1056-11-668 **David Goss*** (goss@math.ohio-state.edu). *Symmetries of characteristic p L-series.*

Let p be a prime number with $\mathbf{Z}_p$ the ring of p-adic integers. As is universally known, every p-adic number s may be written as $s = \sum_{i=0}^{\infty} c_i p^i$ where $0 \leq c_i < p$ for all i. By simply permuting these digits $\{c_i\}$ in a consistent fashion for all $s \in \mathbf{Z}_p$ we obtain a group of homeomorphisms of $\mathbf{Z}_p$ which we call $S_{Z(p)}$. This group is easily seen to have the cardinality of the continuum. In this talk we will explain the evidence that $S_{(p)}$ acts as symmetries of characteristic p valued L-series arising in theory of Drinfeld modules, t-modules, and various generalizations. The evidence comes from special values at both the positive and negative integers of these functions. (Received September 15, 2009)