

Particle spectrograph

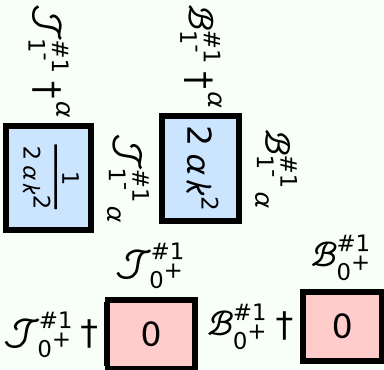
Wave operator and propagator

Quadratic (free) action

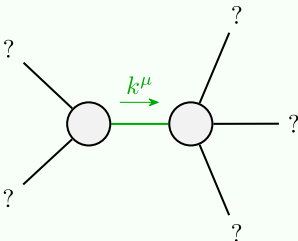
$$S = \iiint \mathcal{B}^\alpha \mathcal{T}_\alpha + 2 \alpha (-\partial_\alpha \mathcal{B}_\beta + \partial_\beta \mathcal{B}_\alpha) \partial^\beta \mathcal{B}^\alpha [t, x, y, z] dz dy dx dt$$

Source constraints/gauge generators

SO(3) irreps	Multiplicities
$\mathcal{T}_0^{\#1} = 0$	1
Total constraints:	1



Massive and massless spectra



Quadratic pole

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

(No massive particles)

Unitarity conditions

$$\alpha < 0$$