

Meeting: 1004, Bowling Green, Kentucky, SS 14A, Special Session on Geometric Topology and Group Theory

1004-20-40 **Alexey Muranov*** (muranov@math.vanderbilt.edu), Vanderbilt University, Dept. of Mathematics, 1326 Stevenson Center, Nashville, TN 37240-0001. *On one question about torsion-free groups with threadlike bases.* Preliminary report.

The following question posed by V. V. Bludov in the Kourovka notebook in 1995 is answered in this paper: If a torsion-free group G has a finite system of generators a_1, \dots, a_n such that every element of G has a unique presentation in the form $a_1^{k_1} \dots a_n^{k_n}$, where $k_i \in \mathbb{Z}$, is it true that G is virtually polycyclic? The answer is negative. A counterexample is constructed by means of a group presentation by generators and defining relations. (Received January 10, 2005)