1096-13-2724 **Ashwini Bhat**, **Jennifer Biermann*** (jbierman@mtholyoke.edu) and **Adam Van Tuyl**.

Generalized cover ideals and the persistence property.

Let I be a square-free monomial ideal in $R = k[x_1, \ldots, x_n]$, and consider the sets of associated primes $\mathrm{Ass}(I^s)$ for all integers $s \geq 1$. We introduce a family of square-free monomial ideals that can be associated to a finite simple graph G that generalizes the cover ideal construction. When G is a tree, we show our ideals satisfy the persistence property. We also describe the elements of $\mathrm{Ass}(I^s)$ and explicitly determine the index of stability. (Received September 18, 2013)