1046-20-1137 **Brian Parshall***, Department of Mathematics, University of Virginia, Charlottesville, VA 22903.

Filtrations of Weyl modules. Preliminary report.

This talk reports on current work with Leonard Scott. Let G be a semisimple, simply connected algebraic group defined over an algebraically closed field of positive characteristic p. For each dominant weight λ (taken with respect to some fixed set of positive roots), there is associated a Weyl module $\Delta(\lambda)$ and a reduced Weyl module $\Delta^{\mathrm{red}}(\lambda)$. Each is obtained by reduction mod p from an appropriate lattice (the first involving the universal enveloping algebra of the complex Lie algebra associated to G and the second from the quantum enveloping algebra). We discuss the issue of whether each $\Delta(\lambda)$ has a filtration with sections of the form $\Delta^{\mathrm{red}}(\mu)$. The answer is "no" if p is small (thanks to an interesting example shown to us by Will Turner). But we are able to prove some theorems of a positive nature which suggest the answer might be "yes" for large p. Some applications will also be touched upon. (Received September 14, 2008)