

J-PARC Hadron Hall : EXPERIMENTAL REPORT on RUN# 30

Group	KOTO(E14)	Date (Submitted)	25 February 2010
Reporter	Name	e-mail address	
	Tadashi Nomura (KEK)	tadashi.nomura@kek.jp	
Experimenters	Komatsubara, Lim, Watanabe, Nomura (KEK), Nanjo, Shiomi, Kawasaki, Maeda, Naito, Takahashi (Kyoto), Yamanaka, Sato (Osaka), Shimogawa (Saga), Baek (Pusan), Yoshida, Tajima, Sasaki (Yamagata)		
Summary and Results			
<u>Beamline survey</u>			
<ul style="list-style-type: none"> • Halo neutron measurement by a new counter for KOTO (a segmented detector made of pure CsI crystals with WLSF readout) • Photon spectrum measurement inside the beam <ul style="list-style-type: none"> • EM calorimeter with photon tagger (Pb+Aerogel Cherenkov detector) • Beam profile study with changing primary beam position <ul style="list-style-type: none"> • With cooperation of hadron beam group, relation between primary beam position and profile center of KL beam was studied. • KL yield measurement using hodoscope and CsI mini-calorimeter <ul style="list-style-type: none"> • $KL \rightarrow \pi^+ \pi^- \pi^0$ decays were collected further. • A helium bag was installed in the neutral beam region to avoid backgrounds due to neutron interactions. • Comparison between Ni and Pt targets was done. • Dependence on the photon absorber's thickness in the beam was measured. • KL yield measurement using spectrometer • Core neutron measurement by utilizing n-p scattering 			
SCHEDULED and EXECUTED MACHINE TIME, BEAM CONDITION, DOWN TIME, Priority etc.			
2010/2/15 22:50 - 2/16 10:00 User run, 1.3×10^{12} ppp, Ni target - 2/16 03:48-05:15 1.5 hours down due to a bunch of MPS's RCS:KMPS2 (3:48-3:59), MR:BM5 (3:57-4:57), RCS:KMPS2 (4:54-5:12) - 2/16 06:51-07:34 0.5 hours down due to MR:QFN MPS 2010/2/16 20:50 - 2/17 10:00 User run, 1.3×10^{12} ppp, Ni target - 2/16 20:50-22:00 beam profile study with changing primary beam position 2010/2/17 14:30 - 2/17 16:36 SX for survey in HD hall; 2kW (2.5×10^{12} ppp), Ni target 2010/2/17 20:30 - 2/18 09:00 User run, 1kW (1.3×10^{12} ppp), Ni target 2010/2/18 23:00 - 2/19 10:10 User run, 1.6kW (2.0×10^{12} ppp), Ni target 2010/2/19 10:10 - 2/20 12:10 User run, 1.6kW, (2.0×10^{12} ppp), Pt target 2010/2/19 12:10 - 2/20 18:07 User run, 1.0kW, (1.2×10^{12} ppp), Pt target 2010/2/20 18:07 - 2/22 09:00 User run, 1.0kW, (1.2×10^{12} ppp), Ni target - 2/21 13:03-16:27 3.5 hours down due to RCS:KMPS6 MPS After this, a lot of MR:EQ MPS's occurred, though each down time was ~30 sec. - 2/22 01:55-02:30 0.5 hours down due to MR:QFX MPS - 2/22 04:54-05:29 0.5 hours down due to MR:BM1 MPS			
<u>Comments/Requests</u>			