

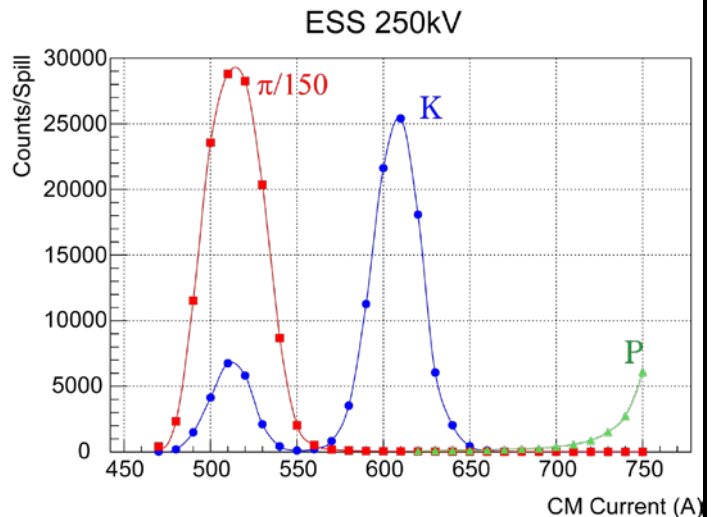
## J-PARC Hadron Hall : EXPERIMENTAL REPORT on RUN#43

	<b>Date(submitted)</b>	2012/7/2
<b>Group</b>	TREK	<b>Beam line</b>
		K1.1BR
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### Summary and Results

We performed the beam tuning of the K1.1BR beamline realigned after the earthquake and confirmed the recovery of its performance. We determined the K<sup>+</sup> acceptance absolute value, which was not done before. We also measured the performance of the Aerogel Cherenkov (AC) counter prototype2 of the E36 experiment using a e<sup>+</sup> beam. The following items were done.

- 1) Beam instruments tuning : Fitch Chrenkov, 2 BDC, TOF counters and 2 Gas Cherenkov
- 2) Checking the beam recovery comparing with the beam in Nov. 2010 before the disaster.
- 3) The kaon beam parameter search was performed at the 0.8GeV beam momentum and  $\pm 250$ kV ESS voltage for different slit openings. We found good parameters concerning the Kaon yield and also pi/K ratio. (Fig. shows the mass separation curve under the narrow slit condition.)
- 4) The kaon yield measurement with the wide slit setting was determined to be 138k/spill at the 3.5kW beam power.
- 5) The AC counter was tested using 0.4GeV/c and 0.25GeV/c e<sup>+</sup> beam. Data was taken for the efficiency analysis under different incident position/angle conditions.



Mass separation curve with the narrow slit condition. A K/pi ratio of 3.7 was observed.

### SCHEDULED and EXECUTED MACHINE TIME, BEAM CONDITION, DOWN TIME, Priority etc.

- Scheduled Machine time : Jun. 10 – 18, 116 hours
- Executed Machine time : Jun. 10 – 18, 140 hours
- Beam condition :  
 Positive Beam, 0.8GeV/c, 0.4GeV/c, 0.25GeV/c  
 MR : 3.5 kW
- No long unscheduled downtime
  - 1) Unuseable remote magnet control : Jun. 16 13:40 – 17 8:00  
 (We used the local magnet control in front of the magnet power supplies.)
  - 2) Short down times due to magnet power supply troubles: Q6 (sequence) and Q8 (regulator).

### Comments/Requests