

1135-11-136

Tessa Cotron* (tessa.cotron@emory.edu), **Anya Michaelson** (anm1@williams.edu), **Emily Stamm** (emstamm@vassar.edu) and **Weitao Zhu** (wz1@williams.edu). *Lacunary Eta-quotients Modulo Powers of Primes.*

An integral power series is called lacunary modulo M if almost all of its coefficients are divisible by M . Motivated by the parity problem for the partition function, $p(n)$, Gordon and Ono studied the generating functions for t -regular partitions, and determined conditions for when these functions are lacunary modulo powers of primes. We generalize their results in a number of ways by studying infinite products called Dedekind eta-quotients and generalized Dedekind eta-quotients. We then apply our results to the generating functions for the partition functions considered by Nekrasov, Okounkov, and Han. (Received August 01, 2017)