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ID: 4483 Muon Ionization Cooling Experiment: Controls and Monitoring

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Abstract The Muon Ionization Cooling Experiment (MICE) is a demonstration experiment to prove the viability of cooling a beam of muons for use in a Neutrino Factory and Muon Collider. The MICE cooling channel is a section of a modified Study II cooling channel which will provide a 10% reduction in beam emittance. In order to ensure a reliable measurement, we intend to measure the beam emittance before and after the cooling channel at the level of 1%, or an absolute measurement of 0.001. This renders MICE as a precision experiment which requires strict controls and monitoring of all experimental parameters in order to control systematic errors. The MICE Controls and Monitoring system is based on EPICS and integrates with the DAQ and Data monitoring systems. A description of this system, its implementation, and performance during recent muon beam data collection will be discussed.

Footnotes For the MICE collaboration.

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Type of Presentation Poster

Main Classification 03 Linear Colliders, Lepton Accelerators and New Acceleration Techniques

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