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Mu2e Extinction Monitor Testing at Fermilab STEVEN BOI, ASHLYN SHELLITO, Northern Illinois University, NORTHERN ILLINOIS CENTER FOR ACCELERATOR AND DETECTOR DEVELOPMENT TEAM — Extended versions of the Standard Model predict a small rate of neutrinoless muon-to-electron conversions. If verified, charged lepton flavor violation (CLFV) would point to new physics beyond the Standard Model. With a sensitivity of four orders of magnitude better than previous experiments, the Mu2e experiment at Fermilab will search for a specific muon-to-electron CLFV process in the presence of a nucleus. The Mu2e detector is comprised of many components including a particle tracker, calorimeter, stopping target monitor, cosmic ray veto, and proton beam extinction monitors. Researchers at Northern Illinois University constructed extinction monitoring prototypes used to detect and record residual out-of-time protons which could otherwise cause false muon-to-electron conversion signals. Initial tests of these prototypes were performed both at NIU using radioactive sources and at Fermilab's Test Beam Facility using a 120 GeV proton beam. Results from the extinction monitor prototype testing will be presented.

Ashlyn Shellito
Northern Illinois University

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