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### **Overview of the Fermilab Mu2e Experiment<sup>1</sup>**

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The Mu2e Experiment, at the Fermi National Accelerator Laboratory, will measure the ratio of the decay of the coherent, neutrinoless conversion of stopped muons into electrons in the field of nucleus to the muon nuclear capture rate. This decay is possible at an undetectable level within the Standard Model; however, several physics beyond the Standard Model scenarios predict very small but observable rates. The sensitivity of this experiment is a factor of  $10^4$  improvement over the current limit. The experiment compliments and extends current search for muon to electron+gamma at MEG and new physics searches at the LHC. This experiment is in the approval stages and is expected to start data collection in 2021. An overview of the Mu2e experiment will be presented.

<sup>1</sup>Overview of the Fermilab Mu2e Experiment