Particle Ratios at Forward Rapidity in $\sqrt{S_{NN}} = 130$GeV Au+Au Collisions

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Abstract

The BRAHMS experiment at RHIC consists of two magnetic spectrometers, one covering mid–rapidity (MRS) and another covering forward rapidities (FS) up to $y \approx 4$. The FS as employed in the first RHIC run consisted of two dipole magnets, two TPCs, a time of flight (TOF) array,and a segmented threshold Cerenkov detector This spectrometer took data at polar angle settings (with respect to the beam direction) of 4, 5, and 8 degrees, covering the proton rapidity range $y \approx 2.0 - -3.2$.

Results obtained during the initial running period will be presented, with an emphasis on particle production ratios at forward rapidity for $p_T \leq 1$GeV/c. It is in this region that one might be able to most easily distinguish among model predictions by measuring the net baryon number. This should allow for a clear picture of the amount of stopping in Au+Au collisions at $\sqrt{S_{NN}} = 130$GeV. Comparisons will be made to preliminary results obtained in the MRS near $y = 0$, as well as to available model calculations.

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