	$\sigma_{1^{+}\alpha\beta}^{\#1}$	$\sigma_{1^{+}lphaeta}^{\#2}$	$ au_{1}^{\#1}{}_{lphaeta}$	$\sigma_{1}^{\#1}{}_{lpha}$	$\sigma_{1}^{\#2}{}_{lpha}$	$\tau_{1-\alpha}^{\#1}$	$ au_{1}^{#2}$ α
$\sigma_{1}^{\#1} \dagger^{\alpha\beta}$	$\frac{1}{\frac{3(\alpha_0-4\beta_1)(\alpha_0+8\beta_3)}{16(\beta_1+2\beta_3)}+(\alpha_2+\alpha_5)k^2}$	$-\frac{2\sqrt{2}(3\alpha_0-4\beta_1+16\beta_3)}{(1+k^2)(-3(\alpha_0-4\beta_1)(\alpha_0+8\beta_3)+16(\alpha_2+\alpha_5)(\beta_1+2\beta_3)k^2)}$	$-\frac{2 i \sqrt{2} (3 \alpha_0 - 4 \beta_1 + 16 \beta_3) k}{(1+k^2) (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 8 \beta_3) + 16 (\alpha_2 + \alpha_5) (\beta_1 + 2 \beta_3) k^2)}$	0	0	0	0
$\sigma_{1}^{\#2} \dagger^{\alpha\beta}$	$\frac{2\sqrt{2}(3\alpha_{0}-4\beta_{1}+16\beta_{3})}{(1+k^{2})(-3(\alpha_{0}-4\beta_{1})(\alpha_{0}+8\beta_{3})+16(\alpha_{2}+\alpha_{5})(\beta_{1}+2\beta_{3})k^{2})}$	$\frac{6 \alpha_0 + 8 (\beta_1 + 8 \beta_3 + 3 (\alpha_2 + \alpha_5) k^2)}{(1+k^2)^2 (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 8 \beta_3) + 16 (\alpha_2 + \alpha_5) (\beta_1 + 2 \beta_3) k^2)}$	$\frac{2ik(3\alpha_{0}+4(\beta_{1}+8\beta_{3}+3(\alpha_{2}+\alpha_{5})k^{2}))}{(1+k^{2})^{2}(-3(\alpha_{0}-4\beta_{1})(\alpha_{0}+8\beta_{3})+16(\alpha_{2}+\alpha_{5})(\beta_{1}+2\beta_{3})k^{2})}$	0	0	0	0
$\tau_{1}^{\#1} + \alpha^{\beta}$	$\frac{2i\sqrt{2}(3\alpha_0-4\beta_1+16\beta_3)k}{(1+k^2)(-3(\alpha_0-4\beta_1)(\alpha_0+8\beta_3)+16(\alpha_2+\alpha_5)(\beta_1+2\beta_3)k^2)}$	$-\frac{2 i k (3 \alpha_0+4 (\beta_1+8 \beta_3+3 (\alpha_2+\alpha_5) k^2))}{(1+k^2)^2 (-3 (\alpha_0-4 \beta_1) (\alpha_0+8 \beta_3)+16 (\alpha_2+\alpha_5) (\beta_1+2 \beta_3) k^2)}$	$\frac{2k^2(3\alpha_0+4(\beta_1+8\beta_3+3(\alpha_2+\alpha_5)k^2))}{(1+k^2)^2(-3(\alpha_0-4\beta_1)(\alpha_0+8\beta_3)+16(\alpha_2+\alpha_5)(\beta_1+2\beta_3)k^2)}$	0	0	0	0
$\sigma_{1}^{\#1} \dagger^{\alpha}$	0	0	0	$\frac{1}{\frac{3(\alpha_0-4\beta_1)(\alpha_0+2\beta_2)}{8(2\beta_1+\beta_2)}+(\alpha_4+\alpha_5)k^2}$	$\frac{2\sqrt{2}(3\alpha_0-4\beta_1+4\beta_2)}{(1+2k^2)(-3(\alpha_0-4\beta_1)(\alpha_0+2\beta_2)+8(\alpha_4+\alpha_5)(2\beta_1+\beta_2)k^2)}$	0	$\frac{4i(3\alpha_{0}-4\beta_{1}+4\beta_{2})k}{(1+2k^{2})(-3(\alpha_{0}-4\beta_{1})(\alpha_{0}+2\beta_{2})+8(\alpha_{4}+\alpha_{5})(2\beta_{1}+\beta_{2})k^{2})}$
$\sigma_1^{#2} \dagger^{\alpha}$	0	0	0	$\frac{2\sqrt{2}(3\alpha_0-4\beta_1+4\beta_2)}{(1+2k^2)(-3(\alpha_0-4\beta_1)(\alpha_0+2\beta_2)+8(\alpha_4+\alpha_5)(2\beta_1+\beta_2)k^2)}$	$\frac{6 \alpha_0 + 8 (\beta_1 + 2 \beta_2 + 3 (\alpha_4 + \alpha_5) k^2)}{(1 + 2 k^2)^2 (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 2 \beta_2) + 8 (\alpha_4 + \alpha_5) (2 \beta_1 + \beta_2) k^2)}$	0	$\frac{2 i \sqrt{2} k (3 \alpha_0 + 4 (\beta_1 + 2 \beta_2 + 3 (\alpha_4 + \alpha_5) k^2))}{(1 + 2 k^2)^2 (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 2 \beta_2) + 8 (\alpha_4 + \alpha_5) (2 \beta_1 + \beta_2) k^2)}$
$\tau_{1}^{#1} + \alpha$	0	0	0	0	0	0	0
$\tau_1^{#2} + \alpha$	0	0	0	$-\frac{4 i (3 \alpha_{0}-4 \beta_{1}+4 \beta_{2}) k}{(1+2 k^{2}) (-3 (\alpha_{0}-4 \beta_{1}) (\alpha_{0}+2 \beta_{2})+8 (\alpha_{4}+\alpha_{5}) (2 \beta_{1}+\beta_{2}) k^{2})}$	$-\frac{2 i \sqrt{2} k (3 \alpha_0 + 4 (\beta_1 + 2 \beta_2 + 3 (\alpha_4 + \alpha_5) k^2))}{(1 + 2 k^2)^2 (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 2 \beta_2) + 8 (\alpha_4 + \alpha_5) (2 \beta_1 + \beta_2) k^2)}$	0	$\frac{4 k^2 (3 \alpha_0 + 4 (\beta_1 + 2 \beta_2 + 3 (\alpha_4 + \alpha_5) k^2))}{(1 + 2 k^2)^2 (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 2 \beta_2) + 8 (\alpha_4 + \alpha_5) (2 \beta_1 + \beta_2) k^2)}$

Lagrangian density $ \frac{1}{2}a_0 \omega_{\alpha\beta} \omega^{\alpha\beta} \omega^{\alpha\beta} \frac{1}{2}a_0 \omega^{\alpha\beta} \omega^{\beta} \times \frac{1}{2}a_0 \omega^{\alpha\beta} \omega^{\alpha\beta} \omega^{\alpha\beta} \omega^{\alpha\beta} \times \frac{1}{2}a_0 \omega^{$

	_	$\omega_{1^{+}lphaeta}^{\sharp1}$	$\omega_{1}^{\#2}{}_{lphaeta}$	$f_{1}^{\#1}{}_{\alpha\beta}$	$\omega_{1^{-}\alpha}^{\sharp 1}$	$\omega_{1^{-}\alpha}^{\#2}$	$f_{1-\alpha}^{\#1}$	$f_{1-\alpha}^{\#2}$
μ	$\nu_{1}^{\#1} \dagger^{\alpha\beta}$	$\frac{\alpha_0}{4} + \frac{1}{3} (\beta_1 + 8 \beta_3) + (\alpha_2 + \alpha_5) k^2$	$\frac{3\alpha_0-4\beta_1+16\beta_3}{6\sqrt{2}}$	$\frac{i(3\alpha_0-4\beta_1+16\beta_3)k}{6\sqrt{2}}$	0	0	0	0
μ	$v_{1}^{\#2} \dagger^{\alpha\beta}$	$\frac{3 \alpha_0 - 4 \beta_1 + 16 \beta_3}{6 \sqrt{2}}$	$\frac{2}{3}\left(\beta_1+2\beta_3\right)$	$\frac{2}{3}i(\beta_1+2\beta_3)k$	0	0	0	0
f	$f_1^{#1} \dagger^{\alpha\beta}$	$-\frac{i(3\alpha_0-4\beta_1+16\beta_3)k}{6\sqrt{2}}$	$-\frac{2}{3}\bar{i}\left(\beta_1+2\beta_3\right)k$	$\frac{2}{3}(\beta_1 + 2\beta_3)k^2$	0	0	0	0
	$\omega_1^{#1} \dagger^{\alpha}$	0	0	0	$\frac{\alpha_0}{4} + \frac{1}{3} (\beta_1 + 2 \beta_2) + (\alpha_4 + \alpha_5) k^2$	$-\frac{3 \alpha_0 - 4 \beta_1 + 4 \beta_2}{6 \sqrt{2}}$	0	$-\frac{1}{6}i(3\alpha_0-4\beta_1+4\beta_2)k$
	$\omega_{1}^{#2} \dagger^{\alpha}$	0	0	0	$-\frac{3 \alpha_0 - 4 \beta_1 + 4 \beta_2}{6 \sqrt{2}}$	$\frac{1}{3}\left(2\beta_1+\beta_2\right)$	0	$\frac{1}{3}i\sqrt{2}(2\beta_1+\beta_2)k$
	$f_{1}^{#1} \dagger^{\alpha}$	0	0	0	0	0	0	0
	$f_1^{#2} \dagger^{\alpha}$	0	0	0	$\frac{1}{6}$ i (3 α_0 - 4 β_1 + 4 β_2) k	$-\frac{1}{3}i\sqrt{2}(2\beta_1+\beta_2)k$	0	$\frac{2}{3} (2 \beta_1 + \beta_2) k^2$

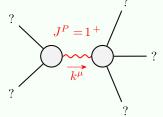
	$\omega_0^{\sharp 1}$	$f_{0}^{#1}$	$f_{0}^{#2}$	$\omega_0^{\sharp 1}$
$\omega_{0}^{\#1}$ †	$\frac{\alpha_0}{2} + \beta_2 + (\alpha_4 + \alpha_6) k^2$	$-\frac{i(\alpha_0+2\beta_2)k}{\sqrt{2}}$	0	0
$f_{0}^{#1}$ †	$\frac{i(\alpha_0+2\beta_2)k}{\sqrt{2}}$	$2 \beta_2 k^2$	0	0
$f_{0}^{#2}$ †	0	0	0	0
$\omega_{0}^{\#1}$ †	0	0	0	$\frac{\alpha_0}{2} + 4\beta_3 + (\alpha_2 + \alpha_3)k^2$

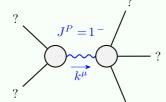
Total #:	$\tau_{1+}^{\#1}{}^{\alpha\beta} + ik \sigma_{1+}^{\#2}{}^{\alpha\beta} == 0$	$\tau_{1}^{\#1}{}^{\alpha} == 0$	$\tau_{1}^{\#2\alpha} + 2ik \sigma_{1}^{\#2\alpha} == 0$	$\tau_{0+}^{\#2} == 0$	SO(3) irreps	Source constraints
10	3	3	3	1	#	

	$\sigma_{0}^{\#1}$	$ au_{0}^{\#1}$	$\tau_{0}^{\#2}$	$\sigma_0^{\sharp 1}$
$\sigma_{0}^{\#1}$ †	$-\frac{4 \beta_2}{{\alpha_0}^2 + 2 \alpha_0 \beta_2 - 4 (\alpha_4 + \alpha_6) \beta_2 k^2}$	$\frac{i\sqrt{2}(\alpha_0+2\beta_2)}{-\alpha_0(\alpha_0+2\beta_2)k+4(\alpha_4+\alpha_6)\beta_2k^3}$	0	0
$ au_{0}^{\#1}$ †	$\frac{i\sqrt{2}(\alpha_0+2\beta_2)}{\alpha_0(\alpha_0+2\beta_2)k-4(\alpha_4+\alpha_6)\beta_2k^3}$	$\frac{\frac{\alpha_0}{2} + \beta_2 + (\alpha_4 + \alpha_6) k^2}{\frac{1}{2} \alpha_0 (\alpha_0 + 2 \beta_2) k^2 + 2 (\alpha_4 + \alpha_6) \beta_2 k^4}$	0	0
$ au_{0}^{\#2} \dagger$	0	0	0	0
$\sigma_0^{\#1}$ †	0	0	0	$\frac{2}{\alpha_0 + 8\beta_3 + 2(\alpha_2 + \alpha_3)k^2}$

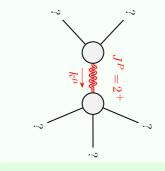
	$\sigma^{\#1}_{2^+lphaeta}$	$ au_{2}^{\#1}{}_{lphaeta}$	$\sigma_{2}^{\sharp 1}{}_{lphaeta\chi}$
$\sigma_{2^+}^{\sharp 1} \dagger^{\alpha\beta}$	$\frac{16 \beta_1}{-\alpha_0^2 + 4 \alpha_0 \beta_1 + 16 (\alpha_1 + \alpha_4) \beta_1 k^2}$	$\frac{2 i \sqrt{2} (\alpha_0 - 4 \beta_1)}{\alpha_0 (\alpha_0 - 4 \beta_1) k - 16 (\alpha_1 + \alpha_4) \beta_1 k^3}$	0
$\tau_{2+}^{\#1} \dagger^{\alpha\beta}$	$-\frac{2 i \sqrt{2} (\alpha_0 - 4 \beta_1)}{\alpha_0 (\alpha_0 - 4 \beta_1) k - 16 (\alpha_1 + \alpha_4) \beta_1 k^3}$	$\frac{2 \left(\alpha_0 - 4 \left(\beta_1 + (\alpha_1 + \alpha_4) k^2\right)\right)}{k^2 \left(\alpha_0^2 - 4 \alpha_0 \beta_1 - 16 \left(\alpha_1 + \alpha_4\right) \beta_1 k^2\right)}$	0
$\sigma_2^{#1}\dagger^{lphaeta\chi}$	0	0	$\frac{1}{-\frac{\alpha_0}{4}+\beta_1+(\alpha_1+\alpha_2)k^2}$

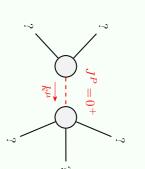
	$\omega_{2}^{\#1}{}_{\alpha\beta}$	$f_{2+\alpha\beta}^{\#1}$	$\omega_{2}^{\sharp 1}{}_{lphaeta\chi}$
$\omega_{2}^{\#1}\dagger^{\alpha\beta}$	$-\frac{\alpha_0}{4}+\beta_1+(\alpha_1+\alpha_4)k^2$	$\frac{i(\alpha_0-4\beta_1)k}{2\sqrt{2}}$	0
$f_{2+}^{#1}\dagger^{\alpha\beta}$	$-\frac{i(\alpha_0-4\beta_1)k}{2\sqrt{2}}$	$2 \beta_1 k^2$	0
$\omega_2^{\#1} \dagger^{\alpha\beta\chi}$	0	0	$-\frac{\alpha_0}{4}+\beta_1+(\alpha_1+\alpha_2)k^2$

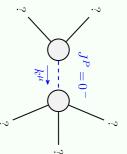


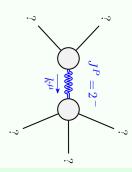


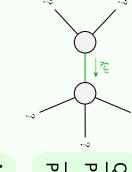
? $J^P = 1^-$	
k^{μ} ?	
?	











Massive partic	le
Pole residue:	$(3(\alpha_0^2))$
	$16 (-4 \beta)$

Pole residue:	$(3(\alpha_0^2(3\alpha_2+3\alpha_5+2\beta_1+4\beta_3)-$
	$8 \alpha_0 (\beta_1^2 + \alpha_2 (\beta_1 - 4 \beta_3) + \alpha_5 (\beta_1 - 4 \beta_3) - 4 \beta_3^2) +$
	$16(-4\beta_1\beta_3(\beta_1+2\beta_3)+\alpha_2(\beta_1^2+8\beta_3^2)+\alpha_5(\beta_1^2+8\beta_3^2))))/$
	$(2(\alpha_2 + \alpha_5)(\beta_1 + 2\beta_3)(3\alpha_0^2 - 12\alpha_0(\beta_1 - 2\beta_3) +$
	$16 (\alpha_5 \beta_1 + 2 \alpha_5 \beta_3 - 6 \beta_1 \beta_3 + \alpha_2 (\beta_1 + 2 \beta_3)))) > 0$
Polarisations:	3
Square mass:	$\frac{3(\alpha_0-4\beta_1)(\alpha_0+8\beta_3)}{(\alpha_0-4\beta_1)(\alpha_0+8\beta_3)} > 0$
· 	$16(\alpha_2+\alpha_5)(\beta_1+2\beta_3)$
Spin:	1
Parity:	Even

Massive partic	Massive particle			
Pole residue:	$ \begin{array}{l} -((3(\alpha_{0}^{2}(3\alpha_{4}+3\alpha_{5}+4\beta_{1}+2\beta_{2})+\\ 4\alpha_{0}(-2\alpha_{4}\beta_{1}-2\alpha_{5}\beta_{1}-4\beta_{1}^{2}+2\alpha_{4}\beta_{2}+2\alpha_{5}\beta_{2}+\beta_{2}^{2})+\\ 8(-2\beta_{1}\beta_{2}(2\beta_{1}+\beta_{2})+\alpha_{4}(2\beta_{1}^{2}+\beta_{2}^{2})+\alpha_{5}(2\beta_{1}^{2}+\beta_{2}^{2}))))/\\ (2(\alpha_{4}+\alpha_{5})(2\beta_{1}+\beta_{2})(3\alpha_{0}^{2}+6\alpha_{0}(-2\beta_{1}+\beta_{2})+\\ 4(2\alpha_{5}\beta_{1}+\alpha_{5}\beta_{2}-6\beta_{1}\beta_{2}+\alpha_{4}(2\beta_{1}+\beta_{2})))))>0 \end{array} $			
Polarisations:	3			
Square mass:	$\frac{\frac{3(\alpha_0 - 4\beta_1)(\alpha_0 + 2\beta_2)}{8(\alpha_4 + \alpha_5)(2\beta_1 + \beta_2)}}{ 8(\alpha_4 + \alpha_5)(2\beta_1 + \beta_2)} > 0$			
Spin:	1			
Parity:	Odd			

Massive particle	ē
Pole residue:	$-\frac{2}{\alpha_0} + \frac{\alpha_1 + \alpha_4 + 2\beta_1}{2\alpha_1\beta_1 + 2\alpha_4\beta_1} > 0$
Polarisations: 5	5
Square mass:	$\frac{\alpha_0 (\alpha_0 - 4\beta_1)}{16 (\alpha_1 + \alpha_4) \beta_1} > 0$
Spin:	2
Parity:	Fven

Parity:	Spin:	Square mass:	Polarisations:	Pole residue:	Massive particle
Even	0	$\frac{\alpha_0 (\alpha_0 + 2\beta_2)}{4 (\alpha_4 + \alpha_6)\beta_2} > 0$	1	$\frac{1}{\alpha_0} + \frac{\alpha_4 + \alpha_6 + 2\beta_2}{2\alpha_4\beta_2 + 2\alpha_6\beta_2} > 0$	Ē

Massive particle	e
Pole recidine:	0 <
l die Lesidae.	$\alpha_2 + \alpha_3$
Polarisations:	1
Square mass:	$-\frac{\alpha_0+8\beta_3}{2(\alpha_2+\alpha_3)}>0$
Spin:	0
Parity:	ррО

		•~			
Parity:	Spin:	Square mass:	Polarisations:	Pole residue:	Massive particle
Odd	2	$\frac{\alpha_0 - 4\beta_1}{4(\alpha_1 + \alpha_2)} > 0$	5	$-\frac{1}{\alpha_1 + \alpha_2} > 0$	Ф