Protasov, Igor

Weakening topologies on a countable Abelian group of finite exponent.  (English. Ukrainian original) [Zbl 1461.22002]

The notion of a locally minimal topological group was introduced by Morris and Pestov. A topological group \((G, \tau)\) is called locally minimal if there exists a neighborhood \(V\) of identity such that if \(\sigma \subseteq \tau\) is a group topology on \(G\) such that \(V\) is a \(\sigma\)-neighborhood of identity, then \(\sigma = \tau\).

The author proves the following result which solves the Question 7.35(b) from [D. Dikranjan and M. Megrelishvili, in: Recent progress in general topology III. Based on the presentations at the Prague symposium, Prague, Czech Republic, 2001. Amsterdam: Atlantis Press, 229–327 (2014; Zbl 1308.54002)]: Any countable abelian group of finite exponent does not admit a locally minimal group topology.

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References:


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