^+}f^{\parallel}$	$^{0^+}f^{\perp}$	$^{0^-}\mathcal{A}^{\parallel}$
$^{0^+}\mathcal{A}^{\parallel}\dagger$	$\frac{1}{2}(2\beta_1+\beta_2+3\beta_3+4(3\alpha_1+\alpha_3-\alpha_4+\alpha_6)k^2+(\mathcal{M}_{Pl}^2))$	$-\frac{ik(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}{\sqrt{2}}$	0	0
$^{0^+}f^{\parallel}\dagger$	$\frac{ik(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}{\sqrt{2}}$	$(2\beta_1+\beta_2+3\beta_3)k^2$	0	0
$^{0^+}f^{\perp}\dagger$	0	0 0		0
$^{0^-}\mathcal{A}^{\parallel}\dagger$	0	0 0		$4\beta_1-4\beta_2+2(\alpha_2+3\alpha_4)k^2+\frac{(\mathcal{M}_{Pl}^2)}{2}$

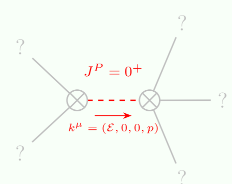
	$^{2^+}\sigma^{\parallel}{}_{\alpha\beta}$	$^{2^+}\tau^{\parallel}{}_{\alpha\beta}$	$^{2^-}\sigma^{\parallel}{}_{\alpha\beta\chi}$
$^{2^+}\sigma^{\parallel}\dagger^{\alpha\beta}$	$\frac{8}{4(-3\alpha_2+\alpha_3-4\alpha_4+4\alpha_6)k^2+(\mathcal{M}_{Pl}^2)(2-\frac{(\mathcal{M}_{Pl}^2)}{2\beta_1+\beta_2})}$	$-\frac{2i\sqrt{2}(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))}{k(4(3\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1+\beta_2)k^2-2(2\beta_1+\beta_2)(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)}$	0
$^{2^+}\tau^{\parallel}\dagger^{\alpha\beta}$	$\frac{2i\sqrt{2}(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))}{k(2(2\beta_1+\beta_2)(2(3\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)k^2-(\mathcal{M}_{Pl}^2))+(\mathcal{M}_{Pl}^2)^2)}$	$-\frac{2(4\beta_1+2\beta_2+2(-3\alpha_2+\alpha_3-4\alpha_4+4\alpha_6)k^2-(\mathcal{M}_{Pl}^2))}{k^2(4(3\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1+\beta_2)k^2-2(2\beta_1+\beta_2)(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)}$	0
$^{2^-}\sigma^{\parallel}\dagger^{\alpha\beta\chi}$	0	0	$-\frac{4}{-4\beta_1-2\beta_2+4\alpha_2k^2+(\mathcal{M}_{Pl}^2)}$

Massive and massless spectra



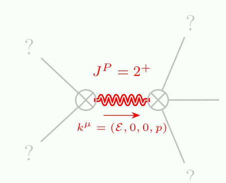
Massive particle

Pole residue:	$(\alpha_2(48\beta_1^2-80\beta_1\beta_2+44\beta_2^2+8\beta_1(\mathcal{M}_{Pl}^2)-12\beta_2(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)-\alpha_3(48\beta_1^2-80\beta_1\beta_2+44\beta_2^2+8\beta_1(\mathcal{M}_{Pl}^2)-12\beta_2(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)+4\alpha_4(48\beta_1^2-80\beta_1\beta_2+44\beta_2^2+8\beta_1(\mathcal{M}_{Pl}^2)-12\beta_2(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)-4\alpha_6(48\beta_1^2-80\beta_1\beta_2+44\beta_2^2+8\beta_1(\mathcal{M}_{Pl}^2)-12\beta_2(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)-2(2\beta_1-\beta_2)(32\beta_1^2-16\beta_2^2+10\beta_2(\mathcal{M}_{Pl}^2)-(\mathcal{M}_{Pl}^2)^2-4\beta_1(4\beta_2+(\mathcal{M}_{Pl}^2))))/((\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)(8\alpha_2\beta_1-8\alpha_3\beta_1+32\alpha_4\beta_1-32\alpha_6\beta_1-32\beta_1^2-4\alpha_2\beta_2+4\alpha_3\beta_2-16\alpha_4\beta_2+16\alpha_6\beta_2+16\beta_1\beta_2+16\beta_2^2+4\beta_1(\mathcal{M}_{Pl}^2)-10\beta_2(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2)) > 0$
Square mass:	$\frac{-32\beta_1^2+16\beta_2^2-10\beta_2(\mathcal{M}_{Pl}^2)+(\mathcal{M}_{Pl}^2)^2+4\beta_1(4\beta_2+(\mathcal{M}_{Pl}^2))}{4(\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1-\beta_2)} > 0$
Spin:	1
Parity:	Even



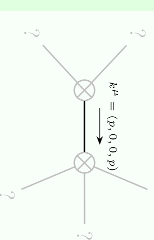
Massive particle

Pole residue:	$(-4\alpha_4\beta_1+4\alpha_6\beta_1-2\alpha_4\beta_2+2\alpha_6\beta_2-6\alpha_4\beta_3+6\alpha_6\beta_3-2\alpha_4(\mathcal{M}_{Pl}^2)+2\alpha_6(\mathcal{M}_{Pl}^2)+2\beta_1(\mathcal{M}_{Pl}^2)+\beta_2(\mathcal{M}_{Pl}^2)+3\beta_3(\mathcal{M}_{Pl}^2)+6\alpha_1(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))+2\alpha_3(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2)))/(2(3\alpha_1+\alpha_3-\alpha_4+\alpha_6)(2\beta_1+\beta_2+3\beta_3)(\mathcal{M}_{Pl}^2)) > 0$
Square mass:	$\frac{(\mathcal{M}_{Pl}^2)(2\beta_1+\beta_2+3\beta_3+(\mathcal{M}_{Pl}^2))}{4(3\alpha_1+\alpha_3-\alpha_4+\alpha_6)(2\beta_1+\beta_2+3\beta_3)} > 0$
Spin:	0
Parity:	Even



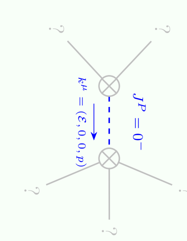
Massive particle

Pole residue:	$\frac{-3\alpha_2(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))+\alpha_3(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))-2(8\alpha_4\beta_1-8\alpha_6\beta_1+4\alpha_4\beta_2-4\alpha_6\beta_2-2\alpha_4(\mathcal{M}_{Pl}^2)+2\alpha_6(\mathcal{M}_{Pl}^2)+2\beta_1(\mathcal{M}_{Pl}^2)+\beta_2(\mathcal{M}_{Pl}^2))}{(3\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1+\beta_2)(\mathcal{M}_{Pl}^2)} > 0$
Square mass:	$\frac{(4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2))(\mathcal{M}_{Pl}^2)}{4(3\alpha_2-\alpha_3+4\alpha_4-4\alpha_6)(2\beta_1+\beta_2)} > 0$
Spin:	2
Parity:	Even



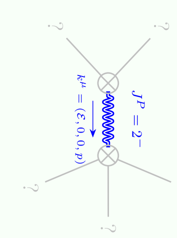
Massless particle

Pole residue:	$\frac{1}{(\mathcal{M}_{Pl}^2)} > 0$
Polarisations:	2



Massive particle

Pole residue:	$-\frac{1}{2(\alpha_2+3\alpha_4)} > 0$
Square mass:	$-\frac{8\beta_1-8\beta_2+(\mathcal{M}_{Pl}^2)}{4(\alpha_2+3\alpha_4)} > 0$
Spin:	0
Parity:	Odd



Massive particle

Pole residue:	$\frac{1}{\alpha_2} > 0$
Square mass:	$\frac{4\beta_1+2\beta_2-(\mathcal{M}_{Pl}^2)}{4\alpha_2} > 0$
Spin:	2
Parity:	Odd

Unitarity conditions

(Demonstrably impossible)