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Charged Pion + Jet Longitudinal Double Spin Asymmetry in Polarized Proton-Proton Collisions at $\sqrt{s} = 200$ GeV at STAR JAMES HAYS-WEHLE, Massachusetts Institute of Technology, STAR COLLABORATION — Inclusive measurements from polarized proton-proton collisions at RHIC have constrained Δg , the polarized gluon distribution function of the proton. Correlation observables, such as this pion+jet measurement, allow for reconstruction of initial parton kinematics and are thus sensitive to the x dependence of Δg . By measuring charged pions opposite a jet, this particular measurement can be sensitive to the flavor of the struck parton. This measurement, which is dominated by the quark-gluon subprocess, can be divided into terms proportional to $\Delta u\Delta g$ and $\Delta d\Delta g$. The relatively larger quark polarization amplifies the measured asymmetry thereby enhancing the statistical power. I will present progress on the mid-rapidity pion+jet longitudinal double spin asymmetry analysis from 10.6 pb^{-1} of luminosity collected in the 2009 200 GeV p+p run.

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