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Measurement of the double spin asymmetry A_{LL} from inclusive charged pion production in polarized p+p collisions at 200 GeV. A. KOCOLOSKI, STAR COLLABORATION — A primary goal of the RHIC Spin program is the measurement of the polarized gluon distribution function Δg , which can be obtained from a global analysis incorporating measurements of the double spin asymmetry A_{LL} in various final state channels of polarized p+p collisions. Final states with large production cross sections such as inclusive jet and hadron production are analyzed as the program moves towards the measurement of A_{LL} in the theoretically clean channel of prompt photon production. The channels $\vec{p}+\vec{p} \rightarrow \pi^{+/-}+X$ are unique in that the ordering of the measurements of A_{LL} in these two channels is sensitive to the sign of Δg . Moreover, the STAR experiment has already established the procedure for the identification of charged pions and the calculation of their production cross-sections over a broad kinematic range. This contribution will present progress towards measurements of A_{LL} extracted from inclusive charged pion yields in the transverse momentum region $2|p_T| \geq 12$ GeV/c. These yields were obtained from ~ 3 pb⁻¹ of data taken by STAR at $\sqrt{s}=200$ GeV in 2005.

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