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**Angelica Babei\***, babeiangelica@gmail.com, and **Larry Rolan** and **Ian Wagner**. *On the partition function modulo 3*. Preliminary report.

Ramanujan's congruences for the partition function and generalizations of the form  $p(an + b) \equiv 0 \pmod{m}$  have been of special interest in the past century. In 2010, Ono showed that such congruences exist modulo all primes  $m \geq 5$ , which was further extended to all  $m$  coprime to 6. However, the cases  $m = 2, 3$  has been more elusive. In 2010, Ono constructs a generating function using generalized Borcherds' products to show that given  $D \equiv -1 \pmod{24}$ , if there exist  $n$  coprime to 6 such that  $p\left(\frac{Dn^2+1}{24}\right) \equiv 0 \pmod{2}$  (respectively,  $p\left(\frac{Dn^2+1}{24}\right) \equiv 1 \pmod{2}$ ), then there are infinitely many such  $n$ . In this talk, we use a similar construction to examine the case modulo 3. (Received September 15, 2020)