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Vladimir Chernousov, Lucy Lifschitz and Dave Witte Morris* (Dave.Morris@uleth.ca), Department of Mathematics & Computer Science, University of Lethbridge, Lethbridge, Alberta T1K 3M4, Canada. Locally symmetric subspaces of locally symmetric spaces.

It has long been known that only two manifolds are minimal in the category of symmetric spaces X = G/K of rank greater than 1. (We assume G is a connected, semisimple Lie group with no compact factors.) Namely, every symmetric space in this category contains either the product of two hyperbolic planes or the symmetric space associated to $SL(3, \mathbb{R})$. The corresponding problem for noncompact spaces of finite volume that are locally symmetric, rather than symmetric, also has a fairly simple answer, even though infinitely many manifolds are minimal in this category. The proof goes through a case-by-case analysis of the possible Q-forms of G. The compact case will have a more complicated answer, and remains open. (Received September 15, 2008)