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William Graham* (wag@math.uga.edu) and **Sam Evens** (sevens@nd.edu). *The Belkale-Kumar cup product and relative Lie algebra cohomology.*

We study the Belkale-Kumar family of cup products on the cohomology of a generalized flag variety. We give an alternative construction of the family using relative Lie algebra cohomology, and in particular, identify the Belkale-Kumar cup product for every parameter. As a consequence, we extend a fundamental disjointness result of Kostant to a family of Lie algebras. (Received September 22, 2010)