The PHENIX Muon Identifier Subsystem

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Abstract

The detection of muon, both single muon and di-muon, is one of key probes to search Quark-Gluon-Plasma in gold-gold collision and to elucidate the spin structure of proton in polarized proton-proton collision at RHIC. The PHENIX muon identifier subsystem, designed to provide clean muon identification as a key issue to PHENIX muon measurement, has been installed and was partially in commission for gold-gold collision during the summer run in 2000. The performance of the subsystem, i.e. muon reconstruction efficiency and pion/kaon rejection rate etc., is studied with simulated data. The detector response for experiemental events has been compared to that for simulated events and a good agreement has been observed. The south muon identifier will be fully operated from next spring run.

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