

1116-17-1656 **Zongzhu Lin*** (zlin@math.ksu.edu), Department of Mathematics, Kansas State University, Manhattan, KS 66506, and **Ke Ou**. *Geometry of the varieties of Borel subalgebras in Lie algebras of Cartan types*. Preliminary report.

For the Lie algebra of a semi-simple algebraic group, the set of all Borel subalgebras form the flag variety of the algebraic group. For a restricted Lie algebra of Cartan type Lie algebras, Borel subalgebras are no longer conjugate under the automorphism groups. In the cases of type W Lie algebras, the conjugacy classes Borel subalgebras. In this talk we will describe the geometry of the varieties of all Borel subalgebras and its relations with nilpotent variety. This is a joint work with Ke Ou. (Received September 21, 2015)