

Particle spectrograph

Wave operator and propagator

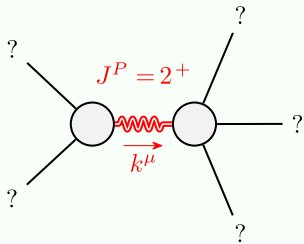
Quadratic (free) action

$$\mathcal{S} ==$$

$$\iiint (\beta (h_{\alpha\beta} h^{\alpha\beta} - h^\alpha_\alpha h^\beta_\beta) + h^{\alpha\beta} \mathcal{T}_{\alpha\beta} + \frac{1}{2} \alpha (\partial_\beta h^\chi_\chi \partial^\beta h^\alpha_\alpha + 2 \partial_\alpha h^{\alpha\beta} \partial_\chi h^\chi_\beta - 2 \partial^\beta h^\alpha_\alpha \partial_\chi h^\chi_\beta - \partial_\chi h^\alpha_\beta \partial^\chi h^{\alpha\beta})) [t, x, y, z] dz dy dx dt$$

[illegible]

Massive and massless spectra



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

(No massless particles)

Unitarity conditions

$$\alpha < 0 \ \&\& \ \beta < 0$$