1014-11-921   **Stephanie Treneer*** (`treneer@math.uiuc.edu`), Department of Mathematics, University of Illinois at Urbana-Champaign, 1409 W. Green St., Urbana, IL 61801. *Congruences for the Coefficients of Weakly Holomorphic Modular Forms.*

Recently, the theory of modular forms has been used to prove the existence of infinitely many linear congruences for the partition function, and for several other arithmetic functions of interest in number theory. In each case, values of the arithmetic function are shown to occur as the Fourier coefficients of a certain weakly holomorphic modular form. We show that these phenomena are quite general, by finding similar congruences for the coefficients of any weakly holomorphic modular form. For example, congruences may be found for a wide class of partition functions, and for traces of CM values of arbitrary modular functions on certain congruence subgroups of prime level. (Received September 26, 2005)