Why Does High–p_T Suppression Persist at Forward Rapidity?

I. G. Bearden[a] for the BRAHMS Collaboration

[a]The Niels Bohr Institute, University of Copenhagen,
Copenhagen, Denmark *bearden@nbi.dk*

The nuclear modification factor has been seen to be remarkably constant for charged hadrons from mid-rapidity to the most forward experimentally accessible rapidities for Au+Au collisions at the top RHIC energy. Recent results from BRAHMS show that this is also true for identified particles. That is, the baryon meson difference seen at mid-rapidity persists to forward rapidites, despite the fact that the emitting source changes. This talk will present results of measurements of high transverse momentum identified particles at rapidities from 0 to 3.5. BRAHMS has carried out measurements for both Au+Au and p+p collisiions, allowing us to study the nuclear modification factor up to $p_T \approx 4$ over this broad range in rapidity. These results will be compared to model calculations in order to shed light on the relative contributions of the various effects (gluon saturation, partonic recombination, jet quenching) which conspire to give to the observed behaviour at forward rapidities.