

Planning and CoordinationMACHINE TIME EXECUTIONREPORT (2005-4-3 CYCLE)

Experimental Group	T592	Reporter	ShinIchi Esumi
Scheduled Period and Shift	Dec/16-Dec/23 21 shifts	Main, Sub, Para	Para
Experimenters : ShinIchi Esumi, Tatsuya Chujo, Yasuo Miake and graduate and undergraduate students in High-Energy Heavy-Ion experimental group at Univ. of Tsukuba			
<p>SUMMARY OF EXECUTION AND RESULTS</p> <p>A gaseous time-of-flight detector, Multi-gap Resistive Plate Chamber (MRPC) was studied with secondary particles in the T1 beam line at PS-KEK. This type of gaseous detector will be used as an upgrade project in the PHENIX experiment at RHIC-BNL for particle identification with time-of-flight measurement. Data with various detector configurations such as number of resistive layers, gas mixture, supplied high-voltage are collected during the beam time. A position dependence of the timing resolution as well as the efficiency was found to show a flat top over the active area of each pad. The intrinsic timing resolution of about 120ps and the efficiency of 95% are achieved. Full data analysis is still underway to find an optimum set of parameters and detector configurations.</p>			
<p>EXECUTED MACHINE TIME, BEAM CONDITION, DOWN TIME etc.</p> <p>16/Dec/2005(17:00) – 23/Dec/2005(17:00): excluding a scheduled down time of one shift. With $1 \times 1(\text{cm}^2)$ trigger counter, we got stable beam rate of about 300 particles/spill at 1.0-1.5GeV/c. About 50% of total were protons, another half were pions and few % deuterons and kaons.</p>			
<p>COMMENTS</p> <p>We appreciate very much for the stable beam provided by PS-crews and for supports we got from the experimental support groups during the beam time.</p>			