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Caroline B. Wright* (cwright@math.arizona.edu), Department of Math University of Arizona, 617 N. Santa Rita Ave., P.O. Box 210089, Tucson, AZ 85721. *Computing Lie Algebra Cohomology for $p = 2$* . Preliminary report.

Title: Computing Lie algebra Cohomology for $p = 2$

Abstract: Let G be a simple simply connected affine algebraic group scheme defined over an algebraically closed field k of characteristic p , B be a Borel subgroup of G , and U be the unipotent radical of B . Let $\mathfrak{u} = \text{Lie}(U)$. Let $F : G \rightarrow G$ be the Frobenius map and G_1 (respectively B_1, U_1) be the Frobenius kernel of G (respectively B, U). In my PhD thesis I computed $H^2(U_1, k)$ when $p = 2$.

In this talk I will present how to compute the ordinary Lie algebra cohomology, $H^2(\mathfrak{u}, k)$ from the restricted Lie algebra cohomology, $H^2(U_1, k)$, specifically for the case when $p = 2$. (Received February 15, 2010)