1052-11-52      **Tsz Ho Chan\*** (`tchan@memphis.edu`), Department of Mathematical Sciences, University of Memphis, Memphis, TN 38152, and **Igor E. Shparlinski**. *Concentration of Points on Modular Hyperbolas and Exponential Curves.*

We are interested in the number of points $(x, y)$ on the modular hyperbola $xy \equiv a \pmod{p}$ that lie in a small square of side length $H$. Is it true that there are only $o(H)$ points when $H = o(p)$? We will answer this question using sum-product type estimates from additive combinatorics. Similar argument applies to the modular exponential curve $y \equiv ag^x \pmod{p}$. This is joint work with Igor Shparlinski. (Received August 13, 2009)