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**Shashika Petta Mestri\*** (pchama1@lsu.edu), 303 Lockett Hall, Department of Mathematics, Louisiana State University, Baton Rouge, LA 70803. *Congruences for the generalized partition function  $p_{[1^c, \ell^d]}(n)$* . Preliminary report.

The generalized partition function  $p_{[1^c, \ell^d]}(n)$  has been extensively studied in recent years. We use Hecke operators and an explicit basis for the vector space of modular functions of the congruence subgroup  $\Gamma_0(N)$  (for  $N = 5, 7, 11$ ) together with Watson, Atkin and Gordon work on proving congruences for the partition functions  $p(n)$ ,  $p_{-k}(n)$  to prove infinite families of congruences for the generalized partition function  $p_{[1^c, \ell^d]}(n)$  (where  $\ell = 5, 7, 11$ , and  $c, d$  are given integers). (Received January 29, 2019)