Particle spectrograph

Wave operator and propagator

Spin-parity form	Covariant form	Multiplicities
$1^{-}\mathcal{T}^{\#1\alpha} == 0$	$\partial_\chi\partial_\beta\partial^\alpha\mathcal{T}^{\beta\chi} == \partial_\chi\partial^\chi\partial_\beta\mathcal{T}^{\alpha\beta}$	3
Total expected gauge generators:		3

	$0^{+}h^{\#1}$	$0^{+}h^{\#2}$
$0^{+}h^{\#1}{}^{\dagger}$	αk^2	$\frac{1}{2}\sqrt{3}(\alpha-\beta)k^2$
$0^{+}h^{\#2}{}^{\dagger}$	$\frac{1}{2}\sqrt{3}(\alpha-\beta)k^2$	$(\alpha-\beta)k^2$

	$2^{+}\mathcal{T}^{\#1}_{\alpha\beta}$
$2^{+}\mathcal{T}^{\#1}{}^{\dagger\alpha\beta}$	$-\frac{2}{\alpha k^2}$

	$2^{+}h^{\#1}_{\alpha\beta}$
$2^{+}h^{\#1}{}^{\dagger\alpha\beta}$	$-\frac{\alpha k^2}{2}$

	$1^{-}\mathcal{T}^{\#1}_{\alpha}$
$1^{-}\mathcal{T}^{\#1}{}^{\dagger\alpha}$	0

	$1^{-}h^{\#1}_{\alpha}$
$1^{-}h^{\#1}{}^{\dagger\alpha}$	0

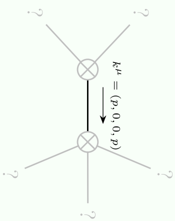
	$0^{+}\mathcal{T}^{\#1}$	$0^{+}\mathcal{T}^{\#2}$
$0^{+}\mathcal{T}^{\#1}{}^{\dagger}$	$\frac{4}{(\alpha+3\beta)k^2}$	$-\frac{2\sqrt{3}}{(\alpha+3\beta)k^2}$
$0^{+}\mathcal{T}^{\#2}{}^{\dagger}$	$-\frac{2\sqrt{3}}{(\alpha+3\beta)k^2}$	$\frac{4\alpha}{(\alpha-\beta)(\alpha+3\beta)k^2}$

$$S == \iiiint \left(h^{\alpha\beta}\,\mathcal{T}_{\alpha\beta} - \beta\,\partial^\beta h^\alpha{}_\alpha\,\partial_\chi h_\beta{}^\chi + \frac{1}{2}\alpha\left(\partial_\beta h^\chi{}_\chi\,\partial^\beta h^\alpha{}_\alpha + 2\,\partial_\alpha h^{\alpha\beta}\,\partial_\chi h_\beta{}^\chi - \partial_\chi h_{\alpha\beta}\,\partial^\chi h^{\alpha\beta}\right)\right)[t,x,y,z]\,dz\,dy\,dx$$

Massive and massless spectra

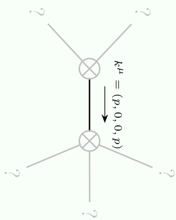
Massless particle

Pole residue:	$\frac{4+(\alpha-\beta)^2}{\alpha(\alpha-\beta)(\alpha+3\beta)} > 0$
Polarisations:	1



Massless particle

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



(No particles)

Unitarity conditions