

STRONG DOWNWARD LÖWENHEIM-SKOLEM THEOREMS, LARGE CARDINALS AND SET-THEORETIC COMPLEXITY

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ABSTRACT. Results of Bagaria, Magidor, Väänänen, Wilson and others establish deep connections between the validity of strong extensions of the downward Löwenheim-Skolem theorem and the existence of large cardinals. In particular, recent work of Bagaria and Wilson shows that principles of *product structural reflection* can be used to obtain uniform characterizations of large cardinal properties in the region between strongness and Woodinness. The work I want to present in my talk establishes an analogous correspondence in the lower part of the large cardinal hierarchy. More precisely, by weakening the corresponding reflection principles, it can be shown that subtle cardinals, introduced by Kunen and Jensen, relate to strongly unfoldable cardinals, introduced by Villaveces, in the same way as Woodin cardinals relate to strong cardinals.