Rapidity dependence on particle ratios and spectra at $\sqrt{s_{NN}} = 200GeV$ Au-Au collisions

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The BRAHMS (Broad RAnge Hadron Magnetic Spetrometers)[1] experiment on the RHIC accelerator at the Brookhaven National Laboratory, NY, USA, consists of two movable spectrometer arms, each with a limited acceptance at a given angle. However, integrated over different angular and magnetic field settings its acceptance in y and p_t is outstanding. BRAHMS measures inclusive π, K and p at $0 < |\eta| < 4$ and $0.2GeV/c < p_t < \sim 3GeV/c$.

Spectra and ratios extracted from data collected in the 2001/2002 run period are presented for different rapidities between 0 and 3. In particular baryon stopping is addressed through $\bar{p}/p$ from this run and compared to the $\sqrt{s_{NN}} = 130GeV$ results[2]. Strangeness production is discussed on the basis of extracted K/π ratios. The analysis procedure is described and the results are compared to current model predictions.

References

[1] http://www4.rcf.bnl.gov/brahms

[2] I.G.Bearden et al., Phys. Rev. Lett. Volume 87, (2001) 112305