

Meeting: 999, Nashville, Tennessee, SS 10A, Special Session on Geometry of Hyperbolic Manifolds

999-57-206

John G. Ratcliffe* (ratclifj@math.vanderbilt.edu), Department of Mathematics, Vanderbilt University, 1326 Stevenson Center, Nashville, TN 37240, and **Steven T. Tschantz**, Vanderbilt University. *Some examples of aspherical 4-manifolds that are homology 4-spheres.*

Infinitely many examples of aspherical 4-manifolds that are homology 4-spheres are constructed by performing Dehn surgery on the hyperbolic complement M of five linked 2-tori in S^4 recently constructed by D. Ivanšić. The existence of aspherical homology 4-sphere manifolds solves problem 4.17 on R. Kirby's problem list. (Received August 23, 2004)