1046-20-218   **Arturo Magidin*** (`magidin@member.ams.org`), Mathematics Department, University of Louisiana at Lafayette, P.O. Box 41010, Lafayette, LA 70504-1010, and **Robert F Morse** and **Azhana Ahmad**. *New classification of* 2-*generated p-groups of class* 2.

In this talk we will describe a new approach to classify 2-generated p-groups of class two, by recognizing each such group of order p^n as a central extension of $[G, G] \cong C_{p^\gamma}$ by $C_{p^\alpha} \times C_{p^\beta}$, where $\alpha + \beta + \gamma = n$.

We use the presentations to obtain the number of non-isomorphic 2-generator groups of class at most 2 and order p^n, some invariants of the groups, and to compute some of their homological invariants and properties (e.g., determine which ones are capable). (Received August 20, 2008)