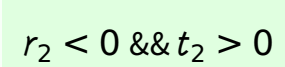


Wave operator and propagator

$$\begin{aligned} \text{Quadratic (free) action} \\ S = & \iiint (\frac{1}{6} (6 f^{\alpha\beta} \tau_{\alpha\beta} + 6 \omega^{\alpha\beta\chi} \sigma_{\alpha\beta\chi} - 18 r_3 \partial_\beta \omega^\theta_{,\theta} \partial' \omega^{\alpha\beta}_{,\alpha} - 6 r_3 \partial_1 \omega_\beta^\theta \partial' \omega^{\alpha\beta}_{,\alpha} \\ & 6 r_3 \partial_\alpha \omega^{\alpha\beta 1} \partial_\theta \omega_\beta^\theta + 12 r_3 \partial' \omega^{\alpha\beta}_{,\alpha} \partial_\theta \omega_\beta^\theta - \\ & 18 r_3 \partial_\alpha \omega^{\alpha\beta 1} \partial_\theta \omega_{,\theta}^\theta + 36 r_3 \partial' \omega^{\alpha\beta}_{,\alpha} \partial_\theta \omega_{,\theta}^\theta + \\ & 4 t_2 \omega_{,\theta\alpha} \partial^\theta f^{\alpha 1} + 2 t_2 \partial_\alpha f_{,\theta}^\theta \partial^\theta f^{\alpha 1} - t_2 \partial_\alpha f_{,\theta}^\theta \partial^\theta f^{\alpha 1} - \\ & t_2 \partial_1 f_{,\theta\alpha} \partial^\theta f^{\alpha 1} + t_2 \partial_\theta f_{,\theta}^\theta \partial^\theta f^{\alpha 1} - t_2 \partial_\theta f_{,\theta}^\theta \partial^\theta f^{\alpha 1} - \\ & 4 t_2 \omega_{,\theta\alpha\theta 1} (\omega^{\alpha\theta} + \partial^\theta f^{\alpha 1}) + 2 t_2 \omega_{\alpha 1\theta} (\omega^{\alpha\theta} + 2 \partial^\theta f^{\alpha 1}) + \\ & 8 r_2 \partial_\beta \omega_{\alpha 1\theta} \partial^\theta \omega^{\alpha\beta 1} - 4 r_2 \partial_\beta \omega_{\alpha\theta 1} \partial^\theta \omega^{\alpha\beta 1} + \\ & 4 r_2 \partial_\beta \omega_{,\theta\alpha} \partial^\theta \omega^{\alpha\beta 1} - 24 r_3 \partial_\beta \omega_{,\theta\alpha} \partial^\theta \omega^{\alpha\beta 1} - \\ & 2 r_2 \partial_1 \omega_{\alpha\theta} \partial^\theta \omega^{\alpha\beta 1} + 2 r_2 \partial_\theta \omega_{,\theta\alpha\beta 1} \partial^\theta \omega^{\alpha\beta 1} - \\ & 4 r_2 \partial_\theta \omega_{\alpha\beta} \partial^\theta \omega^{\alpha\beta 1})) [t, x, y, z] dz dy dx dt \end{aligned}$$

Unitarity conditions



	$\omega_{2^+}^{\#1}$	$f_{2^+}^{\#1}$	$\omega_{2^+}^{\#1}$
$\omega_{2^+}^{\#1} \dagger \alpha\beta$	0	0	0
$f_{2^+}^{\#1} \dagger \alpha\beta$	0	0	0
$\omega_{2^+}^{\#1} \dagger \alpha\beta\chi$	0	0	0

	$\omega_0^{\#1}$	$f_0^{\#1}$	$f_0^{\#2}$	$\omega_0^{\#1}$
$\omega_0^{\#1} \dagger$	$6k^2 r_3$	0	0	0
$f_0^{\#1} \dagger$	0	0	0	0
$f_0^{\#2} \dagger$	0	0	0	0
$\omega_0^{\#1} \dagger$	0	0	0	$k^2 r_2 + t_2$