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George J McNinch* (george.mcninch@tufts.edu), Department of Mathematics, Tufts University, 503 Boston Ave, Medford, MA 02155. *Centralizers of nilpotent elements.*

Suppose that G is a connected and reductive algebraic group over a local field K . Write A for the ring of integers of K , and k for the residue field of A . Consider a parahoric group scheme P ; thus P is a smooth and affine group scheme over A whose generic fiber P_K identifies with G .

In the talk, we will discuss comparison between on the one hand, the orbits of $G(K)$ on K -rational nilpotent elements, and on the other hand, the $P(k)$ orbits on the k -rational nilpotent elements for the reductive quotient of the special fiber P_k . We will try to emphasize the role of centralizers in this comparison. (Received February 15, 2018)