Nuclear modification factor for Cu-Cu collisions at 62 GeV

Quark Matter 2005 Abstract

The BRAHMS experiment at RHIC has taken data on Cu-Cu collisions at $\sqrt{s_{AA}}=62.4$ GeV. The BRAHMS experiment has a unique construction, consisting of two movable spectrometer arms. This enables scanning of a large rapidity range. Results from Au-Au at 62.4 GeV/A exibits interesting features of the evolution and dynamics of the fireball created in the collisions. At mid rapidity R_{AA} show a slight suppression for the most central collisions, while R_{cp} show suppression. At forward rapidities there is suppression of the high p_T particles in the R_{cp} . Nuclear modification factors for identified particles show another interesting feature. The baryons and the mesons behave differently, mesons are suppressed while the baryons are not.

We will present nuclear modification factors for unidentified hadrons from $\sqrt{s_{AA}}=62.4$ GeV Cu-Cu collisions. There is no RHIC p-p data at this energy, so the results will be presented as a ratio of central to peripheral collisions, R_{cp} . In addition, comparison will be made to results from Au-Au collisions at $\sqrt{s_{AA}}=62.4$ GeV, as well as to available model calculations. The difference in size of the Au and Cu nuclei is big and the number of participants in central collisions will also be big. Since BRHAMS has spectra from Au-Au at the same energy, R_{AuCu} will also be presented.