1061-55-74   **Sam Gitler*** (`sgitler@math.cinvestav.mx`), CINVESTAV, Mexico City, Mexico, and **Anthony Bahri**, **Frederick R Cohen** and **Martin Bendersky**. *Some results in toric topology.*

This is work partly in progress by A. Bahri, M. Bendersky, F.R. Cohen and S. Gitler. I will present a general splitting theorem of the suspension of a generalized moment angle complex (GMAC) as a suspension of a one point union of smashed generalized moment angle complexes (SGMAC). We give the homotopy type of the SGMACS in two general cases. We present a few of the applications that follow. Davis and Januszkiewicz introduced quasitoric manifolds, a generalization of toric varieties, which consist of a differentiable manifold of dimension 2n with an action of the n-torus so that the orbit space is an n-polytope.and similarly a small cover of a polytope, which consists of an n-manifold with a $(Z/2)^k$ action which has an n-polytope as orbit space I will present a construction of an infinite family of polyopes associated to given one and similarly an infinite family of abstract simplicial complexes associated to given one. It will be applied to construct infinite families of Gmacs associated to a given one, to quasitoric manifols and small covers of polytopes . We will mention some results about relations in each family and interrelations among the various families. (Received April 05, 2010)