

1048-14-168

David E Anderson* (dandersn@umich.edu) and **Alan Stapledon** (astapl@umich.edu). *Arc spaces and equivariant cohomology.*

Let X be a smooth variety with an action of an algebraic group G . The arc space of X carries a natural action by the arc space of G ; we show how the orbits in the arc space determine classes in the equivariant cohomology of X . When X is a smooth toric variety, the classes of certain orbits form a \mathbb{Z} -linear basis for the equivariant cohomology of X . Our approach applies more generally to the situation where X has a dense free G -orbit. (Received February 05, 2009)