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Chuck Hague* (chuck.hague@tufts.edu), Tufts University Department of Mathematics, Bromfield-Pearson Building, 503 Boston Ave., Medford, MA 02155. *Cohomology of Cotangent Bundles of Flag Varieties and the BK-Filtration.*

Let G be a complex algebraic group and let P be a parabolic subgroup of G . Let $T^*(G/P)$ denote the cotangent bundle of the flag variety G/P . In this talk I will describe results connecting cohomology of bundles on $T^*(G/P)$ to purely combinatorial objects such as filtrations on G -modules and generalizations of Lusztig's q -analog of weight multiplicity. (Received February 08, 2009)