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**Benjamin J. Wyser\*** (bwyser@illinois.edu) and **Alexander Yong**. *Versions of Schubert and Grothendieck polynomials for symmetric orbit closures.*

Schubert polynomials (resp. Grothendieck polynomials) are a particular system of representatives for cohomology (resp. K-theory) classes of Schubert varieties in a flag manifold which possess a number of favorable combinatorial properties. Consider instead the problem of determining a system of cohomological or K-theoretic representatives of the closures of orbits of a symmetric subgroup  $K$  of  $GL_n$  on the flag manifold, where  $K$  is either the symplectic or the orthogonal group. We give solutions to these problems which share many of the favorable combinatorial properties of Schubert polynomials. Namely, our polynomial families are well-defined (or “self-consistent”), have non-negative integer coefficients, and are stable with respect to the containment of one flag manifold into a larger one. (Received February 15, 2016)