

Abstract Submitted
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Electronics and Data Acquisition for MiniLENS M. AMRIT, J. BLACKMON, C. RASCO, L. AFANASIEVA, Louisiana State University — The Low-Energy Neutrino Spectroscopy (LENS) Collaboration aims to precisely measure the entire energy spectrum of solar neutrinos through charged-current neutrino interactions using indium-loaded scintillator in a novel, optically-segmented detector architecture. The collaboration is currently constructing prototype detectors, aiming towards a 1 m³ prototype, miniLENS, that will demonstrate the performance and selectivity of the full-scale LENS instrument. Here we present the electronics and data acquisition system that we are developing for miniLENS. The responses of smaller (up to 15 liter) prototype detectors have been studied to characterize the combined response of the scintillator and detector architecture. We have studied various approaches for triggering and for combining signals from multiple photomultipliers to help design an acquisition system best suited to fully characterize the performance of the miniLENS prototype in a cost-effective manner. Analysis of our current prototype measurements and the design of the data acquisition system for miniLENS will be presented.

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