Abstract Submitted
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Status of the TREK/E36 Experiment at J-PARC[1] MICHAEL KOHL, Hampton University, TREK/E36 COLLABORATION — The TREK/E36 experiment will provide a precision test of lepton universality in the $K_{e2}/K_{\mu 2}$ ratio to search for new physics beyond the Standard Model. Simultaneously it will search for light U(1) gauge bosons and sterile neutrinos below 300 MeV/c^2, which could be associated with dark matter or explain established muon-related anomalies such as the muon anomalous magnetic moment and the proton radius puzzle. The experiment is scheduled to run in 2015 at the J-PARC K1.1BR kaon beamline. It uses a scintillating fiber target to stop a beam of up to 10^6 positive kaons per second. The kaon decay products are detected with a large-acceptance toroidal spectrometer capable of tracking charged particles with high resolution, combined with a photon calorimeter with large solid angle and redundant particle identification systems. An overview of the planned experiment and the current project status will be presented.

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