1064-58-308 **Eugene Lerman***, Department of Mathematics, University of Illinois, Urbana, IL 61801, and **Yael Karshon**. *Non-compact symplectic toric manifolds.*

The paradigmatic result in symplectic toric geometry is the paper of Delzant that classifies compact connected symplectic manifolds with effective completely integrable torus actions, the so called (compact) symplectic toric manifolds. The moment map induces an embedding of the quotient of the manifold by the torus action into the dual of the Lie algebra of the torus; its image is a simple unimodular ("Delzant") polytope. This gives a bijection between simple unimodular polytopes and isomorphism classes of compact symplectic toric manifolds. For a non-compact symplectic toric manifold the image of the moment map need not be convex and the induced map of the quotient need not be an embedding. Moreover, even when the map of the quotient is an embedding, its image no longer determines the symplectic toric manifold; a degree two characteristic class makes an appearance. None the less there is a classification of non-compact symplectic toric manifolds and I will explain what it is. (Received September 13, 2010)