Recent Results from PHOBOS at RHIC

Robert Pak[a]
for the PHOBOS Collaboration

[a] *Brookhaven National Laboratory*

Systematic study of the strong interaction, as described by Quantum Chromodynamics (QCD), is possible with the high density matter created during relativistic heavy-ion collisions at RHIC. This hot hadronic matter may exhibit nonlinear dynamics and nonperturbative effects, including parton saturation, color deconfinement and chiral symmetry restoration. Global observables such as particle production and dynamical variables such as collective flow provide important constraints on model predictions that characterize this state of matter.

The PHOBOS experiment at RHIC has recorded measurements for Au-Au collisions spanning nucleon-nucleon center-of-mass energies between $\sqrt{s_{NN}} = 20$ GeV to 200 GeV and a comparison data sample of p-p collisons at 200 GeV. The nearly 4π acceptance of the device provides excellent coverage for complete multiplicity and flow measurements, while two spectrometer arms are used to determine detailed particle identification. Results for heavy-ion collisions, including beam energy and event centrality dependencies, will be compared to elementary high energy collisions and model calculations.