

1108-20-103

**Mark L. Lewis\*** ([lewis@math.kent.edu](mailto:lewis@math.kent.edu)), Department of Mathematical Sciences, Kent State University, Kent, OH 44242. *Camina  $p$ -groups of nilpotence class 3.*

A Camina group is a (finite) group where every element  $g \in G \setminus G'$  has  $gG'$  for its conjugacy class. It is known that a finite Camina group is either a Frobenius group or a  $p$ -group for some prime  $p$ . Furthermore, it is known that if  $G$  is a Camina  $p$ -group for some prime  $p$ , then  $G$  has nilpotence class at most 3, and there exist Camina  $p$ -groups of nilpotence class 3 for every odd prime  $p$ .

In this talk, we determine which groups can occur as  $G/Z(G)$  when  $G$  is a Camina  $p$ -group of nilpotence class 3. We will also present some results regarding  $|Z(G)|$  when  $G$  is a Camina  $p$ -group of nilpotence class 3. (Received January 05, 2015)