

Lagrangian density

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

$$\begin{matrix} h_{0+}^{\#1} & h_{0+}^{\#2} \\ h_{0+}^{\#1} \vdash & \begin{bmatrix} \alpha k^2 & 0 \end{bmatrix} \\ h_{0+}^{\#2} \vdash & \begin{bmatrix} 0 & (-\alpha+\beta)k^2 \end{bmatrix} \end{matrix}$$

$$\mathcal{T}_{2+}^{\#1} \vdash^{\alpha\beta} \begin{bmatrix} -\frac{2}{\alpha k^2} \end{bmatrix}$$

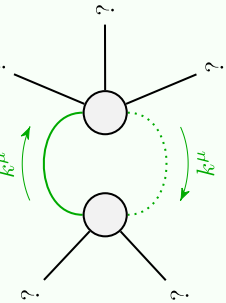
$$\begin{matrix} \mathcal{T}_{0+}^{\#1} & \mathcal{T}_{0+}^{\#2} \\ \mathcal{T}_{0+}^{\#1} \vdash & \begin{bmatrix} \frac{1}{\alpha k^2} & 0 \end{bmatrix} \\ \mathcal{T}_{0+}^{\#2} \vdash & \begin{bmatrix} 0 & \frac{1}{(-\alpha+\beta)k^2} \end{bmatrix} \end{matrix}$$

$$h_{\nu_{1-}^{\#1}}^{\nu_{1-}^{\#1}} \vdash_{\nu_{1-}^{\#1}} \begin{bmatrix} \frac{1}{2}(\not{p}+\not{\nu})\not{\nu}k^2 \end{bmatrix}$$

$$\not{\nu}_{1-}^{\#1} \vdash_{\nu_{1-}^{\#1}} \begin{bmatrix} -\frac{2}{(\alpha\beta)k^2} \end{bmatrix}$$

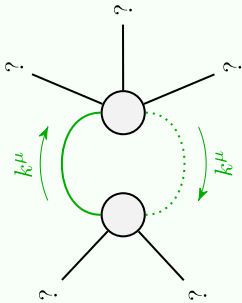
$$h_{\nu_{2+}^{\#1}+\alpha\beta}^{\nu_{2+}^{\#1}+\alpha\beta} \vdash_{\nu_{2+}^{\#1}+\alpha\beta} \begin{bmatrix} -\frac{\alpha k^2}{2} \end{bmatrix}$$

(No source constraints)



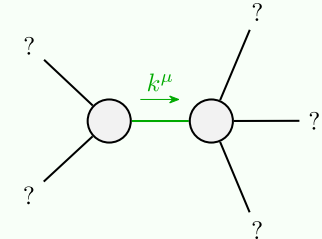
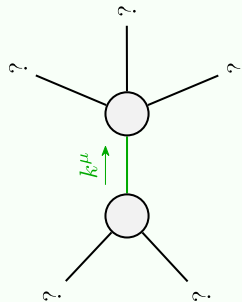
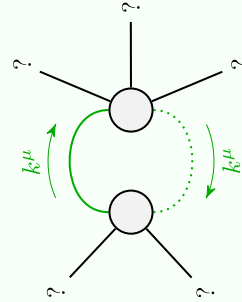
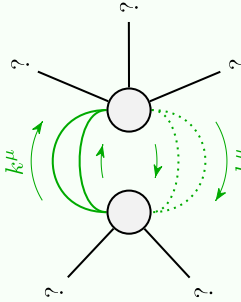
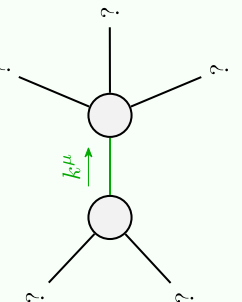
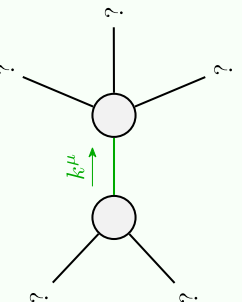
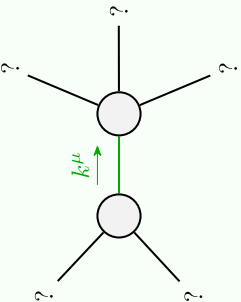
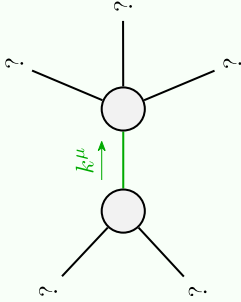
Quartic pole

Pole residue:	$0 < \frac{6\alpha+3\beta-\sqrt{3}\sqrt{12\alpha^2+12\alpha\beta+19\beta^2+64(\alpha-\beta)^2}p^2}{\alpha(\alpha-\beta)} \&\& \frac{6\alpha+3\beta-\sqrt{3}\sqrt{12\alpha^2+12\alpha\beta+19\beta^2+64(\alpha-\beta)^2}p^2}{\alpha(\alpha-\beta)} > 0$
Polarisations:	1



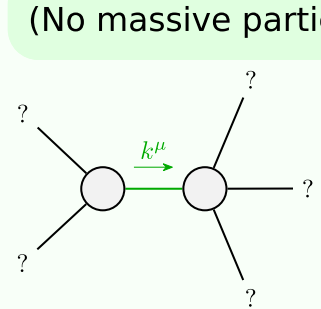
Quartic pole

Pole residue:	$0 < \frac{6\alpha+3\beta+\sqrt{3}\sqrt{12\alpha^2+12\alpha\beta+19\beta^2+64(\alpha-\beta)^2}p^2}{\alpha(\alpha-\beta)} \&\& \frac{6\alpha+3\beta+\sqrt{3}\sqrt{12\alpha^2+12\alpha\beta+19\beta^2+64(\alpha-\beta)^2}p^2}{\alpha(\alpha-\beta)} > 0$
Polarisations:	1



Quadratic pole

Pole residue:	$-\frac{2\alpha-\beta+\sqrt{20\alpha^2-36\alpha\beta+17\beta^2}}{\alpha^2-\alpha\beta} > 0$
Polarisations:	1



(No massive particles)

Quadratic pole

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

Hexic pole

Pole residue:	$0 < \frac{2\alpha+\beta}{\alpha^2-\alpha\beta} \&\& \frac{2\alpha+\beta}{\alpha^2-\alpha\beta} > 0$
Polarisations:	1

Quartic pole

Pole residue:	$0 < \frac{\beta}{\alpha^2-\alpha\beta} \&\& \frac{\beta}{\alpha^2-\alpha\beta} > 0$
Polarisations:	2

Quadratic pole

Pole residue:	$-\frac{1}{\alpha} + \frac{1}{-\alpha+\beta} > 0$
Polarisations:	2

(Unitarity is demonstrably impossible)