1096-52-1726 **Marcus Bishop*** (marcus.bishop@wne.edu). *Computations for Coxeter arrangements and Solomon's descent algebra.* Preliminary report.

In joint work with J. M. Douglass, G. Pfeiffer, and G. Röhrle we refine a conjecture of Lehrer and Solomon on the structure of the Orlik-Solomon algebra of a finite Coxeter group W and we relate it to the descent algebra of W. As a result, we claim that both the group algebra of W and the Orlik-Solomon algebra of W can be decomposed into sums of induced one-dimensional representations of element centralizers, one for each conjugacy class of elements of W. To date the conjecture has been verified for the symmetric groups and the dihedral groups, as well for all Coxeter groups of exceptional type other than the group of type E_8. We discuss the proof in the case of the symmetric and dihedral groups and time permitting, the computer implementation for the exceptional groups. (Received September 16, 2013)