

Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

Di-jet Measurements at Mid and Intermediate Rapidities ($-0.8 < \eta < 1.8$) **at the STAR Detector** BRIAN PAGE, Indiana University, STAR COLLABORATION — One of the primary goals of the STAR spin program is to determine the spin-dependent gluon distribution, $\Delta g(x)$, of the proton. To date, the strongest constraints on $\Delta g(x)$ from STAR have come from measurements of the longitudinal double-spin asymmetry, A_{LL} , in inclusive jet production. In contrast to inclusive jets, di-jet correlation measurements provide access to partonic kinematics, at leading order, and thus give better constraints on the behavior of $\Delta g(x)$ as a function of partonic momentum fraction x . Furthermore, di-jet measurements at larger rapidity sample lower x values where $\Delta g(x)$ is poorly constrained. In addition to A_{LL} , the di-jet cross section can be measured and compared to NLO pQCD calculations to confirm that detector and reconstruction effects are well understood. The mid-rapidity di-jet cross section result, utilizing 17 pb^{-1} of 57% polarized p-p data at $\sqrt{s} = 200 \text{ GeV}$ collected in 2009, will be presented. The status of the cross section and A_{LL} measurements at forward rapidities will also be discussed.

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Date submitted: 28 Jun 2013

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