Table (1^+ / 1^- sector, sigma/tau):

	$\sigma_1^{\#1}\dagger^{\alpha\beta}$	$\sigma_1^{\#2}\dagger^{\alpha\beta}$	$\tau_1^{\#1}\dagger^{\alpha\beta}$	$\sigma_1^{\#1}\dagger^{\alpha}$	$\sigma_1^{\#2}\dagger^{\alpha}$	$\tau_1^{\#1}\dagger^{\alpha}$	$\tau_1^{\#2}\dagger^{\alpha}$
$\tau_1^{\#2}{}_{\alpha}$	0	0	0	$-\frac{4ik}{(\alpha_0-4\beta_1)(1+2k^2)}$	$-\frac{2i\sqrt{2}k}{(\alpha_0-4\beta_1)(1+2k^2)}$	0	$-\frac{4k^2}{(\alpha_0-4\beta_1)(1+2k^2)}$
$\tau_1^{\#1}{}_{\alpha}$	0	0	0	0	0	0	0
$\sigma_1^{\#2}{}_{\alpha}$	0	0	0	$-\frac{2\sqrt{2}}{(\alpha_0-4\beta_1)(1+2k^2)}$	$-\frac{2}{(\alpha_0-4\beta_1)(1+2k^2)}$	0	$\frac{2i\sqrt{2}k}{(\alpha_0-4\beta_1)(1+2k^2)}$
$\sigma_1^{\#1}{}_{\alpha}$	0	0	0	0	$-\frac{2\sqrt{2}}{(\alpha_0-4\beta_1)(1+2k^2)}$	0	$\frac{4ik}{(\alpha_0-4\beta_1)(1+2k^2)}$
$\tau_1^{\#1}{}_{\alpha\beta}$	$\frac{2i\sqrt{2}k}{(\alpha_0-4\beta_1)(1+k^2)}$	$\frac{2ik}{(\alpha_0-4\beta_1)(1+k^2)^2}$	$-\frac{2k^2}{(\alpha_0-4\beta_1)(1+k^2)^2}$	0	0	0	0
$\sigma_1^{\#2}{}_{\alpha\beta}$	$\frac{2\sqrt{2}}{(\alpha_0-4\beta_1)(1+k^2)}$	$-\frac{2}{(\alpha_0-4\beta_1)(1+k^2)^2}$	$\frac{2ik}{(\alpha_0-4\beta_1)(1+k^2)^2}$	0	0	0	0
$\sigma_1^{\#1}{}_{\alpha\beta}$	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

Table (2^+ / 2^-, omega/f):

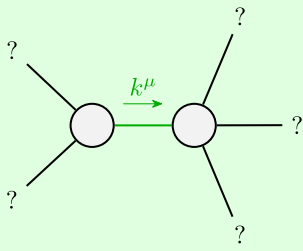|	$\omega_{2^+}^{\#1}{}_{\alpha\beta}$	$f_{2^+}^{\#1}{}_{\alpha\beta}$	$\omega_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\omega_{2^+}^{\#1}\dagger^{\alpha\beta}$	$-\frac{\alpha_0}{4}+\beta_1$	$\frac{i(\alpha_0-4\beta_1)k}{2\sqrt{2}}$	0
$f_{2^+}^{\#1}\dagger^{\alpha\beta}$	$-\frac{i(\alpha_0-4\beta_1)k}{2\sqrt{2}}$	$2\beta_1 k^2$	0
$\omega_{2^-}^{\#1}\dagger^{\alpha\beta\chi}$	0	0	$-\frac{\alpha_0}{4}+\beta_1$

Table (2^+ / 2^-, sigma/tau):

	$\sigma_{2^+}^{\#1}{}_{\alpha\beta}$	$\tau_{2^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\sigma_{2^+}^{\#1}\dagger^{\alpha\beta}$	$-\frac{16\beta_1}{\alpha_0^2-4\alpha_0\beta_1}$	$\frac{2i\sqrt{2}}{\alpha_0 k}$	0
$\tau_{2^+}^{\#1}\dagger^{\alpha\beta}$	$-\frac{2i\sqrt{2}}{\alpha_0 k}$	$\frac{2}{\alpha_0 k^2}$	0
$\sigma_{2^-}^{\#1}\dagger^{\alpha\beta\chi}$	0	0	$\frac{1}{-\frac{\alpha_0}{4}+\beta_1}$

Table (0^+ / 0^-):

	$\sigma_{0^+}^{\#1}$	$\tau_{0^+}^{\#1}$	$\tau_{0^+}^{\#2}$	$\sigma_{0^-}^{\#1}$
$\sigma_{0^+}^{\#1}\dagger$	$\frac{8\beta_1}{\alpha_0^2-4\alpha_0\beta_1+8\alpha_6\beta_1 k^2}$	$-\frac{i\sqrt{2}(\alpha_0-4\beta_1)}{\alpha_0(\alpha_0-4\beta_1)k+8\alpha_6\beta_1 k^3}$	0	0
$\tau_{0^+}^{\#1}\dagger$	$\frac{i\sqrt{2}(\alpha_0-4\beta_1)}{\alpha_0(\alpha_0-4\beta_1)k+8\alpha_6\beta_1 k^3}$	$-\frac{\alpha_0-4\beta_1+2\alpha_6 k^2}{k^2(\alpha_0^2-4\alpha_0\beta_1+8\alpha_6\beta_1 k^2)}$	0	0
$\tau_{0^+}^{\#2}\dagger$	0	0	0	0
$\sigma_{0^-}^{\#1}\dagger$	0	0	0	$\frac{2}{\alpha_0-4\beta_1}$

Table (1^+ / 1^-, omega/f):

	$\omega_{1^+}^{\#1}\dagger^{\alpha\beta}$	$\omega_{1^+}^{\#2}\dagger^{\alpha\beta}$	$f_{1^+}^{\#1}\dagger^{\alpha\beta}$	$\omega_{1^-}^{\#1}\dagger^{\alpha}$	$\omega_{1^-}^{\#2}\dagger^{\alpha}$	$f_{1^-}^{\#1}\dagger^{\alpha}$	$f_{1^-}^{\#2}\dagger^{\alpha}$
$f_{1^-}^{\#2}{}_{\alpha}$	0	0	0	$-\frac{1}{2}i(\alpha_0-4\beta_1)k$	0	0	0
$f_{1^-}^{\#1}{}_{\alpha}$	0	0	0	0	0	0	0
$\omega_{1^-}^{\#2}{}_{\alpha}$	0	0	0	$\frac{\alpha_0-4\beta_1}{2\sqrt{2}}$	0	0	0
$\omega_{1^-}^{\#1}{}_{\alpha}$				$\frac{1}{4}(\alpha_0-4\beta_1)$	$-\frac{\alpha_0-4\beta_1}{2\sqrt{2}}$	0	$\frac{1}{2}i(\alpha_0-4\beta_1)k$
$f_{1^+}^{\#1}{}_{\alpha\beta}$	$\frac{i(\alpha_0-4\beta_1)k}{2\sqrt{2}}$	0	0	0	0	0	0
$\omega_{1^+}^{\#2}{}_{\alpha\beta}$	$\frac{\alpha_0-4\beta_1}{2\sqrt{2}}$	0	0	0	0	0	0
$\omega_{1^+}^{\#1}{}_{\alpha\beta}$	$\frac{1}{4}(\alpha_0-4\beta_1)$	$\frac{\alpha_0-4\beta_1}{2\sqrt{2}}$	$-\frac{i(\alpha_0-4\beta_1)k}{2\sqrt{2}}$	0	0	0	0

Source constraints

SO(3) irreps	#
$\tau_{0^+}^{\#2}==0$	1
$\tau_1^{\#2\,\alpha}+2ik\,\sigma_1^{\#2\,\alpha}==0$	3
$\tau_1^{\#1\,\alpha}==0$	3
$\tau_1^{\#1\,\alpha\beta}+ik\,\sigma_1^{\#2\,\alpha\beta}==0$	3
Total #:	10

Table (0^+ / 0^-, omega/f):

	$\omega_{0^+}^{\#1}\dagger$	$f_{0^+}^{\#1}\dagger$	$f_{0^+}^{\#2}\dagger$	$\omega_{0^-}^{\#1}\dagger$
$\omega_{0^-}^{\#1}$	0	0	0	$\frac{1}{2}(\alpha_0-4\beta_1)$
$f_{0^+}^{\#2}$	0	0	0	0
$f_{0^+}^{\#1}$	$-\frac{i(\alpha_0-4\beta_1)k}{\sqrt{2}}$	$-4\beta_1 k^2$	0	0
$\omega_{0^+}^{\#1}$	$\frac{\alpha_0}{2}-2\beta_1+\alpha_6 k^2$	$\frac{i(\alpha_0-4\beta_1)k}{\sqrt{2}}$	0	0

Lagrangian density

$$-\tfrac{1}{2}\alpha_0\,\omega_{\alpha\chi\beta}\,\omega^{\alpha\beta\chi}-\tfrac{1}{2}\alpha_0\,\omega^{\alpha\beta}{}_{\alpha}\,\omega_{\beta\chi}{}^{\chi}+2\beta_1\,\omega^{\alpha\beta}{}_{\alpha}\,\omega_{\beta\chi}{}^{\chi}-2\beta_1\,\omega_{\chi\delta}{}^{\alpha}\,\omega^{\chi\delta}{}_{\alpha}+$$
$$f^{\alpha\beta}\,\tau_{\alpha\beta}+\omega^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi}-2\beta_1\,\omega_{\alpha}{}^{\chi}{}_{\chi}\,\partial_{\beta}f^{\alpha\beta}-2\beta_1\,\omega_{\alpha}{}^{\chi}{}_{\delta}\,\partial_{\beta}\omega^{\alpha}{}_{\chi}+$$
$$\alpha_0\,\partial_{\beta}\omega^{\alpha\beta}+2\beta_1\,\omega_{\beta}{}^{\chi}{}_{\chi}\,\partial^{\beta}f^{\alpha}+2\beta_1\,\omega_{\beta}{}^{\delta}\,\partial^{\beta}f^{\alpha}{}_{\chi}-2\beta_1\,\partial_{\beta}f^{\chi}{}_{\chi}\,\partial^{\beta}f^{\alpha}{}_{\delta}+$$
$$\alpha_0\,f^{\alpha\beta}\,\partial_{\chi}\omega^{\chi}{}_{\alpha}{}_{\beta}-\alpha_0\,f^{\alpha}\,\partial_{\chi}\omega^{\beta\chi}{}_{\beta}+4\beta_1\,\omega_{\alpha\chi\beta}\,\partial^{\chi}f^{\alpha\beta}+\beta_1\,\partial_{\chi}f_{\beta}{}^{\delta}\,\partial^{\chi}f^{\alpha}{}_{\delta}+$$
$$\beta_1\,\partial^{\chi}f_{\beta\chi}\,\partial_{\delta}f^{\alpha}{}_{\beta}{}^{\delta}-2\beta_1\,\partial_{\delta}f^{\alpha}{}_{\chi}\,\partial^{\chi}f^{\beta\delta}{}_{\beta}+\tfrac{2}{3}\alpha_6\,\partial_{\beta}\omega^{\alpha\beta}{}_{\alpha}\,\partial_{\delta}\omega^{\chi\delta}{}_{\chi}-$$
$$\beta_1\,\partial_{\chi}f_{\beta}{}^{\delta}\,\partial^{\chi}f_{\delta}{}^{\beta}{}_{\chi\beta}+\beta_1\,\partial^{\chi}f_{\delta}{}^{\delta}\,\partial_{\delta}f^{\beta\delta}-\beta_1\,\partial^{\chi}f^{\alpha}{}_{\delta}\,\partial_{\zeta}\partial_{\delta}\partial^{\delta}f^{\delta}{}_{\chi}$$

Massive particle ($J^P=0^+$)

Pole residue:	$\frac{1}{\alpha_0}+\frac{1}{\alpha_6}-\frac{1}{4\beta_1}>0$
Polarisations:	1
Square mass:	$-\frac{\alpha_0(\alpha_0-4\beta_1)}{8\alpha_6\beta_1}>0$
Spin:	0
Parity:	Even

Quadratic pole

Pole residue:	$\frac{1}{\alpha_0}>0$
Polarisations:	2

Unitarity conditions

$$\alpha_0>0 \ \&\&\ \alpha_6>0 \ \&\&\ \beta_1<0\ ||\ \beta_1>\frac{\alpha_0}{4}$$