## 1027-20-175 Bryson W Finklea, Terri Moore and Vadim Ponomarenko<sup>\*</sup> (vadim123@gmail.com), Department of Mathematics and Statistics, 5500 Campanile Drive, San Diego State University, San Diego, CA 92182, and Zachary Turner. On Groups with Excessive Davenport Constant.

For a fixed finite abelian group G, consider all multisets of elements whose sum is zero. These multisets form a semigroup under the multiset sum operation. The Davenport constant, D(G), denotes the largest cardinality of the atoms of this semigroup. A simple, constructive, lower bound  $D^*(G)$  has been known for 40 years. For many groups, in fact  $D^*(G) = D(G)$ . For certain groups, however, it is known that  $D^*(G) < D(G)$ . We determine D(G) for some of these violative groups. (Received February 26, 2007)