Lagrangian density

$$\beta\, h_{\alpha\beta}\, h^{\alpha\beta} - \gamma\, h^\alpha{}_\alpha\, h^\beta{}_\beta +$$
$$\tfrac{1}{2}\,\alpha\, \partial_\beta h^\chi{}_\chi\, \partial^\beta h^\alpha{}_\alpha + \alpha\, \partial_\alpha h^{\alpha\beta}\, \partial_\chi h_\beta{}^\chi -$$
$$\alpha\, \partial^\beta h^\alpha{}_\alpha\, \partial_\chi h_\beta{}^\chi - \tfrac{1}{2}\,\alpha\, \partial_\chi h_{\alpha\beta}\, \partial^\chi h^{\alpha\beta}$$

Added source term: $\quad h^{\alpha\beta}\, \mathcal{T}_{\alpha\beta}$

(No source constraints)

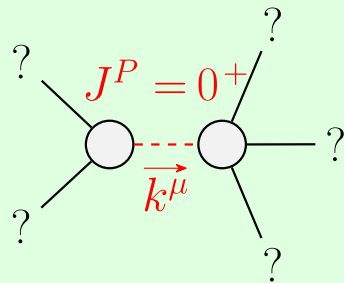|	$\mathcal{T}_{0^+}^{\#1}$	$\mathcal{T}_{0^+}^{\#2}$
$\mathcal{T}_{0^+}^{\#1}\dagger$	$\dfrac{1}{\frac{\beta(\beta-4\gamma)}{\beta-\gamma}+\alpha k^2}$	$\dfrac{\sqrt{3}\,\gamma}{\beta(\beta-4\gamma)+\alpha(\beta-\gamma)\,k^2}$
$\mathcal{T}_{0^+}^{\#2}\dagger$	$\dfrac{\sqrt{3}\,\gamma}{\beta(\beta-4\gamma)+\alpha(\beta-\gamma)\,k^2}$	$\dfrac{1}{\beta+\gamma\left(-1-\frac{3\gamma}{\beta-3\gamma+\alpha k^2}\right)}$

	$h_{0^+}^{\#1}$	$h_{0^+}^{\#2}$
$h_{0^+}^{\#1}\dagger$	$\beta-3\gamma+\alpha k^2$	$-\sqrt{3}\,\gamma$
$h_{0^+}^{\#2}\dagger$	$-\sqrt{3}\,\gamma$	$\beta-\gamma$

	$\mathcal{T}_{1^-}^{\#1}{}_\alpha$
$\mathcal{T}_{1^-}^{\#1}\dagger^\alpha$	$\dfrac{1}{\beta}$

	$h_{1^-}^{\#1}{}_\alpha$
$h_{1^-}^{\#1}\dagger^\alpha$	β

	$\mathcal{T}_{2^+}^{\#1}{}_{\alpha\beta}$
$\mathcal{T}_{2^+}^{\#1}\dagger^{\alpha\beta}$	$\dfrac{1}{\beta-\frac{\alpha k^2}{2}}$

	$h_{2^+}^{\#1}{}_{\alpha\beta}$
$h_{2^+}^{\#1}\dagger^{\alpha\beta}$	$\beta-\dfrac{\alpha k^2}{2}$

Massive particle	
Pole residue:	$\dfrac{\beta^2-2\beta\gamma+4\gamma^2}{\alpha(\beta-\gamma)^2}>0$
Polarisations:	1
Square mass:	$-\dfrac{\beta(\beta-4\gamma)}{\alpha(\beta-\gamma)}>0$
Spin:	0
Parity:	Even

$J^P=0^+$ — $\vec{k}^\mu$
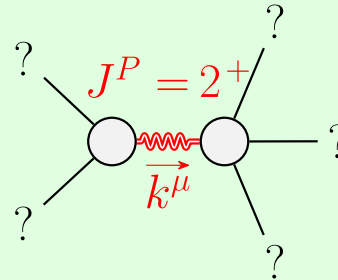
Massive particle	
Pole residue:	$-\dfrac{2}{\alpha}>0$
Polarisations:	5
Square mass:	$\dfrac{2\beta}{\alpha}>0$
Spin:	2
Parity:	Even

$J^P=2^+$ — $\vec{k}^\mu$

Unitarity conditions

(Unitarity is demonstrably impossible)

(No massless particles)