The PHENIX Time Expansion Chamber at RHIC

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Abstract

The Time Expansion Chamber (TEC) together with the Drift Chamber and the Pad Chamber provides charged particle track information between the Ring Imaging Cherenkov and the Electromagnetic Calorimeter detectors in the Phenix East Central Arm. The TEC contributes to the electron-pion discrimination by performing fine sampling dE/dx measurements and also to the pattern recognition and momentum measurement of high pt particles. The TEC electronics contains a 40 MHz FADC that instrument each anode wire allowing the digitization of the deposited electron cluster signals along small segments of charged particle paths. Performance of the TEC during the first sqrt(s) = 130 A GeV beam run at RHIC will be presented.

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