1112-13-318   **Robert Krone*** (`rckrone@gmail.com`), Department of Math & Stats, Jeffery Hall, University Ave., Kingston, Ontario K7L3X1, Canada. *Equivariant Gröbner bases of toric ideals.*

We consider a large class of monomial maps respecting an action of the infinite symmetric group. Previous work showed that the toric ideals arising as their kernels are finitely generated up to symmetry, but did not offer an effective algorithm for computing generating sets. We show that every such symmetric toric ideal also has a finite equivariant Gröbner basis for a particularly chosen monomial order. We can modify existing equivariant Gröbner basis algorithms to guarantee termination in the case that a finite equivariant Gröbner basis exists. Finally, using elimination we can compute equivariant Gröbner bases of the toric ideals in question, given the monomial map that they arise from. (Received August 07, 2015)