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*Canonical classes and Schubert calculus in the symplectic category.*

A longstanding question in algebraic geometry and combinatorics is how to describe (combinatorially) the intersections of Schubert varieties in the flag manifold. Algebraically, this is equivalent to finding a formula for the multiplicative coefficients of a natural basis on the cohomology ring of  $G/P$ . These “structure constants” are positive for geometric reasons, and their analogs in equivariant K-theory and equivariant cohomology also satisfy a generalized notion of positivity. For equivariant theories, there is also a notion of positivity given by the restriction of the cohomology classes to fixed points of a maximal torus action on the flag variety. This also has been shown to be positive. In this talk, I will describe what happens outside the algebraic category. This is joint work with Susan Tolman, University of IL, Champaign-Urbana. (Received January 18, 2011)