

1067-16-429

Leonid Krop* (lkrop@depaul.edu), Department of Mathematical Sciences, DePaul University, 2320 N. Kenmore, Chicago, IL 60614, and **Yevgenia Kashina** (ykasina@depaul.edu), Department of Mathematical Sciences, DePaul University, 2320 N. Kenmore, Chicago, IL 60614.
Classification of isomorphism types of a class of abelian extensions, by Y. Kashina and L. Krop.

We determine the isomorphism types in the class of Hopf algebra extensions of a cyclic group C_2 of order 2 by an arbitrary finite, elementary 2- group G . Put $\text{Aut}_{C_2}(G)$ for the group of C_2 - linear automorphisms of G . Our main result asserts existence of a bijection between the orbits of $\text{Aut}_{C_2}(G)$ in the group of Hopf algebra extensions $\text{Opext}(kC_2, kG)$ and the isomorphism types of algebras in our class. In the special case of commutative or cocommutative extensions H , assuming G has rank n , the number of isotypes is $n + 1$ if H is cocommutative, and $\frac{3n+(-1)^n+2}{2}$ if H is commutative. (Received September 23, 2010)