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C. Douglas Haessig* (chaessig@math.rochester.edu), Department of Mathematics, 915 Hylan Hall, Box 270138, Rochester, NY 14627. *L-functions of symmetric powers of Kloosterman sums.*

The L-function of symmetric powers of classical Kloosterman sums is a polynomial whose degree is now known, as well as the complex absolute values of the roots. In this talk, we will present estimates for the p-adic absolute values of these roots. Our method is indirect. We first develop a Dwork-type p-adic cohomology theory for the two-variable infinite symmetric power L-function associated to the Kloosterman family, and then study p-adic estimates of the eigenvalues of Frobenius. A continuity argument then provides the desired p-adic estimates. (Received August 26, 2016)