## Lagrangian density

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

## Source constraints

| SO(3) irreps | # |
|---|---|
| $\mathcal{T}^{\#1}_{1^-}{}^{\alpha} == 0$ | 3 |
| Total #: | 3 |

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

| $h^{\#1}_{1^-}{}^{\alpha}\,\dagger$ |
|---|
| 0 |

$h^{\#1}_{0^+}$ $h^{\#2}_{0^+}$

| | $h^{\#1}_{0^+}\,\dagger$ | $h^{\#2}_{0^+}\,\dagger$ |
|---|---|---|
| $h^{\#1}_{0^+}\,\dagger$ | $4\,\alpha k^2$ | $\sqrt{3}\,\alpha k^2$ |
| $h^{\#2}_{0^+}\,\dagger$ | $\sqrt{3}\,\alpha k^2$ | 0 |

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

| $\mathcal{T}^{\#1}_{1^-}{}^{\alpha}\,\dagger$ |
|---|
| 0 |

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

| $h^{\#1}_{2^+}{}^{\alpha\beta}\,\dagger$ |
|---|
| $\alpha k^2$ |

$\mathcal{T}^{\#1}_{0^+}$ $\mathcal{T}^{\#2}_{0^+}$

| | $\mathcal{T}^{\#1}_{0^+}\,\dagger$ | $\mathcal{T}^{\#2}_{0^+}\,\dagger$ |
|---|---|---|
| $\mathcal{T}^{\#1}_{0^+}$ | 0 | $\frac{1}{\sqrt{3}\,\alpha k^2}$ |
| $\mathcal{T}^{\#2}_{0^+}$ | $\frac{1}{\sqrt{3}\,\alpha k^2}$ | $-\frac{4}{3\,\alpha k^2}$ |

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

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

(No massive particles)

## Unitarity conditions

$\alpha > 0$




## Quadratic pole

| Pole residue: | $\frac{1}{\alpha} \wedge 0$ |
|---|---|
| Polarisations: | 3 |