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Strengthening the group topology of an Abelian group to a complete one. (Russian)

Zbl 0691.22001

Mat. Issled. 105, 105-119 (1988).

Every abelian group G can be equipped with a non-discrete topology, with respect to which G is a complete topological group. The author gives a construction of this topology for any torsion-free group. It is shown with the help of this result that every topology on an abelian group, which is consistent with group multiplication and satisfies the first axiom of countability, can be strengthened to be a complete non-discrete topology satisfying the separability axiom.

Reviewer: A.Klimyk

MSC:

22A05 Structure of general topological groups

54H15 Transformation groups and semigroups (topological aspects)

Cited in **2** Documents

Keywords:

abelian group; complete topological group; torsion-free group; first axiom of countability

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