1116-20-496 **Luise-Charlotte Kappe*** (menger@math.binghamton.edu), **Patrizia Longobardi** and **Mercede Maj**. *On autocommutators in infinite abelian groups.* Preliminary report.

It is well-known that the set of commutators does not necessarily form a subgroup in a group G. For $g \in G$ and $\varphi \in Aut(G)$, the automorphism group of G, we define the autocommutator of g and φ as $[g,\varphi] = g^{-1} \cdot g^{\varphi}$. We denote by $K^* = \{[g,\varphi]; g \in G,\ \varphi \in Aut(G)\}$, the set of all autocommutators of G, and write $G^* = \langle K^*(G)\rangle$ for the autocommutator subgroup of G.

There exists a group of order 64 of nilpotency class 2 in which the autocommutators do not form a subgroup and this group is of minimal order in this respect. It was also shown that the set of autocommutators in a finite abelian group always equals the autocommutator subgroup.

In this talk we will discuss the relationship between $K^*(G)$ and G^* in infinite abelian groups. In particular we have shown that in such groups we do not have necessarily $K^*(G) = G^*$. (Received September 04, 2015)