

PSALter results panel

$$S = \iiint \int (\mathcal{A}^{\alpha\beta\chi} \sigma_{\alpha\beta\chi} + f^{\alpha\beta} \tau(\Delta + \mathcal{K})_{\alpha\beta} + \frac{1}{2} \lambda. (4 \partial_i \mathcal{A}^{\alpha i}_{\alpha} - 4 \mathcal{A}^{\theta}_{\alpha\theta} \partial_i f^{\alpha i} + 4 \mathcal{A}^{\theta}_{i\theta} \partial' f^{\alpha}_{\alpha} - 2 \partial_i f^{\theta}_{\theta} \partial' f^{\alpha}_{\alpha} - 4 f^{\alpha i} (\partial_i \mathcal{A}^{\theta}_{\alpha\theta} - \partial_{\theta} \mathcal{A}^{\theta}_{\alpha i}) - 4 f^{\alpha}_{\alpha} \partial_{\theta} \mathcal{A}^{\theta}_{i i} - 2 \partial_i f^{\alpha i} \partial_{\theta} f^{\theta}_{\alpha} + 4 \partial' f^{\alpha}_{\alpha} \partial_{\theta} f^{\theta}_{i i} + 4 \mathcal{A}_{\alpha\theta i} \partial^{\theta} f^{\alpha i} - 2 \partial_{\alpha} f_{i\theta} \partial^{\theta} f^{\alpha i} - \partial_{\alpha} f_{\theta i} \partial^{\theta} f^{\alpha i} + \partial_i f_{\alpha\theta} \partial^{\theta} f^{\alpha i} + \partial_{\theta} f_{\alpha i} \partial^{\theta} f^{\alpha i} + \partial_{\theta} f_{i\alpha} \partial^{\theta} f^{\alpha i})) [t, x, y, z] dz dy dx dt$$

Wave operator

	$0^+ \mathcal{A}^{\parallel}$	$0^+ f^{\parallel}$	$0^+ f^{\perp}$	$0^- \mathcal{A}^{\parallel}$														
$0^+ \mathcal{A}^{\parallel} \dagger$	0	0	0	0														
$0^+ f^{\parallel} \dagger$	0	$-2 k^2 \lambda.$	0	0														
$0^+ f^{\perp} \dagger$	0	0	0	0														
$0^- \mathcal{A}^{\parallel} \dagger$	0	0	0	0	$1^+ \mathcal{A}^{\parallel}_{\alpha\beta}$	$1^+ \mathcal{A}^{\perp}_{\alpha\beta}$	$1^+ f^{\parallel}_{\alpha\beta}$	$1^- \mathcal{A}^{\parallel}_{\alpha}$	$1^- \mathcal{A}^{\perp}_{\alpha}$	$1^- f^{\parallel}_{\alpha}$	$1^- f^{\perp}_{\alpha}$							
					$1^+ \mathcal{A}^{\parallel} \dagger^{\alpha\beta}$	0	0	0	0	0	0	0						
					$1^+ \mathcal{A}^{\perp} \dagger^{\alpha\beta}$	0	0	0	0	0	0	0						
					$1^+ f^{\parallel} \dagger^{\alpha\beta}$	0	0	0	0	0	0	0						
					$1^- \mathcal{A}^{\parallel} \dagger^{\alpha}$	0	0	0	0	0	0	0						
					$1^- \mathcal{A}^{\perp} \dagger^{\alpha}$	0	0	0	0	0	0	0						
					$1^- f^{\parallel} \dagger^{\alpha}$	0	0	0	0	0	0	0						
					$1^- f^{\perp} \dagger^{\alpha}$	0	0	0	0	0	0	0	$2^+ \mathcal{A}^{\parallel}_{\alpha\beta}$	$2^+ f^{\parallel}_{\alpha\beta}$	$2^- \mathcal{A}^{\parallel}_{\alpha\beta\chi}$			
													$2^- \mathcal{A}^{\parallel} \dagger^{\alpha\beta}$	0	0			
													$2^+ f^{\parallel} \dagger^{\alpha\beta}$	0	$k^2 \lambda.$			
													$2^- \mathcal{A}^{\parallel} \dagger^{\alpha\beta\chi}$	0	0			

Saturated propagator

	$0^+ \sigma^{\parallel}$	$0^+ \tau^{\parallel}$	$0^+ \tau^{\perp}$	$0^- \sigma^{\parallel}$												
$0^+ \sigma^{\parallel} \uparrow$	0	0	0	0												
$0^+ \tau^{\parallel} \uparrow$	0	$-\frac{1}{2k^2 \lambda.}$	0	0												
$0^+ \tau^{\perp} \uparrow$	0	0	0	0												
$0^- \sigma^{\parallel} \uparrow$	0	0	0	0	$1^+ \sigma^{\parallel}_{\alpha\beta}$	$1^+ \sigma^{\perp}_{\alpha\beta}$	$1^+ \tau^{\parallel}_{\alpha\beta}$	$1^- \sigma^{\parallel}_{\alpha}$	$1^- \sigma^{\perp}_{\alpha}$	$1^- \tau^{\parallel}_{\alpha}$	$1^- \tau^{\perp}_{\alpha}$					
					$1^+ \sigma^{\parallel} \uparrow^{\alpha\beta}$	0	0	0	0	0	0	0				
					$1^+ \sigma^{\perp} \uparrow^{\alpha\beta}$	0	0	0	0	0	0	0				
					$1^+ \tau^{\parallel} \uparrow^{\alpha\beta}$	0	0	0	0	0	0	0				
					$1^- \sigma^{\parallel} \uparrow^{\alpha}$	0	0	0	0	0	0	0				
					$1^- \sigma^{\perp} \uparrow^{\alpha}$	0	0	0	0	0	0	0				
					$1^- \tau^{\parallel} \uparrow^{\alpha}$	0	0	0	0	0	0	0				
					$1^- \tau^{\perp} \uparrow^{\alpha}$	0	0	0	0	0	0	0	$2^+ \sigma^{\parallel}_{\alpha\beta}$	$2^+ \tau^{\parallel}_{\alpha\beta}$	$2^- \sigma^{\parallel}_{\alpha\beta\chi}$	
													$2^+ \sigma^{\parallel} \uparrow^{\alpha\beta}$	0	0	
													$2^+ \tau^{\parallel} \uparrow^{\alpha\beta}$	0	$\frac{1}{k^2 \lambda.}$	
													$2^- \sigma^{\parallel} \uparrow^{\alpha\beta\chi}$	0	0	

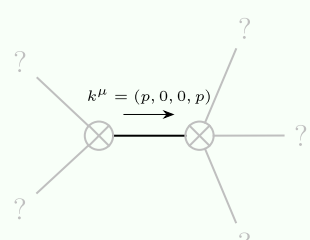
Source constraints

Spin-parity form	Covariant form	Multiplicities
$0^- \sigma^{\parallel} == 0$	$\epsilon \eta_{\alpha\beta\chi\delta} \partial^{\delta} \sigma^{\alpha\beta\chi} == 0$	1
$0^+ \tau^{\perp} == 0$	$\partial_{\beta} \partial_{\alpha} \tau (\Delta + \mathcal{K})^{\alpha\beta} == 0$	1
$0^+ \sigma^{\parallel} == 0$	$\partial_{\beta} \sigma^{\alpha\beta}_{\alpha} == 0$	1
$1^- \tau^{\perp\alpha} == 0$	$\partial_{\chi} \partial_{\beta} \partial^{\alpha} \tau (\Delta + \mathcal{K})^{\beta\chi} == \partial_{\chi} \partial^{\chi} \partial_{\beta} \tau (\Delta + \mathcal{K})^{\alpha\beta}$	3
$1^- \tau^{\parallel\alpha} == 0$	$\partial_{\chi} \partial_{\beta} \partial^{\alpha} \tau (\Delta + \mathcal{K})^{\beta\chi} == \partial_{\chi} \partial^{\chi} \partial_{\beta} \tau (\Delta + \mathcal{K})^{\beta\alpha}$	3
$1^- \sigma^{\perp\alpha} == 0$	$\partial_{\chi} \partial_{\beta} \sigma^{\beta\alpha\chi} == 0$	3
$1^- \sigma^{\parallel\alpha} == 0$	$\partial_{\delta} \partial^{\alpha} \sigma^{\chi}_{\chi}{}^{\delta} + \partial_{\delta} \partial^{\delta} \sigma^{\chi\alpha}_{\chi} == \partial_{\delta} \partial_{\chi} \sigma^{\chi\alpha\delta}$	3
$1^+ \tau^{\parallel\alpha\beta} == 0$	$\partial_{\chi} \partial^{\alpha} \tau (\Delta + \mathcal{K})^{\beta\chi} + \partial_{\chi} \partial^{\beta} \tau (\Delta + \mathcal{K})^{\chi\alpha} + \partial_{\chi} \partial^{\chi} \tau (\Delta + \mathcal{K})^{\alpha\beta} == \partial_{\chi} \partial^{\alpha} \tau (\Delta + \mathcal{K})^{\chi\beta} + \partial_{\chi} \partial^{\beta} \tau (\Delta + \mathcal{K})^{\alpha\chi} + \partial_{\chi} \partial^{\chi} \tau (\Delta + \mathcal{K})^{\beta\alpha}$	3
$1^+ \sigma^{\perp\alpha\beta} == 0$	$\partial_{\delta} \partial_{\chi} \partial^{\alpha} \sigma^{\chi\beta\delta} + \partial_{\delta} \partial^{\delta} \partial_{\chi} \sigma^{\chi\alpha\beta} == \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\chi\alpha\delta}$	3
$1^+ \sigma^{\parallel\alpha\beta} == 0$	$\partial_{\delta} \partial_{\chi} \partial^{\alpha} \sigma^{\chi\beta\delta} + \partial_{\delta} \partial^{\delta} \partial_{\chi} \sigma^{\beta\alpha\chi} == \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\chi\alpha\delta} + \partial_{\delta} \partial^{\delta} \partial_{\chi} \sigma^{\alpha\beta\chi}$	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} + 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}$	5
$2^- \sigma^{\parallel\alpha\beta} == 0$	$3 \partial_{\delta} \partial_{\chi} \partial^{\alpha} \sigma^{\chi\beta\delta} + 3 \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\chi\alpha\delta} + 2 \eta^{\alpha\beta} \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \sigma^{\chi}_{\chi}{}^{\delta} == 2 \partial_{\delta} \partial^{\beta} \partial^{\alpha} \sigma^{\chi}_{\chi}{}^{\delta} + 3 (\partial_{\delta} \partial^{\delta} \partial_{\chi} \sigma^{\alpha\beta\chi} + \partial_{\delta} \partial^{\delta} \partial_{\chi} \sigma^{\beta\alpha\chi})$	5
Total expected gauge generators:		34

Massive spectrum

(No particles)

Massless spectrum



Massless particle

Pole residue:	$\frac{p^2}{\lambda.} > 0$
Polarisations:	2

Unitarity conditions

$$\lambda. > 0$$