

Lagrangian density

$$\beta h_{\alpha\beta} h^{\alpha\beta} - \gamma h^\alpha_\alpha h^\beta_\beta + h^{\alpha\beta} \mathcal{T}_{\alpha\beta} + \frac{1}{2} \alpha \partial_\beta h^\chi_\chi \partial^\beta h^\alpha_\alpha + \alpha \partial_\alpha h^{\alpha\beta} \partial_\chi h^\chi_\beta - \alpha \partial^\beta h^\alpha_\alpha \partial_\chi h^\chi_\beta - \frac{1}{2} \alpha \partial_\chi h_{\alpha\beta} \partial^\chi h^{\alpha\beta}$$

$$\mathcal{T}^{\#1}_{0^+}$$

$$\mathcal{T}^{\#2}_{0^+}$$

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

$$h^{\#1}_{0^+}$$

$$h^{\#2}_{0^+}$$

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

(No source constraints)

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

$$\beta - \frac{\alpha k^2}{2}$$

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

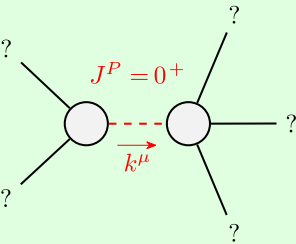
$$\mathcal{T}^{\#1}_{1^-} \dagger \alpha \quad \frac{1}{\beta}$$

$$h^{\#1}_{1^-} \alpha$$

$$h^{\#1}_{1^-} \dagger \alpha \quad \beta$$

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

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



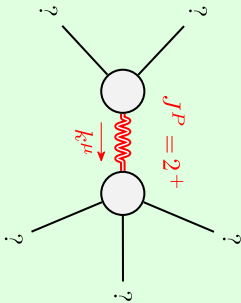
Massive particle

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

Unitarity conditions

(Unitarity is demonstrably impossible)

(No massless particles)



Massive particle	
Pole residue:	$-\frac{2}{\alpha} > 0$
Polarisations:	5
Square mass:	$\frac{2\beta}{\alpha} > 0$
Spin:	2
Parity:	Even