

Abstract Submitted  
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**The Slow Controls System for the Muon g-2 Experiment at Fermilab**<sup>1</sup> MICHAEL EADS, Northern Illinois University, MUON G-2 COLLABORATION COLLABORATION — The goal of the muon g-2 experiment (E-989), currently in the final stages of construction at Fermi National Accelerator Laboratory, is to measure the anomalous gyromagnetic ratio of the muon with unprecedented precision. The uncertainty goal of the experiment, 0.14ppm, represents a four-fold improvement over the current best measurement of this value and has the potential to increase the current three standard deviation disagreement with the predicted standard model value to five standard deviations. Measuring the operating conditions of the experiment will be essential to achieving these uncertainty goals. This talk will describe the current status of the experiment's slow controls system. This system, based on the MIDAS Slow Control Bus, will be used to measure and record currents, voltages, temperatures, humidities, pressures, flows, and other data which is collected asynchronously with the injection of the muon beam. The system consists of a variety of sensors and front-end electronics which interface to back-end data acquisition, data storage, and data monitoring systems. Calibration, installation, and commissioning of the experimental hall environmental sensors are nearly complete, and these sensors are being used to verify the hall's stability.

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