1102-20-163 **George McNinch*** (george.mcninch@tufts.edu), Department of Math, Tufts University, 503 Boston Ave, Medford, MA 02155. *Central subalgebras of the centralizer of a nilpotent element.* Preliminary report.

Let G be a connected and semisimple group over the field k, and suppose that the characteristic of k is *very good* for G. Suppose that $X \in \mathrm{Lie}(G)$ is *nilpotent*, write $C_G(X)$ for the centralizer of X, and write Z for the *center* of $C_G(X)$.

When X is *even*, Lawther and Testerman have shown that the dimension of Z coincides with the dimension d of the center of L, where L is a Levi factor of the parabolic subgroup P which is attached to X (recall that P is described by choosing an $\mathfrak{sl}_2$-triple in characteristic 0, and by geometric invariant theory in general).

In some recent work, we give an argument deforming the *Lie algebraic center* $\mathfrak{z}(\mathrm{Lie}(L))$ to a subspace of the center of $\mathfrak{c}_{\mathfrak{g}}(X)$. With some further work, this deformation may be used to show that $\dim Z \geq d$. The main reason for the interest in our work is that it avoids the extensive case-checking carried out by Lawther-Testerman. (Received July 28, 2014)