1086-11-1871   **John J. Webb*** (`webbjj@wfu.edu`), Dept. of Mathematics, Wake Forest University, PO Box 7388, 127 Manchester Hall, Winston-Salem, NC 27109. *Behavior of ℓ-regular partitions modulo powers of ℓ.*

Let $\ell \geq 5$ be prime. We adapt the recent techniques developed by Folsom-Kent-Ono to study the ℓ-adic properties of the unrestricted partition function to analyze ℓ-regular partitions. In particular, we prove analogues of the famed Ramanujan Congruences for all powers of ℓ when $\ell \in \{5, 7, 11\}$. The proof utilizes connections to weakly holomorphic modular forms with bounded poles. (Received September 24, 2012)