

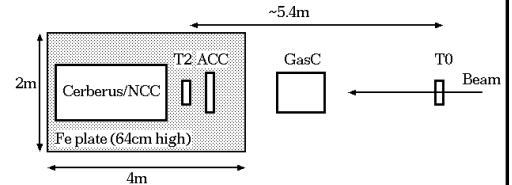
J-PARC Hadron Hall : EXPERIMENTAL REPORT on RUN#

		Date(submitted)	
Group	T38	Beam line	K1.1BR
Reporter	Name	e-mail address	
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Experimenters	Lim, Nomura, Watanabe(KEK), Nanjo, Kawasaki, Maeda, Takahashi(Kyoto), Sasao(Okayama), Shimogawa(Saga), Tajima, Sasaki(Yamagata)		

**Summary and Results**

[1]Area setup

A steel plate (area:4m x 2m, height:64cm) was placed at the most downstream region.



[2]Detectors

- (1)Cerberus: A Pb and plastic scintillator sandwich module (EM module) and 5 Fe and plastic scintillator sandwich modules (Hadron modules), which were used in the core gamma and neutron measurement.
- (2)Profile: A plastic scintillator slab which was used in the beam profile measurement.
- (3)NCC: Segmented pure CsI crystals with WLS fiber readout which was used in the core and halo neutron measurement.
- (4)TOF counters(T0,T2): Two TOF counters are placed with a distance of 5.4m.
- (5)Gas Cerenkov detector(GasC): A gas Cerenkov counter which was prepared by TREK group was used. We filled dry air and the pressure is 3 atm to increase the light yield. It was used for the electron tagging with good efficiency.
- (6)Aerogel Cerenkov Counter(ACC): The refractive index of the aerogel was 1.02, which was used in the Bell experiment. We used it as an electron tagger and we can evaluate the tagging efficiency with ACC and GasC for the electron momentum of 0.4 GeV/c.

[3]Measurement

- (1)TOF, GasC, ACC: We measured the yields of electron, pion, and proton (with an uncertainty from muon flux). We also used the DC separator for proton and pion selection.
- (2)Cerberus, profile and NCC: We measured the detector response of electron, pion, and proton for the momentum from 0.4 to 1 GeV/c. We also tried to measure the pi0 production from 1GeV/c proton for NCC.

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

11/11	9:00-11/12	21:00	Area setup(base up, detector alignment, cabling, DAQ)
11/12	21:00-11/13	15:00	(11h) Tuning with +0.4GeV/c and +1GeV/c
11/13	15:00-11/14	0:00	( 9h) Cerberus and profile momentum scan(+/- 1, 0.8, 0.6, 0.4 GeV/c)
11/14	0:00-11/14	3:00	( 3h) Cerberus Fe module run
11/14	3:00-11/14	5:00	( 2h) Setup change from Cerberus to NCC.
11/14	5:00-11/14	11:00	( 6h) Tuning with +0.4GeV/c and +1GeV/c
11/14	11:00-11/14	20:00	( 9h) NCC momentum scan (+/- 1, 0.8, 0.6, 0.4 GeV/c)
11/14	20:00-11/15	5:00	( 9h) +1GeV/c NCC pi0 production run
11/15	22:00-11/16	9:00	( 6h) +1GeV/c NCC y-scan and rate dependence study

Widthes of beam slits were changed and DC separator were used occasionally.

**Major Beam stop**

11/12	22:19-11/13	5:06	( ~7h) SX-EQ MPS:magnet water flow and then pulse bend
11/13	15:12-11/13	15:45	(~0.5h) QFX MPS
11/14	0:15-11/14	1:02	(~0.75h) FX abort kicker MPS
11/16	2:51-11/16	7:57	( ~5h) QFX MPS and QFP MPS
Total: over 13h			

**Comments/Requests**