(No source constraints)

Lagrangian density

$$2\beta^2\phi^2 + \alpha^2\beta^2 h_{\alpha\mu\nu}h^{\alpha\mu\nu} - 3\alpha^2\beta^2 h^{\alpha}{}_{\alpha}{}^{\mu} h_{\mu}{}^{\nu}{}_{\nu} +$$
$$\tfrac{1}{2}\phi\partial_\alpha\partial^\alpha\phi + \alpha\beta h_{\alpha}{}^{\mu}{}_{\mu}\partial^\alpha\phi - \tfrac{3}{2}\alpha^2 h^{\alpha}{}_{\alpha}{}^{\mu}\partial_\rho\partial_\mu h^{\nu}{}_{\nu}{}^{\rho} -$$
$$3\alpha^2 h^{\alpha\mu\nu}\partial_\rho\partial_\nu h_{\alpha\mu}{}^{\rho} + 6\alpha^2 h^{\alpha}{}_{\alpha}{}^{\mu}\partial_\rho\partial_\nu h_{\mu}{}^{\nu\rho} +$$
$$\alpha^2 h^{\alpha\mu\nu}\partial_\rho\partial^\rho h_{\alpha\mu\nu} - 3\alpha^2 h^{\alpha}{}_{\alpha}{}^{\mu}\partial_\rho\partial^\rho h_{\mu}{}^{\nu}{}_{\nu}$$

Added source term: $\phi\rho + h^{\alpha\beta\chi}\mathcal{F}_{\alpha\beta\chi}$

	$\mathcal{F}^{\#1}_{0^+}$	$\mathcal{F}^{\#2}_{0^+}$	$\rho^{\#1}_{0^+}$
$\mathcal{F}^{\#1}_{0^+}\dagger$	$\frac{16\beta^4-39\beta^2k^2+9k^4}{40\alpha^2\beta^6}$	$-\frac{24\beta^4-17\beta^2k^2+3k^4}{40\alpha^2\beta^6}$	$\frac{i\,k(\beta^2+3k^2)}{20\alpha\beta^5}$
$\mathcal{F}^{\#2}_{0^+}\dagger$	$-\frac{24\beta^4-17\beta^2k^2+3k^4}{40\alpha^2\beta^6}$	$\frac{16\beta^4-7\beta^2k^2+k^4}{40\alpha^2\beta^6}$	$\frac{i(\beta-k)k(\beta+k)}{20\alpha\beta^5}$
$\rho^{\#1}_{0^+}\dagger$	$-\frac{i\,k(\beta^2+3k^2)}{20\alpha\beta^5}$	$\frac{i\,k(-\beta^2+k^2)}{20\alpha\beta^5}$	$\frac{5\beta^2+k^2}{10\beta^4}$

	$h^{\#1}_{0^+}$	$h^{\#2}_{0^+}$	$\phi^{\#1}_{0^+}$
$h^{\#1}_{0^+}\dagger$	$\frac{1}{2}\alpha^2(-4\beta^2+k^2)$	$\frac{3}{2}\alpha^2(-2\beta^2+k^2)$	$\frac{1}{2}i\alpha\beta k$
$h^{\#2}_{0^+}\dagger$	$\frac{3}{2}\alpha^2(-2\beta^2+k^2)$	$\frac{1}{2}\alpha^2(-4\beta^2+9k^2)$	$\frac{1}{2}i\alpha\beta k$
$\phi^{\#1}_{0^+}\dagger$	$-\frac{1}{2}i\alpha\beta k$	$-\frac{1}{2}i\alpha\beta k$	$2\beta^2-\frac{k^2}{2}$

	$\mathcal{F}^{\#1}_{3^-}{}_{\alpha\beta\chi}$
$\mathcal{F}^{\#1}_{3^-}\dagger^{\alpha\beta\chi}$	$\frac{1}{\alpha^2(\beta^2-k^2)}$

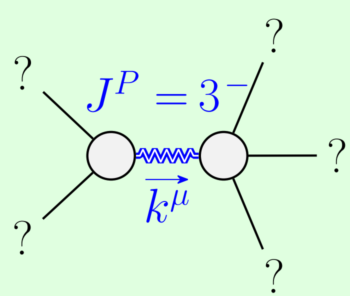
	$\mathcal{F}^{\#1}_{2^+}{}_{\alpha\beta}$
$\mathcal{F}^{\#1}_{2^+}\dagger^{\alpha\beta}$	$\frac{1}{\alpha^2\beta^2}$

	$h^{\#1}_{2^+}{}_{\alpha\beta}$
$h^{\#1}_{2^+}\dagger^{\alpha\beta}$	$\alpha^2\beta^2$

	$h^{\#1}_{3^-}{}_{\alpha\beta\chi}$
$h^{\#1}_{3^-}\dagger^{\alpha\beta\chi}$	$\alpha^2(\beta-k)(\beta+k)$

	$h^{\#1}_{1^-}{}_{\alpha}$	$h^{\#2}_{1^-}{}_{\alpha}$
$h^{\#1}_{1^-}\dagger^{\alpha}$	0	$-\sqrt{5}\,\alpha^2\beta^2$
$h^{\#2}_{1^-}\dagger^{\alpha}$	$-\sqrt{5}\,\alpha^2\beta^2$	$4\alpha^2(-\beta^2+k^2)$

	$\mathcal{F}^{\#1}_{1^-}{}_{\alpha}$	$\mathcal{F}^{\#2}_{1^-}{}_{\alpha}$
$\mathcal{F}^{\#1}_{1^-}\dagger^{\alpha}$	$\frac{4(\beta-k)(\beta+k)}{5\alpha^2\beta^4}$	$-\frac{1}{\sqrt{5}\alpha^2\beta^2}$
$\mathcal{F}^{\#2}_{1^-}\dagger^{\alpha}$	$-\frac{1}{\sqrt{5}\alpha^2\beta^2}$	0



Massive particle	
Pole residue:	$\frac{1}{\alpha^2} > 0$
Polarisations:	7
Square mass:	$\beta^2 > 0$
Spin:	3
Parity:	Odd

(No massless particles)

Unitarity conditions

$\alpha < 0 \,||\, \alpha > 0 \,\&\&\, \beta < 0 \,||\, \beta > 0$