REBECCA GOLDIN, George Mason University, Fairfax, Virginia 22039, USA Counting chambers of the moment polytope

Let M be a compact symplectic manifold with a Hamiltonian T action and moment map Φ . For H a subtorus of T, denote by M^H the fixed point set of the H action on T. The images of $\Phi(M)$ and $\Phi(M^H)$ for all one-dimensional subtori of T form a polytope carved into chambers. It is not at all trivial to count the number of these chambers. I will present an invariant which distinguishes the chambers in the case of SU(n) coadjoint orbits. The general story is still unknown. This is joint work with T. Holm.