ABSOLUTENESS FOR UNIVERSALLY BAIRE SETS AND THE UNCOUNTABLE II

ILIJAS FARAH, RICHARD KETCHERSID, PAUL LARSON, AND MENACHEM MAGIDOR

Abstract. Using $\diamondsuit$ and large cardinals we extend results of Magidor–Malitz and Farah–Larson to obtain models correct for the existence of uncountable homogeneous sets for finite-dimensional partitions and universally Baire sets. Furthermore, we show that the constructions in this paper and its predecessor can be modified to produce a family of 2^{ω_1}-many such models so that no two have a stationary, costationary subset of ω_1 in common. Finally, we extend a result of Steel to show that trees on reals of height ω_1 which are coded by universally Baire sets have either an uncountable path or an absolute impediment preventing one.

Date: October 31, 2006.

The first author is partially supported by NSERC. The third author was supported in part by NSF grant DMS-0401603 and a summer research grant from Miami University. Part of this research was conducted while the third and fourth authors were in residence at the Institute for Mathematical Sciences at the National University of Singapore, and we thank the institute for its hospitality.