

1035-13-1253

Alan Koch* (akoch@agnesscott.edu), 141 E. College Ave., Decatur, GA 30030. *The Dieudonné module of a Hopf algebra generated by two elements.* Preliminary report.

Let k be a perfect field of characteristic p . There is a categorical equivalence between Dieudonné modules and finite abelian k -Hopf algebras of p -power order. In the case where the Dieudonné module is killed by a power of F and V the corresponding Hopf algebra is local with local linear dual. Here, we describe all Dieudonné modules killed by a power of F and V with the property that their corresponding Hopf algebras are generated by as k -algebras by (at most) two elements. Such a Dieudonné module arises as an extension of two modules, each of which corresponding to a monogenic Hopf algebra. We compute this extension group, and give conditions for when the constructed Hopf algebra is again monogenic. (Received September 19, 2007)