1014-53-1622 **Brian Krummel*** (`bkrum1@umbc.edu`), 4305 Cottington Road, Baltimore, MD 21236, and **Mike Greenberg** (`mikeyg@nyu.edu`), 363 Gulf Rd., Elyria, OH 44035. *Isoperimetric Surfaces and General Relativity.*

Recall that the isoperimetric problem for 3-manifolds is the problem of bounding a region of given volume with a surface of minimal surface area. We obtain the isoperimetric profile for the standard initial slices in the Reissner-Nordstrom and Schwarzschild Anti-deSitter spacetimes. We derive our results by modifying and applying recent work of Bray and Morgan on isoperimetric comparison. The study of the isoperimetric problem on Schwarzschild Anti-deSitter space can be applied to deriving a Penrose Inequality for a class of asymptotically hyperbolic spaces.