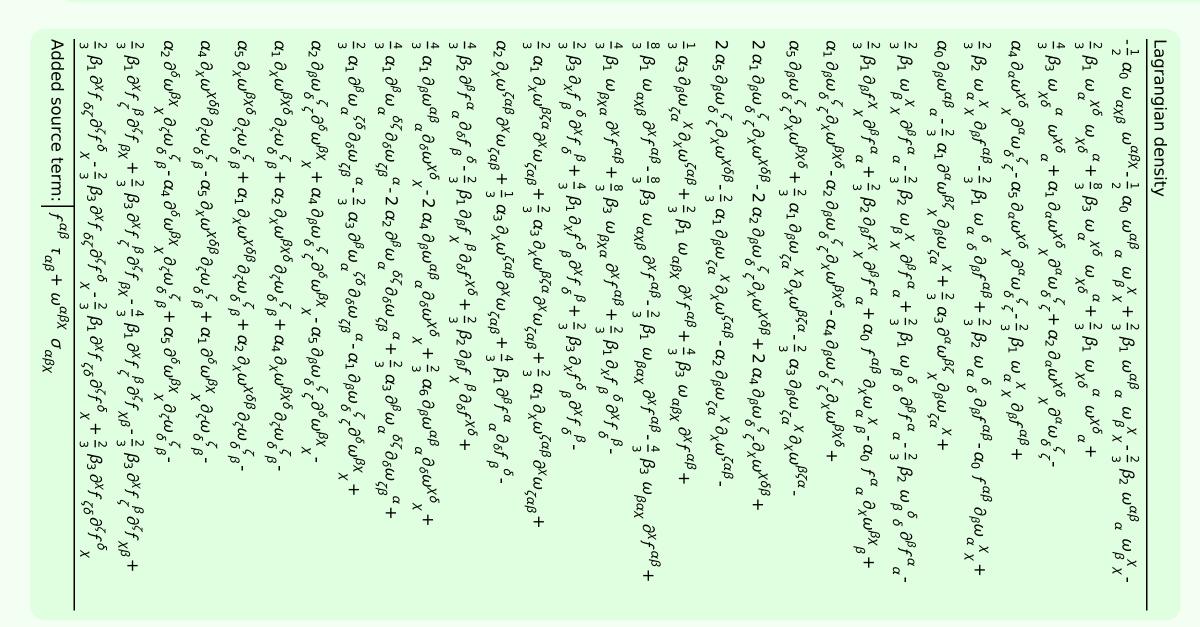
	$\sigma_{1^{+}\alpha\beta}^{\#1}$	$\sigma_{1^+ lpha eta}^{ ext{#2}}$	$ au_{1}^{\#1}{}_{lphaeta}$	$\sigma_{1}^{\sharp 1}{}_{lpha}$	$\sigma_{1^-\alpha}^{\#2}$	$\tau_{1}^{\#1}{}_{\alpha}$	τ ₁ - α
$\sigma_{1}^{#1} \dagger^{\alpha}$	$\beta = \frac{\frac{1}{3(\alpha_0 - 4\beta_1)(\alpha_0 + 8\beta_3)} + (\alpha_2 + \alpha_5)k^2}{16(\beta_1 + 2\beta_3)}$	$-\frac{2\sqrt{2}(3\alpha_0-4\beta_1+16\beta_3)}{(1+k^2)(-3(\alpha_0-4\beta_1)(\alpha_0+8\beta_3)+16(\alpha_2+\alpha_5)(\beta_1+2\beta_3)k^2)}$	$-\frac{2 i \sqrt{2} (3 \alpha_0 - 4 \beta_1 + 16 \beta_3) k}{(1+k^2) (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 8 \beta_3) + 16 (\alpha_2 + \alpha_5) (\beta_1 + 2 \beta_3) k^2)}$	0	0	0	0
$\sigma_{1+}^{#2} \dagger^{\alpha}$	$\beta = \frac{2\sqrt{2}(3\alpha_0-4\beta_1+16\beta_3)}{(1+k^2)(-3(\alpha_0-4\beta_1)(\alpha_0+8\beta_3)+16(\alpha_2+\alpha_5)(\beta_1+2\beta_3)k^2)}$	$\frac{6 \alpha_0 + 8 (\beta_1 + 8 \beta_3 + 3 (\alpha_2 + \alpha_5) k^2)}{(1+k^2)^2 (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 8 \beta_3) + 16 (\alpha_2 + \alpha_5) (\beta_1 + 2 \beta_3) k^2)}$	$\frac{2 i k (3 \alpha_0+4 (\beta_1+8 \beta_3+3 (\alpha_2+\alpha_5) k^2))}{(1+k^2)^2 (-3 (\alpha_0-4 \beta_1) (\alpha_0+8 \beta_3)+16 (\alpha_2+\alpha_5) (\beta_1+2 \beta_3) k^2)}$	0	0	0	0
$\tau_{1}^{#1} + ^{\alpha}$	$\beta \frac{2 i \sqrt{2} (3 \alpha_0 - 4 \beta_1 + 16 \beta_3) k}{(1+k^2) (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 8 \beta_3) + 16 (\alpha_2 + \alpha_5) (\beta_1 + 2 \beta_3) k^2)}$	$-\frac{2 i k (3 \alpha_0+4 (\beta_1+8 \beta_3+3 (\alpha_2+\alpha_5) k^2))}{(1+k^2)^2 (-3 (\alpha_0-4 \beta_1) (\alpha_0+8 \beta_3)+16 (\alpha_2+\alpha_5) (\beta_1+2 \beta_3) k^2)}$	$\frac{2 k^2 (3 \alpha_0 + 4 (\beta_1 + 8 \beta_3 + 3 (\alpha_2 + \alpha_5) k^2))}{(1 + k^2)^2 (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 8 \beta_3) + 16 (\alpha_2 + \alpha_5) (\beta_1 + 2 \beta_3) k^2)}$	0	0	0	0
$\sigma_1^{\!\#1}$ †	ο	0	0	$-\frac{\frac{1}{3(\alpha_0-4\beta_1)(\alpha_0+2\beta_2)}+(\alpha_4+\alpha_5)k^2}{8(2\beta_1+\beta_2)}$	$\frac{2\sqrt{2}(3\alpha_0-4\beta_1+4\beta_2)}{(1+2k^2)(-3(\alpha_0-4\beta_1)(\alpha_0+2\beta_2)+8(\alpha_4+\alpha_5)(2\beta_1+\beta_2)k^2)}$	0	$\frac{4 i (3 \alpha_0 - 4 \beta_1 + 4 \beta_2) k}{(1 + 2 k^2) (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 2 \beta_2) + 8 (\alpha_4 + \alpha_5) (2 \beta_1 + \beta_2) k^2)}$
$\sigma_1^{\#2}$ †	ο	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	$\frac{2 i \sqrt{2} k (3 \alpha_0 + 4 (\beta_1 + 2 \beta_2 + 3 (\alpha_4 + \alpha_5) k^2))}{(1 + 2 k^2)^2 (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 2 \beta_2) + 8 (\alpha_4 + \alpha_5) (2 \beta_1 + \beta_2) k^2)}$
$ au_{1}^{\#1}$ †	ο 0	0	0	0	0	0	0
τ ₁ -2 †	ο	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	$\frac{4 k^2 (3 \alpha_0 + 4 (\beta_1 + 2 \beta_2 + 3 (\alpha_4 + \alpha_5) k^2))}{(1 + 2 k^2)^2 (-3 (\alpha_0 - 4 \beta_1) (\alpha_0 + 2 \beta_2) + 8 (\alpha_4 + \alpha_5) (2 \beta_1 + \beta_2) k^2)}$



	$\sigma_{0}^{\#1}$	τ ₀ ^{#1}	$ au_{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}$ †	0	0	0	0
$\sigma_{0}^{\#1}$ †	0	0	0	$\frac{2}{\alpha_0+8\beta_3+2(\alpha_2+\alpha_3)k^2}$

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

 $\omega_{2}^{*1} + \alpha \beta \chi$

0

0

 $+\beta_1+(\alpha_1+\alpha_2)\,k^2$

 $f_{2+}^{#1} \dagger^{\alpha\beta}$

 $2 \beta_1 k^2$

0

 $\omega_{2^{+}}^{*1} \dagger^{\alpha\beta}$

 $-\frac{\alpha_0}{4} + \beta_1 + (\alpha_1 + \alpha_4) k^2$

 $f_{2}^{\#1}\alpha\beta$ $\frac{i(\alpha_{0}-4\beta_{1})k}{2\sqrt{2}}$

0

 $\omega_{2}^{\#1}{}_{lphaeta}$

	$\sigma_{2^{+}lphaeta}^{\sharp1}$	$ au_{2}^{\#1}{}_{lphaeta}$	$\sigma_{2}^{\#1}{}_{lphaeta\chi}$
$\sigma_{2}^{\#1}\dagger^{lphaeta}$	$\frac{16 \beta_1}{-\alpha_0^2 + 4 \alpha_0 \beta_1 + 16 (\alpha_1 + \alpha_4) \beta_1 k^2}$	$\frac{2 i \sqrt{2} (\alpha_0 - 4 \beta_1)}{\alpha_0 (\alpha_0 - 4 \beta_1) k - 16 (\alpha_1 + \alpha_4) \beta_1 k^3}$	0
$ au_2^{\#1} \dagger^{lphaeta}$	$-\frac{2 i \sqrt{2} (\alpha_0 - 4 \beta_1)}{\alpha_0 (\alpha_0 - 4 \beta_1) k - 16 (\alpha_1 + \alpha_4) \beta_1 k^3}$	$\frac{2 (\alpha_0 - 4 (\beta_1 + (\alpha_1 + \alpha_4) k^2))}{k^2 (\alpha_0^2 - 4 \alpha_0 \beta_1 - 16 (\alpha_1 + \alpha_4) \beta_1 k^2)}$	0
$\sigma_2^{\sharp 1} \dagger^{\alpha\beta\chi}$	0	0	$\frac{1}{-\frac{\alpha_0}{4} + \beta_1 + (\alpha_1 + \alpha_2) k^2}$

$\omega_{0^{-}}^{*1}$ †	$f_{0+}^{#2}$ †	f ₀ ^{#1} †	$\omega_{0^{+}}^{*1}$ †		
0	0	$\frac{i(\alpha_0+2\beta_2)k}{\sqrt{2}}$	$\omega_{0+}^{*1} + \left \frac{\alpha_0}{2} + \beta_2 + (\alpha_4 + \alpha_6) k^2 \right - \frac{i(\alpha_0 + 2\beta_2)k}{\sqrt{2}}$	ω_0^{*1}	
0	0	$2 \beta_2 k^2$	$-\frac{i(\alpha_0+2\beta_2)k}{\sqrt{2}}$	$f_{0}^{#1}$	
0	0	0	0	$f_{0}^{#2}$	
$\frac{\alpha_0}{2} + 4 \beta_3 + (\alpha_2 + \alpha_3) k^2$	0	0	0	$\omega_{0^-}^{\#1}$	

	$\omega_{1^{+}lphaeta}^{\sharp1}$	$\omega_{1^{+}lphaeta}^{\#2}$	$f_{1}^{\#1}{}_{lphaeta}$	$\omega_{1^{-}lpha}^{\sharp 1}$	$\omega_{1^{-}\alpha}^{$ #2}	$f_{1-\alpha}^{\#1}$	$f_{1-\alpha}^{#2}$
$\omega_{1}^{\#1} \dagger^{lphaeta}$	$\frac{\alpha_0}{4} + \frac{1}{3} (\beta_1 + 8 \beta_3) + (\alpha_2 + \alpha_5) k^2$	$\frac{3\alpha_0-4\beta_1+16\beta_3}{6\sqrt{2}}$	$\frac{i (3 \alpha_0 - 4 \beta_1 + 16 \beta_3) k}{6 \sqrt{2}}$	0	0	0	0
$\omega_1^{\#2} \dagger^{\alpha\beta}$	$\frac{3 \alpha_0 - 4 \beta_1 + 16 \beta_3}{6 \sqrt{2}}$	$\frac{2}{3}\left(\beta_1+2\beta_3\right)$	$\frac{2}{3}i(\beta_1+2\beta_3)k$	0	0	0	0
$f_1^{#1} \dagger^{\alpha\beta}$	$-\frac{i(3 \alpha_0 - 4 \beta_1 + 16 \beta_3) k}{6 \sqrt{2}}$	$-\frac{2}{3}\bar{l}(\beta_1+2\beta_3)k$	$\frac{2}{3}(\beta_1 + 2\beta_3)k^2$	0	0	0	0
$\omega_1^{\#1} \dagger^{lpha}$	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	$-\frac{1}{6}i(3\alpha_0-4\beta_1+4\beta_2)k$
$\omega_1^{\#2} \uparrow^{\alpha}$	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	$\frac{1}{3}\bar{i}\sqrt{2}(2\beta_1+\beta_2)k$
$f_{1}^{#1} \dagger^{\alpha}$	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	$-\frac{1}{3}\bar{l}\sqrt{2}(2\beta_1+\beta_2)k$	0	$\frac{2}{3} (2 \beta_1 + \beta_2) k^2$

Parity:	Spin:	Square mass:	Polarisations:	Pole residue:	? $J^P = 1^+$? k^{μ} ? Massive particle
Even	1	$\frac{3(\alpha_0-4\beta_1)(\alpha_0+8\beta_3)}{16(\alpha_2+\alpha_5)(\beta_1+2\beta_3)} > 0$	3	Pole residue: $ (3 (\alpha_0^2 (3 \alpha_2 + 3 \alpha_5 + 2 \beta_1 + 4 \beta_3) - (3 (\alpha_0^2 (3 \alpha_2 + 3 \alpha_5 + 2 \beta_1 + 4 \beta_3) - 4 \beta_3^2) + (3 (\alpha_0 (\beta_1^2 + \alpha_2 (\beta_1 - 4 \beta_3) + \alpha_5 (\beta_1 - 4 \beta_3) - 4 \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) + (2 (\alpha_2 + \alpha_5) (\beta_1 + 2 \beta_3) (3 \alpha_0^2 - 12 \alpha_0 (\beta_1 - 2 \beta_3) + (3 (\alpha_5 \beta_1 + 2 \alpha_5 \beta_3 - 6 \beta_1 \beta_3 + \alpha_2 (\beta_1 + 2 \beta_3)))) > 0 $? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?

$\frac{1}{2}$ = $\frac{1}{2}$ -((3 (α_0^2 (3 α_4 + 3 α_5 + 4 β_1 + 2 β_2) + 4 α_0 (-2 α_4 β_1 - 2 α_5 β_1 - 4 β_1^2 + 2 α_4 β_2 + 2 α_5 β_2 + β_2^2) + 8 (-2 β_1 β_2 (2 β_1 + β_2) + α_4 (2 β_1^2 + β_2^2) + α_5 (2 β_1^2 + β_2^2)))))/ (2 (α_4 + α_5) (2 β_1 + β_2) (3 α_0^2 + 6 α_0 (-2 β_1 + β_2) + 4 (2 α_5 β_1 + α_5 β_2 - 6 β_1 β_2 + α_4 (2 β_1 + β_2))))) > 0 $\frac{3}{8(\alpha_0^4 + \alpha_5)(2\beta_1 + \beta_2)}$ > 0 $\frac{3(\alpha_0^4 + \alpha_5)(2\beta_1 + \beta_2)}{8(\alpha_4 + \alpha_5)(2\beta_1 + \beta_2)}$ > 0 Odd
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? ?????????????????????????????????????	$ \stackrel{?}{\nearrow} J^P = 1 - $

		\$\frac{F}{2}		 					£ +		
								.7		\ \ \ \	\ .
Parity:	Spin:	Square mass:	Polarisations:	Pole residue:	Massive particle		Parity:	Spin:	Square mass:	Polarisations:	Pole residue:
Even	2	$\frac{\alpha_0 (\alpha_0 - 4\beta_1)}{16 (\alpha_1 + \alpha_4) \beta_1} > 0$	5	$-\frac{2}{\alpha_0} + \frac{\alpha_1 + \alpha_4 + 2\beta_1}{2\alpha_1\beta_1 + 2\alpha_4\beta_1} > 0$	ē		Even	0	$\frac{\alpha_0 (\alpha_0 + 2\beta_2)}{4 (\alpha_4 + \alpha_6) \beta_2} > 0$	1	$\frac{1}{\alpha_0} + \frac{\alpha_4 + \alpha_6 + 2 \mu_2}{2 \alpha_4 \beta_2 + 2 \alpha_6 \beta_2} > 0$
Jn	itar	itv co	ndi	tions							

Unitarity conditions
(Unitarity is demonstrably impossible)

	. ?	2		; , , , , , , , , , , , , , , , , , , ,		. ?	~			γη / · · · · · · · · · · · · · · · · · ·	?
Darity:	Spin:	Square mass:	Polarisations:	Pole residue:	Massive particle		Polarisations: 2		, Pole residue:	Quadratic pole	
)))	0	$-\frac{\alpha_0+8\beta_3}{2(\alpha_2+\alpha_3)}>0$	1	$-\frac{1}{\alpha_2 + \alpha_3} > 0$	le		2	α_0	<u> </u>		
		V 0		0							

	Massive particle	
? $J^{P} = 2^{-}$? ? ?	Pole residue:	$-\frac{1}{\alpha_1 + \alpha_2} > 0$
	Polarisations:	5
	Square mass:	$\frac{\alpha_0 - 4\beta_1}{4(\alpha_1 + \alpha_2)} > 0$
	Spin:	2
	Parity:	Odd