## A cohomological obstruction to the existence of Clifford-Klein forms.

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A Clifford-Klein form is a quotient of a homogeneous space G/H by a discrete subgroup of G acting properly and freely on G/H. It naturally admits a structure of a manifold locally modelled on G/H. Comparing relative Lie algebra cohomology and de Rham cohomology of a Clifford-Klein form, we give a new obstruction to the existence of compact Clifford-Klein forms of a given homogeneous space. As a corollary, we see that every complete pseudo-Riemannian manifold of signature (p,q) with positive constant sectional curvature is noncompact if p, q > 0, q: odd.