1078-11-367 **Christelle Vincent*** (`vincent@math.wisc.edu`), Department of Mathematics, 480 Lincoln Drive, Madison, WI 53706. *Weierstrass points on the Drinfeld modular curve $X_0(p)$.* Preliminary report.

For q a power of a prime, consider the ring $\mathbb{F}_q[T]$. Due to the many similarities between $\mathbb{F}_q[T]$ and the ring of integers $\mathbb{Z}$, we can define for $\mathbb{F}_q[T]$ objects that are analogous to elliptic curves, modular forms, and modular curves. In particular, for $\mathfrak{p}$ a prime ideal in $\mathbb{F}_q[T]$, we can define the modular curve $X_0(\mathfrak{p})$, and study the reduction modulo $\mathfrak{p}$ of its Weierstrass points, as is done in the classical case by Rohrlich, and Ahlgren and Ono. In this talk we construct a Drinfeld modular form for $\Gamma_0(\mathfrak{p})$ whose divisor is supported at the Weierstrass points of $X_0(\mathfrak{p})$, and some partial results on the reduction modulo $\mathfrak{p}$ of this divisor are obtained. (Received December 13, 2011)