1077-22-135 **Luis Alberto Lomelí*** (lomeli@math.purdue.edu). *On representations and L-functions for the classical groups in positive characteristic.* Preliminary report.

We study representations of the linear algebraic groups $G_l = \mathrm{SO}_{2l+1}$, SP_{2l}, SO_{2l}, and U_n in positive characteristic. In particular, admissible generic representations of maximal Levi subgroups $M \simeq \mathrm{GL}_m \times G_n$ of G_l, $l = m + n$, and generic constituents of their induced representations. We define L-functions and related local factors over a non-archimedean local field by means of the uniqueness property of Whittaker models à la Langlands-Shahidi. For a globally generic cuspidal automorphic representation of M there is a connection to Langlands' theory of Eisenstein series that allows us to establish a global functional equation. (Received July 29, 2011)