$\mathcal{S} = \iiint (\mathcal{H}^{\alpha\beta\chi} \ \sigma_{\alpha\beta\chi} + f^{\alpha\beta} \ \tau(\Delta + \mathcal{K})_{\alpha\beta} +$ $\beta_{1}\left(4\,\partial_{\beta}\mathcal{R}^{\alpha\beta}_{\quad \alpha}-4\,\,\mathcal{R}_{\alpha\,\,\chi}^{\quad \chi}\,\,\partial_{\beta}f^{\alpha\beta}+4\,\,\mathcal{R}_{\beta\,\,\chi}^{\quad \chi}\,\,\partial^{\beta}f^{\alpha}_{\quad \alpha}-2\,\partial_{\beta}f^{\chi}_{\quad \chi}\,\partial^{\beta}f^{\alpha}_{\quad \alpha}-4\,\,f^{\alpha\beta}\,\,(\partial_{\beta}\mathcal{R}_{\alpha\,\,\chi}^{\quad \chi}-\partial_{\chi}\mathcal{R}_{\alpha\,\,\beta}^{\quad \chi})-2\,\partial_{\beta}f^{\alpha}_{\quad \alpha}+2\,\partial_{\beta}f^{\alpha}_{\quad \alpha}-2\,\partial_{\beta}f^{\alpha}_{\quad \alpha}-2\,\partial$ $4\ f^{\alpha}_{\ \alpha}\ \partial_{\chi}\mathcal{A}^{\beta\chi}_{\ \beta} - 2\ \partial_{\beta}f^{\alpha\beta}\ \partial_{\chi}f_{\alpha}^{\ \chi} + 4\ \partial^{\beta}f^{\alpha}_{\ \alpha}\partial_{\chi}f_{\beta}^{\ \chi} + 4\ \mathcal{A}_{\alpha\chi\beta}\ \partial^{\chi}f^{\alpha\beta} - 2\ \partial_{\alpha}f_{\beta\chi}\ \partial^{\chi}f^{\alpha\beta} - 2\ \partial_{\alpha}f_{\beta\chi} + 4\ \partial^{\alpha}f^{\alpha\beta} - 2\ \partial_{\alpha}f^{\alpha\beta} - 2\$ $\partial_{\alpha}f_{\chi\beta}\,\partial^{\chi}f^{\alpha\beta}+\partial_{\beta}f_{\alpha\chi}\,\partial^{\chi}f^{\alpha\beta}+\partial_{\chi}f_{\alpha\beta}\,\partial^{\chi}f^{\alpha\beta}+\partial_{\chi}f_{\beta\alpha}\,\partial^{\chi}f^{\alpha\beta})+$ $\frac{1}{3} \alpha_{\stackrel{\cdot}{,}} (4 \, \partial_{\beta} \mathcal{R}_{\alpha \chi \delta} - 2 \, \partial_{\beta} \mathcal{R}_{\alpha \delta \chi} + 2 \, \partial_{\beta} \mathcal{R}_{\chi \delta \alpha} - \partial_{\chi} \mathcal{R}_{\alpha \beta \delta} + \partial_{\delta} \mathcal{R}_{\alpha \beta \chi} - 2 \, \partial_{\delta} \mathcal{R}_{\alpha \chi \beta})$ $\partial^{\delta}\mathcal{A}^{\alpha\beta\chi}$)[t, x, y, z]dzdydxdt **Wave operator** $0 -4 \beta_1 k^2 = 0$ $0.+f^{\parallel}$ † 0

 ${1^{+}}\mathcal{A} \parallel_{\alpha\beta} {1^{+}}\mathcal{A}^{\perp}{}_{\alpha\beta} {1^{+}}f \parallel_{\alpha\beta} {1^{+}}\mathcal{A} \parallel_{\alpha} {1^{+}}\mathcal{A}^{\perp}{}_{\alpha} {1^{+}}f \parallel_{\alpha} \quad {1^{+}}f^{\perp}{}_{\alpha}$

0

0

0

0

0

0

Saturated propagator

 $0.^{+}\sigma^{\parallel}$ †

0.0 σ^{\parallel} †

 $0^{-}\sigma^{\parallel}$

0

0

 $1.^+\sigma^{\parallel}$ $+^{\alpha\beta}$

 $^{1^+}\sigma^{\scriptscriptstyle \perp}$ $^{+}\sigma^{\scriptscriptstyle \perp}$

 $1.^+\tau^{\parallel} + ^{\alpha\beta}$

 $\frac{1}{2}\sigma^{\parallel} + \alpha$

 $\frac{1}{2}\sigma^{\perp} + \alpha$

 $1^{-}\tau^{\parallel} + \alpha$

 1 τ^{\perp} \dagger^{α}

 $\partial_{\beta}\partial_{\alpha}\tau\left(\Delta+\mathcal{K}\right)^{\alpha\beta}==0$

0

0

PSALTer results panel

 $\alpha_{3} k^{2}$ $^{1^{+}}\mathcal{A}^{\parallel}$ † $^{\alpha\beta}$

0

 1 \mathcal{A}^{\perp} $^{+}$ $^{1,+}f^{\parallel}\uparrow^{\alpha\beta}$ $^{1}\mathcal{A}^{\parallel}\dagger^{\alpha}$ $^{1}\mathcal{A}^{\perp}\dagger^{\alpha}$

0 $f^{\parallel} \uparrow^{\parallel} \uparrow^{\alpha}$

0

0

0

0

 $1^+\sigma^{\parallel}{}_{\alpha\beta}\ 1^+\sigma^{\perp}{}_{\alpha\beta}\ 1^+\tau^{\parallel}{}_{\alpha\beta}\ 1^+\sigma^{\parallel}{}_{\alpha}\ 1^+\sigma^{\perp}{}_{\alpha}\ 1^+\tau^{\parallel}{}_{\alpha}$

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

 $^{2.^{+}}\sigma^{\parallel}$ $\dagger^{^{\alpha\beta}}$

0

0

0

0

0

0

0

0

0

0

0

0

0

0

 $^{2^{+}}\mathcal{A}^{\parallel}$ $^{+}$

 $2.^{+}f^{\parallel}$ † $^{\alpha\beta}$

 $2^{-}\mathcal{A}^{\parallel} + ^{\alpha\beta\chi}$

 $2^+\mathcal{A}^{\parallel}_{\alpha\beta}$ $2^+f^{\parallel}_{\alpha\beta}$ $2^-\mathcal{A}^{\parallel}_{\alpha\beta\chi}$

0

 $2\beta_{i}k^{2}$

0

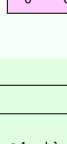
0

0

 $2^+ \sigma^{\parallel}_{\alpha\beta} \ 2^+ \tau^{\parallel}_{\alpha\beta} \ 2^- \sigma^{\parallel}_{\alpha\beta\chi}$ 0 0

 $\frac{1}{2\beta_1 k^2}$

$2.^{+}\tau^{\parallel}$ $+^{\alpha\beta}$ $e^{-\sigma^{\parallel}}$



0

Multiplicities

1

0

Source constraints

 $0.^{+}\tau^{\perp} == 0$

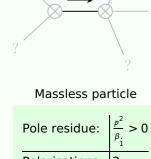
Spin-parity form | Covariant form

$0.^{+}\sigma^{\parallel} == 0$	xAct`xTensor`Private`Reconstruct[1
	Symmetry[4, $-i \partial^{\bullet 1} \sigma^{\bullet 2 \bullet 3 \bullet 4}$, $\{ \bullet 1 \rightarrow a, \bullet 2 \rightarrow b, \bullet 3 \rightarrow -a, \bullet 4 \rightarrow -b \}$,	
	StrongGenSet[{3, 4}, GenSet[-(3,4)]]],	
	{-1, {a, -a, b, -b}[[{1, 3, 5, 7}]]}] == 0	
$1 T^{\perp} = 0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau \left(\Delta + \mathcal{K}\right)^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}\tau \left(\Delta + \mathcal{K}\right)^{\alpha\beta}$	3
1 ₇ == 0	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau\left(\Delta+\mathcal{K}\right)^{\beta\chi}==\partial_{\chi}\partial^{\chi}\partial_{\beta}\tau\left(\Delta+\mathcal{K}\right)^{\beta\alpha}$	3
$\frac{1}{1}\sigma^{\perp}^{\alpha} == 0$	$\partial_{\chi}\partial_{\beta}\sigma^{\beta\alpha\chi}=0$	3
1. σ α == 0	$\partial_{\delta}\partial^{\alpha}\sigma_{\chi}^{\chi}{}^{\delta} + \partial_{\delta}\partial^{\delta}\sigma_{\chi}^{\chi\alpha} = \partial_{\delta}\partial_{\chi}\sigma_{\chi}^{\chi\alpha\delta}$	3
$1^+_{\cdot \tau} ^{\alpha \beta} == 0$	$\partial_{\chi}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\beta\chi} + \partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\chi\alpha} + \partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\alpha\beta} = =$	3
	$\partial_{\chi}\partial^{\alpha}\tau\left(\Delta+\mathcal{K}\right)^{\chi\beta}+\partial_{\chi}\partial^{\beta}\tau\left(\Delta+\mathcal{K}\right)^{\alpha\chi}+\partial_{\chi}\partial^{\chi}\tau\left(\Delta+\mathcal{K}\right)^{\beta\alpha}$	
$1^+ \sigma^{\perp \alpha\beta} == 0$	$\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\chi\alpha\beta} == \partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta}$	3
$1^+_{\cdot}\sigma^{\parallel^{\alpha\beta}}=0$	$\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{\chi\beta\delta} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\beta\alpha\chi} == \partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\chi\alpha\delta} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\alpha\beta\chi}$	3
$2^{-}\sigma^{\parallel}^{\alpha\beta\chi} == 0$	$3 \partial_{\epsilon} \partial_{\delta} \partial^{\chi} \partial^{\alpha} \sigma^{\delta \beta \epsilon} + 3 \partial_{\epsilon} \partial^{\epsilon} \partial^{\chi} \partial^{\alpha} \sigma^{\delta \beta}{}_{\delta} + 2 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\beta} \sigma^{\alpha \chi \delta} + 4 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\beta} \sigma^{\chi \alpha \delta} +$	5
	$2 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\beta} \sigma^{\delta \alpha \chi} + 2 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\chi} \sigma^{\beta \alpha \delta} + 4 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\chi} \sigma^{\delta \alpha \beta} + 2 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\delta} \sigma^{\alpha \beta \chi} +$	
	$3 \eta^{\beta\chi} \partial_{\phi} \partial^{\phi} \partial_{\epsilon} \partial^{\alpha} \sigma^{\delta}_{\delta}{}^{\epsilon} + 3 \eta^{\alpha\chi} \partial_{\phi} \partial^{\phi} \partial_{\epsilon} \partial_{\delta} \sigma^{\delta\beta\epsilon} + 3 \eta^{\beta\chi} \partial_{\phi} \partial^{\phi} \partial_{\epsilon} \partial^{\epsilon} \sigma^{\delta\alpha}_{\delta} = $	
	$3 \partial_{\epsilon} \partial_{\delta} \partial^{\chi} \partial^{\beta} \sigma^{\delta \alpha \epsilon} + 3 \partial_{\epsilon} \partial^{\epsilon} \partial^{\chi} \partial^{\beta} \sigma^{\delta \alpha}{}_{\delta} + 2 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\alpha} \sigma^{\beta \chi \delta} + 4 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\alpha} \sigma^{\chi \beta \delta} +$	
	$2 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\alpha} \sigma^{\delta \beta \chi} + 2 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\chi} \sigma^{\alpha \beta \delta} + 2 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\delta} \sigma^{\beta \alpha \chi} + 4 \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\delta} \sigma^{\chi \alpha \beta} +$	
	$3 \eta^{\alpha\chi} \partial_{\phi} \partial^{\phi} \partial_{\epsilon} \partial^{\beta} \sigma^{\delta}_{\delta}^{\epsilon} + 3 \eta^{\beta\chi} \partial_{\phi} \partial^{\phi} \partial_{\epsilon} \partial_{\delta} \sigma^{\delta\alpha\epsilon} + 3 \eta^{\alpha\chi} \partial_{\phi} \partial^{\phi} \partial_{\epsilon} \partial^{\epsilon} \sigma^{\delta\beta}_{\delta}$	
$2^+_{\cdot \sigma} \sigma^{\parallel^{\alpha\beta}} == 0$	$3 \partial_{\delta} \partial_{\chi} \partial^{\alpha} \sigma^{\chi \beta \delta} + 3 \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\chi \alpha \delta} + 2 \eta^{\alpha \beta} \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \sigma^{\chi}_{\chi}^{\delta} = =$	5
	$2\partial_{\delta}\partial^{\beta}\partial^{\alpha}\sigma_{\chi}^{\chi\delta} + 3(\partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\alpha\beta\chi} + \partial_{\delta}\partial^{\delta}\partial_{\chi}\sigma^{\beta\alpha\chi})$	
Total expected gauge generators:		33
Massive sr	pectrum	

Massive spectrum

Massless spectrum

(No particles)



Polarisations: 2 **Unitarity conditions** $\beta_{1} > 0$