

Particle spectrograph

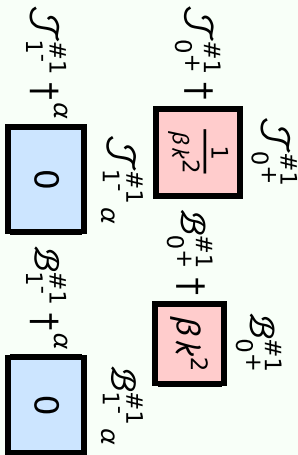
Wave operator and propagator

Source constraints

| SO(3) irreps | Fundamental fields | Multiplicities |
|---|--|----------------|
| $\mathcal{J}_{1^{-1}}^{\#1\alpha} == 0$ | $\partial_\beta \partial^\alpha \mathcal{J}^\beta == \partial_\beta \partial^\beta \mathcal{J}^\alpha$ | 3 |
| Total constraints/gauge generators: | | 3 |

Quadratic (free) action

$$\mathcal{S} = \iiint (\mathcal{B}^\alpha \mathcal{J}_\alpha + \beta \partial_\alpha \mathcal{B}^\alpha \partial_\beta \mathcal{B}^\beta) [t, x, y, z] dz dy dx dt$$



Massive and massless spectra

(No massless particles)

(No massive particles)

Unitarity conditions

True