

1036-14-149

Angela Gibney* (agibney@math.upenn.edu), Department of Mathematics, David Rittenhouse Lab., 209 South 33rd Street, Philadelphia, PA 19104-6395, and **Diane Maclagan** (d.maclagan@warwick.ac.uk), Mathematics Institute, Zeeman Building, University of Warwick, Warwick, Coventry CV4 7AL UK. *Degenerations of $\overline{M}_{0,n}$ to toric varieties.*

Given a nice enough action of an algebraic torus T on a projective variety X , one can form the Chow and Hilbert quotients of X by T . The moduli space of stable n pointed rational curves arises as the Chow or Hilbert quotient of the Grassmannian $G(2, n)$ by the action of a maximal torus. If one is given equations for X in some projective embedding, it is possible to compute equations for these Chow and Hilbert quotients in the Cox Ring of various toric varieties. If X degenerates to a toric variety, then one also obtains degenerations of the Chow and Hilbert quotients to toric varieties. In this talk I will explain how natural degenerations of the Grassmannian to toric varieties lead to natural degenerations of the $\overline{M}_{0,n}$ to toric varieties and discuss the toric limits. This is joint work with Diane Maclagan. (Received January 21, 2008)