

Request 2 - SVT Integrals

$$\phi = -\frac{1}{2}h_{00} \tag{0.1}$$

$$B = \int d^3y D^{(3)}(\mathbf{x} - \mathbf{y}) \tilde{\nabla}_y^k \tilde{\nabla}_k^y h_{0k} \tag{0.2}$$

$$B_i = \int d^3y D^{(3)}(\mathbf{x} - \mathbf{y}) \left[\tilde{\nabla}_y^k \tilde{\nabla}_k^y h_{0i} - \tilde{\nabla}_i^y \tilde{\nabla}_y^k h_{0k} \right] \tag{0.3}$$

$$E_i = \int d^3y D^{(3)}(\mathbf{x} - \mathbf{y}) \int d^3z D^{(3)}(\mathbf{y} - \mathbf{z}) \left[\tilde{\nabla}_z^k \tilde{\nabla}_k^z \tilde{\nabla}_z^j h_{ij} - \tilde{\nabla}_i^z \tilde{\nabla}_z^k \tilde{\nabla}_z^l h_{kl} \right] \tag{0.4}$$