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Cusp cross-sections of arithmetic hyperbolic manifolds

The cusps of a finite-volume hyperbolic $(n+1)$-manifold have cross-sections homeomorphic to compact n-manifolds that admit a flat structure. In 2009, McReynolds built on work of Long and Reid to prove that every compact flat n-manifold B occurs as a cusp cross-section of some hyperbolic $(n+1)$-manifold. In this talk, we will discuss a condition that determines whether a given flat manifold B occurs as a cusp cross-section in a given commensurability class C of arithmetic hyperbolic manifolds; in particular, some B can be obstructed from appearing some classes C. Joint work with Duncan McCoy.