Strongly minimal fragments in existentially prime convex Jonsson theory

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Abstract: Let Jonsson theory T [1] is complete for the existential sentences in the language L and C is its semantic model.

Let X is Jonsson subset [2] of T, and M is existentially closed submodel of semantic model C of considered Jonsson theory T, where $dcl(X) = M$.

$Th_{\forall\exists}(M) = T_M$, T_M is the Jonsson fragment of Jonsson set X [2] .

Let $I(E_T, \aleph_0)$ denotes the number of countable existentially closed models of Jonsson theory T. On strongly minimality for Jonsson sets in the frame of the Jonsson theories one can find in [2].

Theorem 1. *If theory T is the strongly minimal existentially prime convex Jonsson theory complete for existential sentences, then T_M is categorical for $k \geq \aleph_1$ and $I(E_T, \aleph_0) \leq \aleph_0$.*

Theorem 2. *If theory T is Jonsson theory complete for the existential sentences is uncountable categorical and it has Jonsson strong minimal $\mathfrak{L}$-formula, then either T_M is $\aleph_0$- categorically or $I(E_{T_M}, \aleph_0) = \aleph_0$.*

Theorem 3. *If theory T Jonsson existentially prime convex theory complete for the existential sentence is uncountable categorical, but not $\aleph_0$-categorical, then $I(E_{T_M}, \aleph_0) \geq \aleph_0$.*

Keywords: Jonsson theory, Jonsson set, forcing companion, stable theory

2010 Mathematics Subject Classification: 03C05, 03C25, 03C45

References

[1] Yeshkeyev A.R., “Jonsson Theories”, *Publisher of the Karaganda state university*, 249 p., 2009.

[2] Yeshkeóev A.R., “On Jonsson sets and some their properties / 2014 European summer meeting of the association for Symbolic Logic Colloquium ’14 Vienna, Austria, July 14-19, 2014”, *The Bulletin of Symbolic Logic*, Vol. 21, No.1, pp.99-100, 2015.