LINEARLY ORDERED SMALL THEORIES WITH CONTINUUM NUMBER OF COUNTABLE MODELS

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The study of the countable spectrum of ordered theories is complicated by the existence of theories with a "fictitious"linear order: there is always a linearly ordered theory with the same number of countable models as the given (unordered) theory. Therefore, in contrast to the example of M. Rubin's work [1] on Vaught's conjecture for pure linear orders enriched with predicates, we will consider an arbitrary language, but we will introduce restrictions on the theory itself. The properties and spectrum of theories with definable linear order were studied by mathematicians as L. Mayer, M. Rubin, S.V. Sudoplatov, A. Alibek - B.S. Baizhanov - T. Zambarnaya, B.Sh. Kulpeshov and S. Maconja, P. Tanovich ([2]-[12]).

In our talk we consider the conditions on small ordered theories assuring maximal numbers of countable non-isomorphic models. This research is based on the studying the properties linear orders defined on the classes of convex equivalence of one-formulas, classifications of one-types in (small) ordered theories. As application of obtained conditions we consider ordered theories with few number (non-maximal) of countable models of some classes ordered small theories.

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