1121-20-55 **David C. Vella*** (dvella@skidmore.edu), Dept. Mathematics, Skidmore College, 815 N. Broadway, Saratoga Springs, NY 12866. *Borel Subgroups of Modality Zero.*

Let G be a quasi-simple algebraic group over an algebraically closed field k, and let B be a Borel subgroup of G. If b is the Lie algebra of B, then B acts on b and on n, the nilradical of b, via the adjoint representation. The orbits of B in n are the nilpotent B-orbits. Informally speaking, the modality of B is the 'maximum number of parameters on which a family of nilpotent B-orbits in n may depend'. Thus, the modality of B is zero if and only if there are only finitely many nilpotent B-orbits in n. It turns out that there are only five examples of G in which B has modality zero. In this talk, we outline how to prove that result (a 1990 result due to Kashin); and also in those five cases, I present the defining equations of each orbit, and thereby derive the dimensions and closure order of the nilpotent orbits (recent results which are joint work with Madeleine Burkhart.) (Received July 07, 2016)