Argonne NATIONAL LABORATORY

HEP Seminar

High Energy Physics Division Seminar

Yuri Oksuzian

Argonne National Laboratory

"Enhancing New Physics Discovery Potential at Mu2e with Improved Cosmic Ray Background Rejection"

Host: Tom LeCompte

February 19, 2020 – 11:00 a.m.-12:00p.m. Building 362/F-108

Abstract:
This seminar will discuss an Early Career proposal to enhance and validate the suppression of the dominant background at Mu2e that originates from cosmic ray muons interacting in the detector solenoid.
The Mu2e experiment is designed to search for New Physics in an extremely rare process of muon to electron neutrino-less conversion with a fraction of an event expected background. The Mu2e sensitivity to New Physics heavily relies on suppressing the cosmic ray background by 4 orders of magnitude and validating the background rejection by the Cosmic Ray Veto subsystem at high precision. This proposal will deliver an enhancement to the Cosmic Ray Veto subsystem performance through the improvements to the detector components and background rejection algorithms.

The HEP Division Seminar Schedule can be viewed at:
https://indico.fnal.gov/event/23216/