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Eric E Katz* (EEKatz@math.utexas.edu), Department of Mathematics, University of Texas,
Austin, TX 78712. *Localization on Toric Varieties and a new proof of Bernstein's theorem.*

Bernstein's theorem is an extension of Bezout's theorem that gives a bound on the number of intersection points of n hypersurfaces in an n -dimensional algebraic torus. We outline a new proof of Bernstein's theorem. The proof involves a combinatorial description of the map from equivariant to ordinary Chow cohomology of a toric variety together with Brion's formula for lattice point enumeration. The ideas behind this proof are motivated by tropical geometry.

This is joint work with Sam Payne. (Received August 05, 2007)