Cartesian SVT

Metric

$h_{00} = -2\phi$

$h_{0i} = \nabla_i B + B_i$

$h_{ij} = -2\psi + 2\nabla_i\nabla_j E + \nabla_i E_j + \nabla_j E_i + 2E_{ij}$

Conditions

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

$\partial_i E^{ij} = 0$

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

Scalar Laplacian

$\nabla^2 = \partial_1\partial_1 + \partial_2\partial_2 + \partial_3\partial_3$

$\delta G_{\mu\nu}$ Ω=1

00	$(-2\,\nabla^2\,\psi) + (0) + (0)$
11	$(-\nabla^2\,\phi + \nabla^2\,\psi - \nabla^2\,\partial_0 B + \nabla^2\,\partial_0\partial_0 E - 2\,\partial_0\partial_0\psi + \partial_1\partial_1\phi - \partial_1\partial_1\psi + \partial_1\partial_1\partial_0 B - \partial_1\partial_1\partial_0\partial_0 E)$ $+ (\partial_1\partial_0 B_1 - \partial_1\partial_0\partial_0 E_1) + (\nabla^2\,E_{11} - \partial_0\partial_0 E_{11})$
22	$(-\nabla^2\,\phi + \nabla^2\,\psi - \nabla^2\,\partial_0 B + \nabla^2\,\partial_0\partial_0 E - 2\,\partial_0\partial_0\psi + \partial_2\partial_2\phi - \partial_2\partial_2\psi + \partial_2\partial_2\partial_0 B - \partial_2\partial_2\partial_0\partial_0 E)$ $+ (\partial_2\partial_0 B_2 - \partial_2\partial_0\partial_0 E_2) + (\nabla^2\,E_{22} - \partial_0\partial_0 E_{22})$
33	$(-\nabla^2\,\phi + \nabla^2\,\psi - \nabla^2\,\partial_0 B + \nabla^2\,\partial_0\partial_0 E - 2\,\partial_0\partial_0\psi + \partial_3\partial_3\phi - \partial_3\partial_3\psi + \partial_3\partial_3\partial_0 B - \partial_3\partial_3\partial_0\partial_0 E)$ $+ (\partial_3\partial_0 B_3 - \partial_3\partial_0\partial_0 E_3) + (\nabla^2\,E_{33} - \partial_0\partial_0 E_{33})$
01	$(-2\,\partial_1\partial_0\psi) + (\frac{\nabla^2 B_1}{2} - \frac{1}{2}\nabla^2\,\partial_0 E_1) + (0)$
02	$(-2\,\partial_2\partial_0\psi) + (\frac{\nabla^2 B_2}{2} - \frac{1}{2}\nabla^2\,\partial_0 E_2) + (0)$
03	$(-2\,\partial_3\partial_0\psi) + (\frac{\nabla^2 B_3}{2} - \frac{1}{2}\nabla^2\,\partial_0 E_3) + (0)$
12	$(\partial_2\partial_1\phi - \partial_2\partial_1\psi + \partial_2\partial_1\partial_0 B - \partial_2\partial_1\partial_0\partial_0 E) + ($ $\frac{1}{2}\partial_1\partial_0 B_2 - \frac{1}{2}\partial_1\partial_0\partial_0 E_2 + \frac{1}{2}\partial_2\partial_0 B_1 - \frac{1}{2}\partial_2\partial_0\partial_0 E_1) + (\nabla^2\,E_{12} - \partial_0\partial_0 E_{12})$
13	$(\partial_3\partial_1\phi - \partial_3\partial_1\psi + \partial_3\partial_1\partial_0 B - \partial_3\partial_1\partial_0\partial_0 E) + ($ $\frac{1}{2}\partial_1\partial_0 B_3 - \frac{1}{2}\partial_1\partial_0\partial_0 E_3 + \frac{1}{2}\partial_3\partial_0 B_1 - \frac{1}{2}\partial_3\partial_0\partial_0 E_1) + (\nabla^2\,E_{13} - \partial_0\partial_0 E_{13})$
23	$(\partial_3\partial_2\phi - \partial_3\partial_2\psi + \partial_3\partial_2\partial_0 B - \partial_3\partial_2\partial_0\partial_0 E) + ($ $\frac{1}{2}\partial_2\partial_0 B_3 - \frac{1}{2}\partial_2\partial_0\partial_0 E_3 + \frac{1}{2}\partial_3\partial_0 B_2 - \frac{1}{2}\partial_3\partial_0\partial_0 E_2) + (\nabla^2\,E_{23} - \partial_0\partial_0 E_{23})$

$\delta G_{\mu v}$ $\Omega = \Omega(t)$

00	$(-2\nabla^2\psi + \frac{2\nabla^2 B\,\Omega'[t]}{\Omega[t]} - \frac{2\nabla^2\partial_0 E\,\Omega'[t]}{\Omega[t]} + \frac{6\partial_0\psi\,\Omega'[t]}{\Omega[t]}) + (0) + (0)$
11	$(-\nabla^2\phi + \nabla^2\psi - \nabla^2\partial_0 B + \nabla^2\partial_0\partial_0 E - 2\partial_0\partial_0\psi + \partial_1\partial_1\phi - \partial_1\partial_1\psi +$ $\partial_1\partial_1\partial_0 B - \partial_1\partial_1\partial_0\partial_0 E - \frac{2\nabla^2 B\,\Omega'[t]}{\Omega[t]} + \frac{2\nabla^2\partial_0 E\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_0\phi\,\Omega'[t]}{\Omega[t]} - \frac{4\partial_0\psi\,\Omega'[t]}{\Omega[t]} + \frac{2\partial_1\partial_1 B\,\Omega'[t]}{\Omega[t]} -$ $\frac{2\partial_1\partial_1\partial_0 E\,\Omega'[t]}{\Omega[t]} + \frac{2\phi\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2\psi\,\Omega'[t]^2}{\Omega[t]^2} - \frac{2\partial_1\partial_1 E\,\Omega'[t]^2}{\Omega[t]^2} - \frac{4\phi\,\Omega''[t]}{\Omega[t]} - \frac{4\psi\,\Omega''[t]}{\Omega[t]} + \frac{4\partial_1\partial_1 E\,\Omega''[t]}{\Omega[t]}$ $) + (\partial_1\partial_0 B_1 - \partial_1\partial_0\partial_0 E_1 + \frac{2\partial_1 B_1\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_1\partial_0 E_1\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_1 E_1\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4\partial_1 E_1\,\Omega''[t]}{\Omega[t]}$ $) + (\nabla^2 E_{11} - \partial_0\partial_0 E_{11} - \frac{2\partial_0 E_{11}\,\Omega'[t]}{\Omega[t]} - \frac{2 E_{11}\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4 E_{11}\,\Omega''[t]}{\Omega[t]})$
22	$(-\nabla^2\phi + \nabla^2\psi - \nabla^2\partial_0 B + \nabla^2\partial_0\partial_0 E - 2\partial_0\partial_0\psi + \partial_2\partial_2\phi - \partial_2\partial_2\psi +$ $\partial_2\partial_2\partial_0 B - \partial_2\partial_2\partial_0\partial_0 E - \frac{2\nabla^2 B\,\Omega'[t]}{\Omega[t]} + \frac{2\nabla^2\partial_0 E\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_0\phi\,\Omega'[t]}{\Omega[t]} - \frac{4\partial_0\psi\,\Omega'[t]}{\Omega[t]} + \frac{2\partial_2\partial_2 B\,\Omega'[t]}{\Omega[t]} -$ $\frac{2\partial_2\partial_2\partial_0 E\,\Omega'[t]}{\Omega[t]} + \frac{2\phi\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2\psi\,\Omega'[t]^2}{\Omega[t]^2} - \frac{2\partial_2\partial_2 E\,\Omega'[t]^2}{\Omega[t]^2} - \frac{4\phi\,\Omega''[t]}{\Omega[t]} - \frac{4\psi\,\Omega''[t]}{\Omega[t]} + \frac{4\partial_2\partial_2 E\,\Omega''[t]}{\Omega[t]}$ $) + (\partial_2\partial_0 B_2 - \partial_2\partial_0\partial_0 E_2 + \frac{2\partial_2 B_2\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_2\partial_0 E_2\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_2 E_2\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4\partial_2 E_2\,\Omega''[t]}{\Omega[t]}$ $) + (\nabla^2 E_{22} - \partial_0\partial_0 E_{22} - \frac{2\partial_0 E_{22}\,\Omega'[t]}{\Omega[t]} - \frac{2 E_{22}\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4 E_{22}\,\Omega''[t]}{\Omega[t]})$
33	$(-\nabla^2\phi + \nabla^2\psi - \nabla^2\partial_0 B + \nabla^2\partial_0\partial_0 E - 2\partial_0\partial_0\psi + \partial_3\partial_3\phi - \partial_3\partial_3\psi +$ $\partial_3\partial_3\partial_0 B - \partial_3\partial_3\partial_0\partial_0 E - \frac{2\nabla^2 B\,\Omega'[t]}{\Omega[t]} + \frac{2\nabla^2\partial_0 E\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_0\phi\,\Omega'[t]}{\Omega[t]} - \frac{4\partial_0\psi\,\Omega'[t]}{\Omega[t]} + \frac{2\partial_3\partial_3 B\,\Omega'[t]}{\Omega[t]} -$ $\frac{2\partial_3\partial_3\partial_0 E\,\Omega'[t]}{\Omega[t]} + \frac{2\phi\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2\psi\,\Omega'[t]^2}{\Omega[t]^2} - \frac{2\partial_3\partial_3 E\,\Omega'[t]^2}{\Omega[t]^2} - \frac{4\phi\,\Omega''[t]}{\Omega[t]} - \frac{4\psi\,\Omega''[t]}{\Omega[t]} + \frac{4\partial_3\partial_3 E\,\Omega''[t]}{\Omega[t]}$ $) + (\partial_3\partial_0 B_3 - \partial_3\partial_0\partial_0 E_3 + \frac{2\partial_3 B_3\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_3\partial_0 E_3\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_3 E_3\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4\partial_3 E_3\,\Omega''[t]}{\Omega[t]}$ $) + (\nabla^2 E_{33} - \partial_0\partial_0 E_{33} - \frac{2\partial_0 E_{33}\,\Omega'[t]}{\Omega[t]} - \frac{2 E_{33}\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4 E_{33}\,\Omega''[t]}{\Omega[t]})$
01	$(-2\partial_1\partial_0\psi - \frac{2\partial_1\phi\,\Omega'[t]}{\Omega[t]} - \frac{\partial_1 B\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2\partial_1 B\,\Omega''[t]}{\Omega[t]}) + (\frac{\nabla^2 B_1}{2} - \frac{1}{2}\nabla^2\partial_0 E_1 - \frac{B_1\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2 B_1\,\Omega''[t]}{\Omega[t]}) + (0)$
02	$(-2\partial_2\partial_0\psi - \frac{2\partial_2\phi\,\Omega'[t]}{\Omega[t]} - \frac{\partial_2 B\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2\partial_2 B\,\Omega''[t]}{\Omega[t]}) + (\frac{\nabla^2 B_2}{2} - \frac{1}{2}\nabla^2\partial_0 E_2 - \frac{B_2\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2 B_2\,\Omega''[t]}{\Omega[t]}) + (0)$
03	$(-2\partial_3\partial_0\psi - \frac{2\partial_3\phi\,\Omega'[t]}{\Omega[t]} - \frac{\partial_3 B\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2\partial_3 B\,\Omega''[t]}{\Omega[t]}) + (\frac{\nabla^2 B_3}{2} - \frac{1}{2}\nabla^2\partial_0 E_3 - \frac{B_3\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2 B_3\,\Omega''[t]}{\Omega[t]}) + (0)$
12	$(\partial_2\partial_1\phi - \partial_2\partial_1\psi + \partial_2\partial_1\partial_0 B - \partial_2\partial_1\partial_0\partial_0 E + \frac{2\partial_2\partial_1 B\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_2\partial_1\partial_0 E\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_2\partial_1 E\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4\partial_2\partial_1 E\,\Omega''[t]}{\Omega[t]}$ $) + (\frac{1}{2}\partial_1\partial_0 B_2 - \frac{1}{2}\partial_1\partial_0\partial_0 E_2 + \frac{1}{2}\partial_2\partial_0 B_1 - \frac{1}{2}\partial_2\partial_0\partial_0 E_1 + \frac{\partial_1 B_2\,\Omega'[t]}{\Omega[t]} -$ $\frac{\partial_1\partial_0 E_2\,\Omega'[t]}{\Omega[t]} + \frac{\partial_2 B_1\,\Omega'[t]}{\Omega[t]} - \frac{\partial_2\partial_0 E_1\,\Omega'[t]}{\Omega[t]} - \frac{\partial_1 E_2\,\Omega'[t]^2}{\Omega[t]^2} - \frac{\partial_2 E_1\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2\partial_1 E_2\,\Omega''[t]}{\Omega[t]} + \frac{2\partial_2 E_1\,\Omega''[t]}{\Omega[t]}$ $) + (\nabla^2 E_{12} - \partial_0\partial_0 E_{12} - \frac{2\partial_0 E_{12}\,\Omega'[t]}{\Omega[t]} - \frac{2 E_{12}\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4 E_{12}\,\Omega''[t]}{\Omega[t]})$
13	$(\partial_3\partial_1\phi - \partial_3\partial_1\psi + \partial_3\partial_1\partial_0 B - \partial_3\partial_1\partial_0\partial_0 E + \frac{2\partial_3\partial_1 B\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_3\partial_1\partial_0 E\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_3\partial_1 E\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4\partial_3\partial_1 E\,\Omega''[t]}{\Omega[t]}$ $) + (\frac{1}{2}\partial_1\partial_0 B_3 - \frac{1}{2}\partial_1\partial_0\partial_0 E_3 + \frac{1}{2}\partial_3\partial_0 B_1 - \frac{1}{2}\partial_3\partial_0\partial_0 E_1 + \frac{\partial_1 B_3\,\Omega'[t]}{\Omega[t]} -$ $\frac{\partial_1\partial_0 E_3\,\Omega'[t]}{\Omega[t]} + \frac{\partial_3 B_1\,\Omega'[t]}{\Omega[t]} - \frac{\partial_3\partial_0 E_1\,\Omega'[t]}{\Omega[t]} - \frac{\partial_1 E_3\,\Omega'[t]^2}{\Omega[t]^2} - \frac{\partial_3 E_1\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2\partial_1 E_3\,\Omega''[t]}{\Omega[t]} + \frac{2\partial_3 E_1\,\Omega''[t]}{\Omega[t]}$ $) + (\nabla^2 E_{13} - \partial_0\partial_0 E_{13} - \frac{2\partial_0 E_{13}\,\Omega'[t]}{\Omega[t]} - \frac{2 E_{13}\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4 E_{13}\,\Omega''[t]}{\Omega[t]})$
23	$(\partial_3\partial_2\phi - \partial_3\partial_2\psi + \partial_3\partial_2\partial_0 B - \partial_3\partial_2\partial_0\partial_0 E + \frac{2\partial_3\partial_2 B\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_3\partial_2\partial_0 E\,\Omega'[t]}{\Omega[t]} - \frac{2\partial_3\partial_2 E\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4\partial_3\partial_2 E\,\Omega''[t]}{\Omega[t]}$ $) + (\frac{1}{2}\partial_2\partial_0 B_3 - \frac{1}{2}\partial_2\partial_0\partial_0 E_3 + \frac{1}{2}\partial_3\partial_0 B_2 - \frac{1}{2}\partial_3\partial_0\partial_0 E_2 + \frac{\partial_2 B_3\,\Omega'[t]}{\Omega[t]} -$ $\frac{\partial_2\partial_0 E_3\,\Omega'[t]}{\Omega[t]} + \frac{\partial_3 B_2\,\Omega'[t]}{\Omega[t]} - \frac{\partial_3\partial_0 E_2\,\Omega'[t]}{\Omega[t]} - \frac{\partial_2 E_3\,\Omega'[t]^2}{\Omega[t]^2} - \frac{\partial_3 E_2\,\Omega'[t]^2}{\Omega[t]^2} + \frac{2\partial_2 E_3\,\Omega''[t]}{\Omega[t]} + \frac{2\partial_3 E_2\,\Omega''[t]}{\Omega[t]}$ $) + (\nabla^2 E_{23} - \partial_0\partial_0 E_{23} - \frac{2\partial_0 E_{23}\,\Omega'[t]}{\Omega[t]} - \frac{2 E_{23}\,\Omega'[t]^2}{\Omega[t]^2} + \frac{4 E_{23}\,\Omega''[t]}{\Omega[t]})$

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

00	$\left(-\frac{2\nabla^4\phi}{3} - \frac{2\nabla^4\psi}{3} - \frac{2\nabla^4\partial_0 B}{3} + \frac{2}{3}\nabla^4\,\partial_0\partial_0 E\right) + (0) + (0)$
11	$\left(-\frac{\nabla^4\phi}{3} - \frac{\nabla^4\psi}{3} - \frac{\nabla^4\partial_0 B}{3} + \frac{1}{3}\nabla^4\,\partial_0\partial_0 E + \frac{1}{3}\nabla^2\,\partial_0\partial_0\phi + \frac{1}{3}\nabla^2\,\partial_0\partial_0\psi + \frac{1}{3}\nabla^2\,\partial_0\partial_0\partial_0 B - \frac{1}{3}\nabla^2\,\partial_0\partial_0\partial_0\partial_0 E + \frac{1}{3}\nabla^2\,\partial_1\partial_1\phi + \frac{1}{3}\nabla^2\,\partial_1\partial_1\psi + \frac{1}{3}\nabla^2\,\partial_1\partial_1\partial_0 B - \frac{1}{3}\nabla^2\,\partial_1\partial_1\partial_0\partial_0 E - \partial_1\partial_1\partial_0\partial_0\phi - \partial_1\partial_1\partial_0\partial_0\psi - \partial_1\partial_1\partial_0\partial_0\partial_0 B + \partial_1\partial_1\partial_0\partial_0\partial_0\partial_0 E\right) + \left(\nabla^2\,\partial_1\partial_0 B_1 - \nabla^2\,\partial_1\partial_0\partial_0 E_1 - \partial_1\partial_0\partial_0\partial_0 B_1 + \partial_1\partial_0\partial_0\partial_0\partial_0 E_1\right) + \left(\nabla^4\,E_{11} - 2\nabla^2\,\partial_0\partial_0 E_{11} + \partial_0\partial_0\partial_0\partial_0 E_{11}\right)$
22	$\left(-\frac{\nabla^4\phi}{3} - \frac{\nabla^4\psi}{3} - \frac{\nabla^4\partial_0 B}{3} + \frac{1}{3}\nabla^4\,\partial_0\partial_0 E + \frac{1}{3}\nabla^2\,\partial_0\partial_0\phi + \frac{1}{3}\nabla^2\,\partial_0\partial_0\psi + \frac{1}{3}\nabla^2\,\partial_0\partial_0\partial_0 B - \frac{1}{3}\nabla^2\,\partial_0\partial_0\partial_0\partial_0 E + \frac{1}{3}\nabla^2\,\partial_2\partial_2\phi + \frac{1}{3}\nabla^2\,\partial_2\partial_2\psi + \frac{1}{3}\nabla^2\,\partial_2\partial_2\partial_0 B - \frac{1}{3}\nabla^2\,\partial_2\partial_2\partial_0\partial_0 E - \partial_2\partial_2\partial_0\partial_0\phi - \partial_2\partial_2\partial_0\partial_0\psi - \partial_2\partial_2\partial_0\partial_0\partial_0 B + \partial_2\partial_2\partial_0\partial_0\partial_0\partial_0 E\right) + \left(\nabla^2\,\partial_2\partial_0 B_2 - \nabla^2\,\partial_2\partial_0\partial_0 E_2 - \partial_2\partial_0\partial_0\partial_0 B_2 + \partial_2\partial_0\partial_0\partial_0\partial_0 E_2\right) + \left(\nabla^4\,E_{22} - 2\nabla^2\,\partial_0\partial_0 E_{22} + \partial_0\partial_0\partial_0\partial_0 E_{22}\right)$
33	$\left(-\frac{\nabla^4\phi}{3} - \frac{\nabla^4\psi}{3} - \frac{\nabla^4\partial_0 B}{3} + \frac{1}{3}\nabla^4\,\partial_0\partial_0 E + \frac{1}{3}\nabla^2\,\partial_0\partial_0\phi + \frac{1}{3}\nabla^2\,\partial_0\partial_0\psi + \frac{1}{3}\nabla^2\,\partial_0\partial_0\partial_0 B - \frac{1}{3}\nabla^2\,\partial_0\partial_0\partial_0\partial_0 E + \frac{1}{3}\nabla^2\,\partial_3\partial_3\phi + \frac{1}{3}\nabla^2\,\partial_3\partial_3\psi + \frac{1}{3}\nabla^2\,\partial_3\partial_3\partial_0 B - \frac{1}{3}\nabla^2\,\partial_3\partial_3\partial_0\partial_0 E - \partial_3\partial_3\partial_0\partial_0\phi - \partial_3\partial_3\partial_0\partial_0\psi - \partial_3\partial_3\partial_0\partial_0\partial_0 B + \partial_3\partial_3\partial_0\partial_0\partial_0\partial_0 E\right) + \left(\nabla^2\,\partial_3\partial_0 B_3 - \nabla^2\,\partial_3\partial_0\partial_0 E_3 - \partial_3\partial_0\partial_0\partial_0 B_3 + \partial_3\partial_0\partial_0\partial_0\partial_0 E_3\right) + \left(\nabla^4\,E_{33} - 2\nabla^2\,\partial_0\partial_0 E_{33} + \partial_0\partial_0\partial_0\partial_0 E_{33}\right)$
01	$\left(-\frac{2}{3}\nabla^2\,\partial_1\partial_0\phi - \frac{2}{3}\nabla^2\,\partial_1\partial_0\psi - \frac{2}{3}\nabla^2\,\partial_1\partial_0\partial_0 B + \frac{2}{3}\nabla^2\,\partial_1\partial_0\partial_0\partial_0 E\right) + \left(\frac{\nabla^4 B_1}{2} - \frac{1}{2}\nabla^4\,\partial_0 E_1 - \frac{1}{2}\nabla^2\,\partial_0\partial_0 B_1 + \frac{1}{2}\nabla^2\,\partial_0\partial_0\partial_0 E_1\right) + (0)$
02	$\left(-\frac{2}{3}\nabla^2\,\partial_2\partial_0\phi - \frac{2}{3}\nabla^2\,\partial_2\partial_0\psi - \frac{2}{3}\nabla^2\,\partial_2\partial_0\partial_0 B + \frac{2}{3}\nabla^2\,\partial_2\partial_0\partial_0\partial_0 E\right) + \left(\frac{\nabla^4 B_2}{2} - \frac{1}{2}\nabla^4\,\partial_0 E_2 - \frac{1}{2}\nabla^2\,\partial_0\partial_0 B_2 + \frac{1}{2}\nabla^2\,\partial_0\partial_0\partial_0 E_2\right) + (0)$
03	$\left(-\frac{2}{3}\nabla^2\,\partial_3\partial_0\phi - \frac{2}{3}\nabla^2\,\partial_3\partial_0\psi - \frac{2}{3}\nabla^2\,\partial_3\partial_0\partial_0 B + \frac{2}{3}\nabla^2\,\partial_3\partial_0\partial_0\partial_0 E\right) + \left(\frac{\nabla^4 B_3}{2} - \frac{1}{2}\nabla^4\,\partial_0 E_3 - \frac{1}{2}\nabla^2\,\partial_0\partial_0 B_3 + \frac{1}{2}\nabla^2\,\partial_0\partial_0\partial_0 E_3\right) + (0)$
12	$\left(\frac{1}{3}\nabla^2\,\partial_2\partial_1\phi + \frac{1}{3}\nabla^2\,\partial_2\partial_1\psi + \frac{1}{3}\nabla^2\,\partial_2\partial_1\partial_0 B - \frac{1}{3}\nabla^2\,\partial_2\partial_1\partial_0\partial_0 E - \partial_2\partial_1\partial_0\partial_0\phi - \partial_2\partial_1\partial_0\partial_0\psi - \partial_2\partial_1\partial_0\partial_0\partial_0 B + \partial_2\partial_1\partial_0\partial_0\partial_0\partial_0 E\right) + \left(\frac{1}{2}\nabla^2\,\partial_1\partial_0 B_2 - \frac{1}{2}\nabla^2\,\partial_1\partial_0\partial_0 E_2 - \frac{1}{2}\partial_1\partial_0\partial_0\partial_0 B_2 + \frac{1}{2}\partial_1\partial_0\partial_0\partial_0\partial_0 E_2 + \frac{1}{2}\nabla^2\,\partial_2\partial_0 B_1 - \frac{1}{2}\nabla^2\,\partial_2\partial_0\partial_0 E_1 - \frac{1}{2}\partial_2\partial_0\partial_0\partial_0 B_1 + \frac{1}{2}\partial_2\partial_0\partial_0\partial_0\partial_0 E_1\right) + \left(\nabla^4\,E_{12} - 2\nabla^2\,\partial_0\partial_0 E_{12} + \partial_0\partial_0\partial_0\partial_0 E_{12}\right)$
13	$\left(\frac{1}{3}\nabla^2\,\partial_3\partial_1\phi + \frac{1}{3}\nabla^2\,\partial_3\partial_1\psi + \frac{1}{3}\nabla^2\,\partial_3\partial_1\partial_0 B - \frac{1}{3}\nabla^2\,\partial_3\partial_1\partial_0\partial_0 E - \partial_3\partial_1\partial_0\partial_0\phi - \partial_3\partial_1\partial_0\partial_0\psi - \partial_3\partial_1\partial_0\partial_0\partial_0 B + \partial_3\partial_1\partial_0\partial_0\partial_0\partial_0 E\right) + \left(\frac{1}{2}\nabla^2\,\partial_1\partial_0 B_3 - \frac{1}{2}\nabla^2\,\partial_1\partial_0\partial_0 E_3 - \frac{1}{2}\partial_1\partial_0\partial_0\partial_0 B_3 + \frac{1}{2}\partial_1\partial_0\partial_0\partial_0\partial_0 E_3 + \frac{1}{2}\nabla^2\,\partial_3\partial_0 B_1 - \frac{1}{2}\nabla^2\,\partial_3\partial_0\partial_0 E_1 - \frac{1}{2}\partial_3\partial_0\partial_0\partial_0 B_1 + \frac{1}{2}\partial_3\partial_0\partial_0\partial_0\partial_0 E_1\right) + \left(\nabla^4\,E_{13} - 2\nabla^2\,\partial_0\partial_0 E_{13} + \partial_0\partial_0\partial_0\partial_0 E_{13}\right)$
23	$\left(\frac{1}{3}\nabla^2\,\partial_3\partial_2\phi + \frac{1}{3}\nabla^2\,\partial_3\partial_2\psi + \frac{1}{3}\nabla^2\,\partial_3\partial_2\partial_0 B - \frac{1}{3}\nabla^2\,\partial_3\partial_2\partial_0\partial_0 E - \partial_3\partial_2\partial_0\partial_0\phi - \partial_3\partial_2\partial_0\partial_0\psi - \partial_3\partial_2\partial_0\partial_0\partial_0 B + \partial_3\partial_2\partial_0\partial_0\partial_0\partial_0 E\right) + \left(\frac{1}{2}\nabla^2\,\partial_2\partial_0 B_3 - \frac{1}{2}\nabla^2\,\partial_2\partial_0\partial_0 E_3 - \frac{1}{2}\partial_2\partial_0\partial_0\partial_0 B_3 + \frac{1}{2}\partial_2\partial_0\partial_0\partial_0\partial_0 E_3 + \frac{1}{2}\nabla^2\,\partial_3\partial_0 B_2 - \frac{1}{2}\nabla^2\,\partial_3\partial_0\partial_0 E_2 - \frac{1}{2}\partial_3\partial_0\partial_0\partial_0 B_2 + \frac{1}{2}\partial_3\partial_0\partial_0\partial_0\partial_0 E_2\right) + \left(\nabla^4\,E_{23} - 2\nabla^2\,\partial_0\partial_0 E_{23} + \partial_0\partial_0\partial_0\partial_0 E_{23}\right)$

$\delta W_{\mu\nu}$ $\quad \Omega = \Omega(t)$

00	$\left(-\dfrac{2\nabla^4\phi}{3\Omega[t]^2} - \dfrac{2\nabla^4\psi}{3\Omega[t]^2} - \dfrac{2\nabla^4\partial_0 B}{3\Omega[t]^2} + \dfrac{2\nabla^4\partial_0\partial_0 E}{3\Omega[t]^2}\right) \; + \; (0) \; + \; (0)$
11	$\left(-\dfrac{\nabla^4\phi}{3\Omega[t]^2} - \dfrac{\nabla^4\psi}{3\Omega[t]^2} - \dfrac{\nabla^4\partial_0 B}{3\Omega[t]^2} + \dfrac{\nabla^4\partial_0\partial_0 E}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\phi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\psi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\partial_0 B}{3\Omega[t]^2} - \dfrac{\nabla^2\partial_0\partial_0\partial_0\partial_0 E}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_1\partial_1\phi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_1\partial_1\psi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_1\partial_1\partial_0 B}{3\Omega[t]^2} - \dfrac{\nabla^2\partial_1\partial_1\partial_0\partial_0 E}{3\Omega[t]^2} - \dfrac{\partial_1\partial_1\partial_0\partial_0\phi}{\Omega[t]^2} - \dfrac{\partial_1\partial_1\partial_0\partial_0\psi}{\Omega[t]^2} - \dfrac{\partial_1\partial_1\partial_0\partial_0\partial_0 B}{\Omega[t]^2} + \dfrac{\partial_1\partial_1\partial_0\partial_0\partial_0\partial_0 E}{\Omega[t]^2}\right)$ $+ \left(\dfrac{\nabla^2\partial_1\partial_0 B_1}{\Omega[t]^2} - \dfrac{\nabla^2\partial_1\partial_0\partial_0 E_1}{\Omega[t]^2} - \dfrac{\partial_1\partial_0\partial_0\partial_0 B_1}{\Omega[t]^2} + \dfrac{\partial_1\partial_0\partial_0\partial_0\partial_0 E_1}{\Omega[t]^2}\right) + \left(\dfrac{\nabla^4 E_{11}}{\Omega[t]^2} - \dfrac{2\nabla^2\partial_0\partial_0 E_{11}}{\Omega[t]^2} + \dfrac{\partial_0\partial_0\partial_0\partial_0 E_{11}}{\Omega[t]^2}\right)$
22	$\left(-\dfrac{\nabla^4\phi}{3\Omega[t]^2} - \dfrac{\nabla^4\psi}{3\Omega[t]^2} - \dfrac{\nabla^4\partial_0 B}{3\Omega[t]^2} + \dfrac{\nabla^4\partial_0\partial_0 E}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\phi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\psi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\partial_0 B}{3\Omega[t]^2} - \dfrac{\nabla^2\partial_0\partial_0\partial_0\partial_0 E}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_2\partial_2\phi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_2\partial_2\psi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_2\partial_2\partial_0 B}{3\Omega[t]^2} - \dfrac{\nabla^2\partial_2\partial_2\partial_0\partial_0 E}{3\Omega[t]^2} - \dfrac{\partial_2\partial_2\partial_0\partial_0\phi}{\Omega[t]^2} - \dfrac{\partial_2\partial_2\partial_0\partial_0\psi}{\Omega[t]^2} - \dfrac{\partial_2\partial_2\partial_0\partial_0\partial_0 B}{\Omega[t]^2} + \dfrac{\partial_2\partial_2\partial_0\partial_0\partial_0\partial_0 E}{\Omega[t]^2}\right)$ $+ \left(\dfrac{\nabla^2\partial_2\partial_0 B_2}{\Omega[t]^2} - \dfrac{\nabla^2\partial_2\partial_0\partial_0 E_2}{\Omega[t]^2} - \dfrac{\partial_2\partial_0\partial_0\partial_0 B_2}{\Omega[t]^2} + \dfrac{\partial_2\partial_0\partial_0\partial_0\partial_0 E_2}{\Omega[t]^2}\right) + \left(\dfrac{\nabla^4 E_{22}}{\Omega[t]^2} - \dfrac{2\nabla^2\partial_0\partial_0 E_{22}}{\Omega[t]^2} + \dfrac{\partial_0\partial_0\partial_0\partial_0 E_{22}}{\Omega[t]^2}\right)$
33	$\left(-\dfrac{\nabla^4\phi}{3\Omega[t]^2} - \dfrac{\nabla^4\psi}{3\Omega[t]^2} - \dfrac{\nabla^4\partial_0 B}{3\Omega[t]^2} + \dfrac{\nabla^4\partial_0\partial_0 E}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\phi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\psi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\partial_0 B}{3\Omega[t]^2} - \dfrac{\nabla^2\partial_0\partial_0\partial_0\partial_0 E}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_3\partial_3\phi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_3\partial_3\psi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_3\partial_3\partial_0 B}{3\Omega[t]^2} - \dfrac{\nabla^2\partial_3\partial_3\partial_0\partial_0 E}{3\Omega[t]^2} - \dfrac{\partial_3\partial_3\partial_0\partial_0\phi}{\Omega[t]^2} - \dfrac{\partial_3\partial_3\partial_0\partial_0\psi}{\Omega[t]^2} - \dfrac{\partial_3\partial_3\partial_0\partial_0\partial_0 B}{\Omega[t]^2} + \dfrac{\partial_3\partial_3\partial_0\partial_0\partial_0\partial_0 E}{\Omega[t]^2}\right)$ $+ \left(\dfrac{\nabla^2\partial_3\partial_0 B_3}{\Omega[t]^2} - \dfrac{\nabla^2\partial_3\partial_0\partial_0 E_3}{\Omega[t]^2} - \dfrac{\partial_3\partial_0\partial_0\partial_0 B_3}{\Omega[t]^2} + \dfrac{\partial_3\partial_0\partial_0\partial_0\partial_0 E_3}{\Omega[t]^2}\right) + \left(\dfrac{\nabla^4 E_{33}}{\Omega[t]^2} - \dfrac{2\nabla^2\partial_0\partial_0 E_{33}}{\Omega[t]^2} + \dfrac{\partial_0\partial_0\partial_0\partial_0 E_{33}}{\Omega[t]^2}\right)$
01	$\left(-\dfrac{2\nabla^2\partial_1\partial_0\phi}{3\Omega[t]^2} - \dfrac{2\nabla^2\partial_1\partial_0\psi}{3\Omega[t]^2} - \dfrac{2\nabla^2\partial_1\partial_0\partial_0 B}{3\Omega[t]^2} + \dfrac{2\nabla^2\partial_1\partial_0\partial_0\partial_0 E}{3\Omega[t]^2}\right) \; + \; \left(\dfrac{\nabla^4 B_1}{2\Omega[t]^2} - \dfrac{\nabla^4\partial_0 E_1}{2\Omega[t]^2} - \dfrac{\nabla^2\partial_0\partial_0 B_1}{2\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\partial_0 E_1}{2\Omega[t]^2}\right) \; + \; (0)$
02	$\left(-\dfrac{2\nabla^2\partial_2\partial_0\phi}{3\Omega[t]^2} - \dfrac{2\nabla^2\partial_2\partial_0\psi}{3\Omega[t]^2} - \dfrac{2\nabla^2\partial_2\partial_0\partial_0 B}{3\Omega[t]^2} + \dfrac{2\nabla^2\partial_2\partial_0\partial_0\partial_0 E}{3\Omega[t]^2}\right) \; + \; \left(\dfrac{\nabla^4 B_2}{2\Omega[t]^2} - \dfrac{\nabla^4\partial_0 E_2}{2\Omega[t]^2} - \dfrac{\nabla^2\partial_0\partial_0 B_2}{2\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\partial_0 E_2}{2\Omega[t]^2}\right) \; + \; (0)$
03	$\left(-\dfrac{2\nabla^2\partial_3\partial_0\phi}{3\Omega[t]^2} - \dfrac{2\nabla^2\partial_3\partial_0\psi}{3\Omega[t]^2} - \dfrac{2\nabla^2\partial_3\partial_0\partial_0 B}{3\Omega[t]^2} + \dfrac{2\nabla^2\partial_3\partial_0\partial_0\partial_0 E}{3\Omega[t]^2}\right) \; + \; \left(\dfrac{\nabla^4 B_3}{2\Omega[t]^2} - \dfrac{\nabla^4\partial_0 E_3}{2\Omega[t]^2} - \dfrac{\nabla^2\partial_0\partial_0 B_3}{2\Omega[t]^2} + \dfrac{\nabla^2\partial_0\partial_0\partial_0 E_3}{2\Omega[t]^2}\right) \; + \; (0)$
12	$\left(\dfrac{\nabla^2\partial_2\partial_1\phi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_2\partial_1\psi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_2\partial_1\partial_0 B}{3\Omega[t]^2} - \dfrac{\nabla^2\partial_2\partial_1\partial_0\partial_0 E}{3\Omega[t]^2} - \dfrac{\partial_2\partial_1\partial_0\partial_0\phi}{\Omega[t]^2} - \dfrac{\partial_2\partial_1\partial_0\partial_0\psi}{\Omega[t]^2} - \dfrac{\partial_2\partial_1\partial_0\partial_0\partial_0 B}{\Omega[t]^2} + \dfrac{\partial_2\partial_1\partial_0\partial_0\partial_0\partial_0 E}{\Omega[t]^2}\right) \; + \; \Big($ $\dfrac{\nabla^2\partial_1\partial_0 B_2}{2\Omega[t]^2} - \dfrac{\nabla^2\partial_1\partial_0\partial_0 E_2}{2\Omega[t]^2} - \dfrac{\partial_1\partial_0\partial_0\partial_0 B_2}{2\Omega[t]^2} + \dfrac{\partial_1\partial_0\partial_0\partial_0\partial_0 E_2}{2\Omega[t]^2} + \dfrac{\nabla^2\partial_2\partial_0 B_1}{2\Omega[t]^2} - \dfrac{\nabla^2\partial_2\partial_0\partial_0 E_1}{2\Omega[t]^2} - \dfrac{\partial_2\partial_0\partial_0\partial_0 B_1}{2\Omega[t]^2} + \dfrac{\partial_2\partial_0\partial_0\partial_0\partial_0 E_1}{2\Omega[t]^2}$ $\Big) \; + \; \left(\dfrac{\nabla^4 E_{12}}{\Omega[t]^2} - \dfrac{2\nabla^2\partial_0\partial_0 E_{12}}{\Omega[t]^2} + \dfrac{\partial_0\partial_0\partial_0\partial_0 E_{12}}{\Omega[t]^2}\right)$
13	$\left(\dfrac{\nabla^2\partial_3\partial_1\phi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_3\partial_1\psi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_3\partial_1\partial_0 B}{3\Omega[t]^2} - \dfrac{\nabla^2\partial_3\partial_1\partial_0\partial_0 E}{3\Omega[t]^2} - \dfrac{\partial_3\partial_1\partial_0\partial_0\phi}{\Omega[t]^2} - \dfrac{\partial_3\partial_1\partial_0\partial_0\psi}{\Omega[t]^2} - \dfrac{\partial_3\partial_1\partial_0\partial_0\partial_0 B}{\Omega[t]^2} + \dfrac{\partial_3\partial_1\partial_0\partial_0\partial_0\partial_0 E}{\Omega[t]^2}\right) \; + \; \Big($ $\dfrac{\nabla^2\partial_1\partial_0 B_3}{2\Omega[t]^2} - \dfrac{\nabla^2\partial_1\partial_0\partial_0 E_3}{2\Omega[t]^2} - \dfrac{\partial_1\partial_0\partial_0\partial_0 B_3}{2\Omega[t]^2} + \dfrac{\partial_1\partial_0\partial_0\partial_0\partial_0 E_3}{2\Omega[t]^2} + \dfrac{\nabla^2\partial_3\partial_0 B_1}{2\Omega[t]^2} - \dfrac{\nabla^2\partial_3\partial_0\partial_0 E_1}{2\Omega[t]^2} - \dfrac{\partial_3\partial_0\partial_0\partial_0 B_1}{2\Omega[t]^2} + \dfrac{\partial_3\partial_0\partial_0\partial_0\partial_0 E_1}{2\Omega[t]^2}$ $\Big) \; + \; \left(\dfrac{\nabla^4 E_{13}}{\Omega[t]^2} - \dfrac{2\nabla^2\partial_0\partial_0 E_{13}}{\Omega[t]^2} + \dfrac{\partial_0\partial_0\partial_0\partial_0 E_{13}}{\Omega[t]^2}\right)$
23	$\left(\dfrac{\nabla^2\partial_3\partial_2\phi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_3\partial_2\psi}{3\Omega[t]^2} + \dfrac{\nabla^2\partial_3\partial_2\partial_0 B}{3\Omega[t]^2} - \dfrac{\nabla^2\partial_3\partial_2\partial_0\partial_0 E}{3\Omega[t]^2} - \dfrac{\partial_3\partial_2\partial_0\partial_0\phi}{\Omega[t]^2} - \dfrac{\partial_3\partial_2\partial_0\partial_0\psi}{\Omega[t]^2} - \dfrac{\partial_3\partial_2\partial_0\partial_0\partial_0 B}{\Omega[t]^2} + \dfrac{\partial_3\partial_2\partial_0\partial_0\partial_0\partial_0 E}{\Omega[t]^2}\right) \; + \; \Big($ $\dfrac{\nabla^2\partial_2\partial_0 B_3}{2\Omega[t]^2} - \dfrac{\nabla^2\partial_2\partial_0\partial_0 E_3}{2\Omega[t]^2} - \dfrac{\partial_2\partial_0\partial_0\partial_0 B_3}{2\Omega[t]^2} + \dfrac{\partial_2\partial_0\partial_0\partial_0\partial_0 E_3}{2\Omega[t]^2} + \dfrac{\nabla^2\partial_3\partial_0 B_2}{2\Omega[t]^2} - \dfrac{\nabla^2\partial_3\partial_0\partial_0 E_2}{2\Omega[t]^2} - \dfrac{\partial_3\partial_0\partial_0\partial_0 B_2}{2\Omega[t]^2} + \dfrac{\partial_3\partial_0\partial_0\partial_0\partial_0 E_2}{2\Omega[t]^2}$ $\Big) \; + \; \left(\dfrac{\nabla^4 E_{23}}{\Omega[t]^2} - \dfrac{2\nabla^2\partial_0\partial_0 E_{23}}{\Omega[t]^2} + \dfrac{\partial_0\partial_0\partial_0\partial_0 E_{23}}{\Omega[t]^2}\right)$