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### the Mu2e experiment

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The Mu2e experiment at Fermi National Accelerator Laboratory (Batavia, Illinois, USA) searches for the charged-lepton flavor violating neutrino-less conversion of a negative muon into an electron in the field of an aluminum nucleus. The dynamics of such a process is well modelled by a two-body decay, resulting in a mono-energetic electron with energy slightly below the muon rest mass (104.967 MeV). Mu2e will reach a single event sensitivity of about  $3 \times 10^{-17}$  that corresponds to four orders of magnitude improvement with respect to the current best limit. We will describe the physics motivations, the underlying experimental technique and the experiment construction status.

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