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Charles S. Hague* (chague@email.unc.edu), CB #3250, Phillips Hall, UNC-CH, Chapel Hill, NC 27599, and **Shrawan Kumar**. *Cohomology of Cotangent Bundles of Flag Varieties and the BK-Filtration*. Preliminary report.

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 irreducible G -modules and Lusztig's q -analog of weight multiplicity. (Received January 06, 2007)