Abstract Submitted
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Progress of the TREK/E36 Experiment at J-PARC[1] MICHAEL KOHL, Hampton University, TREK/E36 COLLABORATION — The TREK/E36 experiment is being carried out at J-PARC to 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 be sensitive to 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 $g-2$ and the proton radius puzzle. The experiment has been set up at the J-PARC K1.1BR kaon beamline since fall 2014, it has been fully commissioned in spring 2015, and is now ready to accumulate production data anticipated in fall 2015. It uses a scintillating fiber target to stop a beam of up to 1.2 Million K^+ per spill. 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 particle identification systems. The status and recent progress of the experiment will be presented.

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Michael Kohl
Hampton University

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