Particle identification capability of the PHENIX experiment

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Abstract

The PHENIX experiment aims to address as many signatures relevant to QGP formation as possible. For this purpose, the PHENIX detector system, with two central arms and two muon arms, is equipped with unique detectors for particle identification. In the central arms, a RICH detector, a time expansion chamber and electromagnetic calorimeters are used for electron identification. A time-of-flight system is used for charged-hadron identification with a pair of beam-beam counters providing the start signals. In the muon arms, muon tracking and muon identifier systems are in the process of being implemented.

Particle identification capability will be demonstrated and discussed, based on the results from the Au+Au runs at $\sqrt{s} = 130$ A GeV in the summer of 2000.