Matthew Moynihan* (mmoynihan@wooster.edu). The Flag Descent Algebra. Preliminary report.

We examine signed permutations and show that the type $A$ Eulerian descent algebra is a two-sided ideal in the algebra spanned by the basis elements from the type $A$ and type $B$ Eulerian descent algebras. This larger algebra corresponds to the flag descent number of Adin, Brenti, and Roichman and so is called the flag descent algebra. We end by describing a set of orthogonal idempotents which span this algebra. (Received September 17, 2013)