

## Mu2e in 10 Minutes

*Tuesday, 27 June 2023 13:15 (15 minutes)*

The Mu2e experiment, scheduled to begin its first run in 2025 at Fermi National Accelerator Laboratory, will search for charged lepton flavor violation (CLFV) in the form of neutrinoless muon-to-electron conversion in the field of an aluminum nucleus. The current sensitivity limit on neutrinoless muon-to-electron conversion is on the order of  $10^{-13}$ ; Mu2e will improve sensitivity by four orders of magnitude. An observation of CLFV at this sensitivity would provide definitive evidence of physics beyond the standard model, possibly including but not limited to supersymmetry (SUSY), heavy neutrinos, and leptoquarks. The experiment is on track to finish construction and take data before the long shutdown for PIP-II tie-in to the Booster. This talk will give an overview of the physics, experimental layout, and status of Mu2e.

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