Transverse Single-Spin asymmetries for π^{\pm} production from pp collisions at $\sqrt{s_{NN}} = 200$ GeV.

F.Videbæk for the BRAHMS Collaboration

Measurements of transverse spin asymmetries in pp collisions at forward angles may reveal information on the internal spinstructure of the proton, in particular on the orbital angular momenta of the quarks. Large asymmetries has been reported for charged pion production at $\sqrt{s_{NN}} = 19$ GeV [1], and for π^0 at 200 GeV [2]. The BRAHMS data from the previous RHIC run aquiered a small sample of data at $0.15 < x_F < 0.35$ for π^{\pm} transverse asymmetry and reported a value of $+0.05 \pm 0.02$ for π^+ and -0.08 ± 0.02 for π^- [3]. The just completed run resulted in a much large sample and allows an extension of the measurements to higher x_F and p_T with better both systematic and statistical uncertainties. Preliminary results will be presented and discussed in relation to pQCD models.

References

- [1] D.L.Adams (E704) Phys.Lett B264,462(1991); Phys.ReV D53,4747 (1996).
- [2] J.Adams (STAR collaboration) Phys.Rev.Lett 92,171801(2004)
- [3] F.Videbæk (BRAHMS collaboration) DIS 2005. IOP conference series, in print.