

Particle spectrograph

Wave operator and propagator

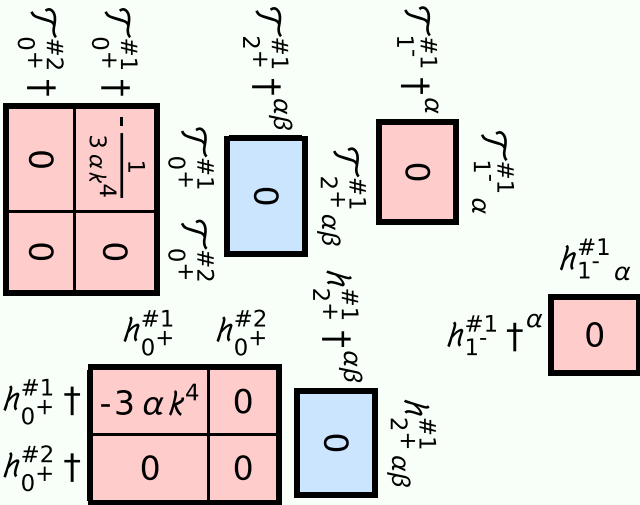
Quadratic (free) action

$S =$

$$\iiint\int (h^{\alpha\beta} \mathcal{T}_{\alpha\beta} - \alpha (\partial_\beta \partial_\alpha h^{\alpha\beta} \partial_\delta \partial_\chi h^{\chi\delta} + \partial_\beta \partial^\beta h^\alpha_\alpha (-2 \partial_\delta \partial_\chi h^{\chi\delta} + \partial_\delta \partial^\delta h^\chi_\chi))) [t, x, y, z] dz dy dx dt$$

Source constraints/gauge generators

SO(3) irreps	Multiplicities
$\mathcal{T}^{\#2}_{0+} = 0$	1
$\mathcal{T}^{\#1\alpha}_{1-} = 0$	3
$\mathcal{T}^{\#1\alpha\beta}_{2+} = 0$	5
Total constraints:	9



Massive and massless spectra

(No massless particles)

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Unitarity conditions

True