

On n -stationary sets

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Session: 32. Set Theory

A subset S of a regular uncountable cardinal κ is *0-stationary* if it is unbounded. And it is *$n+1$ -stationary* if for every $m \leq n$ and every m -stationary subset T of κ , there exists some $\alpha \in S$ where it m -reflects, i.e., $T \cap \alpha$ is m -stationary in α . Thus, S is 1-stationary if and only if it is stationary in the usual sense. But the existence of 2-stationary sets has already some large-cardinal consistency strength. We present some recent results on n -stationary subsets of regular cardinals. In particular, we shall look at (1) the characterization of n -stationarity in terms of non-discreteness of some natural topologies on ordinals, (2) the equivalence between n -stationarity and second-order indescribability in the constructible universe L , (3) the ideals associated to non n -stationary sets, and (4) the consistency strength of n -stationarity.