1035-11-805 **Pavel Guerzhoy*** (pavel@math.hawaii.edu), 2565 McCarthy Mall, Keller Hall 401A, Honolulu, HI 96822. *On U(p)-congruences.*

The phenomenon of U(p)-congruences has been studied in recent work by Ahlgren and Ono and by Elkies, Ono and Yang. Let p be a prime. Let j denote the modular invariant, U denote Atkin's U-operator, and let F be a polynomial with rational integer coefficients. We say that U(p)-congruences hold if F(j)—U vanishes modulo p as a power series in q. We present a necessary and sufficient condition on the polynomial F for U(p)-congruences to hold. We further discuss possible generalizations for powers of U. (Received September 16, 2007)