On Exceptional Completions of Symmetric Varieties

Let $G$ be a simple group with an exceptional involution $\sigma$ having $H$ as fixed point set. We study the embedding of $G/H$ in the projective space $\mathbb{P}(V)$ for a simple $G$-module $V$ with a line fixed by $H$ but having no nonzero vector fixed by $H$. For a certain class of such modules $V$ we describe the closure of $G/H$ proving in particular that it is a smooth variety.

Keywords: Complete symmetric variety, exceptional involution.

MSC: 14M17, 14L30