

- YAIR HAYUT, *Stationary Reflection at the successor of a singular cardinal*.
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In the paper [2], the consistency of stationary reflection holds at all stationary subset of $\aleph_{\omega+1}$ which concentrate on ordinals of uncountable cofinality, was obtained from the existence of a cardinal κ which is κ^+ -supercompact. Using a similar method, Zeman showed in [5] that $\neg\Box_{\aleph_\omega}$ is consistent relative to the weaker assumption — a measurable subcompact cardinal. In both cases, Prikry forcing is used in order to singularize a measurable cardinal that will become the new \aleph_ω . When trying to improve those results in order to obtain full stationary reflection at $\aleph_{\omega+1}$ one needs to deal with the non-reflecting stationary sets which are introduced by the Prikry forcing.

In this talk I will describe the main ideas behind the method which is used in a joint work with Spencer Unger, [4]. In this work we obtain full stationary reflection at $\aleph_{\omega+1}$, starting from a large cardinal axiom weaker than the one from [2]. This method uses the ideas of [1] and [3], and enables us to analyse the properties of a Prikry type generic extensions by using internal analysis of some iterated ultrapowers, as well as construct a specialized Prikry type forcing notion with a controlled behaviour for our problem.

[1] LEV BUKOVSKÝ *Iterated ultrapower and Prikry's forcing* *Commentationes Mathematicae Universitatis Carolinae* vol. 18 (1977), no. 1, pp.77–85.

[2] JAMES CUMMINGS, MATTHEW FOREMAN AND MENACHEM MAGIDOR *Squares, scales and stationary reflection* *Journal of Mathematical Logic* vol. 1 (2001), no. 1, pp.35–98.

[3] PATRICK DEHORNOY *Iterated ultrapowers and Prikry forcing* *Annals of Mathematical Logic* vol. 15 (1978), no. 2, pp.109–160.

[4] YAIR HAYUT AND SPENCER UNGER *Stationary Reflection* *arXiv preprint* arXiv:1804.11329 (2018)

[5] MARTIN ZEMAN, *Two upper bounds on consistency strength of $\neg\Box_{\aleph_\omega}$ and stationary set reflection at two successive \aleph_n* *Notre Dame Journal of Formal Logic*, vol. 58 (2017), no. 3, pp. 409–432.