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The Mu2e Experiment BERTRAND ECHENARD, Caltech — While Charged Lepton Flavor Violating processes are heavily suppressed in the Standard Model, the rate of these reactions are enhanced to levels accessible to the next generation of experiments in many scenarios of New Physics. The Mu2e experiment is designed to search for neutrinoless muon-to-electron conversion in the Coulomb field of a nucleus with expected sensitivity of 6×10^{-17} at 90% confidence level. Such sensitivity, about four orders of magnitude below the current limits, will allow Mu2e to probe mass scales of New Physics up to 1000-10000 TeV, far above the range directly accessible at the LHC. We briefly describe the Mu2e experiment and its physics goals.

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