

1046-22-1366

**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  $\mathbb{Q}$ -forms of  $G$ . The compact case will have a more complicated answer, and remains open. (Received September 15, 2008)