

1097-57-249

**Dennis J. Garity\*** (garity@math.oregonstate.edu) and **Dušan Repovš**  
(dusan.repovs@guest.arnes.si). *Homogeneity Groups of Ends of Open 3-Manifolds.*

For every finitely generated Abelian group  $G$ , we construct an irreducible open 3-manifold  $M_G$  whose end set is homeomorphic to a Cantor set and with end homogeneity group of  $M_G$  isomorphic to  $G$ . The end homogeneity group is the group of self-homeomorphisms of the end set that extend to homeomorphisms of the 3-manifold. This is the same as the embedding homogeneity group of the Cantor set. The techniques involve computing the embedding homogeneity groups of carefully constructed Antoine type Cantor sets made up of rigid pieces. In addition, a generalization of an Antoine Cantor set using infinite chains is needed to construct an example with integer homogeneity group. Results about local genus of points in Cantor sets and about geometric index are also used. (Received January 23, 2014)