1062-22-21 **Ellen J Goldstein*** (ellen.goldstein@tufts.edu), Mathematics Department, 503 Boston Ave., Medford, MA 02155. *Normality of Closures of Conjugacy Classes in Classical Groups.* Preliminary report.

Given a linear algebraic group G over the algebraically closed field K of arbitrary characteristic, let $\mathfrak{g}$ be its Lie algebra. The Zariski closure of the adjoint orbit $\overline{Gx}$ for $x \in \mathfrak{g}$ is a subvariety of $\mathfrak{g}$. If $G = \mathrm{GL}(V)$ for V a finite dimensional vector space over K, then $\overline{Gx}$ is a normal variety for all $x \in \mathfrak{g} = M_n(K)$ (Kraft-Procesi, Donkin). If $G = O(V)$ or $Sp(V)$, Kraft and Procesi proved that $\overline{Gx}$ is normal for certain $x \in \mathfrak{o}(V)$ or $\mathfrak{sp}(V)$ in the case where $\mathrm{char}(K) = 0$. Following Donkin's proof for the general linear case in arbitrary characteristic, we show for certain nilpotent $x \in \mathfrak{g}$ that $\overline{Gx}$ is normal when $\mathrm{char}(K) \neq 2$. The proof makes use of properties of modules admitting a good filtration as a substitute for the lack of complete reducibility in prime characteristic. (Received June 12, 2010)