

1102-20-89

Brian Parshall* (bjp8w@virginia.edu), Department of Mathematics, University of Virginia,
Charlottesville, VA 22903. *Structure of cohomology for restricted Lie algebras.*

Let G be a semisimple algebraic group, defined and split over \mathbb{F}_p , and let u be its restricted enveloping algebra. Irreducible u -modules L, L' are naturally rational G -modules and thus, for any positive integer n , $\text{Ext}_u^n(L, L')$ has a natural structure as a rational G -module. After untwisting, this G -module has been recently shown to have a good filtration, at least when p is large. We discuss this result (due to the speaker and Leonard Scott), indicating what is involved in its proof. We also speculate how the result might be extended to the case in which u is replaced by higher infinitesimal subgroups. (Received July 22, 2014)