Prospects for J/ψ suppression measurements at Hera-B

HERA-B collaboration [a]

[a] *NIKHEF, Amsterdam*

Presented by: M. Bruinsma

Abstract

The first indications of anomalous suppression of J/ψ production in central Pb-Pb collisions have initiated discussion as to whether this is to be attributed to QGP formation. Precision measurements on J/ψ suppression in pA collisions can provide valuable input for the interpretation of existing and upcoming data from heavy ion experiments.

Hera-B is a fixed target hadronic B factory at DESY, using eight wires of different materials in the halo of the HERA proton beam. Its trigger system is specifically designed to select events containing J/ψ candidates. The expected large amount of events will enable precision measurements of nuclear suppression of J/ψ, ψ' and Υ in pA collisions.

Besides providing data in the largely uncharted kinematical domain of negative x_F, Hera-B will be able to reconstruct a large fraction of the associated particles in the event. Such a measurement can provide a direct gauge for suppression patterns in heavy ion collisions.

The Hera-B spectrometer and its potential for J/ψ suppression measurements will be presented.

Preprint submitted to Elsevier Preprint *20 December 2000*