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Particle identification analysis of TREK/E36[1] THIR NARAYAN GAUTAM, Hampton University, TREK COLLABORATION — The TREK/E36 experiment conducted at J-PARC in Japan aims to test lepton universality by a precise measurement of the ratio of decay widths of the decay channels K_{e2} and $K_{\mu 2}$, $R_K = \Gamma(K_{e2})/\Gamma(K_{\mu 2})$, and to search for exotic K^+ decay modes accompanied by light neutral bosons, by utilizing a K^+ beam stopped in a scintillating fiber target, a combination a highly segmented CsI(Tl) photon calorimeter covering 75% of 4π, charged-particle tracking detectors, and particle identification systems. Since the R_K value is of order 10^{-5}, the e^+ discrimination from other particles is one of the most important issues. Three independent detection systems: time of flight between TOF1 and TOF2, an aerogel Cherenkov detector (AC), and a lead glass Cherenkov detector (PGC) were used for particle identification (PID). In this talk the status and approach of the PID analysis will be presented.

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