

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

	Date(submitted)	2012/07/10
Group	T44 (E13)	Beam line
		K1.1 BR
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Experimenters	H.Tamura, M. Ukai, T. Yamamoto, A. Sasaki, K. Hosomi, N. Chiga, K. Sugihara, K. Tsukada, S. Nagao, N. Arai, D. Uchiyama, T. Koike (Tohoku University), K. Shirotori (RCNP), S. Yang (Seoul), A.Feliciello (INFN)	

Summary and Results

- Testing of the two Hyperball-J detector units
 - ① Ge detector (ORTEC/Canberra) + pulse tube refrigerator + PWO suppression counter + LSO pulser
 - ② Checked signal through put of the Ge detectors with a beam synchronized trigger and 4kHz clock trigger
 - a) 7 different detector positions (angle(deg.): -45, 90, 45, distance(cm): 15, 20, 25, 30, and 35)
 - b) Different pion/electron beam intensity (counts/spill): 250 k, 500 k, 750 k, 1 M, 2 M, 3 M, 5 M, and 8 M
 - ③ Detector response measurements to the in-beam 718-keV gamma ray from the $^{10}\text{B}(\pi, \pi')^{10}\text{B}^*$ reaction
 - Beam intensities(counts/spill): 250 K and 750 K
 - Energy and time resolution measurements
 - PWO suppression performance tested
 - Real time monitoring system with a LSO pulser (β - γ) trigger checked
 - ④ Testing of an interface amplifier circuit for digital readout system
 - ⑤ Recording of signal wave forms out of the Ge preamplifier
 - ⑥ Measurement of low gain energy spectra of the Ge detectors for energy deposit by charged particles
- Testing of the E13 DAQ system
- Testing of an AC detectors for the E13 experiment
- Checking of lead glass detectors for π^0 identification
- Testing of quality of different Aerogels and the reflection materials for AC counters

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

Scheduled Machine time :

1:00 - 9:00, June 27 40 hours

21:00, June 29 – 5:00, July 2 72 hours

Executed Machine time :

1:00 - 9:00, June 27 40 hours

21:00, June 29 – 5:00, July 2 67 hours

Beam condition :

Positive Beam, 0.8GeV/c,

MR : 6.0 kW

Negative Beam, 1.0GeV/c

MR : 6.0 kW

Major downtime: (longer than 30 minutes)

1) July 1st, 0:01~03:40 , accelerator shut down due to the interlock system tripped

2) July 2nd, 01:09~2:45 , LINAC cooling system trouble

Comments/Requests

ESS operated at $\pm 225\text{kV}$

ESS was down for the last 24 hours.