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**Leonard L Scott\***, Dept. Mathematics, The University of Virginia, Kerchof Hall, Cabell Drive, Charlottesville, VA 22903. *Cohomology of algebraic, quantum, and finite groups.*

I will discuss some interrelated issues for Ext and cohomology groups over algebraic, quantum, and finite groups of Lie type. The main focus will be on irreducible coefficient modules, though others will enter. Much of the work involves relatively recent results obtained with Ed Cline and Brian Parshall, as well as older work with these collaborators. In part, this recent work was motivated by the desire to better understand the reductions modulo  $p$  of char. 0 quantum irreducible modules at a  $p$ th root of unity, whose study was initiated by G. Lusztig and Z. Lin. But as our work evolved, we realized the results were very relevant to some asymptotic cohomology questions raised by Robert Guralnick for general finite groups. I will mention some of these questions, and also mention some additional relevant results obtained by the author in collaboration with Nanua Xi. (Received September 14, 2008)