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Catherine A Buell* (cbuell@bates.edu). *On maximal quasi \mathbb{R} -split tori invariant under an involution.*

Real symmetric spaces are of importance in many fields, but their main use has been in mathematics and physics. Symmetric k -varieties are a generalization of the real symmetric spaces to spaces defined over arbitrary fields. These spaces are formed from a group G , an involution of G , and the fixed point group of the involution.

The conjugacy classes of maximal k -split tori can be used to determine the orbit decomposition of minimal parabolic subgroups acting on a symmetric variety which is important to the representation theory of symmetric varieties. Commuting pairs and associated pairs of involutions classify the tori within the fixed point groups of the involutions. I'll discuss various characterizations for any k . For $k = \mathbb{R}$, I'll provide a classification of the representatives of maximal quasi \mathbb{R} -split tori. (Received September 16, 2013)