Abstract Submitted
for the APR10 Meeting of
The American Physical Society

**Towards benchmarking the performance of LENS**[1] B.H. MOAZEN, J.C. BLACKMON, L.E. LINHARDT, M.M. WHITE, Louisiana State University, LENS COLLABORATION — The Low-Energy Neutrino Spectroscopy (LENS) experiment is designed to precisely measure the fluxes of low-energy solar neutrinos via charged-current reactions to achieve a precision test of solar physics and the MSW-LMA flavor-conversion model through the fundamental equality of the neutrino fluxes and the precisely known solar luminosity in photons. The collaboration is currently developing a $(0.7\ \mathrm{m})^3$ prototype, miniLENS, that will demonstrate the performance and selectivity of the LENS technology. A 13 liter prototype with the same length scale as miniLENS (but smaller volume) is currently operating at LSU and is being used to benchmark optical properties of the as-built instrument that serve as input parameters into Monte Carlo simulations, and to develop the data acquisition (DAQ) system for miniLENS. Results from studies with the 13-liter prototype and the status of the DAQ development will be presented.

[1]This work is supported by the LA Board of Regents, LSU and the National Science Foundation.

Brian Moazen
Louisiana State University

Date submitted: 23 Oct 2009 Electronic form version 1.4