

1089-14-387

Mahir B. Can, Michael Joyce and Benjamin J. Wyser* (bwyser@illinois.edu), 250
Altgeld Hall, 1409 W. Green St., Urbana, IL 61801. *Factoring sums of Schubert
polynomials*. Preliminary report.

To the unique closed orbit of $H = Sp(2n, \mathbb{C})$ or $H = O(n, \mathbb{C})$ on the type A flag variety, there is a subset of Weyl group elements (the “ W -set” of the orbit) having the property that the class of the orbit closure in $H^*(G/B)$ is equal to the sum of the Schubert classes corresponding to elements of the W -set. These W -set elements have been computed explicitly in recent work of Can-Joyce. When combined with recent work of the presenter, which uses equivariant localization and the self-intersection formula to give a formula for this cohomology class, one obtains a non-trivial factorization of the corresponding sum of Schubert polynomials. We will discuss this result, as well as some recent generalizations of it to the closed orbits of other spherical subgroups on the flag variety. These other spherical subgroups correspond to other G -orbits on the wonderful compactification of the symmetric space G/H . (Received February 19, 2013)