## First Pan-African Astro-Particle and Collider Physics Workshop



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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 3x10–17 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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