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Distal and non-distal ordered abelian groups.

It is a classical result of Gurevich and Schmitt (1984) that ordered abelian groups have NIP (the *non-independence property*). Two refinements of NIP theories that we wish to consider are distality (a notion of pure instability) and dp-minimality (a notion of tameness). We conjecture that for the class of ordered abelian groups, these two notions coincide. Janhke, Simon, and Walsberg (2017) proved that an ordered abelian group G is dp-minimal iff there is a prime p such G/pG is infinite; thus the job is to prove that this same property also characterizes the distal ordered abelian groups. In this talk I will report on progress towards resolving this conjecture. This is joint work with Matthias Aschenbrenner and Artem Chernikov. (Received September 06, 2017)