Meeting: 1001, Evanston, Illinois, SS 21A, Special Session on Low-Dimensional Topology and Kleinian Groups

1001-57-55 **Nathan Darrell Broaddus*** (broaddus@math.cornell.edu), 310 Malott Hall, Cornell University, Ithaca, NY 14853. *Noncyclic covers of knot complements.*

Hempel has shown that the fundamental groups of knot complements are residually finite. This implies that every nontrivial knot must have a finite-sheeted, noncyclic cover. We give an explicit bound, $\Phi(c)$, such that if K is a nontrivial knot in the three-sphere with a diagram with c crossings then the complement of K has a finite-sheeted, noncyclic cover with at most $\Phi(c)$ sheets. (Received July 28, 2004)