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*Spectra of uniformity*

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**Abstract:** We study some limitations and possible occurrences of uniform ultrafilters on ordinals without the axiom of choice. We prove an Easton-like theorem about the possible spectrum of successors of regular cardinals which carry uniform ultrafilters; we also show that this spectrum is not necessarily closed.

**Keywords:** uniform ultrafilter; axiom of choice; measurable cardinal; strongly compact cardinal

**AMS Subject Classification:** 03E25, 03E55, 03E35

REFERENCES

- [1] Apter A. W., Dimitriou I. M., Koepke P., *The first measurable cardinal can be the first uncountable regular cardinal at any successor height*, MLQ Math. Log. Q. **60** (2014), no. 6, 471–486.
- [2] Blass A., *A model without ultrafilters*, Bull. Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys. **25** (1977), no. 4, 329–331.
- [3] Feferman S., *Some applications of the notions of forcing and generic sets*, Fund. Math. **56** (1964/1965), 325–345.
- [4] Herrlich H., Howard P., Keremedis K., *On preimages of ultrafilters in ZF*, Comment. Math. Univ. Carolin. **57** (2016), no. 2, 241–252.
- [5] Jech T., *Set Theory*, Springer Monographs in Mathematics, Springer, Berlin, 2003.
- [6] Karagila A., *Embedding orders into the cardinals with  $DC_\kappa$* , Fund. Math. **226** (2014), no. 2, 143–156.
- [7] Solovay R. M., *A model of set-theory in which every set of reals is Lebesgue measurable*, Ann. of Math. (2) **92** (1970), 1–56.
- [8] Truss J., *Models of set theory containing many perfect sets*, Ann. Math. Logic **7** (1974), no. 2–3, 197–219.