

The Conformal Method and Matter Models

Jim Isenberg¹, David Maxwell^{2,*}

¹*Department of Mathematics, University of Oregon, USA*

²*Department of Mathematics and Statistics, University of Alaska Fairbanks, USA*

*Email: damaxwell@alaska.edu

We discuss the application of the conformal method to generating non-vacuum initial data sets. There are a number of different schemes for including matter in the conformal method including so-called scaling and non-scaling sources. These techniques have been presented in the literature as ad-hoc methods. We show that there is a principled idea that leads to a variation of scaled sources and that leads to decoupling of the momentum and Hamiltonian constraints in the CMC case.