1014-20-1073 **Farrah Jackson Chandler*** (chandlerf@uncw.edu), Department of Mathematics and Statistics, 601 South College Road, Wilmington, NC 28403-5970. *On the classification of k-involutions of* $\mathrm{SP}(2n, k)$. Preliminary report.

Symmetric spaces defined over a field k of characteristic not 2 are completely characterized by the k-involution of the corresponding reductive group. A first characterization of the isomorphism classes of k-involutions for reductive algebraic groups defined over a a field k of characteristic not 2 was given by Helminck in 2000 using 3 invariants. Two of these 3 invariants are difficult to classify. In this paper we consider the group $\mathrm{SP}(n, k)$ and give a different and much more detailed characterization of the isomorphism classes of k-involutions for this group. For this we first show that each involution of $\mathrm{SP}(n, k)$ is the restriction of an involution of $\mathrm{SL}(n, k)$. Next we determine which involutions of $\mathrm{SL}(2n, k)$ remain involutions when restricted to $\mathrm{SP}(2n, k)$. To complete the classification for a specific base field it remains to determine in how many $\mathrm{SP}(2n, k)$-isomorphy classes one $\mathrm{SP}(2n, k)$-isomorphy class of such a k-involution of $mathrmSL(2n, k)$ splits. (Received September 27, 2005)