Classification of 8-Dimensional Compact Projective Planes

Let $\mathcal{P}$ be a compact, 8-dimensional projective plane and $\Delta$ a connected closed subgroup of $\text{Aut} \, \mathcal{P}$. If $\Delta$ is semi-simple or has a normal torus subgroup, and if $\dim \Delta > 13$, then $\mathcal{P}$ is a Hughes plane.

Keywords: Compact projective planes, Lie collineation group, Hughes plane, Baer subplane.

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