

- ▶ ROMAN WENCEL, *Weakly o-minimal expansions of ordered fields of finite transcendence degree*.

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A linearly ordered structure $\mathcal{M} = (M, \leq, \dots)$ is said to be weakly o-minimal iff every subset of M definable in \mathcal{M} is a finite union of convex sets. Weak o-minimality unlike o-minimality is not preserved under elementary equivalences. We say that a theory T is weakly o-minimal if all its models are weakly o-minimal structures. If \mathcal{M} is a weakly o-minimal expansion of an ordered field, then the underlying field is real closed. During the talk I am going to discuss two results concerning weakly o-minimal expansions of real closed fields of finite transcendence degree.

Theorem 1. If K is a real closed subfield of the reals of finite transcendence degree, then every weakly o-minimal expansion of K has weakly o-minimal theory and is polynomially bounded.

Theorem 2. If K is a real closed field of finite transcendence degree, then every weakly o-minimal non-valuational expansion of K has weakly o-minimal theory and is power bounded.

[1] R. WENCEL, *On expansions of weakly o-minimal non-valuational structures by convex predicates*, *Fundamenta Mathematicae*, vol. 202 (2009), pp. 147–159.

[2] R. WENCEL, *Weakly o-minimal expansions of ordered fields of finite transcendence degree*, *Bulletin of the London Mathematical Society*, vol. 41 (2009), pp. 109–116.

[3] R. WENCEL, *Weakly o-minimal non-valuational structures*, *Annals of Pure and Applied Logic*, vol. 154 (2008), pp. 139–162.