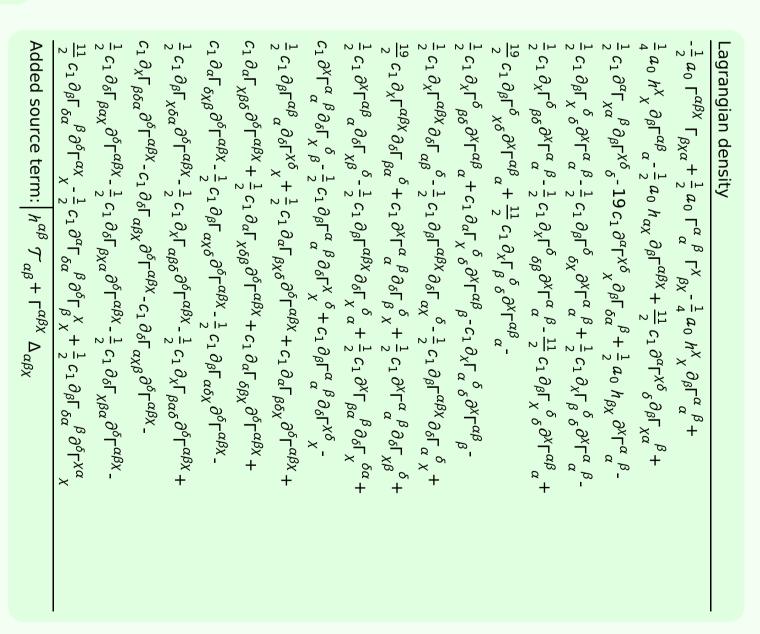


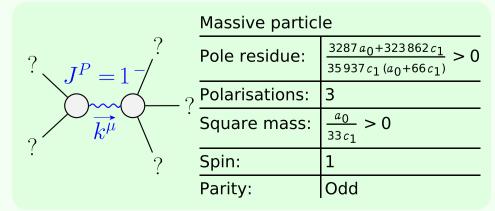
	$\Delta_{2}^{\#1}{}_{\alpha\beta}$	$\Delta^{\#2}_{2}{}^{+}{}_{lphaeta}$	$\Delta_{2}^{\#3}{}_{lphaeta}$	${\mathcal T}_{2}^{\sharp 1}{}_{lphaeta}$	$\Delta_{2}^{\#1}{}_{\alpha\beta\chi}$	$\Delta_{2^{-}\alpha\beta\chi}^{\#2}$
$\Delta_{2}^{\#1} \dagger^{lphaeta}$	0	$\frac{2\sqrt{\frac{2}{3}}}{a_0}$	$\frac{4}{\sqrt{3} \ a_0}$	$\frac{4i\sqrt{2}}{a_0k}$	0	0
$\Delta_{2}^{\#2} \dagger^{\alpha\beta}$	$\frac{2\sqrt{\frac{2}{3}}}{a_0}$	$-\frac{8(a_0+13c_1k^2)}{3a_0^2}$	$-\frac{2\sqrt{2}(a_0+52c_1k^2)}{3a_0^2}$	$-\frac{4i(a_0+31c_1k^2)}{\sqrt{3}a_0^2k}$	0	0
$\Delta_{2}^{\#3} \dagger^{\alpha\beta}$	$\frac{4}{\sqrt{3}}a_0$	$-\frac{2\sqrt{2}(a_0+52c_1k^2)}{3a_0^2}$	$\frac{8(a_0-26c_1k^2)}{3a_0^2}$	$-\frac{4i\sqrt{\frac{2}{3}}(a_0+31c_1k^2)}{a_0^2k}$	0	0
${\mathcal T}_{\mathtt{2}^{+}}^{\mathtt{#1}} t^{lphaeta}$	$-\frac{4i\sqrt{2}}{a_0k}$	$\frac{4 i (a_0 + 31 c_1 k^2)}{\sqrt{3} a_0^2 k}$	$\frac{4i\sqrt{\frac{2}{3}}(a_0+31c_1k^2)}{{a_0}^2k}$	$-\frac{8(a_0+11c_1k^2)}{a_0^2k^2}$	0	0
$\Delta_{2}^{#1} \dagger^{lphaeta\chi}$	0	0	0	0	$\frac{4}{a_0 - c_1 k^2}$	0
$\Delta_2^{#2} \dagger^{\alpha\beta\chi}$	0	0	0	0	0	$\frac{4}{a_0-5c_1k^2}$

	$\Gamma^{\#1}_{2^+ lphaeta}$	Γ ^{#2} ₂ + αβ	Γ#3 2 ⁺ αβ	$h_{2}^{\#1}{}_{lphaeta}$	$\Gamma_{2}^{\#1}_{\alpha\beta\chi}$	Γ ₂ - _{αβχ}
$\Gamma_{2}^{#1} + \alpha \beta$	$\frac{1}{4} (a_0 + 11 c_1 k^2)$	$-5\sqrt{\frac{2}{3}}c_1k^2$	$\frac{5c_1k^2}{\sqrt{3}}$	$\frac{i a_0 k}{4 \sqrt{2}}$	0	0
$\Gamma_{2+}^{\#2} + \alpha \beta$	$-5\sqrt{\frac{2}{3}}c_1k^2$	$\frac{1}{6} \left(-3 a_0 + c_1 k^2 \right)$	$-\frac{c_1 k^2}{6 \sqrt{2}}$	$\frac{i a_0 k}{4 \sqrt{3}}$	0	0
$\Gamma_{2+}^{\#3} \dagger^{\alpha\beta}$	$\frac{5c_1k^2}{\sqrt{3}}$	$-\frac{c_1 k^2}{6 \sqrt{2}}$	$\frac{1}{12} \left(3 a_0 + c_1 k^2 \right)$	$-\frac{i a_0 k}{4 \sqrt{6}}$	0	0
$h_2^{\#1} \dagger^{\alpha\beta}$	$-\frac{i a_0 k}{4 \sqrt{2}}$	$-\frac{i a_0 k}{4 \sqrt{3}}$	$\frac{i a_0 k}{4 \sqrt{6}}$	0	0	0
$\Gamma_2^{\#1} \dagger^{\alpha\beta\chi}$	0	0	0	0	$\frac{1}{4}(a_0-c_1k^2)$	0
$\Gamma_2^{\#2} \dagger^{\alpha\beta\chi}$	0	0	0	0	0	$\frac{1}{4} (a_0 - 5 c_1 k^2)$

	$\Delta_0^{\#1}$	Δ ₀ ^{#2}	Δ ₀ #3	$\Delta_0^{\#4}$	${\mathcal T}_0^{\#1}$	${\cal T}_0^{\#2}$	$\Delta_0^{\#1}$
$\Delta_{0}^{\#1}$ †	0	$\frac{4\sqrt{6}}{16a_0 + 3a_0 k^2}$	$-\frac{4\sqrt{\frac{2}{3}}}{16a_0+3a_0k^2}$	$-\frac{8}{\sqrt{3} (16 a_0 + 3 a_0 k^2)}$	$-\frac{2i\sqrt{2}}{a_0k}$	$-\frac{2i\sqrt{6}k}{16a_0+3a_0k^2}$	0
$\Delta_0^{\#2}$ †	$\frac{4\sqrt{6}}{16a_0 + 3a_0 k^2}$	$-\frac{48 (3 a_0 + 197 c_1 k^2)}{{a_0}^2 (16 + 3 k^2)^2}$	$\frac{16(19a_0 + (3a_0 + 197c_1)k^2)}{{a_0}^2(16 + 3k^2)^2}$	$-\frac{8\sqrt{2}(10a_0+(3a_0-394c_1)k^2)}{{a_0}^2(16+3k^2)^2}$	$-\frac{8i\sqrt{3}(a_0-65c_1k^2)}{{a_0}^2k(16+3k^2)}$	$\frac{24 i k (3 a_0 + 197 c_1 k^2)}{a_0^2 (16 + 3 k^2)^2}$	0
$\Delta_{0}^{#3}$ †	$-\frac{4\sqrt{\frac{2}{3}}}{16a_0+3a_0k^2}$	$\frac{16(19a_0 + (3a_0 + 197c_1)k^2)}{a_0^2(16 + 3k^2)^2}$	$-\frac{16 \left(35 a_0 + \left(6 a_0 + 197 c_1\right) k^2\right)}{3 a_0^2 (16 + 3 k^2)^2}$	$-\frac{8\sqrt{2}(22a_0+(3a_0+394c_1)k^2)}{3a_0^2(16+3k^2)^2}$	$\frac{8i(a_0-65c_1k^2)}{\sqrt{3}a_0^2k(16+3k^2)}$	$-\frac{8ik(19a_0+(3a_0+197c_1)k^2)}{{a_0}^2(16+3k^2)^2}$	0
$\Delta_{0}^{\#4}$ †	$-\frac{8}{\sqrt{3}(16a_0+3a_0k^2)}$	$-\frac{8\sqrt{2}(10a_0+(3a_0-394c_1)k^2)}{{a_0}^2(16+3k^2)^2}$	$-\frac{8\sqrt{2}(22a_0+(3a_0+394c_1)k^2)}{3a_0^2(16+3k^2)^2}$	$\frac{32 (13 a_0 + (3 a_0 - 197 c_1) k^2)}{3 a_0^2 (16 + 3 k^2)^2}$	$\frac{8i\sqrt{\frac{2}{3}}(a_0-65c_1k^2)}{a_0^2k(16+3k^2)}$	$\frac{4i\sqrt{2}k(10a_0 + (3a_0 - 394c_1)k^2)}{a_0^2(16 + 3k^2)^2}$	0
${\cal T}_{0}^{\#1}\dagger$	$\frac{2i\sqrt{2}}{a_0k}$	$\frac{8i\sqrt{3}(a_0-65c_1k^2)}{a_0^2k(16+3k^2)}$	$-\frac{8 i (a_0-65 c_1 k^2)}{\sqrt{3} a_0^2 k (16+3 k^2)}$	$-\frac{8i\sqrt{\frac{2}{3}}(a_0-65c_1k^2)}{a_0^2k(16+3k^2)}$	$\frac{4(a_0-25c_1k^2)}{{a_0}^2k^2}$	$\frac{4\sqrt{3}(a_0-65c_1k^2)}{a_0^2(16+3k^2)}$	0
$\mathcal{T}_{0}^{\#2}$ †	$\frac{2 i \sqrt{6} k}{16 a_0 + 3 a_0 k^2}$	$-\frac{24ik(3a_0+197c_1k^2)}{{a_0}^2(16+3k^2)^2}$	$\frac{8ik(19a_0 + (3a_0 + 197c_1)k^2)}{a_0^2(16 + 3k^2)^2}$	$-\frac{4i\sqrt{2}k(10a_0+(3a_0-394c_1)k^2)}{{a_0}^2(16+3k^2)^2}$	$\frac{4\sqrt{3}(a_0-65c_1k^2)}{a_0^2(16+3k^2)}$	$-\frac{12 k^2 (3 a_0 + 197 c_1 k^2)}{a_0^2 (16 + 3 k^2)^2}$	0
$\Delta_{0}^{\#_{1}}$ †	0	0	0	0	0	0	$-\frac{2}{a_0-c_1k^2}$

	Γ ₀ ^{#1}	Γ ₀ ^{#2}	Γ ₀ ^{#3}	Γ <mark>#</mark> 4	$h_{0}^{\#1}$	$h_{0}^{\#2}$	Γ ₀ -1
Γ ₀ ^{#1} †	$\frac{1}{2}\left(-a_0+25c_1k^2\right)$	0	$10\sqrt{\frac{2}{3}}c_1k^2$	$-\frac{10c_1k^2}{\sqrt{3}}$	$-\frac{i a_0 k}{2 \sqrt{2}}$	0	0
$\Gamma_{0}^{\#2}$ †	0	0	<u>a₀</u> 2	$-\frac{a_0}{2\sqrt{2}}$	0	0	0
Γ ₀ ^{#3} †	$10 \sqrt{\frac{2}{3}} c_1 k^2$	<u>a₀</u> 2	$\frac{23c_1k^2}{3}$	$-\frac{3a_0+46c_1k^2}{6\sqrt{2}}$	$\frac{i a_0 k}{4 \sqrt{3}}$	$-\frac{1}{4}ia_0k$	0
Γ ₀ ^{#4} †	$-\frac{10c_1k^2}{\sqrt{3}}$	$-\frac{a_0}{2\sqrt{2}}$	$-\frac{3a_0+46c_1k^2}{6\sqrt{2}}$	$\frac{1}{6} \left(3 a_0 + 23 c_1 k^2 \right)$	$-\frac{i a_0 k}{4 \sqrt{6}}$	$\frac{i a_0 k}{4 \sqrt{2}}$	0
$h_{0}^{\#1}$ †	$\frac{i a_0 k}{2 \sqrt{2}}$	0	$-\frac{i a_0 k}{4 \sqrt{3}}$	$\frac{i a_0 k}{4 \sqrt{6}}$	0	0	0
$h_{0}^{\#2}$ †	0	0	<u>i a o k</u> 4	$-\frac{i a_0 k}{4 \sqrt{2}}$	0	0	0
Γ ₀ [#] -1 †	0	0	0	0	0	0	$\frac{1}{2}\left(-a_0+c_1k^2\right)$





 $\Gamma_{1}^{\#3}_{\alpha\beta}$

 $5c_1k^2$

0

0

0

 $0 \quad \frac{1}{4} (a_0 - 29 c_1 k^2)$

0

0

0

0

0

0

0

0

 $\frac{1}{4} \left(-a_0 - 3 c_1 k^2 \right) \left| \frac{a_0}{2 \sqrt{2}} \right|$

 $\frac{5}{3} \sqrt{3} c_1 k^2$

 $5\sqrt{\frac{3}{2}}c_1k^2$

0

0

 $\frac{5}{3} \sqrt{3} c_1 k^2$

 $-\frac{a_0}{}$

 $\sqrt{5} (a_0 - 8c_1 k^2)$

 $-\frac{a_0}{6\sqrt{2}}$

 $-\frac{i a_0 k}{4 \sqrt{6}}$

 $0 \quad \frac{1}{6} \left(-a_0 + 20 c_1 k^2 \right)$

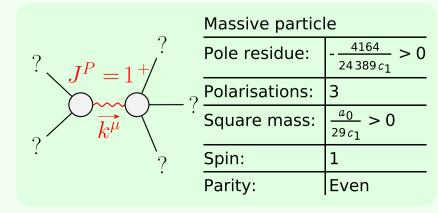
 $\Gamma_{1}^{\#1}{}_{lphaeta}$

 $\frac{1}{2} \left(-a_0 - 15 c_1 k^2 \right)$

 $\Gamma_{1}^{#1}$ †

 $\Gamma_{1}^{#3} + {}^{0}$

 $\Gamma_{1}^{\#4} + ^{\alpha}$



 $\Gamma_{1}^{\#4}$ α

0

0

0

 $-\frac{5}{2}\sqrt{\frac{5}{3}}c_1k^2$

 $\frac{1}{6} \sqrt{5} (a_0 - 8c_1 k^2)$

 $\frac{1}{3}(a_0 + 7c_1 k^2)$

 $-\frac{1}{6}\sqrt{\frac{5}{2}}(a_0+16c_1k^2)$

 $-\frac{1}{6}\sqrt{5}(a_0-5c_1k^2)$

 $\frac{1}{4}\,\bar{l}\,\sqrt{\frac{5}{6}}\,a_0\,k$

 $\Gamma_{1^{-}\alpha}^{\#5}$

 $5\sqrt{\frac{3}{2}}c_1k^2$

 $\left| \frac{1}{6} \sqrt{\frac{5}{2}} \left(a_0 + 16 c_1 k^2 \right) \right|$

 $\frac{a_0 + 40c_1 k^2}{6\sqrt{2}}$

 $-\frac{i a_0 k}{4 \sqrt{3}}$

 $\Gamma_{1}^{\#6}$ α

0

0

0

 $-\frac{5c_1k^2}{\sqrt{3}}$

 $\frac{1}{6} \left(-a_0 + 20 c_1 k^2 \right)$

 $\frac{a_0 + 40 c_1 k^2}{6 \sqrt{2}}$

 $\frac{5}{12}$ (a₀ - 17 c₁ k²)

 $-\frac{ia_0k}{4\sqrt{6}}$

 $\frac{1}{c} \sqrt{5} (a_0 - 5 c_1 k^2)$

 $h_{1^{-}\alpha}^{\#1}$

0

0

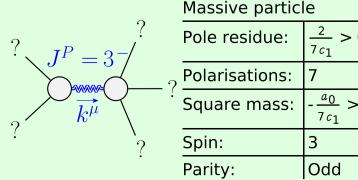
 $-\frac{i a_0 k}{4 \sqrt{2}}$

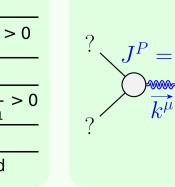
 $-\frac{1}{4}\,\bar{l}\,\sqrt{\frac{5}{6}}\,a_0\,k$

 $\frac{i a_0 k}{4 \sqrt{3}}$

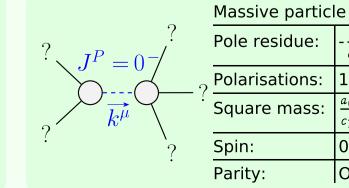
 $\frac{i a_0 k}{4 \sqrt{6}}$

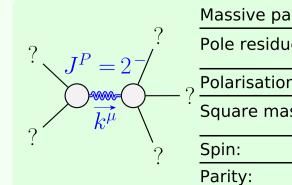
0





	Massive particle			
? $J^P = 2^{-/}$	Pole residue:	$\frac{4}{5c_1} >$		
?	Polarisations:	5		
k^{μ}	Square mass:	$\frac{a_0}{5c_1}$ >		
?	Spin:	2		
·	Parity:	Odd		





rtic	le	
e:	$\frac{4}{c_1} > 0$?
าร:	5	
ss:	$\frac{a_0}{c_1} > 0$?
	2	
	Odd	

?		
? k^{μ}	Quadratic pole	<u> </u>
	Pole residue:	$-\frac{1}{a_0} > 0$
?	Polarisations:	2
7		

s) irreps $\frac{2}{+} - i k \Delta_{0+}^{\#2} == 0$ $+ 2 \Delta_{0+}^{\#4} + 3 \Delta_{0+}^{\#2} == 0$ $\frac{1}{+} \alpha - i k (3 \Delta_{1-}^{\#2} \alpha - \Delta_{1-}^{\#5} \alpha + \Delta_{1$

8 W W 1 1 #

 $+ \Delta_{1}^{#3}$ $\Delta_{1}^{#3}$

Unitarity conditions (Unitarity is demonstrably impossible)