

S.V.T. Decomposition in Conformal to Flat Space

$$h_{\theta\theta} = -2\phi$$

$$h_{\theta i} = w_i = \partial_i B + B_i$$

$$h_{ij} = -2\psi + S_{ij} = -2\psi + 2\partial_i \partial_j E + \partial_i E_j + \partial_j E_i + 2E_{ij}$$

where

$$\partial_i B^i = \partial_i E^i = 0$$

$$\partial_i E^{ij} = 0$$

$$\delta_{ij} E^{ij} = 0$$

$\Omega=1$ Gauge invariant quantities:

$$\psi = \psi$$

$$\mathcal{P} = \phi + \partial_\theta B - \partial_\theta \partial_\theta E$$

$$\mathcal{F}_i = \partial_\theta E_i - B_i$$

$$E_{ij} = E_{ij}$$

$\Omega=\Omega(t)$ Gauge invariant quantities:

$$C = \psi - \frac{\Omega'}{\Omega} (B - \partial_\theta E)$$

$$\mathcal{P} = \phi + \frac{\Omega'}{\Omega} (B - \partial_\theta E) + (\partial_\theta B - \partial_\theta \partial_\theta E)$$

$$\mathcal{F}_i = \partial_\theta E_i - B_i$$

$$E_{ij} = E_{ij}$$

 $\delta W_{\mu\nu}$
 $\Omega = 1$

00	$-\frac{2}{3}\nabla^4(\psi+\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E})$
11	$-\frac{1}{3}[\square^2+\square(\partial_\theta\partial_\theta-\partial_1\partial_1)+2\partial_1\partial_1\partial_\theta\partial_\theta](\psi+\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) + \square\partial_1(\partial_\theta\mathbf{B}_1-\partial_\theta\partial_\theta\mathbf{E}_1) + \square^2\mathbf{E}_{11}$
22	$-\frac{1}{3}[\square^2+\square(\partial_\theta\partial_\theta-\partial_2\partial_2)+2\partial_2\partial_2\partial_\theta\partial_\theta](\psi+\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) + \square\partial_2(\partial_\theta\mathbf{B}_2-\partial_\theta\partial_\theta\mathbf{E}_2) + \square^2\mathbf{E}_{22}$
33	$-\frac{1}{3}[\square^2+\square(\partial_\theta\partial_\theta-\partial_3\partial_3)+2\partial_3\partial_3\partial_\theta\partial_\theta](\psi+\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) + \square\partial_3(\partial_\theta\mathbf{B}_3-\partial_\theta\partial_\theta\mathbf{E}_3) + \square^2\mathbf{E}_{33}$
01	$-\frac{2}{3}\nabla^2\partial_1(\partial_\theta\psi+\partial_\theta\phi+\partial_\theta\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\partial_\theta\mathbf{E}) + \frac{1}{2}(\nabla^4-\nabla^2\partial_\theta\partial_\theta)(\mathbf{B}_1-\partial_\theta\mathbf{E}_1)$
02	$-\frac{2}{3}\nabla^2\partial_2(\partial_\theta\psi+\partial_\theta\phi+\partial_\theta\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\partial_\theta\mathbf{E}) + \frac{1}{2}(\nabla^4-\nabla^2\partial_\theta\partial_\theta)(\mathbf{B}_2-\partial_\theta\mathbf{E}_2)$
03	$-\frac{2}{3}\nabla^2\partial_3(\partial_\theta\psi+\partial_\theta\phi+\partial_\theta\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\partial_\theta\mathbf{E}) + \frac{1}{2}(\nabla^4-\nabla^2\partial_\theta\partial_\theta)(\mathbf{B}_3-\partial_\theta\mathbf{E}_3)$
12	$\frac{1}{3}(\square-2\partial_\theta\partial_\theta)\partial_1\partial_2(\psi+\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) + \frac{1}{2}\square\partial_1\partial_\theta(\mathbf{B}_2-\partial_\theta\mathbf{E}_2) + \frac{1}{2}\square\partial_2\partial_\theta(\mathbf{B}_1-\partial_\theta\mathbf{E}_1) + \square^2\mathbf{E}_{12}$
13	$\frac{1}{3}(\square-2\partial_\theta\partial_\theta)\partial_1\partial_3(\psi+\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) + \frac{1}{2}\square\partial_1\partial_\theta(\mathbf{B}_3-\partial_\theta\mathbf{E}_3) + \frac{1}{2}\square\partial_3\partial_\theta(\mathbf{B}_1-\partial_\theta\mathbf{E}_1) + \square^2\mathbf{E}_{13}$
23	$\frac{1}{3}(\square-2\partial_\theta\partial_\theta)\partial_2\partial_3(\psi+\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) + \frac{1}{2}\square\partial_2\partial_\theta(\mathbf{B}_3-\partial_\theta\mathbf{E}_3) + \frac{1}{2}\square\partial_3\partial_\theta(\mathbf{B}_2-\partial_\theta\mathbf{E}_2) + \square^2\mathbf{E}_{23}$

For conformal to flat backgrounds

$$\delta\bar{W}_{\mu\nu}(\bar{h}_{\mu\nu}) = \Omega^{-2}\delta W_{\mu\nu}(h_{\mu\nu})$$

 $\delta G_{\mu\nu}$
 $\Omega = 1$

00	$-2\nabla^2\psi$
11	$(-2\partial_\theta\partial_\theta-\partial_1\partial_1+\nabla^2)\psi - (\nabla^2-\partial_1\partial_1)(\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) + -\partial_1\partial_\theta(-\mathbf{B}_1+\partial_\theta\mathbf{E}_1) + \square\mathbf{E}_{11}$
22	$(-2\partial_\theta\partial_\theta-\partial_2\partial_2+\nabla^2)\psi - (\nabla^2-\partial_2\partial_2)(\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) + -\partial_2\partial_\theta(-\mathbf{B}_2+\partial_\theta\mathbf{E}_2) + \square\mathbf{E}_{22}$
33	$(-2\partial_\theta\partial_\theta-\partial_3\partial_3+\nabla^2)\psi - (\nabla^2-\partial_3\partial_3)(\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) + -\partial_3\partial_\theta(-\mathbf{B}_3+\partial_\theta\mathbf{E}_3) + \square\mathbf{E}_{33}$
01	$-2\partial_1\partial_\theta\psi - \frac{1}{2}\nabla^2(-\mathbf{B}_1+\partial_\theta\mathbf{E}_1)$
02	$-2\partial_2\partial_\theta\psi - \frac{1}{2}\nabla^2(-\mathbf{B}_2+\partial_\theta\mathbf{E}_2)$
03	$-2\partial_3\partial_\theta\psi - \frac{1}{2}\nabla^2(-\mathbf{B}_3+\partial_\theta\mathbf{E}_3)$
12	$-\partial_2\partial_1\psi + \partial_2\partial_1(\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) - \frac{1}{2}\partial_1\partial_\theta(\partial_\theta\mathbf{E}_2-\mathbf{B}_2) - \frac{1}{2}\partial_2\partial_\theta(\partial_\theta\mathbf{E}_1-\mathbf{B}_1) + \square\mathbf{E}_{12}$
13	$-\partial_3\partial_1\psi + \partial_3\partial_1(\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) - \frac{1}{2}\partial_1\partial_\theta(\partial_\theta\mathbf{E}_3-\mathbf{B}_3) - \frac{1}{2}\partial_3\partial_\theta(\partial_\theta\mathbf{E}_1-\mathbf{B}_1) + \square\mathbf{E}_{13}$
23	$-\partial_3\partial_2\psi + \partial_3\partial_2(\phi+\partial_\theta\mathbf{B}-\partial_\theta\partial_\theta\mathbf{E}) - \frac{1}{2}\partial_2\partial_\theta(\partial_\theta\mathbf{E}_3-\mathbf{B}_3) - \frac{1}{2}\partial_3\partial_\theta(\partial_\theta\mathbf{E}_2-\mathbf{B}_2) + \square\mathbf{E}_{23}$

$$\Omega = \frac{1}{Ht}$$

00	$-\frac{6}{t}\partial_0\psi - 2\nabla^2\psi - \frac{2}{t}\nabla^2(B-\partial_0E)$
11	$-2\partial_0\partial_0\psi + \frac{2}{t}\partial_0(\phi+2\psi+E_{11}) - \frac{6}{t^2}(\phi+\psi-\partial_1\partial_1E-\partial_1E_1-E_{11}) -$ $(\nabla^2-\partial_1\partial_1)(\phi-\psi+\partial_0B-\partial_0\partial_0E) + \frac{2}{t}(\nabla^2-\partial_1\partial_1)(B-\partial_0E) + (\partial_1\partial_0-\frac{2}{t}\partial_1)(B_1-\partial_0E_1) + \square E_{11}$
22	$-2\partial_0\partial_0\psi + \frac{2}{t}\partial_0(\phi+2\psi+E_{22}) - \frac{6}{t^2}(\phi+\psi-\partial_2\partial_2E-\partial_2E_2-E_{22}) -$ $(\nabla^2-\partial_2\partial_2)(\phi-\psi+\partial_0B-\partial_0\partial_0E) + \frac{2}{t}(\nabla^2-\partial_2\partial_2)(B-\partial_0E) + (\partial_2\partial_0-\frac{2}{t}\partial_2)(B_2-\partial_0E_2) + \square E_{22}$
33	$-2\partial_0\partial_0\psi + \frac{2}{t}\partial_0(\phi+2\psi+E_{33}) - \frac{6}{t^2}(\phi+\psi-\partial_3\partial_3E-\partial_3E_3-E_{33}) -$ $(\nabla^2-\partial_3\partial_3)(\phi-\psi+\partial_0B-\partial_0\partial_0E) + \frac{2}{t}(\nabla^2-\partial_3\partial_3)(B-\partial_0E) + (\partial_3\partial_0-\frac{2}{t}\partial_3)(B_3-\partial_0E_3) + \square E_{33}$
01	$-2\partial_1\partial_0\psi + \frac{2}{t}\partial_1\phi + \frac{3}{t^2}(\partial_1B+B_1) + \frac{1}{2}\nabla^2(B_1-\partial_0E_1)$
02	$-2\partial_2\partial_0\psi + \frac{2}{t}\partial_2\phi + \frac{3}{t^2}(\partial_2B+B_2) + \frac{1}{2}\nabla^2(B_2-\partial_0E_2)$
03	$-2\partial_3\partial_0\psi + \frac{2}{t}\partial_3\phi + \frac{3}{t^2}(\partial_3B+B_3) + \frac{1}{2}\nabla^2(B_3-\partial_0E_3)$
12	$\partial_1\partial_2(\phi-\psi+\partial_0B-\partial_0\partial_0E) + (\frac{1}{2}\partial_0-\frac{1}{t})(\partial_1B_2-\partial_1\partial_0E_2+\partial_2B_1-\partial_2\partial_0E_1) + \frac{3}{t^2}(\partial_1E_2+\partial_2E_1-2\partial_1\partial_2E) + \square E_{12}$
13	$\partial_1\partial_3(\phi-\psi+\partial_0B-\partial_0\partial_0E) + (\frac{1}{2}\partial_0-\frac{1}{t})(\partial_1B_3-\partial_1\partial_0E_3+\partial_3B_1-\partial_3\partial_0E_1) + \frac{3}{t^2}(\partial_1E_3+\partial_3E_1-2\partial_1\partial_3E) + \square E_{13}$
23	$\partial_2\partial_3(\phi-\psi+\partial_0B-\partial_0\partial_0E) + (\frac{1}{2}\partial_0-\frac{1}{t})(\partial_2B_3-\partial_2\partial_0E_3+\partial_3B_2-\partial_3\partial_0E_2) + \frac{3}{t^2}(\partial_2E_3+\partial_3E_2-2\partial_2\partial_3E) + \square E_{23}$

$$\Omega = \Omega(t)$$

00	$6\frac{\Omega'}{\Omega}\partial_0\psi - 2\nabla^2\psi + 2\frac{\Omega'}{\Omega}\nabla^2(B-\partial_0E)$
11	$-2\partial_0\partial_0\psi - 2\frac{\Omega'}{\Omega}\partial_0(\phi+2\psi+E_{11}) + 2[(\frac{\Omega'}{\Omega})^2-2\frac{\Omega''}{\Omega}](\phi+\psi-\partial_1\partial_1E-\partial_1E_1-E_{11}) -$ $(\nabla^2-\partial_1\partial_1)(\phi-\psi+\partial_0B-\partial_0\partial_0E) - 2\frac{\Omega'}{\Omega}(\nabla^2-\partial_1\partial_1)(B-\partial_0E) + (\partial_1\partial_0+2\frac{\Omega'}{\Omega}\partial_1)(B_1-\partial_0E_1) + \square E_{11}$
22	$-2\partial_0\partial_0\psi - 2\frac{\Omega'}{\Omega}\partial_0(\phi+2\psi+E_{22}) + 2[(\frac{\Omega'}{\Omega})^2-2\frac{\Omega''}{\Omega}](\phi+\psi-\partial_2\partial_2E-\partial_2E_2-E_{22}) -$ $(\nabla^2-\partial_2\partial_2)(\phi-\psi+\partial_0B-\partial_0\partial_0E) - 2\frac{\Omega'}{\Omega}(\nabla^2-\partial_2\partial_2)(B-\partial_0E) + (\partial_2\partial_0+2\frac{\Omega'}{\Omega}\partial_2)(B_2-\partial_0E_2) + \square E_{22}$
33	$-2\partial_0\partial_0\psi - 2\frac{\Omega'}{\Omega}\partial_0(\phi+2\psi+E_{33}) + 2[(\frac{\Omega'}{\Omega})^2-2\frac{\Omega''}{\Omega}](\phi+\psi-\partial_3\partial_3E-\partial_3E_3-E_{33}) -$ $(\nabla^2-\partial_3\partial_3)(\phi-\psi+\partial_0B-\partial_0\partial_0E) - 2\frac{\Omega'}{\Omega}(\nabla^2-\partial_3\partial_3)(B-\partial_0E) + (\partial_3\partial_0+2\frac{\Omega'}{\Omega}\partial_3)(B_3-\partial_0E_3) + \square E_{33}$
01	$-2\partial_1\partial_0\psi - 2\frac{\Omega'}{\Omega}\partial_1\phi - [(\frac{\Omega'}{\Omega})^2-2\frac{\Omega''}{\Omega}](\partial_1B+B_1) + \frac{1}{2}\nabla^2(B_1-\partial_0E_1)$
02	$-2\partial_2\partial_0\psi - 2\frac{\Omega'}{\Omega}\partial_2\phi - [(\frac{\Omega'}{\Omega})^2-2\frac{\Omega''}{\Omega}](\partial_2B+B_2) + \frac{1}{2}\nabla^2(B_2-\partial_0E_2)$
03	$-2\partial_3\partial_0\psi - 2\frac{\Omega'}{\Omega}\partial_3\phi - [(\frac{\Omega'}{\Omega})^2-2\frac{\Omega''}{\Omega}](\partial_3B+B_3) + \frac{1}{2}\nabla^2(B_3-\partial_0E_3)$
12	$\partial_1\partial_2(\phi-\psi+\partial_0B-\partial_0\partial_0E) +$ $(\frac{1}{2}\partial_0+\frac{\Omega'}{\Omega})(\partial_1B_2-\partial_1\partial_0E_2+\partial_2B_1-\partial_2\partial_0E_1) - [(\frac{\Omega'}{\Omega})^2-2\frac{\Omega''}{\Omega}](\partial_1E_2+\partial_2E_1-2\partial_1\partial_2E) + \square E_{12}$
13	$\partial_1\partial_3(\phi-\psi+\partial_0B-\partial_0\partial_0E) +$ $(\frac{1}{2}\partial_0+\frac{\Omega'}{\Omega})(\partial_1B_3-\partial_1\partial_0E_3+\partial_3B_1-\partial_3\partial_0E_1) - [(\frac{\Omega'}{\Omega})^2-2\frac{\Omega''}{\Omega}](\partial_1E_3+\partial_3E_1-2\partial_1\partial_3E) + \square E_{13}$
23	$\partial_2\partial_3(\phi-\psi+\partial_0B-\partial_0\partial_0E) +$ $(\frac{1}{2}\partial_0+\frac{\Omega'}{\Omega})(\partial_2B_3-\partial_2\partial_0E_3+\partial_3B_2-\partial_3\partial_0E_2) - [(\frac{\Omega'}{\Omega})^2-2\frac{\Omega''}{\Omega}](\partial_2E_3+\partial_3E_2-2\partial_2\partial_3E) + \square E_{23}$

Compare to non-SVT

$$\eta^{\alpha\beta} \partial_\alpha h_{\beta\gamma} = \frac{J \eta^{\alpha\beta} h_{\gamma\alpha} \partial_\beta \Omega}{\Omega} + P \Omega^2 \partial_\gamma h + R h \Omega \partial_\gamma \Omega$$

$$J = 0, P = 1, R = -1$$

$$\Omega = 1$$

$$\delta G_{\mu\nu} = \frac{1}{2} \square h_{\mu\nu} - \frac{1}{2} \partial_\mu \partial_\nu h$$

00	$-\frac{1}{2} \partial_\theta \partial_\theta h_{00} - \frac{\partial_\theta \partial_\theta h}{2} + \frac{1}{2} \partial_1 \partial_1 h_{00} + \frac{1}{2} \partial_2 \partial_2 h_{00} + \frac{1}{2} \partial_3 \partial_3 h_{00}$
11	$-\frac{1}{2} \partial_\theta \partial_\theta h_{11} + \frac{1}{2} \partial_1 \partial_1 h_{11} - \frac{\partial_1 \partial_1 h}{2} + \frac{1}{2} \partial_2 \partial_2 h_{11} + \frac{1}{2} \partial_3 \partial_3 h_{11}$
22	$-\frac{1}{2} \partial_\theta \partial_\theta h_{22} + \frac{1}{2} \partial_1 \partial_1 h_{22} + \frac{1}{2} \partial_2 \partial_2 h_{22} - \frac{\partial_2 \partial_2 h}{2} + \frac{1}{2} \partial_3 \partial_3 h_{22}$
33	$-\frac{1}{2} \partial_\theta \partial_\theta h_{33} + \frac{1}{2} \partial_1 \partial_1 h_{33} + \frac{1}{2} \partial_2 \partial_2 h_{33} + \frac{1}{2} \partial_3 \partial_3 h_{33} - \frac{\partial_3 \partial_3 h}{2}$
01	$-\frac{1}{2} \partial_\theta \partial_\theta h_{01} - \frac{\partial_1 \partial_\theta h}{2} + \frac{1}{2} \partial_1 \partial_1 h_{01} + \frac{1}{2} \partial_2 \partial_2 h_{01} + \frac{1}{2} \partial_3 \partial_3 h_{01}$
02	$-\frac{1}{2} \partial_\theta \partial_\theta h_{02} + \frac{1}{2} \partial_1 \partial_1 h_{02} - \frac{\partial_2 \partial_\theta h}{2} + \frac{1}{2} \partial_2 \partial_2 h_{02} + \frac{1}{2} \partial_3 \partial_3 h_{02}$
03	$-\frac{1}{2} \partial_\theta \partial_\theta h_{03} + \frac{1}{2} \partial_1 \partial_1 h_{03} + \frac{1}{2} \partial_2 \partial_2 h_{03} - \frac{\partial_3 \partial_\theta h}{2} + \frac{1}{2} \partial_3 \partial_3 h_{03}$
12	$-\frac{1}{2} \partial_\theta \partial_\theta h_{12} + \frac{1}{2} \partial_1 \partial_1 h_{12} - \frac{\partial_2 \partial_1 h}{2} + \frac{1}{2} \partial_2 \partial_2 h_{12} + \frac{1}{2} \partial_3 \partial_3 h_{12}$
13	$-\frac{1}{2} \partial_\theta \partial_\theta h_{13} + \frac{1}{2} \partial_1 \partial_1 h_{13} + \frac{1}{2} \partial_2 \partial_2 h_{13} - \frac{\partial_3 \partial_1 h}{2} + \frac{1}{2} \partial_3 \partial_3 h_{13}$
23	$-\frac{1}{2} \partial_\theta \partial_\theta h_{23} + \frac{1}{2} \partial_1 \partial_1 h_{23} + \frac{1}{2} \partial_2 \partial_2 h_{23} - \frac{\partial_3 \partial_2 h}{2} + \frac{1}{2} \partial_3 \partial_3 h_{23}$

$$\Omega = \frac{1}{Ht}$$

$$\frac{\eta^{\mu\nu}}{\Omega^2} \delta G_{\mu\nu} =$$

$$2 H^4 t^2 h_{00} + 8 H^2 h$$

00	$2 H^2 h_{00} - \frac{h}{2 t^2} - H^2 t \partial_\theta h_{00} - \frac{1}{2 t} \partial_\theta h - \frac{1}{2} \partial_\theta \partial_\theta h + \frac{1}{2} H^2 t^2 \square h_{00}$
11	$4 H^2 h_{11} + \frac{3 h}{2 t^2} - H^2 t \partial_\theta h_{11} - \frac{1}{2 t} \partial_\theta h - \frac{1}{2} \partial_1 \partial_1 h + \frac{1}{2} H^2 t^2 \square h_{11}$
22	$4 H^2 h_{22} + \frac{3 h}{2 t^2} - H^2 t \partial_\theta h_{22} - \frac{1}{2 t} \partial_\theta h - \frac{1}{2} \partial_2 \partial_2 h + \frac{1}{2} H^2 t^2 \square h_{22}$
33	$4 H^2 h_{33} + \frac{3 h}{2 t^2} - H^2 t \partial_\theta h_{33} - \frac{1}{2 t} \partial_\theta h - \frac{1}{2} \partial_3 \partial_3 h + \frac{1}{2} H^2 t^2 \square h_{33}$
01	$3 H^2 h_{01} - H^2 t \partial_\theta h_{01} - \frac{1}{2 t} \partial_1 h - \frac{1}{2} \partial_\theta \partial_1 h + \frac{1}{2} H^2 t^2 \square h_{01}$
02	$3 H^2 h_{02} - H^2 t \partial_\theta h_{02} - \frac{1}{2 t} \partial_2 h - \frac{1}{2} \partial_\theta \partial_2 h + \frac{1}{2} H^2 t^2 \square h_{02}$
03	$3 H^2 h_{03} - H^2 t \partial_\theta h_{03} - \frac{1}{2 t} \partial_3 h - \frac{1}{2} \partial_\theta \partial_3 h + \frac{1}{2} H^2 t^2 \square h_{03}$
12	$4 H^2 h_{12} - H^2 t \partial_\theta h_{12} - \frac{1}{2} \partial_1 \partial_2 h + \frac{1}{2} H^2 t^2 \square h_{12}$
13	$4 H^2 h_{13} - H^2 t \partial_\theta h_{13} - \frac{1}{2} \partial_1 \partial_3 h + \frac{1}{2} H^2 t^2 \square h_{13}$
23	$4 H^2 h_{23} - H^2 t \partial_\theta h_{23} - \frac{1}{2} \partial_2 \partial_3 h + \frac{1}{2} H^2 t^2 \square h_{23}$

$$\Omega = \Omega(t)$$

$$\frac{\eta^{\mu\nu}}{\Omega^2} \delta G_{\mu\nu} =$$

$$-\frac{10 h_{00} \Omega' [t]^2}{\Omega [t]^6} + \frac{2 h \Omega' [t]^2}{\Omega [t]^4} + \frac{6 h_{00} \Omega'' [t]}{\Omega [t]^5} + \frac{3 h \Omega'' [t]}{\Omega [t]^3}$$

00	$-\frac{\partial_0 \partial_0 h}{2} + \frac{\partial_0 h_{00} \Omega' [t]}{\Omega [t]^3} + \frac{\partial_0 h \Omega' [t]}{2 \Omega [t]} + \frac{2 h_{00} \Omega' [t]^2}{\Omega [t]^4} - \frac{3 h \Omega' [t]^2}{2 \Omega [t]^2} + \frac{h \Omega'' [t]}{2 \Omega [t]} + \frac{1}{2 \Omega [t]^2} \square h_{00}$
11	$-\frac{\partial_1 \partial_1 h}{2} + \frac{\partial_0 h_{11} \Omega' [t]}{\Omega [t]^3} + \frac{\partial_0 h \Omega' [t]}{2 \Omega [t]} - \frac{2 h_{00} \Omega' [t]^2}{\Omega [t]^4} - \frac{2 h_{11} \Omega' [t]^2}{\Omega [t]^4} + \frac{h \Omega' [t]^2}{2 \Omega [t]^2} + \frac{h_{00} \Omega'' [t]}{\Omega [t]^3} + \frac{3 h_{11} \Omega'' [t]}{\Omega [t]^3} + \frac{h \Omega'' [t]}{2 \Omega [t]} + \frac{1}{2 \Omega [t]^2} \square h_{11}$
22	$-\frac{\partial_2 \partial_2 h}{2} + \frac{\partial_0 h_{22} \Omega' [t]}{\Omega [t]^3} + \frac{\partial_0 h \Omega' [t]}{2 \Omega [t]} - \frac{2 h_{00} \Omega' [t]^2}{\Omega [t]^4} - \frac{2 h_{22} \Omega' [t]^2}{\Omega [t]^4} + \frac{h \Omega' [t]^2}{2 \Omega [t]^2} + \frac{h_{00} \Omega'' [t]}{\Omega [t]^3} + \frac{3 h_{22} \Omega'' [t]}{\Omega [t]^3} + \frac{h \Omega'' [t]}{2 \Omega [t]} + \frac{1}{2 \Omega [t]^2} \square h_{22}$
33	$-\frac{\partial_3 \partial_3 h}{2} + \frac{\partial_0 h_{33} \Omega' [t]}{\Omega [t]^3} + \frac{\partial_0 h \Omega' [t]}{2 \Omega [t]} - \frac{2 h_{00} \Omega' [t]^2}{\Omega [t]^4} - \frac{2 h_{33} \Omega' [t]^2}{\Omega [t]^4} + \frac{h \Omega' [t]^2}{2 \Omega [t]^2} + \frac{h_{00} \Omega'' [t]}{\Omega [t]^3} + \frac{3 h_{33} \Omega'' [t]}{\Omega [t]^3} + \frac{h \Omega'' [t]}{2 \Omega [t]} + \frac{1}{2 \Omega [t]^2} \square h_{33}$
01	$-\frac{\partial_0 \partial_1 h}{2} + \frac{\partial_0 h_{01} \Omega' [t]}{\Omega [t]^3} + \frac{\partial_1 h \Omega' [t]}{2 \Omega [t]} - \frac{h_{01} \Omega' [t]^2}{\Omega [t]^4} + \frac{2 h_{01} \Omega'' [t]}{\Omega [t]^3} + \frac{1}{2 \Omega [t]^2} \square h_{01}$
02	$-\frac{\partial_0 \partial_2 h}{2} + \frac{\partial_0 h_{02} \Omega' [t]}{\Omega [t]^3} + \frac{\partial_2 h \Omega' [t]}{2 \Omega [t]} - \frac{h_{02} \Omega' [t]^2}{\Omega [t]^4} + \frac{2 h_{02} \Omega'' [t]}{\Omega [t]^3} + \frac{1}{2 \Omega [t]^2} \square h_{02}$
03	$-\frac{\partial_0 \partial_3 h}{2} + \frac{\partial_0 h_{03} \Omega' [t]}{\Omega [t]^3} + \frac{\partial_3 h \Omega' [t]}{2 \Omega [t]} - \frac{h_{03} \Omega' [t]^2}{\Omega [t]^4} + \frac{2 h_{03} \Omega'' [t]}{\Omega [t]^3} + \frac{1}{2 \Omega [t]^2} \square h_{03}$
12	$-\frac{\partial_1 \partial_2 h}{2} + \frac{\partial_0 h_{12} \Omega' [t]}{\Omega [t]^3} - \frac{2 h_{12} \Omega' [t]^2}{\Omega [t]^4} + \frac{3 h_{12} \Omega'' [t]}{\Omega [t]^3} + \frac{1}{2 \Omega [t]^2} \square h_{12}$
13	$-\frac{\partial_1 \partial_3 h}{2} + \frac{\partial_0 h_{13} \Omega' [t]}{\Omega [t]^3} - \frac{2 h_{13} \Omega' [t]^2}{\Omega [t]^4} + \frac{3 h_{13} \Omega'' [t]}{\Omega [t]^3} + \frac{1}{2 \Omega [t]^2} \square h_{13}$
23	$-\frac{\partial_2 \partial_3 h}{2} + \frac{\partial_0 h_{23} \Omega' [t]}{\Omega [t]^3} - \frac{2 h_{23} \Omega' [t]^2}{\Omega [t]^4} + \frac{3 h_{23} \Omega'' [t]}{\Omega [t]^3} + \frac{1}{2 \Omega [t]^2} \square h_{23}$