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Nikolaus Vonessen* (nikolaus.vonessen@umontana.edu), Department of Mathematical Sciences, University of Montana, Missoula, MT 59812-0864. *Central simple algebras with involution: a geometric approach*. Preliminary report.

Let k be an algebraically closed base field of characteristic zero. The category equivalence between central simple algebras and irreducible, generically free PGL_n -varieties is extended to the context of central simple algebras with involution. The associated variety of a central simple algebra with involution comes with an action of $\mathrm{PGL}_n \rtimes \langle \tau \rangle$, where τ is the automorphism of PGL_n given by $\tau(h) = (h^{-1})^{\mathrm{transpose}}$. Basic properties of an involution are described in terms of the action of $\mathrm{PGL}_n \rtimes \langle \tau \rangle$ on the associated variety, and in particular in terms of the stabilizer in general position for this action. (Received August 11, 2008)