1062-34-249　　　　**Evelyn Stamey*** (`estamey1@ithaca.edu`), **Benjamin Steinhurst**, **Robert Kesler**, **Mandy Parshall** and **Christopher Kauffman**. *Quantum Mechanics on Laakso Spaces.* Preliminary report.

We define Laakso spaces and a Laplacian on them. Then we analyze the spectrum of the Hamiltonian given by the Laplacian and three potentials: infinite square well, infinitely tall parabolic well, and a Coulomb potential. Lastly, we calculate special values of the associated spectral zeta function to use in calculating an analogue to the Casimir effect. (Received August 10, 2010)