Meeting: 998, Houston, Texas, SS 20A, Special Session on Differential Geometry

998-58-366 **Ruth Gornet*** (`rgornet@uta.edu`), Mathematics Department, Box 19408, Arlington, TX 76019-0408, and **Jeffrey M. McGowan** (`jmcgowan@mac.com`). *Examples of lens spaces, isospectral on p-forms but not isospectral on functions.*

We discuss examples of lens spaces, which are spaces of the form S^n/L where L is a finite cyclic group acting by isometries on S^n. We present pairs of lens spaces that are isospectral on p-forms for some $p > 0$, but not isospectral on functions. Similar examples have been constructed on flat manifolds by Miatello and Rossetti. We discuss the context of these examples in light of the Sunada construction and its generalizations for producing isospectral manifolds. We also discuss other interesting examples that were discovered while looking for these. (Received March 02, 2004)

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