Abstract Submitted
for the DNP08 Meeting of
The American Physical Society

Measurement of the Double Longitudinal Spin Asymmetry for Charged Pion Production in 200 GeV Polarized p+p Collisions at RHIC BERND SURROW, MIT, STAR COLLABORATION — A primary goal of the STAR spin physics program at RHIC is the measurement of the gluon polarization, delta g, in the proton. The STAR detector, with its large-acceptance tracking and calorimetery, provides a uniquely suited environment for asymmetry measurements in a number of different final-state channels in polarized p+p collisions such as inclusive jet production [1], charged and neutral pion [2] production. These asymmetries will provide important contributions to a global analysis of delta g. We present here the most recent measurements of the double longitudinal spin asymmetry (ALL) for the production of charged pions at mid-rapidity. These asymmetries are compared to NLO pQCD calculations for different gluon polarization scenarios and are used to provide constraints on delta g. Charged pions are of particular interest as they are sensitive to the sign of delta g. Results and continuing analyses are presented from RHIC runs 5 and 6. [1] Will Jacobs, Recent Longitudinal Spin Asymmetry Measurements for Inclusive Jet Production at STAR, DNP 2008 Fall meeting. [2] Oleksandr Grebenyuk, Longitudinal Double-Spin Asymmetry and Cross Section for Inclusive Neutral Pion Production in Polarized p + p Collisions at RHIC, DNP 2008 Fall meeting.

Bernd Surrow
MIT

Date submitted: 02 Jul 2008 Electronic form version 1.4