General Gauge:

$$\eta^{\alpha\beta}\ \partial_\alpha h_{\beta\nu} == \eta^{\alpha\beta}\left(\frac{J\ h_{\alpha\nu}\ \partial_\beta\Omega}{\Omega} + P\,\partial_\nu h_{\alpha\beta} + \frac{Q\ h_{\alpha\beta}\ \partial_\nu\Omega}{\Omega}\right)$$

deSitter

$\Omega = \frac{1}{(1-Ht)}$,

A = 1, B = 0, C = 0 gauge, corresponding to J = 2, Q = -1, P = 1/2

00	$-3\,H^2\,h_{00} + 3\,H\,\partial_0 h_{00} - \frac{1}{2}\,\partial_0\partial_0 h_{00} - \frac{\partial_0\partial_0 h}{4} + \frac{1}{2}\,\partial_1\partial_1 h_{00} + \frac{\partial_1\partial_1 h}{4} + \frac{1}{2}\,\partial_2\partial_2 h_{00} + \frac{\partial_2\partial_2 h}{4} + \frac{1}{2}\,\partial_3\partial_3 h_{00} + t\left(-3\,H^2\,\partial_0 h_{00} + H\,\partial_0\partial_0 h_{00} - H\,\partial_1\partial_1 h_{00} - H\,\partial_2\partial_2 h_{00} - H\,\partial_3\partial_3 h_{00}\right) + t^2\left(-\frac{1}{2}\,H^2\,\partial_0\partial_0 h_{00} + \frac{1}{2}\,H^2\,\partial_1\partial_1 h_{00} + \frac{1}{2}\,H^2\,\partial_2\partial_2 h_{00} + \frac{1}{2}\,H^2\,\partial_3\partial_3 h_{00}\right) + \frac{\partial_3\partial_3 h}{4}$
11	$3\,H^2\,h_{00} + 4\,H^2\,h_{11} + H\,\partial_0 h_{11} - \frac{1}{2}\,\partial_0\partial_0 h_{11} + \frac{\partial_0\partial_0 h}{4} + 2\,H\,\partial_1 h_{01} + \frac{1}{2}\,\partial_1\partial_1 h_{11} - \frac{\partial_1\partial_1 h}{4} + \frac{1}{2}\,\partial_2\partial_2 h_{11} - \frac{\partial_2\partial_2 h}{4} + \frac{1}{2}\,\partial_3\partial_3 h_{11} + t\left(-H^2\,\partial_0 h_{11} + H\,\partial_0\partial_0 h_{11} - 2\,H^2\,\partial_1 h_{01} - H\,\partial_1\partial_1 h_{11} - H\,\partial_2\partial_2 h_{11} - H\,\partial_3\partial_3 h_{11}\right) + t^2\left(-\frac{1}{2}\,H^2\,\partial_0\partial_0 h_{11} + \frac{1}{2}\,H^2\,\partial_1\partial_1 h_{11} + \frac{1}{2}\,H^2\,\partial_2\partial_2 h_{11} + \frac{1}{2}\,H^2\,\partial_3\partial_3 h_{11}\right) - \frac{\partial_3\partial_3 h}{4}$
22	$3\,H^2\,h_{00} + 4\,H^2\,h_{22} + H\,\partial_0 h_{22} - \frac{1}{2}\,\partial_0\partial_0 h_{22} + \frac{\partial_0\partial_0 h}{4} + \frac{1}{2}\,\partial_1\partial_1 h_{22} - \frac{\partial_1\partial_1 h}{4} + 2\,H\,\partial_2 h_{02} + \frac{1}{2}\,\partial_2\partial_2 h_{22} - \frac{\partial_2\partial_2 h}{4} + \frac{1}{2}\,\partial_3\partial_3 h_{22} + t\left(-H^2\,\partial_0 h_{22} + H\,\partial_0\partial_0 h_{22} - H\,\partial_1\partial_1 h_{22} - 2\,H^2\,\partial_2 h_{02} - H\,\partial_2\partial_2 h_{22} - H\,\partial_3\partial_3 h_{22}\right) + t^2\left(-\frac{1}{2}\,H^2\,\partial_0\partial_0 h_{22} + \frac{1}{2}\,H^2\,\partial_1\partial_1 h_{22} + \frac{1}{2}\,H^2\,\partial_2\partial_2 h_{22} + \frac{1}{2}\,H^2\,\partial_3\partial_3 h_{22}\right) - \frac{\partial_3\partial_3 h}{4}$
33	$3\,H^2\,h_{00} + 4\,H^2\,h_{33} + H\,\partial_0 h_{33} - \frac{1}{2}\,\partial_0\partial_0 h_{33} + \frac{\partial_0\partial_0 h}{4} + \frac{1}{2}\,\partial_1\partial_1 h_{33} - \frac{\partial_1\partial_1 h}{4} + \frac{1}{2}\,\partial_2\partial_2 h_{33} - \frac{\partial_2\partial_2 h}{4} + 2\,H\,\partial_3 h_{03} + \frac{1}{2}\,\partial_3\partial_3 h_{33} + t\left(-H^2\,\partial_0 h_{33} + H\,\partial_0\partial_0 h_{33} - H\,\partial_1\partial_1 h_{33} - H\,\partial_2\partial_2 h_{33} - 2\,H^2\,\partial_3 h_{03} - H\,\partial_3\partial_3 h_{33}\right) + t^2\left(-\frac{1}{2}\,H^2\,\partial_0\partial_0 h_{33} + \frac{1}{2}\,H^2\,\partial_1\partial_1 h_{33} + \frac{1}{2}\,H^2\,\partial_2\partial_2 h_{33} + \frac{1}{2}\,H^2\,\partial_3\partial_3 h_{33}\right) - \frac{\partial_3\partial_3 h}{4}$
01	$2\,H^2\,h_{01} + 2\,H\,\partial_0 h_{01} - \frac{1}{2}\,\partial_0\partial_0 h_{01} + H\,\partial_1 h_{00} + \frac{1}{2}\,\partial_1\partial_1 h_{01} + \frac{1}{2}\,\partial_2\partial_2 h_{01} + \frac{1}{2}\,\partial_3\partial_3 h_{01} + t\left(-2\,H^2\,\partial_0 h_{01} + H\,\partial_0\partial_0 h_{01} - H^2\,\partial_1 h_{00} - H\,\partial_1\partial_1 h_{01} - H\,\partial_2\partial_2 h_{01} - H\,\partial_3\partial_3 h_{01}\right) + t^2\left(-\frac{1}{2}\,H^2\,\partial_0\partial_0 h_{01} + \frac{1}{2}\,H^2\,\partial_1\partial_1 h_{01} + \frac{1}{2}\,H^2\,\partial_2\partial_2 h_{01} + \frac{1}{2}\,H^2\,\partial_3\partial_3 h_{01}\right)$
02	$2\,H^2\,h_{02} + 2\,H\,\partial_0 h_{02} - \frac{1}{2}\,\partial_0\partial_0 h_{02} + \frac{1}{2}\,\partial_1\partial_1 h_{02} + H\,\partial_2 h_{00} + \frac{1}{2}\,\partial_2\partial_2 h_{02} + \frac{1}{2}\,\partial_3\partial_3 h_{02} + t\left(-2\,H^2\,\partial_0 h_{02} + H\,\partial_0\partial_0 h_{02} - H\,\partial_1\partial_1 h_{02} - H^2\,\partial_2 h_{00} - H\,\partial_2\partial_2 h_{02} - H\,\partial_3\partial_3 h_{02}\right) + t^2\left(-\frac{1}{2}\,H^2\,\partial_0\partial_0 h_{02} + \frac{1}{2}\,H^2\,\partial_1\partial_1 h_{02} + \frac{1}{2}\,H^2\,\partial_2\partial_2 h_{02} + \frac{1}{2}\,H^2\,\partial_3\partial_3 h_{02}\right)$
03	$2\,H^2\,h_{03} + 2\,H\,\partial_0 h_{03} - \frac{1}{2}\,\partial_0\partial_0 h_{03} + \frac{1}{2}\,\partial_1\partial_1 h_{03} + \frac{1}{2}\,\partial_2\partial_2 h_{03} + H\,\partial_3 h_{00} + \frac{1}{2}\,\partial_3\partial_3 h_{03} + t\left(-2\,H^2\,\partial_0 h_{03} + H\,\partial_0\partial_0 h_{03} - H\,\partial_1\partial_1 h_{03} - H\,\partial_2\partial_2 h_{03} - H^2\,\partial_3 h_{00} - H\,\partial_3\partial_3 h_{03}\right) + t^2\left(-\frac{1}{2}\,H^2\,\partial_0\partial_0 h_{03} + \frac{1}{2}\,H^2\,\partial_1\partial_1 h_{03} + \frac{1}{2}\,H^2\,\partial_2\partial_2 h_{03} + \frac{1}{2}\,H^2\,\partial_3\partial_3 h_{03}\right)$
12	$4\,H^2\,h_{12} + H\,\partial_0 h_{12} - \frac{1}{2}\,\partial_0\partial_0 h_{12} + H\,\partial_1 h_{02} + \frac{1}{2}\,\partial_1\partial_1 h_{12} + H\,\partial_2 h_{01} + \frac{1}{2}\,\partial_2\partial_2 h_{12} + \frac{1}{2}\,\partial_3\partial_3 h_{12} + t\left(-H^2\,\partial_0 h_{12} + H\,\partial_0\partial_0 h_{12} - H^2\,\partial_1 h_{02} - H\,\partial_1\partial_1 h_{12} - H^2\,\partial_2 h_{01} - H\,\partial_2\partial_2 h_{12} - H\,\partial_3\partial_3 h_{12}\right) + t^2\left(-\frac{1}{2}\,H^2\,\partial_0\partial_0 h_{12} + \frac{1}{2}\,H^2\,\partial_1\partial_1 h_{12} + \frac{1}{2}\,H^2\,\partial_2\partial_2 h_{12} + \frac{1}{2}\,H^2\,\partial_3\partial_3 h_{12}\right)$
13	$4\,H^2\,h_{13} + H\,\partial_0 h_{13} - \frac{1}{2}\,\partial_0\partial_0 h_{13} + H\,\partial_1 h_{03} + \frac{1}{2}\,\partial_1\partial_1 h_{13} + \frac{1}{2}\,\partial_2\partial_2 h_{13} + H\,\partial_3 h_{01} + \frac{1}{2}\,\partial_3\partial_3 h_{13} + t\left(-H^2\,\partial_0 h_{13} + H\,\partial_0\partial_0 h_{13} - H^2\,\partial_1 h_{03} - H\,\partial_1\partial_1 h_{13} - H\,\partial_2\partial_2 h_{13} - H^2\,\partial_3 h_{01} - H\,\partial_3\partial_3 h_{13}\right) + t^2\left(-\frac{1}{2}\,H^2\,\partial_0\partial_0 h_{13} + \frac{1}{2}\,H^2\,\partial_1\partial_1 h_{13} + \frac{1}{2}\,H^2\,\partial_2\partial_2 h_{13} + \frac{1}{2}\,H^2\,\partial_3\partial_3 h_{13}\right)$
23	$4\,H^2\,h_{23} + H\,\partial_0 h_{23} - \frac{1}{2}\,\partial_0\partial_0 h_{23} + \frac{1}{2}\,\partial_1\partial_1 h_{23} + H\,\partial_2 h_{03} + \frac{1}{2}\,\partial_2\partial_2 h_{23} + H\,\partial_3 h_{02} + \frac{1}{2}\,\partial_3\partial_3 h_{23} + t\left(-H^2\,\partial_0 h_{23} + H\,\partial_0\partial_0 h_{23} - H\,\partial_1\partial_1 h_{23} - H^2\,\partial_2 h_{03} - H\,\partial_2\partial_2 h_{23} - H^2\,\partial_3 h_{02} - H\,\partial_3\partial_3 h_{23}\right) + t^2\left(-\frac{1}{2}\,H^2\,\partial_0\partial_0 h_{23} + \frac{1}{2}\,H^2\,\partial_1\partial_1 h_{23} + \frac{1}{2}\,H^2\,\partial_2\partial_2 h_{23} + \frac{1}{2}\,H^2\,\partial_3\partial_3 h_{23}\right)$

Diagonal with J=Q=0, P=1/2 (other choices also diagonalize)

00	$2H^2\ h_{00} + \frac{H^2 h}{2(1-Ht)^2} + H\partial_0 h_{00} - H^2 t\,\partial_0 h_{00} - \frac{H\partial_0 h}{1-Ht} - \frac{1}{2}\partial_0\partial_0 h_{00} + Ht\,\partial_0\partial_0 h_{00} - \frac{1}{2}H^2 t^2\partial_0\partial_0 h_{00} - \frac{\partial_0\partial_0 h}{4} + \frac{1}{2}\partial_1\partial_1 h_{00} - Ht\,\partial_1\partial_1 h_{00} + \frac{1}{2}H^2 t^2\partial_1\partial_1 h_{00} + \frac{\partial_1\partial_1 h}{4} + \frac{1}{2}\partial_2\partial_2 h_{00} - Ht\,\partial_2\partial_2 h_{00} + \frac{1}{2}H^2 t^2\partial_2\partial_2 h_{00} + \frac{\partial_2\partial_2 h}{4} + \frac{1}{2}\partial_3\partial_3 h_{00} - Ht\,\partial_3\partial_3 h_{00} + \frac{1}{2}H^2 t^2\partial_3\partial_3 h_{00} + \frac{\partial_3\partial_3 h}{4}$
11	$4H^2\ h_{11} - \frac{3H^2 h}{2(1-Ht)^2} + H\partial_0 h_{11} - H^2 t\,\partial_0 h_{11} - \frac{1}{2}\partial_0\partial_0 h_{11} + Ht\,\partial_0\partial_0 h_{11} - \frac{1}{2}H^2 t^2\partial_0\partial_0 h_{11} + \frac{\partial_0\partial_0 h}{4} + \frac{1}{2}\partial_1\partial_1 h_{11} - Ht\,\partial_1\partial_1 h_{11} + \frac{1}{2}H^2 t^2\partial_1\partial_1 h_{11} - \frac{\partial_1\partial_1 h}{4} + \frac{1}{2}\partial_2\partial_2 h_{11} - Ht\,\partial_2\partial_2 h_{11} + \frac{1}{2}H^2 t^2\partial_2\partial_2 h_{11} - \frac{\partial_2\partial_2 h}{4} + \frac{1}{2}\partial_3\partial_3 h_{11} - Ht\,\partial_3\partial_3 h_{11} + \frac{1}{2}H^2 t^2\partial_3\partial_3 h_{11} - \frac{\partial_3\partial_3 h}{4}$
22	$4H^2\ h_{22} - \frac{3H^2 h}{2(1-Ht)^2} + H\partial_0 h_{22} - H^2 t\,\partial_0 h_{22} - \frac{1}{2}\partial_0\partial_0 h_{22} + Ht\,\partial_0\partial_0 h_{22} - \frac{1}{2}H^2 t^2\partial_0\partial_0 h_{22} + \frac{\partial_0\partial_0 h}{4} + \frac{1}{2}\partial_1\partial_1 h_{22} - Ht\,\partial_1\partial_1 h_{22} + \frac{1}{2}H^2 t^2\partial_1\partial_1 h_{22} - \frac{\partial_1\partial_1 h}{4} + \frac{1}{2}\partial_2\partial_2 h_{22} - Ht\,\partial_2\partial_2 h_{22} + \frac{1}{2}H^2 t^2\partial_2\partial_2 h_{22} - \frac{\partial_2\partial_2 h}{4} + \frac{1}{2}\partial_3\partial_3 h_{22} - Ht\,\partial_3\partial_3 h_{22} + \frac{1}{2}H^2 t^2\partial_3\partial_3 h_{22} - \frac{\partial_3\partial_3 h}{4}$
33	$4H^2\ h_{33} - \frac{3H^2 h}{2(1-Ht)^2} + H\partial_0 h_{33} - H^2 t\,\partial_0 h_{33} - \frac{1}{2}\partial_0\partial_0 h_{33} + Ht\,\partial_0\partial_0 h_{33} - \frac{1}{2}H^2 t^2\partial_0\partial_0 h_{33} + \frac{\partial_0\partial_0 h}{4} + \frac{1}{2}\partial_1\partial_1 h_{33} - Ht\,\partial_1\partial_1 h_{33} + \frac{1}{2}H^2 t^2\partial_1\partial_1 h_{33} - \frac{\partial_1\partial_1 h}{4} + \frac{1}{2}\partial_2\partial_2 h_{33} - Ht\,\partial_2\partial_2 h_{33} + \frac{1}{2}H^2 t^2\partial_2\partial_2 h_{33} - \frac{\partial_2\partial_2 h}{4} + \frac{1}{2}\partial_3\partial_3 h_{33} - Ht\,\partial_3\partial_3 h_{33} + \frac{1}{2}H^2 t^2\partial_3\partial_3 h_{33} - \frac{\partial_3\partial_3 h}{4}$
01	$3H^2\ h_{01} + H\partial_0 h_{01} - H^2 t\,\partial_0 h_{01} - \frac{1}{2}\partial_0\partial_0 h_{01} + Ht\,\partial_0\partial_0 h_{01} - \frac{1}{2}H^2 t^2\partial_0\partial_0 h_{01} - \frac{H\partial_1 h}{2(1-Ht)} + \frac{1}{2}\partial_1\partial_1 h_{01} - Ht\,\partial_1\partial_1 h_{01} + \frac{1}{2}H^2 t^2\partial_1\partial_1 h_{01} + \frac{1}{2}\partial_2\partial_2 h_{01} - Ht\,\partial_2\partial_2 h_{01} + \frac{1}{2}H^2 t^2\partial_2\partial_2 h_{01} + \frac{1}{2}\partial_3\partial_3 h_{01} - Ht\,\partial_3\partial_3 h_{01} + \frac{1}{2}H^2 t^2\partial_3\partial_3 h_{01}$
02	$3H^2\ h_{02} + H\partial_0 h_{02} - H^2 t\,\partial_0 h_{02} - \frac{1}{2}\partial_0\partial_0 h_{02} + Ht\,\partial_0\partial_0 h_{02} - \frac{1}{2}H^2 t^2\partial_0\partial_0 h_{02} + \frac{1}{2}\partial_1\partial_1 h_{02} - Ht\,\partial_1\partial_1 h_{02} + \frac{1}{2}H^2 t^2\partial_1\partial_1 h_{02} - \frac{H\partial_2 h}{2(1-Ht)} + \frac{1}{2}\partial_2\partial_2 h_{02} - Ht\,\partial_2\partial_2 h_{02} + \frac{1}{2}H^2 t^2\partial_2\partial_2 h_{02} + \frac{1}{2}\partial_3\partial_3 h_{02} - Ht\,\partial_3\partial_3 h_{02} + \frac{1}{2}H^2 t^2\partial_3\partial_3 h_{02}$
03	$3H^2\ h_{03} + H\partial_0 h_{03} - H^2 t\,\partial_0 h_{03} - \frac{1}{2}\partial_0\partial_0 h_{03} + Ht\,\partial_0\partial_0 h_{03} - \frac{1}{2}H^2 t^2\partial_0\partial_0 h_{03} + \frac{1}{2}\partial_1\partial_1 h_{03} - Ht\,\partial_1\partial_1 h_{03} + \frac{1}{2}H^2 t^2\partial_1\partial_1 h_{03} + \frac{1}{2}\partial_2\partial_2 h_{03} - Ht\,\partial_2\partial_2 h_{03} + \frac{1}{2}H^2 t^2\partial_2\partial_2 h_{03} - \frac{H\partial_3 h}{2(1-Ht)} + \frac{1}{2}\partial_3\partial_3 h_{03} - Ht\,\partial_3\partial_3 h_{03} + \frac{1}{2}H^2 t^2\partial_3\partial_3 h_{03}$
12	$4H^2\ h_{12} + H\partial_0 h_{12} - \frac{1}{2}\partial_0\partial_0 h_{12} + \frac{1}{2}\partial_1\partial_1 h_{12} + \frac{1}{2}\partial_2\partial_2 h_{12} + \frac{1}{2}\partial_3\partial_3 h_{12} + t\left(-H^2\partial_0 h_{12} + H\partial_0\partial_0 h_{12} - H\partial_1\partial_1 h_{12} - H\partial_2\partial_2 h_{12} - H\partial_3\partial_3 h_{12}\right) + t^2\left(-\frac{1}{2}H^2\partial_0\partial_0 h_{12} + \frac{1}{2}H^2\partial_1\partial_1 h_{12} + \frac{1}{2}H^2\partial_2\partial_2 h_{12} + \frac{1}{2}H^2\partial_3\partial_3 h_{12}\right)$
13	$4H^2\ h_{13} + H\partial_0 h_{13} - \frac{1}{2}\partial_0\partial_0 h_{13} + \frac{1}{2}\partial_1\partial_1 h_{13} + \frac{1}{2}\partial_2\partial_2 h_{13} + \frac{1}{2}\partial_3\partial_3 h_{13} + t\left(-H^2\partial_0 h_{13} + H\partial_0\partial_0 h_{13} - H\partial_1\partial_1 h_{13} - H\partial_2\partial_2 h_{13} - H\partial_3\partial_3 h_{13}\right) + t^2\left(-\frac{1}{2}H^2\partial_0\partial_0 h_{13} + \frac{1}{2}H^2\partial_1\partial_1 h_{13} + \frac{1}{2}H^2\partial_2\partial_2 h_{13} + \frac{1}{2}H^2\partial_3\partial_3 h_{13}\right)$
23	$4H^2\ h_{23} + H\partial_0 h_{23} - \frac{1}{2}\partial_0\partial_0 h_{23} + \frac{1}{2}\partial_1\partial_1 h_{23} + \frac{1}{2}\partial_2\partial_2 h_{23} + \frac{1}{2}\partial_3\partial_3 h_{23} + t\left(-H^2\partial_0 h_{23} + H\partial_0\partial_0 h_{23} - H\partial_1\partial_1 h_{23} - H\partial_2\partial_2 h_{23} - H\partial_3\partial_3 h_{23}\right) + t^2\left(-\frac{1}{2}H^2\partial_0\partial_0 h_{23} + \frac{1}{2}H^2\partial_1\partial_1 h_{23} + \frac{1}{2}H^2\partial_2\partial_2 h_{23} + \frac{1}{2}H^2\partial_3\partial_3 h_{23}\right)$

Ω[t]

J = 0, P = 1, Q = -2

00	$-\frac{\partial_0\partial_0 h_{00}}{2\Omega[t]^2}-\frac{\partial_0\partial_0 h}{2}+\frac{\partial_1\partial_1 h_{00}}{2\Omega[t]^2}+\frac{\partial_2\partial_2 h_{00}}{2\Omega[t]^2}+\frac{\partial_3\partial_3 h_{00}}{2\Omega[t]^2}+\frac{\partial_0 h_{00}\,\Omega'[t]}{\Omega[t]^3}+\frac{2h_{00}\,\Omega'[t]^2}{\Omega[t]^4}$
11	$-\frac{\partial_0\partial_0 h_{11}}{2\Omega[t]^2}+\frac{\partial_1\partial_1 h_{11}}{2\Omega[t]^2}-\frac{\partial_1\partial_1 h}{2}+\frac{\partial_2\partial_2 h_{11}}{2\Omega[t]^2}+\frac{\partial_3\partial_3 h_{11}}{2\Omega[t]^2}+\frac{\partial_0 h_{11}\,\Omega'[t]}{\Omega[t]^3}-\frac{2h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{2h_{11}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{3h_{11}\,\Omega''[t]}{\Omega[t]^3}$
22	$-\frac{\partial_0\partial_0 h_{22}}{2\Omega[t]^2}+\frac{\partial_1\partial_1 h_{22}}{2\Omega[t]^2}+\frac{\partial_2\partial_2 h_{22}}{2\Omega[t]^2}-\frac{\partial_2\partial_2 h}{2}+\frac{\partial_3\partial_3 h_{22}}{2\Omega[t]^2}+\frac{\partial_0 h_{22}\,\Omega'[t]}{\Omega[t]^3}-\frac{2h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{2h_{22}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{3h_{22}\,\Omega''[t]}{\Omega[t]^3}$
33	$-\frac{\partial_0\partial_0 h_{33}}{2\Omega[t]^2}+\frac{\partial_1\partial_1 h_{33}}{2\Omega[t]^2}+\frac{\partial_2\partial_2 h_{33}}{2\Omega[t]^2}+\frac{\partial_3\partial_3 h_{33}}{2\Omega[t]^2}-\frac{\partial_3\partial_3 h}{2}+\frac{\partial_0 h_{33}\,\Omega'[t]}{\Omega[t]^3}-\frac{2h_{00}\,\Omega'[t]^2}{\Omega[t]^4}-\frac{2h_{33}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{h_{00}\,\Omega''[t]}{\Omega[t]^3}+\frac{3h_{33}\,\Omega''[t]}{\Omega[t]^3}$
01	$-\frac{\partial_0\partial_0 h_{01}}{2\Omega[t]^2}-\frac{\partial_0\partial_1 h}{2}+\frac{\partial_1\partial_1 h_{01}}{2\Omega[t]^2}+\frac{\partial_2\partial_2 h_{01}}{2\Omega[t]^2}+\frac{\partial_3\partial_3 h_{01}}{2\Omega[t]^2}+\frac{\partial_0 h_{01}\,\Omega'[t]}{\Omega[t]^3}-\frac{h_{01}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{2h_{01}\,\Omega''[t]}{\Omega[t]^3}$
02	$-\frac{\partial_0\partial_0 h_{02}}{2\Omega[t]^2}-\frac{\partial_0\partial_2 h}{2}+\frac{\partial_1\partial_1 h_{02}}{2\Omega[t]^2}+\frac{\partial_2\partial_2 h_{02}}{2\Omega[t]^2}+\frac{\partial_3\partial_3 h_{02}}{2\Omega[t]^2}+\frac{\partial_0 h_{02}\,\Omega'[t]}{\Omega[t]^3}-\frac{h_{02}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{2h_{02}\,\Omega''[t]}{\Omega[t]^3}$
03	$-\frac{\partial_0\partial_0 h_{03}}{2\Omega[t]^2}-\frac{\partial_0\partial_3 h}{2}+\frac{\partial_1\partial_1 h_{03}}{2\Omega[t]^2}+\frac{\partial_2\partial_2 h_{03}}{2\Omega[t]^2}+\frac{\partial_3\partial_3 h_{03}}{2\Omega[t]^2}+\frac{\partial_0 h_{03}\,\Omega'[t]}{\Omega[t]^3}-\frac{h_{03}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{2h_{03}\,\Omega''[t]}{\Omega[t]^3}$
12	$-\frac{\partial_0\partial_0 h_{12}}{2\Omega[t]^2}+\frac{\partial_1\partial_1 h_{12}}{2\Omega[t]^2}-\frac{\partial_1\partial_2 h}{2}+\frac{\partial_2\partial_2 h_{12}}{2\Omega[t]^2}+\frac{\partial_3\partial_3 h_{12}}{2\Omega[t]^2}+\frac{\partial_0 h_{12}\,\Omega'[t]}{\Omega[t]^3}-\frac{2h_{12}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3h_{12}\,\Omega''[t]}{\Omega[t]^3}$
13	$-\frac{\partial_0\partial_0 h_{13}}{2\Omega[t]^2}+\frac{\partial_1\partial_1 h_{13}}{2\Omega[t]^2}-\frac{\partial_1\partial_3 h}{2}+\frac{\partial_2\partial_2 h_{13}}{2\Omega[t]^2}+\frac{\partial_3\partial_3 h_{13}}{2\Omega[t]^2}+\frac{\partial_0 h_{13}\,\Omega'[t]}{\Omega[t]^3}-\frac{2h_{13}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3h_{13}\,\Omega''[t]}{\Omega[t]^3}$
23	$-\frac{\partial_0\partial_0 h_{23}}{2\Omega[t]^2}+\frac{\partial_1\partial_1 h_{23}}{2\Omega[t]^2}+\frac{\partial_2\partial_2 h_{23}}{2\Omega[t]^2}-\frac{\partial_2\partial_3 h}{2}+\frac{\partial_3\partial_3 h_{23}}{2\Omega[t]^2}+\frac{\partial_0 h_{23}\,\Omega'[t]}{\Omega[t]^3}-\frac{2h_{23}\,\Omega'[t]^2}{\Omega[t]^4}+\frac{3h_{23}\,\Omega''[t]}{\Omega[t]^3}$

Ω[x]

J = 0, P = 1, Q = -2

00	$-\frac{\partial_0\partial_0 h_{00}}{2\Omega[x]^2}-\frac{\partial_0\partial_0 h}{2}+\frac{\partial_1\partial_1 h_{00}}{2\Omega[x]^2}+\frac{\partial_2\partial_2 h_{00}}{2\Omega[x]^2}+\frac{\partial_3\partial_3 h_{00}}{2\Omega[x]^2}-\frac{\partial_1 h_{00}\,\Omega'[x]}{\Omega[x]^3}+\frac{2h_{00}\,\Omega'[x]^2}{\Omega[x]^4}+\frac{2h_{11}\,\Omega'[x]^2}{\Omega[x]^4}-\frac{3h_{00}\,\Omega''[x]}{\Omega[x]^3}-\frac{h_{11}\,\Omega''[x]}{\Omega[x]^3}$
11	$-\frac{\partial_0\partial_0 h_{11}}{2\Omega[x]^2}+\frac{\partial_1\partial_1 h_{11}}{2\Omega[x]^2}-\frac{\partial_1\partial_1 h}{2}+\frac{\partial_2\partial_2 h_{11}}{2\Omega[x]^2}+\frac{\partial_3\partial_3 h_{11}}{2\Omega[x]^2}-\frac{\partial_1 h_{11}\,\Omega'[x]}{\Omega[x]^3}-\frac{2h_{11}\,\Omega'[x]^2}{\Omega[x]^4}$
22	$-\frac{\partial_0\partial_0 h_{22}}{2\Omega[x]^2}+\frac{\partial_1\partial_1 h_{22}}{2\Omega[x]^2}+\frac{\partial_2\partial_2 h_{22}}{2\Omega[x]^2}-\frac{\partial_2\partial_2 h}{2}+\frac{\partial_3\partial_3 h_{22}}{2\Omega[x]^2}-\frac{\partial_1 h_{22}\,\Omega'[x]}{\Omega[x]^3}-\frac{2h_{11}\,\Omega'[x]^2}{\Omega[x]^4}+\frac{2h_{22}\,\Omega'[x]^2}{\Omega[x]^4}+\frac{h_{11}\,\Omega''[x]}{\Omega[x]^3}-\frac{3h_{22}\,\Omega''[x]}{\Omega[x]^3}$
33	$-\frac{\partial_0\partial_0 h_{33}}{2\Omega[x]^2}+\frac{\partial_1\partial_1 h_{33}}{2\Omega[x]^2}+\frac{\partial_2\partial_2 h_{33}}{2\Omega[x]^2}+\frac{\partial_3\partial_3 h_{33}}{2\Omega[x]^2}-\frac{\partial_3\partial_3 h}{2}-\frac{\partial_1 h_{33}\,\Omega'[x]}{\Omega[x]^3}-\frac{2h_{11}\,\Omega'[x]^2}{\Omega[x]^4}+\frac{2h_{33}\,\Omega'[x]^2}{\Omega[x]^4}+\frac{h_{11}\,\Omega''[x]}{\Omega[x]^3}-\frac{3h_{33}\,\Omega''[x]}{\Omega[x]^3}$
01	$-\frac{\partial_0\partial_0 h_{01}}{2\Omega[x]^2}-\frac{\partial_0\partial_1 h}{2}+\frac{\partial_1\partial_1 h_{01}}{2\Omega[x]^2}+\frac{\partial_2\partial_2 h_{01}}{2\Omega[x]^2}+\frac{\partial_3\partial_3 h_{01}}{2\Omega[x]^2}-\frac{\partial_1 h_{01}\,\Omega'[x]}{\Omega[x]^3}+\frac{h_{01}\,\Omega'[x]^2}{\Omega[x]^4}-\frac{2h_{01}\,\Omega''[x]}{\Omega[x]^3}$
02	$-\frac{\partial_0\partial_0 h_{02}}{2\Omega[x]^2}-\frac{\partial_0\partial_2 h}{2}+\frac{\partial_1\partial_1 h_{02}}{2\Omega[x]^2}+\frac{\partial_2\partial_2 h_{02}}{2\Omega[x]^2}+\frac{\partial_3\partial_3 h_{02}}{2\Omega[x]^2}-\frac{\partial_1 h_{02}\,\Omega'[x]}{\Omega[x]^3}+\frac{2h_{02}\,\Omega'[x]^2}{\Omega[x]^4}-\frac{3h_{02}\,\Omega''[x]}{\Omega[x]^3}$
03	$-\frac{\partial_0\partial_0 h_{03}}{2\Omega[x]^2}-\frac{\partial_0\partial_3 h}{2}+\frac{\partial_1\partial_1 h_{03}}{2\Omega[x]^2}+\frac{\partial_2\partial_2 h_{03}}{2\Omega[x]^2}+\frac{\partial_3\partial_3 h_{03}}{2\Omega[x]^2}-\frac{\partial_1 h_{03}\,\Omega'[x]}{\Omega[x]^3}+\frac{2h_{03}\,\Omega'[x]^2}{\Omega[x]^4}-\frac{3h_{03}\,\Omega''[x]}{\Omega[x]^3}$
12	$-\frac{\partial_0\partial_0 h_{12}}{2\Omega[x]^2}+\frac{\partial_1\partial_1 h_{12}}{2\Omega[x]^2}-\frac{\partial_1\partial_2 h}{2}+\frac{\partial_2\partial_2 h_{12}}{2\Omega[x]^2}+\frac{\partial_3\partial_3 h_{12}}{2\Omega[x]^2}-\frac{\partial_1 h_{12}\,\Omega'[x]}{\Omega[x]^3}+\frac{h_{12}\,\Omega'[x]^2}{\Omega[x]^4}-\frac{2h_{12}\,\Omega''[x]}{\Omega[x]^3}$
13	$-\frac{\partial_0\partial_0 h_{13}}{2\Omega[x]^2}+\frac{\partial_1\partial_1 h_{13}}{2\Omega[x]^2}-\frac{\partial_1\partial_3 h}{2}+\frac{\partial_2\partial_2 h_{13}}{2\Omega[x]^2}+\frac{\partial_3\partial_3 h_{13}}{2\Omega[x]^2}-\frac{\partial_1 h_{13}\,\Omega'[x]}{\Omega[x]^3}+\frac{h_{13}\,\Omega'[x]^2}{\Omega[x]^4}-\frac{2h_{13}\,\Omega''[x]}{\Omega[x]^3}$
23	$-\frac{\partial_0\partial_0 h_{23}}{2\Omega[x]^2}+\frac{\partial_1\partial_1 h_{23}}{2\Omega[x]^2}+\frac{\partial_2\partial_2 h_{23}}{2\Omega[x]^2}-\frac{\partial_2\partial_3 h}{2}+\frac{\partial_3\partial_3 h_{23}}{2\Omega[x]^2}-\frac{\partial_1 h_{23}\,\Omega'[x]}{\Omega[x]^3}+\frac{2h_{23}\,\Omega'[x]^2}{\Omega[x]^4}-\frac{3h_{23}\,\Omega''[x]}{\Omega[x]^3}$

Ω[x],Ω[y],Ω[z] all solvable

$\Omega\left[t,\ (x\text{^}2+y\text{^}2+z\text{^}2)^{1/2}\right]$

No apparent diagonalization

deSitter Polar

J = 0, P = 1, Q = -2

tt	$2H^2\ h_{00} + H\,\partial_0 h_{00} - \frac{1}{2}\partial_0\partial_0 h_{00} - \frac{\partial_0\partial_0 h}{2} + \frac{\partial_1 h_{00}}{r} + \frac{1}{2}\partial_1\partial_1 h_{00} + \frac{\cot[\theta]\,\partial_2 h_{00}}{2r^2} + \frac{\partial_2\partial_2 h_{00}}{2r^2} + \frac{\csc[\theta]^2\,\partial_3\partial_3 h_{00}}{2r^2} + t\left(-H^2\,\partial_0 h_{00} + H\,\partial_0\partial_0 h_{00} - \frac{2H\,\partial_1 h_{00}}{r} - H\,\partial_1\partial_1 h_{00} - \frac{H\cot[\theta]\,\partial_2 h_{00}}{r^2} - \frac{H\,\partial_2\partial_2 h_{00}}{r^2} - \frac{H\csc[\theta]^2\,\partial_3\partial_3 h_{00}}{r^2}\right) + t^2\left(-\frac{1}{2}H^2\,\partial_0\partial_0 h_{00} + \frac{H^2\,\partial_1 h_{00}}{r} + \frac{1}{2}H^2\,\partial_1\partial_1 h_{00} + \frac{H^2\cot[\theta]\,\partial_2 h_{00}}{2r^2} + \frac{H^2\,\partial_2\partial_2 h_{00}}{2r^2} + \frac{H^2\csc[\theta]^2\,\partial_3\partial_3 h_{00}}{2r^2}\right)$
rr	$4H^2\ h_{11} + \frac{h_{22}}{r^4} + \frac{\csc[\theta]^2 h_{33}}{r^4} - \frac{2\cot[\theta]\,h_{12}}{r^3} - \frac{2h_{11}}{r^2} + H\,\partial_0 h_{11} - \frac{1}{2}\partial_0\partial_0 h_{11} + \frac{\partial_1 h_{11}}{r} + \frac{1}{2}\partial_1\partial_1 h_{11} - \frac{\partial_1\partial_1 h}{2} + \frac{\cot[\theta]\,\partial_2 h_{11}}{2r^2} - \frac{2\,\partial_2 h_{12}}{r^3} + \frac{\partial_2\partial_2 h_{11}}{2r^2} - \frac{2\csc[\theta]^2\,\partial_3 h_{13}}{r^3} + \frac{\csc[\theta]^2\,\partial_3\partial_3 h_{11}}{2r^2} + t\left(-\frac{2H\,h_{22}}{r^4} - \frac{2H\csc[\theta]^2 h_{33}}{r^4} + \frac{4H\cot[\theta]\,h_{12}}{r^3} + \frac{4H\,h_{11}}{r^2} - H^2\,\partial_0 h_{11} + H\,\partial_0\partial_0 h_{11} - \frac{2H\,\partial_1 h_{11}}{r} - H\,\partial_1\partial_1 h_{11} - \frac{H\cot[\theta]\,\partial_2 h_{11}}{r^2} + \frac{4H\,\partial_2 h_{12}}{r^3} - \frac{H\,\partial_2\partial_2 h_{11}}{r^2} + \frac{4H\csc[\theta]^2\,\partial_3 h_{13}}{r^3} - \frac{H\csc[\theta]^2\,\partial_3\partial_3 h_{11}}{r^2}\right) + t^2\left(\frac{H^2 h_{22}}{r^4} + \frac{H^2\csc[\theta]^2 h_{33}}{r^4} - \frac{2H^2\cot[\theta]\,h_{12}}{r^3} - \frac{2H^2 h_{11}}{r^2} - \frac{1}{2}H^2\,\partial_0\partial_0 h_{11} + \frac{H^2\,\partial_1 h_{11}}{r} + \frac{1}{2}H^2\,\partial_1\partial_1 h_{11} + \frac{H^2\cot[\theta]\,\partial_2 h_{11}}{2r^2} - \frac{2H^2\,\partial_2 h_{12}}{r^3} + \frac{H^2\,\partial_2\partial_2 h_{11}}{2r^2} - \frac{2H^2\csc[\theta]^2\,\partial_3 h_{13}}{r^3} + \frac{H^2\csc[\theta]^2\,\partial_3\partial_3 h_{11}}{2r^2}\right)$
$\theta\theta$	$h_{11} + 4H^2\ h_{22} - \frac{\cot[\theta]^2 h_{22}}{r^2} + \frac{\cot[\theta]^2\csc[\theta]^2 h_{33}}{r^2} + H\,\partial_0 h_{22} - \frac{1}{2}\partial_0\partial_0 h_{22} - \frac{\partial_1 h_{22}}{r} - \frac{r\,\partial_1 h}{2} + \frac{1}{2}\partial_1\partial_1 h_{22} + \frac{2\,\partial_2 h_{12}}{r} + \frac{\cot[\theta]\,\partial_2 h_{22}}{2r^2} + \frac{\partial_2\partial_2 h_{22}}{2r^2} - \frac{\partial_2\partial_2 h}{2} - \frac{2\cot[\theta]\csc[\theta]^2\,\partial_3 h_{23}}{r^2} + \frac{\csc[\theta]^2\,\partial_3\partial_3 h_{22}}{2r^2} + t\left(-2H\,h_{11} + \frac{2H\cot[\theta]^2 h_{22}}{r^2} - \frac{2H\cot[\theta]^2\csc[\theta]^2 h_{33}}{r^2} - H^2\,\partial_0 h_{22} + H\,\partial_0\partial_0 h_{22} + \frac{2H\,\partial_1 h_{22}}{r} - H\,\partial_1\partial_1 h_{22} - \frac{4H\,\partial_2 h_{12}}{r} - \frac{H\cot[\theta]\,\partial_2 h_{22}}{r^2} - \frac{H\,\partial_2\partial_2 h_{22}}{r^2} + \frac{4H\cot[\theta]\csc[\theta]^2\,\partial_3 h_{23}}{r^2} - \frac{H\csc[\theta]^2\,\partial_3\partial_3 h_{22}}{r^2}\right) + t^2\left(H^2\ h_{11} - \frac{H^2\cot[\theta]^2 h_{22}}{r^2} + \frac{H^2\cot[\theta]^2\csc[\theta]^2 h_{33}}{r^2} - \frac{1}{2}H^2\,\partial_0\partial_0 h_{22} - \frac{H^2\,\partial_1 h_{22}}{r} + \frac{1}{2}H^2\,\partial_1\partial_1 h_{22} + \frac{2H^2\,\partial_2 h_{12}}{r} + \frac{H^2\cot[\theta]\,\partial_2 h_{22}}{2r^2} + \frac{H^2\,\partial_2\partial_2 h_{22}}{2r^2} - \frac{2H^2\cot[\theta]\csc[\theta]^2\,\partial_3 h_{23}}{r^2} + \frac{H^2\csc[\theta]^2\,\partial_3\partial_3 h_{22}}{2r^2}\right)$
$\phi\phi$	$4H^2\ h_{33} + \frac{\cos[\theta]^2 h_{22}}{r^2} + \frac{\csc[\theta]^2 h_{33}}{r^2} + \frac{2\cos[\theta]\,h_{12}\sin[\theta]}{r} + h_{11}\sin[\theta]^2 + H\,\partial_0 h_{33} - \frac{1}{2}\partial_0\partial_0 h_{33} - \frac{\partial_1 h_{33}}{r} - \frac{1}{2}r\sin[\theta]^2\,\partial_1 h + \frac{1}{2}\partial_1\partial_1 h_{33} - \frac{3\cot[\theta]\,\partial_2 h_{33}}{2r^2} - \frac{1}{2}\cos[\theta]\sin[\theta]\,\partial_2 h + \frac{\partial_2\partial_2 h_{33}}{2r^2} + \frac{2\,\partial_3 h_{13}}{r} + \frac{2\cot[\theta]\,\partial_3 h_{23}}{r^2} + \frac{\csc[\theta]^2\,\partial_3\partial_3 h_{33}}{2r^2} + t\left(-\frac{2H\cos[\theta]^2 h_{22}}{r^2} - \frac{2H\csc[\theta]^2 h_{33}}{r^2} - \frac{4H\cos[\theta]\,h_{12}\sin[\theta]}{r} - 2H\,h_{11}\sin[\theta]^2 - H^2\,\partial_0 h_{33} + H\,\partial_0\partial_0 h_{33} + \frac{2H\,\partial_1 h_{33}}{r} - H\,\partial_1\partial_1 h_{33} + \frac{3H\cot[\theta]\,\partial_2 h_{33}}{r^2} - \frac{H\,\partial_2\partial_2 h_{33}}{r^2} - \frac{4H\,\partial_3 h_{13}}{r} - \frac{4H\cot[\theta]\,\partial_3 h_{23}}{r^2} - \frac{H\csc[\theta]^2\,\partial_3\partial_3 h_{33}}{r^2}\right) + t^2\left(\frac{H^2\cos[\theta]^2 h_{22}}{r^2} + \frac{H^2\csc[\theta]^2 h_{33}}{r^2} + \frac{2H^2\cos[\theta]\,h_{12}\sin[\theta]}{r} + H^2\,h_{11}\sin[\theta]^2 - \frac{1}{2}H^2\,\partial_0\partial_0 h_{33} - \frac{H^2\,\partial_1 h_{33}}{r} + \frac{1}{2}H^2\,\partial_1\partial_1 h_{33} - \frac{3H^2\cot[\theta]\,\partial_2 h_{33}}{2r^2} + \frac{H^2\,\partial_2\partial_2 h_{33}}{2r^2} + \frac{2H^2\,\partial_3 h_{13}}{r} + \frac{2H^2\cot[\theta]\,\partial_3 h_{23}}{r^2} + \frac{H^2\csc[\theta]^2\,\partial_3\partial_3 h_{33}}{2r^2}\right) - \frac{\partial_3\partial_3 h}{2}$

tr

$$3H^2 h_{01} - \frac{\cot[\theta] h_{02}}{r^3} - \frac{h_{01}}{r^2} + H\partial_0 h_{01} - \frac{1}{2}\partial_0\partial_0 h_{01} - \frac{\partial_0\partial_1 h}{2} + \frac{\partial_1 h_{01}}{r} + \frac{1}{2}\partial_1\partial_1 h_{01} + \frac{\cot[\theta]\partial_2 h_{01}}{2r^2} - \frac{\partial_2 h_{02}}{r^3} + \frac{\partial_2\partial_2 h_{01}}{2r^2} - \frac{\csc[\theta]^2\partial_3 h_{03}}{r^3} + \frac{\csc[\theta]^2\partial_3\partial_3 h_{01}}{2r^2} + t\left(\frac{2H\cot[\theta] h_{02}}{r^3} + \frac{2H h_{01}}{r^2} - H^2\partial_0 h_{01} + H\partial_0\partial_0 h_{01} - \frac{2H\partial_1 h_{01}}{r} - H\partial_1\partial_1 h_{01} - \frac{H\cot[\theta]\partial_2 h_{01}}{r^2} + \frac{2H\partial_2 h_{02}}{r^3} - \frac{H\partial_2\partial_2 h_{01}}{r^2} + \frac{2H\csc[\theta]^2\partial_3 h_{03}}{r^3} - \frac{H\csc[\theta]^2\partial_3\partial_3 h_{01}}{r^2}\right) + t^2\left(-\frac{H^2\cot[\theta] h_{02}}{r^3} - \frac{H^2 h_{01}}{r^2} - \frac{1}{2}H^2\partial_0\partial_0 h_{01} + \frac{H^2\partial_1 h_{01}}{r} + \frac{1}{2}H^2\partial_1\partial_1 h_{01} + \frac{H^2\cot[\theta]\partial_2 h_{01}}{2r^2} - \frac{H^2\partial_2 h_{02}}{r^3} + \frac{H^2\partial_2\partial_2 h_{01}}{2r^2} - \frac{H^2\csc[\theta]^2\partial_3 h_{03}}{r^3} + \frac{H^2\csc[\theta]^2\partial_3\partial_3 h_{01}}{2r^2}\right)$$

tθ

$$3H^2 h_{02} - \frac{h_{02}}{2r^2} - \frac{\cot[\theta]^2 h_{02}}{2r^2} + H\partial_0 h_{02} - \frac{1}{2}\partial_0\partial_0 h_{02} - \frac{\partial_0\partial_2 h}{2} + \frac{1}{2}\partial_1\partial_1 h_{02} + \frac{\partial_2 h_{01}}{r} + \frac{\cot[\theta]\partial_2 h_{02}}{2r^2} + \frac{\partial_2\partial_2 h_{02}}{2r^2} - \frac{\cot[\theta]\csc[\theta]^2\partial_3 h_{03}}{r^2} + \frac{\csc[\theta]^2\partial_3\partial_3 h_{02}}{2r^2} + t\left(\frac{H h_{02}}{r^2} + \frac{H\cot[\theta]^2 h_{02}}{r^2} - H^2\partial_0 h_{02} + H\partial_0\partial_0 h_{02} - H\partial_1\partial_1 h_{02} - \frac{2H\partial_2 h_{01}}{r} - \frac{H\cot[\theta]\partial_2 h_{02}}{r^2} - \frac{H\partial_2\partial_2 h_{02}}{r^2} + \frac{2H\cot[\theta]\csc[\theta]^2\partial_3 h_{03}}{r^2} - \frac{H\csc[\theta]^2\partial_3\partial_3 h_{02}}{r^2}\right) + t^2\left(-\frac{H^2 h_{02}}{2r^2} - \frac{H^2\cot[\theta]^2 h_{02}}{2r^2} - \frac{1}{2}H^2\partial_0\partial_0 h_{02} + \frac{1}{2}H^2\partial_1\partial_1 h_{02} + \frac{H^2\partial_2 h_{01}}{r} + \frac{H^2\cot[\theta]\partial_2 h_{02}}{2r^2} + \frac{H^2\partial_2\partial_2 h_{02}}{2r^2} - \frac{H^2\cot[\theta]\csc[\theta]^2\partial_3 h_{03}}{r^2} + \frac{H^2\csc[\theta]^2\partial_3\partial_3 h_{02}}{2r^2}\right)$$

tϕ

$$3H^2 h_{03} - \frac{h_{03}}{2r^2} - \frac{\cot[\theta]^2 h_{03}}{2r^2} + \frac{\csc[\theta]^2 h_{03}}{2r^2} + H\partial_0 h_{03} - \frac{1}{2}\partial_0\partial_0 h_{03} - \frac{\partial_0\partial_3 h}{2} + \frac{1}{2}\partial_1\partial_1 h_{03} - \frac{\cot[\theta]\partial_2 h_{03}}{2r^2} + \frac{\partial_2\partial_2 h_{03}}{2r^2} + \frac{\partial_3 h_{01}}{r} + \frac{\cot[\theta]\partial_3 h_{02}}{r^2} + \frac{\csc[\theta]^2\partial_3\partial_3 h_{03}}{2r^2} + t\left(\frac{H h_{03}}{r^2} + \frac{H\cot[\theta]^2 h_{03}}{r^2} - \frac{H\csc[\theta]^2 h_{03}}{r^2} - H^2\partial_0 h_{03} + H\partial_0\partial_0 h_{03} - H\partial_1\partial_1 h_{03} + \frac{H\cot[\theta]\partial_2 h_{03}}{r^2} - \frac{H\partial_2\partial_2 h_{03}}{r^2} - \frac{2H\partial_3 h_{01}}{r} - \frac{2H\cot[\theta]\partial_3 h_{02}}{r^2} - \frac{H\csc[\theta]^2\partial_3\partial_3 h_{03}}{r^2}\right) + t^2\left(-\frac{H^2 h_{03}}{2r^2} - \frac{H^2\cot[\theta]^2 h_{03}}{2r^2} + \frac{H^2\csc[\theta]^2 h_{03}}{2r^2} - \frac{1}{2}H^2\partial_0\partial_0 h_{03} + \frac{1}{2}H^2\partial_1\partial_1 h_{03} - \frac{H^2\cot[\theta]\partial_2 h_{03}}{2r^2} + \frac{H^2\partial_2\partial_2 h_{03}}{2r^2} + \frac{H^2\partial_3 h_{01}}{r} + \frac{H^2\cot[\theta]\partial_3 h_{02}}{r^2} + \frac{H^2\csc[\theta]^2\partial_3\partial_3 h_{03}}{2r^2}\right)$$

rθ

$$4H^2 h_{12} - \frac{\cot[\theta] h_{22}}{r^3} + \frac{\cot[\theta]\csc[\theta]^2 h_{33}}{r^3} - \frac{5h_{12}}{2r^2} - \frac{\cot[\theta]^2 h_{12}}{2r^2} + H\partial_0 h_{12} - \frac{1}{2}\partial_0\partial_0 h_{12} + \frac{1}{2}\partial_1\partial_1 h_{12} - \frac{\partial_1\partial_2 h}{2} + \frac{\partial_2 h_{11}}{r} + \frac{\cot[\theta]\partial_2 h_{12}}{2r^2} - \frac{\partial_2 h_{22}}{r^3} + \frac{\partial_2 h}{2r} + \frac{\partial_2\partial_2 h_{12}}{2r^2} - \frac{\cot[\theta]\csc[\theta]^2\partial_3 h_{13}}{r^2} - \frac{\csc[\theta]^2\partial_3 h_{23}}{r^3} + \frac{\csc[\theta]^2\partial_3\partial_3 h_{12}}{2r^2} + t\left(\frac{2H\cot[\theta] h_{22}}{r^3} - \frac{2H\cot[\theta]\csc[\theta]^2 h_{33}}{r^3} + \frac{5H h_{12}}{r^2} + \frac{H\cot[\theta]^2 h_{12}}{r^2} - H^2\partial_0 h_{12} + H\partial_0\partial_0 h_{12} - H\partial_1\partial_1 h_{12} - \frac{2H\partial_2 h_{11}}{r} - \frac{H\cot[\theta]\partial_2 h_{12}}{r^2} + \frac{2H\partial_2 h_{22}}{r^3} - \frac{H\partial_2\partial_2 h_{12}}{r^2} + \frac{2H\cot[\theta]\csc[\theta]^2\partial_3 h_{13}}{r^2} + \frac{2H\csc[\theta]^2\partial_3 h_{23}}{r^3} - \frac{H\csc[\theta]^2\partial_3\partial_3 h_{12}}{r^2}\right) + t^2\left(-\frac{H^2\cot[\theta] h_{22}}{r^3} + \frac{H^2\cot[\theta]\csc[\theta]^2 h_{33}}{r^3} - \frac{5H^2 h_{12}}{2r^2} - \frac{H^2\cot[\theta]^2 h_{12}}{2r^2} - \frac{1}{2}H^2\partial_0\partial_0 h_{12} + \frac{1}{2}H^2\partial_1\partial_1 h_{12} + \frac{H^2\partial_2 h_{11}}{r} + \frac{H^2\cot[\theta]\partial_2 h_{12}}{2r^2} - \frac{H^2\partial_2 h_{22}}{r^3} + \frac{H^2\partial_2\partial_2 h_{12}}{2r^2} - \frac{H^2\cot[\theta]\csc[\theta]^2\partial_3 h_{13}}{r^2} - \frac{H^2\csc[\theta]^2\partial_3 h_{23}}{r^3} + \frac{H^2\csc[\theta]^2\partial_3\partial_3 h_{12}}{2r^2}\right)$$

$r\phi$	$4H^2 h_{13} - \frac{\text{Cot}[\theta] h_{23}}{r^3} - \frac{5 h_{13}}{2r^2} - \frac{\text{Cot}[\theta]^2 h_{13}}{2r^2} + \frac{\text{Csc}[\theta]^2 h_{13}}{2r^2} + H\partial_0 h_{13} - \frac{1}{2}\partial_0\partial_0 h_{13} + \frac{1}{2}\partial_1\partial_1 h_{13} -$ $\frac{\partial_1\partial_3 h}{2} - \frac{\text{Cot}[\theta]\partial_2 h_{13}}{2r^2} - \frac{\partial_2 h_{23}}{r^3} + \frac{\partial_2\partial_2 h_{13}}{2r^2} + \frac{\partial_3 h_{11}}{r} + \frac{\text{Cot}[\theta]\partial_3 h_{12}}{r^2} - \frac{\text{Csc}[\theta]^2\partial_3 h_{33}}{r^3} + \frac{\partial_3 h}{2r} + \frac{\text{Csc}[\theta]^2\partial_3\partial_3 h_{13}}{2r^2} +$ $t\left(\frac{2H\,\text{Cot}[\theta] h_{23}}{r^3} + \frac{5H h_{13}}{r^2} + \frac{H\,\text{Cot}[\theta]^2 h_{13}}{r^2} - \frac{H\,\text{Csc}[\theta]^2 h_{13}}{r^2} - H^2\partial_0 h_{13} + H\partial_0\partial_0 h_{13} - H\partial_1\partial_1 h_{13} +\right.$ $\left.\frac{H\,\text{Cot}[\theta]\partial_2 h_{13}}{r^2} + \frac{2H\partial_2 h_{23}}{r^3} - \frac{H\partial_2\partial_2 h_{13}}{r^2} - \frac{2H\partial_3 h_{11}}{r} - \frac{2H\,\text{Cot}[\theta]\partial_3 h_{12}}{r^2} + \frac{2H\,\text{Csc}[\theta]^2\partial_3 h_{33}}{r^3} - \frac{H\,\text{Csc}[\theta]^2\partial_3\partial_3 h_{13}}{r^2}\right) +$ $t^2\left(-\frac{H^2\,\text{Cot}[\theta] h_{23}}{r^3} - \frac{5H^2 h_{13}}{2r^2} - \frac{H^2\,\text{Cot}[\theta]^2 h_{13}}{2r^2} + \frac{H^2\,\text{Csc}[\theta]^2 h_{13}}{2r^2} - \frac{1}{2}H^2\partial_0\partial_0 h_{13} + \frac{1}{2}H^2\partial_1\partial_1 h_{13} -\right.$ $\left.\frac{H^2\,\text{Cot}[\theta]\partial_2 h_{13}}{2r^2} - \frac{H^2\partial_2 h_{23}}{r^3} + \frac{H^2\partial_2\partial_2 h_{13}}{2r^2} + \frac{H^2\partial_3 h_{11}}{r} + \frac{H^2\,\text{Cot}[\theta]\partial_3 h_{12}}{r^2} - \frac{H^2\,\text{Csc}[\theta]^2\partial_3 h_{33}}{r^3} + \frac{H^2\,\text{Csc}[\theta]^2\partial_3\partial_3 h_{13}}{2r^2}\right)$
$\theta\phi$	$4H^2 h_{23} - \frac{2\,\text{Cot}[\theta]^2 h_{23}}{r^2} + \frac{\text{Csc}[\theta]^2 h_{23}}{2r^2} - \frac{2\,\text{Cot}[\theta] h_{13}}{r} + H\partial_0 h_{23} - \frac{1}{2}\partial_0\partial_0 h_{23} - \frac{\partial_1 h_{23}}{r} + \frac{1}{2}\partial_1\partial_1 h_{23} + \frac{\partial_2 h_{13}}{r} -$ $\frac{\text{Cot}[\theta]\partial_2 h_{23}}{2r^2} + \frac{\partial_2\partial_2 h_{23}}{2r^2} - \frac{\partial_2\partial_3 h}{2} + \frac{\partial_3 h_{12}}{r} + \frac{\text{Cot}[\theta]\partial_3 h_{22}}{r^2} - \frac{\text{Cot}[\theta]\,\text{Csc}[\theta]^2\partial_3 h_{33}}{r^2} + \frac{1}{2}\text{Cot}[\theta]\partial_3 h + \frac{\text{Csc}[\theta]^2\partial_3\partial_3 h_{23}}{2r^2} +$ $t\left(\frac{4H\,\text{Cot}[\theta]^2 h_{23}}{r^2} - \frac{H\,\text{Csc}[\theta]^2 h_{23}}{r^2} + \frac{4H\,\text{Cot}[\theta] h_{13}}{r} - H^2\partial_0 h_{23} + H\partial_0\partial_0 h_{23} + \frac{2H\partial_1 h_{23}}{r} - H\partial_1\partial_1 h_{23} - \frac{2H\partial_2 h_{13}}{r} +\right.$ $\left.\frac{H\,\text{Cot}[\theta]\partial_2 h_{23}}{r^2} - \frac{H\partial_2\partial_2 h_{23}}{r^2} - \frac{2H\partial_3 h_{12}}{r} - \frac{2H\,\text{Cot}[\theta]\partial_3 h_{22}}{r^2} + \frac{2H\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2\partial_3 h_{33}}{r^2} - \frac{H\,\text{Csc}[\theta]^2\partial_3\partial_3 h_{23}}{r^2}\right) +$ $t^2\left(-\frac{2H^2\,\text{Cot}[\theta]^2 h_{23}}{r^2} + \frac{H^2\,\text{Csc}[\theta]^2 h_{23}}{2r^2} - \frac{2H^2\,\text{Cot}[\theta] h_{13}}{r} - \frac{1}{2}H^2\partial_0\partial_0 h_{23} - \frac{H^2\partial_1 h_{23}}{r} + \frac{1}{2}H^2\partial_1\partial_1 h_{23} + \frac{H^2\partial_2 h_{13}}{r} -\right.$ $\left.\frac{H^2\,\text{Cot}[\theta]\partial_2 h_{23}}{2r^2} + \frac{H^2\partial_2\partial_2 h_{23}}{2r^2} + \frac{H^2\partial_3 h_{12}}{r} + \frac{H^2\,\text{Cot}[\theta]\partial_3 h_{22}}{r^2} - \frac{H^2\,\text{Cot}[\theta]\,\text{Csc}[\theta]^2\partial_3 h_{33}}{r^2} + \frac{H^2\,\text{Csc}[\theta]^2\partial_3\partial_3 h_{23}}{2r^2}\right)$

Ω[t,r], Ω[r], or Ω for RW K=1,-1 do not appear to diagonalize