

PSALTER results panel

$$S==$$
$$\iiint\iiint(\frac{1}{3}(-2t_{\frac{3}{3}}\mathcal{A}^{\alpha\iota}_{\alpha}\mathcal{A}_{\iota\theta}^{\theta}+3\mathcal{A}^{\alpha\beta\chi}\sigma_{\alpha\beta\chi}+3f^{\alpha\beta}\tau(\Delta+\mathcal{K})_{\alpha\beta}+4t_{\frac{3}{3}}\mathcal{A}_{\alpha\theta}^{\theta}\partial_{\iota}f^{\alpha\iota}-4t_{\frac{3}{3}}\mathcal{A}_{\iota\theta}^{\theta}\partial'f^{\alpha}_{\alpha}+2t_{\frac{3}{3}}\partial_{\iota}f^{\theta}_{\theta}\partial'f^{\alpha}_{\alpha}+2t_{\frac{3}{3}}\partial_{\iota}f^{\alpha\iota}\partial_{\theta}f^{\theta}_{\alpha}-4t_{\frac{3}{3}}\partial'f^{\alpha}_{\alpha}$$
$$\partial_{\theta}f^{\theta}_{\iota}-4r_{\frac{1}{1}}\partial_{\beta}\mathcal{A}_{\alpha\iota\theta}\partial^{\theta}\mathcal{A}^{\alpha\beta\iota}+2r_{\frac{1}{1}}\partial_{\beta}\mathcal{A}_{\alpha\theta\iota}\partial^{\theta}\mathcal{A}^{\alpha\beta\iota}-8r_{\frac{1}{1}}\partial_{\beta}\mathcal{A}_{\iota\theta\alpha}\partial^{\theta}\mathcal{A}^{\alpha\beta\iota}-2r_{\frac{1}{1}}\partial_{\iota}\mathcal{A}_{\alpha\beta\theta}\partial^{\theta}\mathcal{A}^{\alpha\beta\iota}+$$
$$2r_{\frac{1}{1}}\partial_{\theta}\mathcal{A}_{\alpha\beta\iota}\partial^{\theta}\mathcal{A}^{\alpha\beta\iota}+2r_{\frac{1}{1}}\partial_{\theta}\mathcal{A}_{\alpha\iota\beta}\partial^{\theta}\mathcal{A}^{\alpha\beta\iota}+3r_{\frac{5}{5}}\partial_{\iota}\mathcal{A}_{\theta\kappa}^{\kappa}\partial^{\theta}\mathcal{A}^{\alpha\iota}_{\alpha}-3r_{\frac{5}{5}}\partial_{\theta}\mathcal{A}_{\iota\kappa}^{\kappa}\partial^{\theta}\mathcal{A}^{\alpha\iota}_{\alpha}-3r_{\frac{5}{5}}\partial_{\alpha}\mathcal{A}^{\alpha\iota\theta}\partial_{\kappa}\mathcal{A}_{\iota\theta}^{\kappa}+$$
$$6r_{\frac{5}{5}}\partial^{\theta}\mathcal{A}^{\alpha\iota}_{\alpha}\partial_{\kappa}\mathcal{A}_{\iota\theta}^{\kappa}+3r_{\frac{5}{5}}\partial_{\alpha}\mathcal{A}^{\alpha\iota\theta}\partial_{\kappa}\mathcal{A}_{\theta\iota}^{\kappa}-6r_{\frac{5}{5}}\partial^{\theta}\mathcal{A}^{\alpha\iota}_{\alpha}\partial_{\kappa}\mathcal{A}_{\theta\iota}^{\kappa})) [t,x,y,z]dzdlydxdt$$

Wave operator

$0^+\mathcal{A}^{\parallel}$	0^+f^{\parallel}	0^+f^{\perp}	$0^-\mathcal{A}^{\parallel}$													
$0^+\mathcal{A}^{\parallel}\dagger$	t_{3}	$-i\sqrt{2}kt_{3}$	0	0												
$0^+f^{\parallel}\dagger$	$i\sqrt{2}kt_{3}$	$2k^2t_{3}$	0	0												
$0^+f^{\perp}\dagger$	0	0	0	0												
$0^-\mathcal{A}^{\parallel}\dagger$	0	0	0	0	$1^+\mathcal{A}^{\parallel}_{\alpha\beta}$	$1^+\mathcal{A}^{\perp}_{\alpha\beta}$	$1^+f^{\parallel}_{\alpha\beta}$	$1^-\mathcal{A}^{\parallel}_{\alpha}$	$1^-\mathcal{A}^{\perp}_{\alpha}$	$1^-f^{\parallel}_{\alpha}$	$1^-f^{\perp}_{\alpha}$					
	$1^+\mathcal{A}^{\parallel}\dagger^{\alpha\beta}$	$k^2(2r_{1}+r_{5})$	0	0	0	0	0	0	0	0	0					
	$1^+\mathcal{A}^{\perp}\dagger^{\alpha\beta}$	0	0	0	0	0	0	0	0	0	0					
	$1^+f^{\parallel}\dagger^{\alpha\beta}$	0	0	0	0	0	0	0	0	0	0					
	$1^-\mathcal{A}^{\parallel}\dagger^{\alpha}$	0	0	0	$k^2(r_{1}+r_{5})+\frac{2t_{3}}{3}$	$-\frac{\sqrt{2}t_{3}}{3}$	0	$-\frac{2}{3}ikt_{3}$					$2^+\mathcal{A}^{\parallel}_{\alpha\beta}$	$2^+f^{\parallel}_{\alpha\beta}$	$2^-\mathcal{A}^{\parallel}_{\alpha\beta\chi}$	
	$1^-\mathcal{A}^{\perp}\dagger^{\alpha}$	0	0	0	$-\frac{\sqrt{2}t_{3}}{3}$	$\frac{t_{3}}{3}$	0	$\frac{1}{3}i\sqrt{2}kt_{3}$								
	$1^-f^{\parallel}\dagger^{\alpha}$	0	0	0	0	0	0	0								
	$1^-f^{\perp}\dagger^{\alpha}$	0	0	0	$\frac{2ikt_{3}}{3}$	$-\frac{1}{3}i\sqrt{2}kt_{3}$	0	$\frac{2k^2t_{3}}{3}$								
												$2^+\mathcal{A}^{\parallel}\dagger^{\alpha\beta}$	0	0	0	
												$2^+f^{\parallel}\dagger^{\alpha\beta}$	0	0	0	
												$2^-\mathcal{A}^{\parallel}\dagger^{\alpha\beta\chi}$	0	0	k^2r_{1}	

Saturated propagator

$0^+ \sigma^{\parallel}$	$0^+ \tau^{\parallel}$	$0^+ \tau^{\perp}$	$0^- \sigma^{\parallel}$										
$0^+ \sigma^{\parallel} \dagger$	$\frac{1}{(1+2k^2)^2 t_{\frac{2}{3}}}$	$-\frac{i \sqrt{2} k}{(1+2k^2)^2 t_{\frac{2}{3}}}$	0	0									
$0^+ \tau^{\parallel} \dagger$	$\frac{i \sqrt{2} k}{(1+2k^2)^2 t_{\frac{2}{3}}}$	$\frac{2k^2}{(1+2k^2)^2 t_{\frac{2}{3}}}$	0	0									
$0^+ \tau^{\perp} \dagger$	0	0	0	0									
$0^- \sigma^{\parallel} \dagger$	0	0	0	0	$1^+ \sigma^{\parallel}_{\alpha\beta}$	$1^+ \sigma^{\perp}_{\alpha\beta}$	$1^+ \tau^{\parallel}_{\alpha\beta}$	$1^- \sigma^{\parallel}_{\alpha}$	$1^- \sigma^{\perp}_{\alpha}$	$1^- \tau^{\parallel}_{\alpha}$	$1^- \tau^{\perp}_{\alpha}$		
	$1^+ \sigma^{\parallel} \dagger^{\alpha\beta}$	$\frac{1}{k^2 (2r_{\frac{1}{5}}+r_{\frac{5}{5}})}$	0	0									
	$1^+ \sigma^{\perp} \dagger^{\alpha\beta}$	0	0	0									
	$1^+ \tau^{\parallel} \dagger^{\alpha\beta}$	0	0	0									
	$1^- \sigma^{\parallel} \dagger^{\alpha}$	0	0	0	$\frac{1}{k^2 (r_{\frac{1}{5}}+r_{\frac{5}{5}})}$	$\frac{\sqrt{2}}{k^2 (1+2k^2) (r_{\frac{1}{5}}+r_{\frac{5}{5}})}$	0	$\frac{2i}{k (1+2k^2) (r_{\frac{1}{5}}+r_{\frac{5}{5}})}$					
	$1^- \sigma^{\perp} \dagger^{\alpha}$	0	0	0	$\frac{\sqrt{2}}{k^2 (1+2k^2) (r_{\frac{1}{5}}+r_{\frac{5}{5}})}$	$\frac{3k^2 (r_{\frac{1}{5}}+r_{\frac{5}{5}})+2t_{\frac{2}{3}}}{(k+2k^3)^2 (r_{\frac{1}{5}}+r_{\frac{5}{5}}) t_{\frac{2}{3}}}$	0	$\frac{i \sqrt{2} (3k^2 (r_{\frac{1}{5}}+r_{\frac{5}{5}})+2t_{\frac{2}{3}})}{k (1+2k^2)^2 (r_{\frac{1}{5}}+r_{\frac{5}{5}}) t_{\frac{2}{3}}}$					
	$1^- \tau^{\parallel} \dagger^{\alpha}$	0	0	0	0	0	0	0					
	$1^- \tau^{\perp} \dagger^{\alpha}$	0	0	0	$-\frac{2i}{k (1+2k^2) (r_{\frac{1}{5}}+r_{\frac{5}{5}})}$	$-\frac{i \sqrt{2} (3k^2 (r_{\frac{1}{5}}+r_{\frac{5}{5}})+2t_{\frac{2}{3}})}{k (1+2k^2)^2 (r_{\frac{1}{5}}+r_{\frac{5}{5}}) t_{\frac{2}{3}}}$	0	$\frac{6k^2 (r_{\frac{1}{5}}+r_{\frac{5}{5}})+4t_{\frac{2}{3}}}{(1+2k^2)^2 (r_{\frac{1}{5}}+r_{\frac{5}{5}}) t_{\frac{2}{3}}}$	$2^+ \sigma^{\parallel}_{\alpha\beta}$	$2^+ \tau^{\parallel}_{\alpha\beta}$	$2^- \sigma^{\parallel}_{\alpha\beta\chi}$		
									$2^+ \sigma^{\parallel} \dagger^{\alpha\beta}$	0	0	0	
									$2^+ \tau^{\parallel} \dagger^{\alpha\beta}$	0	0	0	
									$2^- \sigma^{\parallel} \dagger^{\alpha\beta\chi}$	0	0	$\frac{1}{k^2 r_{\frac{1}{5}}}$	

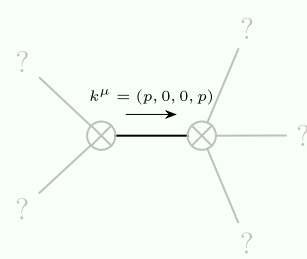
Source constraints

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
$-2ik0^+\sigma^{\parallel}+0^+\tau^{\parallel}==0$	$\partial_{\beta}\partial_{\alpha}\tau(\Delta+\mathcal{K})^{\alpha\beta}==\partial_{\beta}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\alpha}_{\alpha}+2\partial_{\chi}\partial^{\chi}\partial_{\beta}\sigma^{\alpha}_{\alpha}{}^{\beta}$	1
$2ik1^-\sigma^{\perp\alpha}+1^-\tau^{\perp\alpha}==0$	$\partial_{\chi}\partial_{\beta}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\beta\chi}==\partial_{\chi}\partial^{\chi}\partial_{\beta}\tau(\Delta+\mathcal{K})^{\alpha\beta}+2\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial_{\beta}\sigma^{\beta\alpha\chi}$	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
$1^+\tau^{\parallel\alpha\beta}==0$	$\partial_{\chi}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\beta\chi}+\partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\chi\alpha}+\partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\alpha\beta}==\partial_{\chi}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\chi\beta}+\partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\alpha\chi}+\partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\beta\alpha}$	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
$2^+\tau^{\parallel\alpha\beta}==0$	$4\partial_{\delta}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\chi\delta}+2\partial_{\delta}\partial^{\delta}\partial^{\beta}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\chi}_{\chi}+3\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\alpha\beta}+$ $3\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\chi}\tau(\Delta+\mathcal{K})^{\beta\alpha}+2\eta^{\alpha\beta}\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\tau(\Delta+\mathcal{K})^{\chi\delta}==3\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\beta\chi}+$ $3\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\alpha}\tau(\Delta+\mathcal{K})^{\chi\beta}+3\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\alpha\chi}+3\partial_{\delta}\partial^{\delta}\partial_{\chi}\partial^{\beta}\tau(\Delta+\mathcal{K})^{\chi\alpha}+2\eta^{\alpha\beta}\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\tau(\Delta+\mathcal{K})^{\chi}_{\chi}$	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:		25

Massive spectrum

(No particles)

Massless spectrum



Massless particle

Pole residue:	$-\frac{3}{r_{\frac{1}{1}}}-\frac{4}{r_{\frac{1}{1}}+r_{\frac{5}{5}}}+\frac{9}{2r_{\frac{1}{1}}+r_{\frac{5}{5}}}>0$
Polarisations:	2

Unitarity conditions

$$(r_{\frac{1}{1}}<0\&\&(r_{\frac{5}{5}}<-r_{\frac{1}{1}}\parallel r_{\frac{5}{5}}>-2r_{\frac{1}{1}}))\parallel(r_{\frac{1}{1}}>0\&\&-2r_{\frac{1}{1}}<r_{\frac{5}{5}}<-r_{\frac{1}{1}})$$