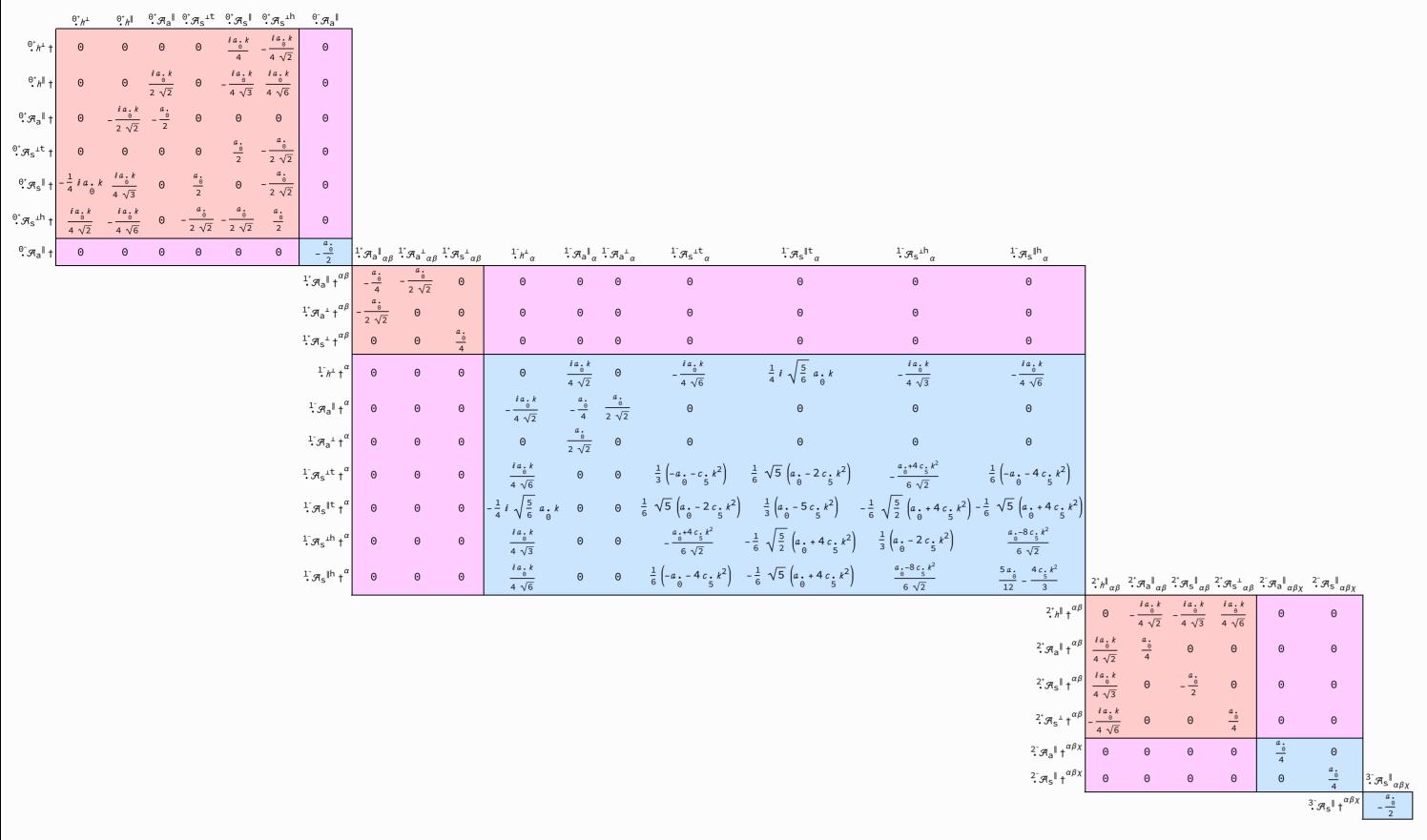
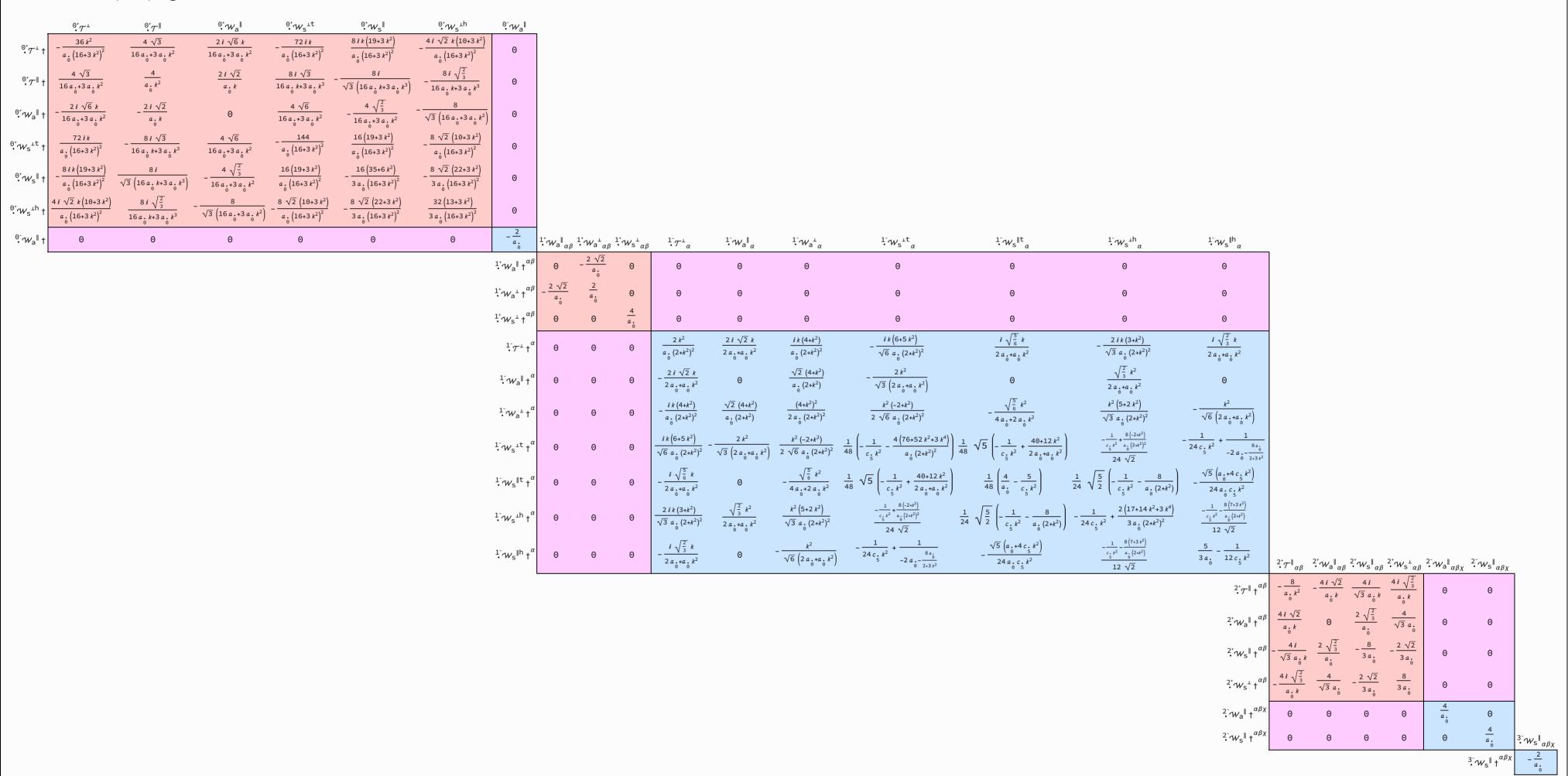
# PSALTer results panel

 $S = \iiint \left(\frac{1}{4}\left(2\,a_{\bullet}\,\mathcal{A}_{\alpha}^{\alpha\beta}\,\mathcal{A}_{\beta\chi}^{\chi} + \mathcal{A}^{\alpha\beta\chi}\left(-2\,a_{\bullet}\,\mathcal{A}_{\beta\chi\alpha}^{\alpha\beta} + 4\,w_{\alpha\beta\chi}\right) + 4\,\mathcal{T}^{\alpha\beta}\,h_{\alpha\beta}^{-\,a_{\bullet}}\,h_{\chi}^{\chi}\,\partial_{\beta}\mathcal{A}_{\alpha}^{\beta} + a_{\bullet}\,h_{\chi}^{\chi}\,\partial_{\beta}\mathcal{A}_{\alpha}^{\alpha\beta} - 2\,a_{\bullet}\,h_{\alpha\chi}\,\partial_{\beta}\mathcal{A}^{\alpha\beta\chi} + 2\,a_{\bullet}\,h_{\beta\chi}\,\partial^{\chi}\mathcal{A}_{\alpha}^{\beta} + 4\,c_{\bullet}\,\partial_{\alpha}\mathcal{A}_{\beta}^{\alpha\beta}\,\partial^{\chi}\mathcal{A}_{\alpha}^{\beta} - 4\,c_{\bullet}\,\partial_{\alpha}\mathcal{A}_{\beta}^{\alpha\beta}\,\partial^{\chi}\mathcal{A}_{\alpha}^{\beta\beta}\right) \left[t,\,x,\,y,\,z\right]\,dz\,dy\,dx\,dt$ 

#### <u>Wave</u> <u>operator</u>



### <u>Saturated</u> <u>propagator</u>



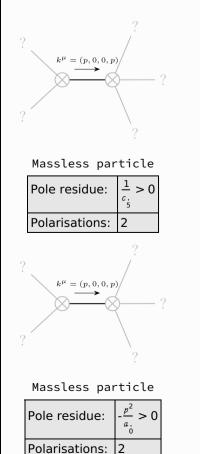
## Source constraints

Spin-parity form	Covariant form	Multiplicities
$k \stackrel{0^+}{\cdot} \mathcal{W}_S^{\parallel} + 2 k \stackrel{0^+}{\cdot} \mathcal{W}_S^{\perp h} - 6 i \stackrel{0^+}{\cdot} \mathcal{T}^{\perp} == 0$	$2 \partial_{\beta} \partial_{\alpha} \mathcal{T}^{\alpha\beta} + \partial_{\chi} \partial^{\chi} \partial_{\alpha} \mathcal{W}^{\alpha\beta}_{\beta} = \partial_{\chi} \partial_{\beta} \partial_{\alpha} \mathcal{W}^{\alpha\beta\chi}$	1
$k \stackrel{0^+}{\cdot} \mathcal{W}_S^{\perp t} + 2 i \stackrel{0^+}{\cdot} \mathcal{T}^{\perp} == 0$	$2 \partial_{\beta} \partial_{\alpha} \mathcal{T}^{\alpha\beta} = \partial_{\chi} \partial_{\beta} \partial_{\alpha} \mathbf{w}^{\alpha\beta\chi}$	1
$k \stackrel{1}{\cdot} \mathcal{W}_{S}^{\perp h^{\alpha}} - 6 i \stackrel{1}{\cdot} \mathcal{T}^{\perp^{\alpha}} == k \left( 3 \stackrel{1}{\cdot} \mathcal{W}_{S}^{\perp^{\alpha}} + \stackrel{1}{\cdot} \mathcal{W}_{S}^{\perp^{t^{\alpha}}} \right)$	$2  \partial_{\chi} \partial_{\beta} \partial^{\alpha} \mathcal{T}^{\beta \chi} + \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial_{\beta} w^{\beta \alpha \chi} = 2  \partial_{\chi} \partial^{\chi} \partial_{\beta} \mathcal{T}^{\alpha \beta} + \partial_{\delta} \partial_{\chi} \partial_{\beta} \partial^{\alpha} w^{\beta \chi \delta}$	3
Total expected gauge generators:		5

# Massive spectrum

(There are no massive particles)

# Massless spectrum



## Gauge symmetries

(Not yet implemented in PSALTer)

# <u>Unitarity</u> conditions

a. < 0 && c. > 0

# <u>Validity</u> <u>assumptions</u>

(Not yet implemented in PSALTer)