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## The Mu2e Experiment at Fermilab

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The Mu2e Experiment at Fermilab will search for coherent, neutrinoless conversion of muons into electrons in the field of a nucleus with a sensitivity improvement of a factor of 10,000 over previous experiments. Such a charged 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 search for muon

decay to electron+gamma at MEG and searches for new physics at the LHC. We will present the physics motivation for Mu2e, the novel design of the muon beam line and the detector, and the current status of the experiment.

### Summary

The Mu2e Experiment, physics motivation and current status

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