1031-13-64   **Jessica Sidman*** (`jsidman@mtholyoke.edu`), Department of Mathematics and Statistics, 415A Clapp Laboratory, Mount Holyoke College, South Hadley, MA 01002. *Syzygies of varieties lying on toric varieties.* Preliminary report.

Suppose that X is a variety in projective space with defining ideal I contained in $S = k[x_0, ..., x_n]$. Many important geometric and algebraic features of X can be determined from a minimal free resolution of S/I. I will discuss situations in which X lies on a toric variety and the syzygies of the toric variety can be used to construct a minimal free resolution of S/I. If time permits I will also discuss generalizations involving secant varieties. (Received August 02, 2007)