

“Forward nuclear modification factor in Au-Au and Cu-Cu collisions at $\sqrt{s}=62.4\text{GeV}$ ”

Truls Martin Larsen for the BRAHMS Collaboration

The nuclear modification factor from 200GeV Au-Au collisions show suppression of the high p_T particles, but no dependence on pseudorapidity. R_{CP} at the same energy is constant at the same value at all rapidities, too. At midrapidity in 62.4GeV Au-Au and Cu-Cu collisions it has been shown that central collisions show no suppression or enhancement of the high p_T particles, while semi central collisions show Cronin enhancement [1]. The fragmentation region is explored at this lower center of mass energy at the forward rapidities. Models such as Color Glass Condensate and Recombination play an important role in understanding the forward rapidity measurement that will be presented.

BRAHMS measured in June 2006, p+p collisions at center of mass energy of 62.4 GeV. These provide a baseline for the exploration of medium effects in heavy ion collisions. BRAHMS can measure particles over a wide range of pseudorapidity, in particular up to $\eta \sim 3$, a unique feature of BRAHMS.

In the talk I will present nuclear modification factors at forward rapidity for Au-Au and Cu-Cu collisions using p+p collisions as reference data. The high p_T suppression's dependence on pseudorapidity and system size will be presented in this talk.

- [1] B. Alver et al, PHOBOS Collaboration, Phys. Rev. Lett. **96**, 212301 (2006)