

Meeting: 1003, Atlanta, Georgia, SS 16A, AMS Special Session on Inverse Spectral Geometry, I

1003-58-882 **Alejandro Uribe*** (uribe@umich.edu), Mathematics Department, University of Michigan, 525 E. University Ave., Ann Arbor, MI 48109-1109. *Wave trace asymptotics with the equivariant spectrum.*

Let M be a compact Riemannian manifold and G a Lie group acting on M by isometries. Then the Laplacian on M commutes with the action, and therefore its eigenvalues, λ_j , can be classified according to the irreducible representations of G , ρ , that appear in the corresponding eigenspaces. The data $\{\lambda_j^\rho\}_{j,\rho}$ will be called the *equivariant spectrum*. I will describe various results on the asymptotic distribution of the λ_j^ρ as j and ρ tend to infinity (in a suitable sense). (Received September 30, 2004)