

1154-05-2136

**Trajan Hammonds\*** (thammond@andrew.cmu.edu). *Modified Erdős-Ginzburg-Ziv Constants for  $(\mathbb{Z}/n\mathbb{Z} \times \mathbb{Z}/m\mathbb{Z})$ .*

For an abelian group  $G$  and an integer  $t > 0$ , the *modified Erdős-Ginzburg-Ziv constant*  $s'_t(G)$  is the smallest integer  $\ell$  such that any zero-sum sequence of length at least  $\ell$  with elements in  $G$  contains a zero-sum subsequence (not necessarily consecutive) of length  $t$ . We compute bounds for  $s'_t(G)$  for  $G = (\mathbb{Z}/n\mathbb{Z})^2$  and  $G = (\mathbb{Z}/n_1\mathbb{Z} \times \mathbb{Z}/n_2\mathbb{Z})$ . We also compute bounds for  $G = (\mathbb{Z}/p\mathbb{Z})^d$  where the subsequence can be any length in  $\{p, \dots, (d-1)p\}$ . Lastly, we investigate the Erdős-Ginzburg-Ziv constant for  $G = (\mathbb{Z}/n\mathbb{Z})^2$  and subsequences of length  $tn$ . (Received September 17, 2019)