1023-53-898   **Robin S Walters*** (`rwalters@fas.harvard.edu`), 379 Cabot House Mail Center, Cambridge, MA 02138. *Surfaces with Density and their Isoperimetric Regions.*

An interesting generalization of Riemannian surfaces admits a density which weights both perimeter and area. Incidentally, such manifolds with density play a crucial role in Perelman's proof of the Poincare Conjecture. I will discuss several examples, their geometry, and their isoperimetric regions. (Received September 22, 2006)