

Abstract Submitted  
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**Status of the TREK/E36 Experiment at J-PARC**<sup>1</sup> MICHAEL KOHL, Hampton University, TREK COLLABORATION — The TREK/E36 experiment is scheduled to run in 2015 at the J-PARC K1.1BR kaon beamline. The experiment 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. With the aim to test lepton universality in the  $K_{e2}/K_{\mu2}$  ratio with high precision, the experiment is highly sensitive to new physics beyond the Standard Model. A further goal of E36 is to search for light new particles with masses up to a few hundred  $\text{MeV}/c^2$  such as sterile neutrinos or U(1) bosons, which could be associated with dark matter or explain established muon-related anomalies. An overview of the planned experiment and the current project status will be presented.

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