

1145-03-1209

Andrey Morozov* (morozov@math.nsc.ru), Sobolev Institute of Mathematics SB RAS,
Novosibirsk, 630090, Russia. *On Σ -definable preorderings over the reals.*

We prove that any preorder Σ -definable with parameters over the hereditarily finite superstructure over the reals ($\text{HF}(\mathbb{R})$) does not contain a chain of type ω_1 . Using this result, we obtain complete descriptions of ordinals and Gödel constructive sets of kind L_α Σ -presentable over $\text{HF}(\mathbb{R})$ and prove that there is no such presentations for the structures of T^- , m^- , 1^- , and tt -degrees. (Received September 20, 2018)