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Muon to electron conversion search in the presence of Al nuclei at the Fermilab Mu2e experiment: Motivation, Design and Progress

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Mu2e experiment aims to find charged lepton flavor violation (CLFV) by measuring the monochromatic electrons from $\mu^- N \rightarrow e^- N$ conversion with an unprecedented single event sensitivity of 3×10^{-17}. When completed the experiment will improve the current limit by 10^4 and make a previously unexplored phase space available for the search for beyond the standard model physics. We will establish the physics motivation for the experiment and explain our design choices for the detectors and various sub systems. The construction of Mu2e experiment is well underway and we will provide a progress update for each sub-system. Commissioning will begin in late 2020 with first data-taking in late 2023 and 4-5 years of data-taking to reach our goal.

I read the instructions

Secondary track (number)

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