Results on Identified Charged Hadron Spectra from the PHENIX Experiment at RHIC

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The particle yields and the transverse momentum spectra of identified hadrons at relativistic heavy ion collisions have an important and basic information on the dynamical evolution and particle production mechanisms in a highly excited nuclear matter. In year 2001 running period of the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory, we have successfully accumulated 92 million minimum bias events of Au+Au collisions at 200 GeV per nucleon.

In this talk, we will present the most recent results from the PHENIX experiment on transverse momentum (p_T) distributions and yields of identified charged hadrons at mid-rapidity in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV, identified by the high timing resolution Time-of-Flight detector. We will also show the centrality dependence of $< p_T >$, spectra shape and yields for each particle species. The particle ratios among pions, kaons, protons and anti-protons will be presented as a function of p_T and centrality. Those experimental results together with the existing data at $\sqrt{s_{NN}} = 130$ GeV will be compared with the various theoretical models.