

Stability of Free products in Bounded Balls

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Abstract

In a series of papers, Z. Sela proved that free groups, and more generally torsion-free hyperbolic groups, have a stable first-order theory. It has been conjectured by E. Jaligot that the free product of two arbitrary stable groups is stable. However, a full answer seems to become a very large project of generalization, from free groups to free products, of the famous articles of Sela. Until this monumental task is done, we provide a very preliminary result in the direction of the stability of free products of stable groups, restricting ourselves to quantifier-free definable sets and to bounded balls of free products.