1086-11-343 **Christelle Vincent*** (cvincent@stanford.edu). *Weierstrass points on the Drinfeld modular curve $X_0(\mathfrak{p})$.*

We consider the Drinfeld setting, which offers analogues for function fields of some aspects of the theory of modular forms, modular curves and elliptic curves. More precisely, we consider the family of modular curves $X_0(\mathfrak{p})$, and we study their Weierstrass points, a finite set of points of geometric interest. These curves are moduli spaces for Drinfeld modules with level structure, which are the objects which in our setting play a role analogous to that of elliptic curves. Previous work of Baker shows that for each Weierstrass point, the reduction modulo $\mathfrak{p}$ of the underlying Drinfeld module is supersingular. We study a modular form W for $\Gamma_0(\mathfrak{p})$ whose divisor is closely related to the set of Weierstrass points. To this end, we first establish a one-to-one correspondence between certain Drinfeld modular forms on $\Gamma_0(\mathfrak{p})$ and forms on the full modular group. In certain cases we can then use knowledge about the action of the Hasse derivatives to compute explicitly a form $\widetilde{W}$ that is congruent to W modulo $\mathfrak{p}$. This allows us to obtain an analogue of a classical result of Rohrlich's. (Received August 23, 2012)