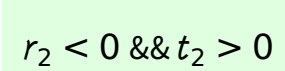


Wave operator and propagator

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

Unitarity conditions



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

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