Symmetric $k$-varieties were introduced in the late 1980s as generalizations of Riemannian symmetric spaces of Lie groups defined over $\mathbb{R}$ or $\mathbb{C}$ to linear algebraic groups defined over general fields. Recently the study of non-Riemannian symmetric spaces and generalizations of these spaces to other base fields has led to exciting applications in many areas including representation theory and singularity theory.

Let $G = \text{SL}_2(\mathbb{F}_q)$, where $q$ is odd, with involution $\theta$. With the fixed-point group $G^\theta = H$, one can define the generalized symmetric space $Q = G/H$. We will discuss the classification of the orbits of the action of $H$ on $Q$ since these orbits play an important role in understanding the representation theory of the space. (Received September 25, 2018)