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The Mu2e Experiment At Fermilab

Friday, 16 August 2013 15:50 (20 minutes)

The Mu2e experiment at Fermilab will search for coherent, neutrino-less conversion of muons into electrons in the Coulomb field of a nucleus with an improvement in sensitivity of a factor of 10,000 over existing limits. Such a lepton flavor-violating reaction probes new physics at a scale inaccessible with direct searches at either present or planned high
energy colliders. The experiment both complements and extends the current studies at MEG and at the LHC. I will present the physics motivation for Mu2e, as well as the design of the muon beamline, tracking spectrometer, and calorimeter. I will also discuss the evolution of the current Fermilab Muon Charged Lepton Flavor Violation Program into the Project X era.

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