Charged Particle Tracking in PHENIX

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Abstract

The PHENIX experiment at BNL's new Relativistic Heavy Ion Collider(RHIC) contains four spectrometer arms: two in the central region covering half the azimuth and η=$\pm$0.35, and two in the forward-backward directions covering the full azimuth and η=$\pm$1.2-2.5. The PHENIX central arms are optimized to measure electrons, hadrons and photons while the forward and backward arms are designed for muon measurements. The spectrometer arms are instrumented with tracking detectors whose main function is to detect and measure all charged particle within the acceptance.

A number of unique detector technologies have been employed to accomplish the PHENIX charged particle physics program . The detectors include the Drift Chamber, pixel Pad Chambers, the Time Expansion Chamber and the Cathode Strip Chambers. The design and capabilities of the PHENIX Tracking Systems will be discussed along with their performance in the RHIC 2000 run.

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