Particle spectrograph

Wave operator and propagator
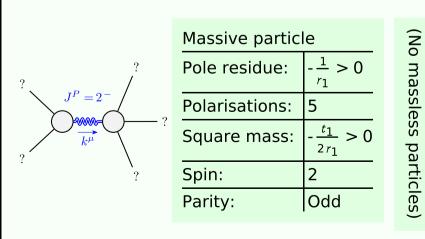
Source constraints

SO(3) irreps	Fundamental fields	Multiplicities
$\tau^{\#2}_0 == 0$	$\partial_\beta \partial_\alpha \tau^{\alpha\beta} == 0$	1
$\tau^{\#1}_0 == 0$	$\partial_\beta \partial_\alpha \tau^{\alpha\beta} == \partial_\beta \partial^\beta \tau^{\alpha}_{\alpha}$	1
	$\tau^{\#2\,\alpha}_1 + 2\,i\,k\,\sigma^{\#1\,\alpha}_1 == 0$	3
	$\sigma^{\#1\,\alpha}_1 == 0$	3
	$\sigma^{\#2\,\alpha}_1 == \sigma^{\#1\,\alpha}_1$	3
	$\tau^{\#1\,\alpha\beta}_1 + i\,k\,\sigma^{\#2\,\alpha\beta}_1 == 0$	3
	$\tau^{\#1\,\alpha\beta}_2 - 2\,i\,k\,\sigma^{\#1\,\alpha\beta}_2 == 0$	5
Total constraints/gauge generators:		19

Quadratic (free) action

$$\mathcal{S} = \iiiint \left(f^{\alpha\beta}\,\tau_{\alpha\beta} + \omega^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi} + \ldots \right)[t,\,x,\,y,\,z]\,dz\,dy\,dx\,dt$$

Massive and massless spectra

Massive particle

Massive particle	
Pole residue:	$-\frac{1}{r_1} > 0$
Polarisations:	5
Square mass:	$-\frac{t_1}{2\,r_1} > 0$
Spin:	2
Parity:	Odd

(No massless particles)

Unitarity conditions

$r_1 < 0\ \&\&\ t_1 > 0$