1067-43-813 **Gail Ratcliff*** (ratcliffg@ecu.edu) and **Chal Benson** (bensonf@ecu.edu). *Geometric models for the spectra of certain Gelfand pairs associated with Heisenberg groups.*

Let K be a compact Lie group acting on a finite dimensional Hermitian vector space V via some unitary representation. Then K acts by automorphisms on the associated Heisenberg group $H_V = V \times \mathbb{R}$ and we say that (K, H_V) is a Gelfand pair when the algebra $L^1_K(H_V)$ of integrable K-invariant functions on H_V commutes under convolution. In this situation an application of the Orbit Method yields an injective mapping Ψ from the space $\Delta(K, H_V)$ of bounded K-spherical functions on H_V to the space $\mathfrak{h}_V^*/K$ of K-orbits in the dual of the Lie algebra of H_V. We show that Ψ is a homeomorphism onto its image provided that the action of K on V is "well-behaved" in a sense made precise in this work. Our result encompasses a widely studied class of examples arising in connection with Hermitian symmetric spaces. (Received September 15, 2010)