Measurement Of The Double Longitudinal Spin Asymmetry In Inclusive Jet Production In Polarized Proton-Proton Collisions At $\sqrt{s}$ = 200 GeV At STAR

David Relyea for the STAR Collaboration

California Institute of Technology, 1200 E. California Blvd, Pasadena, CA 91125

One of the primary objectives of the STAR spin physics program at the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory is a determination of the polarized gluon distribution in the nucleon, ΔG, in the kinematic range $0.01 < x_g < 0.3$. RHIC can collide longitudinally polarized protons at $\sqrt{s}$ = 200 (500) GeV; in this regime, the STAR detector is uniquely capable of full jet reconstruction from q-g, g-g, and q-q scattering.

This talk will present preliminary results for the double longitudinal spin asymmetry A_{LL} in inclusive jet production from 3 pb^{-1} of polarized p-p collisions taken during the 2005 run at $\sqrt{s}$ = 200 GeV and a beam polarization of ~50%. Jet transverse energies range from $5 < E_T < 25$ GeV. These data will be compared to predictions from polarized deep inelastic scattering data. An outlook on the analysis of the 2006 data and the prospect for future running will be given.