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A Free Boundary Problem for the Spherically Symmetric Compressible Navier-Stokes Equations.

From the compressible Navier-Stokes equations, a model is constructed for a symmetric barotropic flow. The support of the density is tracked in positive time. We will discuss the physical significance of the free boundary and the *a priori* estimates involved in this model that rely on fundamental, natural bounds. (Received February 24, 2015)