

Main technical parameters and the main components of Test-Beam Facility

Previous measuring in earlier	Items of the final measuring
Particle types: e, p, π	With TOF measurement
Beam momentum: Electron 0.2~1.3GeV/c(*); Pion & proton 0.4~0.8GeV/c Width of the momentum (FWHM): 400MeV/c--4%;600MeV/c—3%;800MeV/c—2.8% Momentum resolution: <1% (with mwpc)	Momentum (P_0) Calibration (0.3GeV/c, 0.5GeV/c, 0.7GeV/c, 0.9GeV/c, 1.1GeV/c; Electron, pion, proton)
Profile of the beam (800MeV/c electron): Horizontal ~40mm (FWHM); Vertical ~57mm (FWHM)	∇
Counter rate: 0.2~2Hz (to bear upon LINAC beam) (with 5 fold on the 3*3cm ² cross section) 800MeV/c electron	∇
The ratio of selected for single particle: 50%~70% (according with the inducing Q of cathode strips of mwpc, also, to bear a relation to LINAC beam)	∇
The efficiency of the electron selected : $\geq 99.2\%$ (with Čerenkov)	
A regulating of beam center	∇
The ratio of radiation background(near beam line): 40.3/minute in the 25cm ² with 400MeV/c electron; 16.5/minute in the 25cm ² with 800MeV/c electron	∇ To measure a distribution

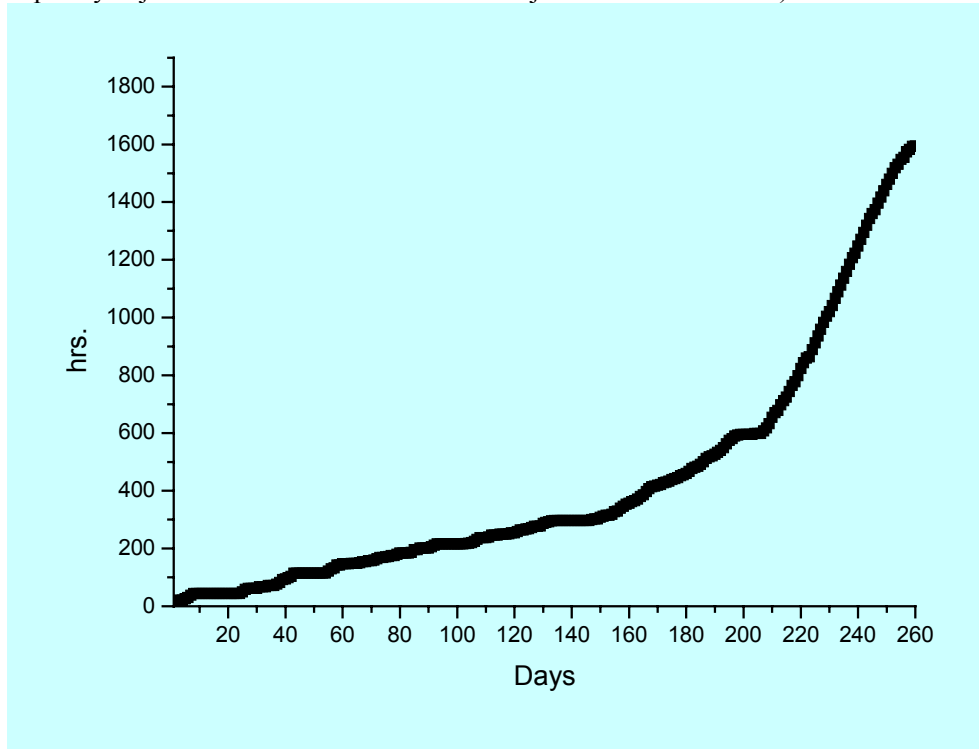
Subsystem and main components

Analysis magnet(D2): $\Delta B/B < 0.1\%$	∇
The stability of magnet power supplies(MPS): MPS of quadrupole and steering 0.1%; MPS of dipole and analysis magnet 0.02%	∇
Control system of power supply: It is reliable and convenient.	∇
Vacuum system: Electron beam line: 1.3E-5Pa; Test beam line: 1.0E-5Pa	∇
Čerenkov counter efficiency: $\geq 99.2\%$	∇
The positioning accuracy of MWPC: Along the X direction is 500 μ m at USTC (It is one calculation which is only to draw the induced charge distribution of single hit). MWPC efficiency : ~91%	∇ The position accuracy of MWPC; MWPC efficiency

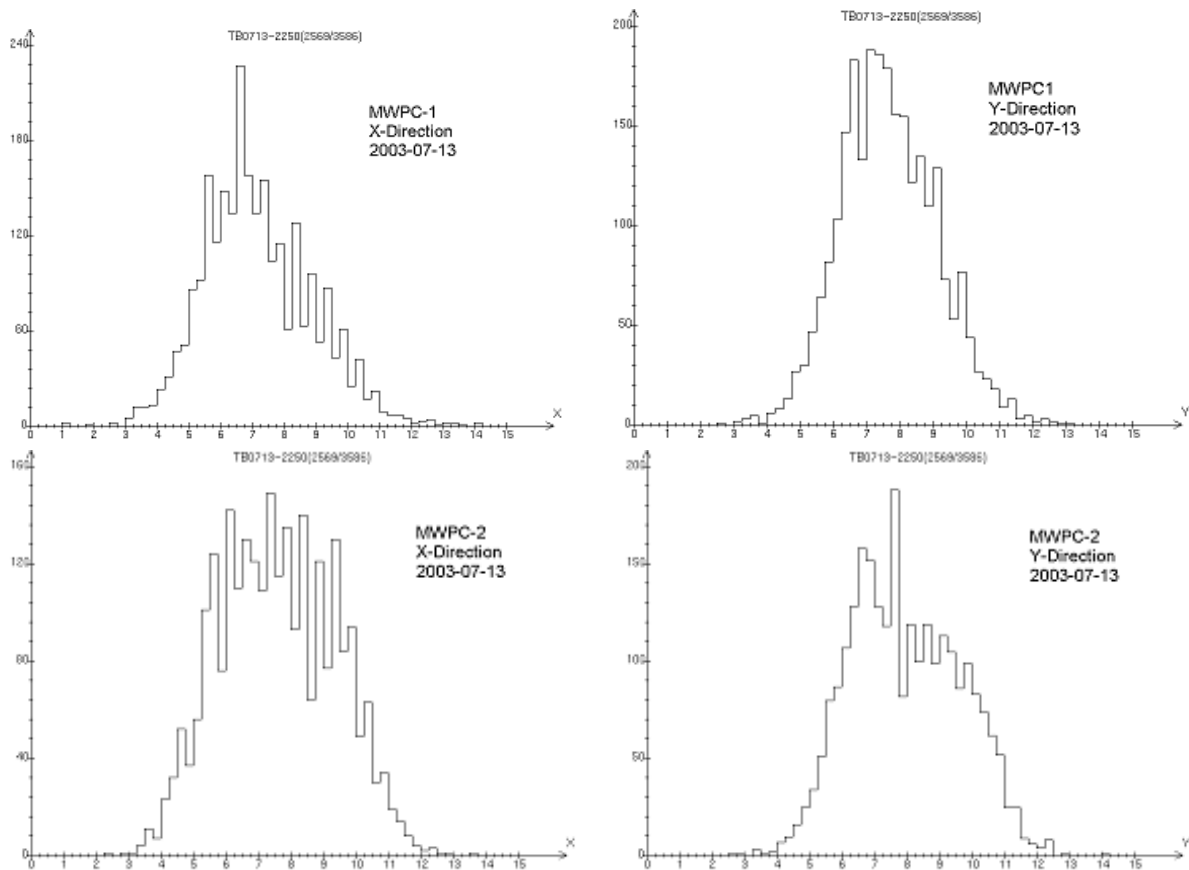
(*): To hit upon a target with an electron beam of 1.5GeV.

Running Map of 10# Experiment Area at The First Running

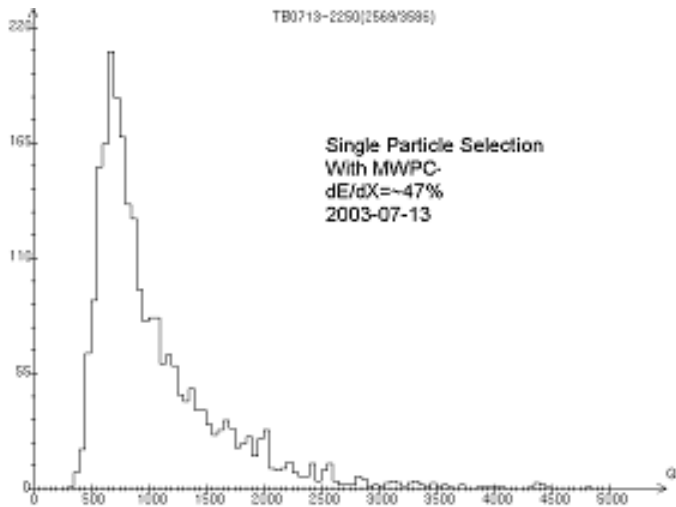
(From 2002-10-30 to 2003-07-16; Total is 1594 hrs for 10# experiment area and about 9 per cent of them are temporary adjusted time of LINAC and beam injected time for BEPC.)



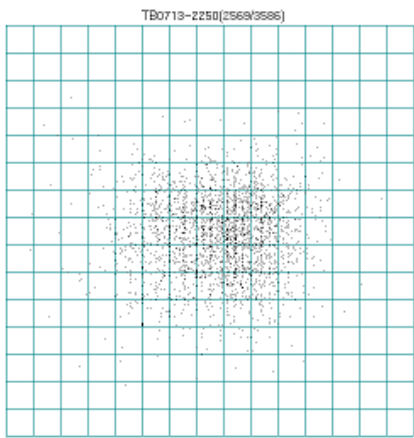
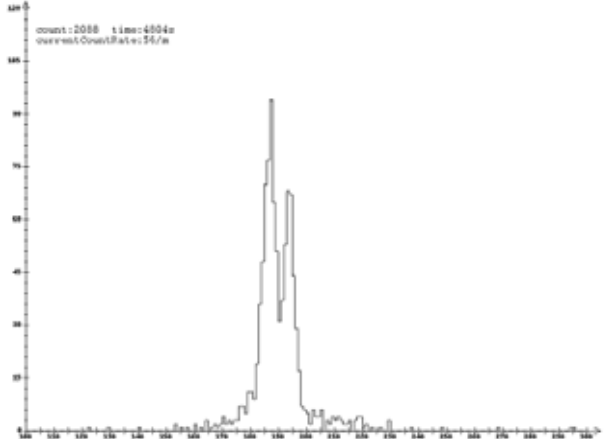
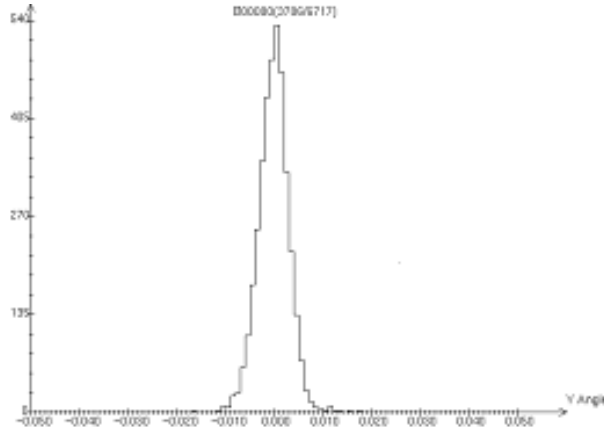
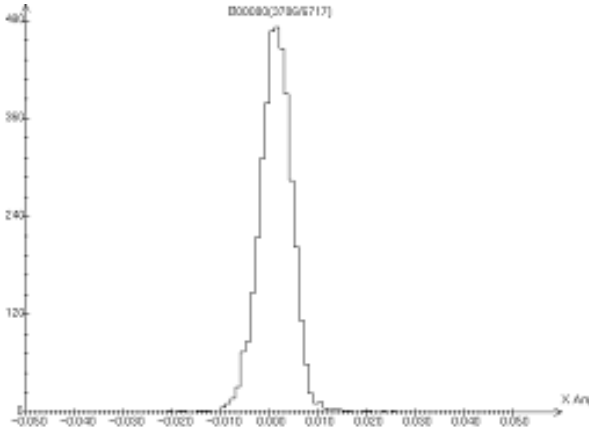
Beam Distribution From MWPC-with Cathode-inducting



(1) The Single Particle Selection with MWPC



(2) Direction angle of Particle from MWPC



Two Photos on The Testbeam (Cherenkov, MWPC)

