1056-19-1689   **Mu-wan Huang*** (`mu-wan.huang@smsu.edu`), Southwest Minnesota State University, 1501 State St., Marshall, MN 56258.
Fan Cohomology and Equivariant Chow Rings of Toric Varieties.

We study the sheaf cohomology groups for the rational, completed equivariant K-groups, and how they relate to the equivariant K-groups of non-smooth and non-affine toric varieties. The rational, complete equivariant K-groups coincide with the equivariant Chow rings for affine toric varieties. For a three-dimensional complete fan, we calculate the dimensions of the sheaf cohomology groups for the symmetric algebra sheaf. When the fan is given by a convex polytope, this information computes the rational, complete equivariant K-groups as extensions of sheaf cohomology groups. (Received September 22, 2009)