ON THE AUTOMORPHISM GROUPS OF ORDERED SYMMETRIC SPACES OF CAYLEY TYPE

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Let $\mathfrak{g} = \mathfrak{g}_{-1} + \mathfrak{g}_0 + \mathfrak{g}_1$ be a simple graded Lie algebra (shortly, GLA) of Hermitian type. To the GLA there correspond an irreducible bounded symmetric domain D of tube type, and a symmetric space M of Cayley type. It is known that there exists a partial order $\leq$ on M arising from the causal structure. In this talk, I determined the relation between the automorphism group $\mathrm{Aut}(M, \leq)$ of the ordered symmetric space $(M, \leq)$ and the holomorphic automorphism group $G(D)$ of D. If $\dim M > 2$, then $\mathrm{Aut}(M, \leq) = G(D) \cdot \mathbf{Z}_2$. If $\dim M = 2$, then $\mathrm{Aut}(M, \leq) = \mathrm{Diffeo}^+(S^1) \cdot \mathbf{Z}_2$, where $\mathrm{Diffeo}^+(S^1)$ is the group of orientation-preserving diffeomorphisms of the circle S^1.

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