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Jared Alexander Bass* (jbass@fas.harvard.edu), 15 Lowell Mail Center, Cambridge, MA 02138. *Improving The Erdős-Ginzburg-Ziv Theorem For Some Non-Abelian Groups.*

Let G be a group of order m . Define $s(G)$ to be the smallest value of t such that out of any t elements in G , there are m with product 1. The Erdős-Ginzburg-Ziv theorem gives the upper bound $s(G) \leq 2m - 1$, and a lower bound is given by $s(G) \geq D(G) + m - 1$, where $D(G)$ is Davenport's constant. A conjecture by Zhuang and Gao asserts that $s(G) = D(G) + m - 1$, and Gao has proven this for all abelian G . We have verified the conjecture for a few classes of non-abelian groups: dihedral and dicyclic groups, and all non-abelian groups of order pq for p and q prime. (Received September 13, 2006)