

Wave operator and propagator

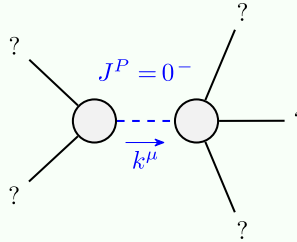
$\sigma_1^{\#1} \dagger \alpha \beta$	$\frac{6}{(3+k^2)^2 t_2}$	$\frac{3 \sqrt{2}}{(3+k^2)^2 t_2}$	$\frac{3 i \sqrt{2} k}{(3+k^2)^2 t_2}$	0	0	0	0
$\sigma_1^{\#2} \dagger \alpha \beta$	$\frac{3 \sqrt{2}}{(3+k^2)^2 t_2}$	$\frac{3}{(3+k^2)^2 t_2}$	$\frac{3 i k}{(3+k^2)^2 t_2}$	0	0	0	0
$\tau_1^{\#1} \dagger \alpha \beta$	$-\frac{3 i \sqrt{2} k}{(3+k^2)^2 t_2}$	$-\frac{3 i k}{(3+k^2)^2 t_2}$	$\frac{3 k^2}{(3+k^2)^2 t_2}$	0	0	0	0
$\sigma_I^{\#1} \dagger \alpha$	0	0	0	$\frac{6}{(3+2 k^2)^2 t_3}$	$-\frac{3 \sqrt{2}}{(3+2 k^2)^2 t_3}$	0	$-\frac{6 i k}{(3+2 k^2)^2 t_3}$
$\sigma_I^{\#2} \dagger \alpha$	0	0	0	$-\frac{3 \sqrt{2}}{(3+2 k^2)^2 t_3}$	$\frac{3}{(3+2 k^2)^2 t_3}$	0	$\frac{3 i \sqrt{2} k}{(3+2 k^2)^2 t_3}$
$\tau_I^{\#1} \dagger \alpha$	0	0	0	0	0	0	0
$\tau_I^{\#2} \dagger \alpha$	0	0	0	$\frac{6 i k}{(3+2 k^2)^2 t_3}$	$-\frac{3 i \sqrt{2} k}{(3+2 k^2)^2 t_3}$	0	$\frac{6 k^2}{(3+2 k^2)^2 t_3}$

[illegible]

	ω_0^{1+}	f_0^{1+}	f_0^{2+}	ω_0^{1-}
$\omega_0^{1+} \dagger$	t_3	$-i \sqrt{2} k t_3$	0	0
$f_0^{1+} \dagger$	$i \sqrt{2} k t_3$	$2 k^2 t_3$	0	0
$f_0^{2+} \dagger$	0	0	0	0
$\omega_0^{1-} \dagger$	0	0	0	$k^2 r_2 + t_2$
	σ_0^{1+}	τ_0^{1+}	τ_0^{2+}	σ_0^{1-}
$\sigma_0^{1+} \dagger$	$\frac{1}{(1+2k^2)^2 t_3}$	$-\frac{i \sqrt{2} k}{(1+2k^2)^2 t_3}$	0	0
$\tau_0^{1+} \dagger$	$\frac{i \sqrt{2} k}{(1+2k^2)^2 t_3}$	$\frac{2 k^2}{(1+2k^2)^2 t_3}$	0	0
$\tau_0^{2+} \dagger$	0	0	0	0
$\sigma_0^{1-} \dagger$	0	0	0	$\frac{1}{k^2 r_2 + t_2}$

$\omega_2^{\#1} \uparrow \alpha\beta$	0	0	0	$\sigma_2^{\#1} \uparrow \alpha\beta$	0	0	0
$f_2^{\#1} \uparrow \alpha\beta$	0	0	0	$\tau_2^{\#1} \uparrow \alpha\beta$	0	0	0
$\omega_2^{\#1} \uparrow \alpha\beta\chi$	0	0	0	$\sigma_2^{\#1} \uparrow \alpha\beta\chi$	0	0	0

Unitarity conditions



Massive particle	
Pole residue:	$-\frac{1}{r_2} > 0$
Polarisations:	1
Square mass:	$-\frac{t_2}{r_2} > 0$
Spin:	0
Parity:	Odd

$$r_2 < 0 \ \&\& \ t_2 > 0$$