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Ken Ono* (ono@math.wisc.edu), Dept. Mathematics, U. Wisconsin, Madison, WI 53706.

Generalized Borcherds products and Ramanujan's mock theta function $\omega(q)$.

The theory of modular forms is a standard tool for proving congruences in partition theory. Hecke operators, twists of modular forms, and finite dimensionality are the usual suspects in most proofs. Here we prove congruences for the coefficients of Ramanujan's mock theta function $\omega(q)$ by making use of a completely new method. Here we use the theory of generalized Borcherds products (as developed by the author and Bruinier) and the theory of p -adic modular forms with Heegner divisors to obtain our results. (Received January 18, 2009)