Contribution ID: **296** Type: **not specified**

Beam Extinction and Monitoring at the Upcoming Mu2e Experiment

Wednesday 5 August 2015 14:54 (18 minutes)

Muon to electon conversion represents a well-known process in physics in which a muon transmutes into an electron and two neutrinos. However, if a neutrinoless conversion were observed, this would represent unambiguous evidence for new physics. The Mu2e experiment at Fermilab will search for neutrionless muon to electron conversion at a sensitivity 10000 better than previously achieved. To accomplish the experiment' s desired sensitivity, late arriving beam-induced backgrounds must be suppressed by a factor of 10^{-10}. This suppression factor, or extinction, will be achieved by a variety of accelerator and beamline techniques. Furthermore, verification and monitoring of the extinction rate will be crucial for the experiment's success. This talk will discuss the current status and many technical aspects of the Mu2e experiment and will focus on Mu2e's extinction strategy and monitoring.

Oral or Poster Presentation

Oral

Author: Prof. HOOPER, Ryan (Lewis University)

Presenter: Prof. HOOPER, Ryan (Lewis University)

Session Classification: Accelerators, Detectors, Computing

Track Classification: Accelerators