1106-05-1886   **Robert Davis*** (`davis.robert@uky.edu`), Department of Mathematics, 715 Patterson Office Tower, University of Kentucky, Lexington, KY 40506. *Integrally Closed Polytopes and an Application to Symmetric Magic Squares.*

It is an open question in Ehrhart theory to determine when the h^*-vector of a rational polytope is unimodal. While unimodality is difficult to prove in even highly restrictive situations, if the polytope is integrally closed then tools from commutative algebra can be useful. We will discuss new applications of toric algebra to certain families of integer polytopes formed from symmetric magic squares. (Received September 15, 2014)