

1154-11-458

Emily Eckels, Steven Jin* (sjin6816@umd.edu), **Andrew Ledoan** and **Brian Tobin**.

Linnik's large sieve and the L^1 norm of exponential sums.

The method of proof of Balog and Ruzsa and the large sieve of Linnik are used to investigate the behaviour of the L^1 norm of a wide class of exponential sums over the square-free integers and the primes. Further, a new proof of the lower bound due to Vaughan for the L^1 norm of an exponential sum with the von Mangoldt Λ function over the primes is furnished. Ramanujan's sum arises naturally in the proof, which also employs Linnik's large sieve. (Received September 04, 2019)