1085-53-60 **Matthew Stover*** (stoverm@umich.edu), Department of Mathematics, 530 Church Street, Ann Arbor, MI 48109. *The number of ends of hyperbolic n-manifolds.*

Let M be a noncompact finite volume complete hyperbolic n-manifold. Then M has a finite number $e(M)$ of topological ends. Examples with $e(M) = 1$ are easy to construct in dimensions 2 and 3, e.g., once punctured surfaces and knot complements in the 3-sphere, respectively. No examples are known $n \geq 4$, and 1-ended orbifolds were only known to exist for $n \leq 9$. I will discuss the proof of the following theorem: 1-ended arithmetic hyperbolic n-orbifolds do not exist for $n \geq 30$. This is a consequence of a more general result, namely, that for any fixed $k > 0$, the number of arithmetic negatively curved locally symmetric spaces N with $e(N) = k$ fall into finitely many commensurability classes. (Received August 28, 2012)