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Double Longitudinal Spin Asymmetries of Inclusive Charged Pion Production in Polarized p+p Collisions at 200 GeV ADAM KOCOLOSKI, Massachusetts Institute of Technology, STAR COLLABORATION — A primary goal of the STAR Spin program at RHIC 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 p+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, STAR 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 first measurements of double longitudinal spin asymmetries for inclusive charged pion production extracted from 3 pb^{-1} of data at $\sqrt{s}$=200 GeV and 50% beam polarizations. The asymmetries are calculated over the transverse momentum region $2<p_T<12$ GeV/c and compared with theoretical predictions incorporating several gluon polarization scenarios. A systematic bias introduced by the selection of charged pions from events satisfying electromagnetic energy triggers will be discussed and estimated using Monte Carlo.

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