

1147-20-517

Mark Hunnell* (hunne11m@wssu.edu), **John Hutchens** and **Nathaniel Schwartz**. *On Involutions of Orthogonal Groups Defined Over a Field of Characteristic 2*. Preliminary report.

Let G be a connected reductive group defined over k , a field of even characteristic, and let H denote the fixed point group of G with respect to an involutorial automorphism θ . The symmetric k -varieties are the homogeneous spaces $G(k)/H(k)$, where $G(k)$ (respectively $H(k)$) denote the k -rational points of G (resp. H). When G is an orthogonal group defined over a field of characteristic 2, the involutions have been characterized when the corresponding quadratic space is nonsingular. We extend these results to defective and singular spaces. We discuss the conjugacy classes of these involutions, and conclude with a discussion of the fixed point groups of the involutions. (Received January 25, 2019)