Particle spectrograph

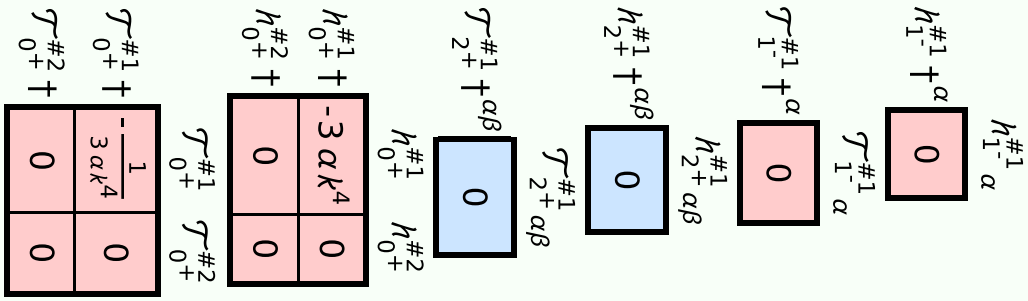
Wave operator and propagator

Source constraints

SO(3) irreps	Fundamental fields	Multiplicities
$\mathcal{T}^{\#2}_{0^+} == 0$	$\partial_\beta \partial_\alpha \mathcal{T}^{\alpha\beta} == 0$	1
$\mathcal{T}^{\#1\,\alpha}_{1^-} == 0$	$\partial_\chi \partial_\beta \partial^\alpha \mathcal{T}^{\beta\chi} == \partial_\chi \partial^\chi \partial_\beta \mathcal{T}^{\alpha\beta}$	3
$\mathcal{T}^{\#1\,\alpha\beta}_{2^+} == 0$	$2\,\partial_\delta \partial_\chi \partial^\beta \partial^\alpha \mathcal{T}^{\chi\delta} + \partial_\delta \partial^\delta \partial^\beta \partial^\alpha \mathcal{T}^{\chi}{}_{\chi} + 3\,\partial_\delta \partial^\delta \partial_\chi \partial^\chi \mathcal{T}^{\alpha\beta} + \eta^{\alpha\beta}\,\partial_\epsilon \partial^\epsilon \partial_\delta \partial_\chi \mathcal{T}^{\chi\delta} == 3\,\partial_\delta \partial^\delta \partial_\chi \partial^\alpha \mathcal{T}^{\beta\chi} + 3\,\partial_\delta \partial^\delta \partial_\chi \partial^\beta \mathcal{T}^{\alpha\chi} + \eta^{\alpha\beta}\,\partial_\epsilon \partial^\epsilon \partial_\delta \partial^\delta \mathcal{T}^{\chi}{}_{\chi}$	5
Total constraints/gauge generators:		9

Quadratic (free) action

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



Massive and massless spectra

(No massless particles)

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Unitarity conditions

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True
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