

**Gildenhuys, D.; Kharlampovich, O.; Myasnikov, A.**

**CSA-groups and separated free constructions.** (English) Zbl 0838.20025

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A group  $G$  is called a CSA-group if all maximal Abelian subgroups are malnormal; i.e.  $M^x \cap M = 1$  for every maximal Abelian subgroup  $M$  and  $x \in G \setminus M$ . The class of CSA-groups contains all torsion free hyperbolic groups and all groups freely acting on  $\Lambda$ -trees. The authors describe conditions under which HNN-extensions and amalgamated free products of CSA-groups are again CSA. One-relator CSA-groups are characterised as follows in the paper: a torsion free one-relator group is CSA if and only if it does not contain  $F_2 \times \mathbb{Z}$  or one of the metabelian Baumslag-Solitar groups  $B_{1,n} = \langle x, y \mid yxy^{-1} = x^n \rangle$ ,  $n \in \mathbb{Z} \setminus \{0, 1\}$ ; a one-relator group with torsion is CSA if and only if it does not contain the infinite dihedral group.

Reviewer: P.Zalesskij (Wien)

**MSC:**

- [20E06](#) Free products of groups, free products with amalgamation, Higman-Neumann-Neumann extensions, and generalizations
- [20F05](#) Generators, relations, and presentations of groups
- [20E07](#) Subgroup theorems; subgroup growth

Cited in **14** Documents

**Keywords:**

residually finite groups; maximal Abelian subgroups; CSA-groups; torsion free hyperbolic groups; HNN-extensions; amalgamated free products; torsion free one-relator groups; metabelian Baumslag-Solitar groups

**Full Text:** [DOI](#)

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