

Abstract Submitted
for the DNP16 Meeting of
The American Physical Society

Longitudinal Double-Spin Asymmetries for Forward Di-jet Production in Polarized pp Collisions at $\sqrt{s} = 200$ GeV¹ TING LIN, Indiana Univ - Bloomington, STAR COLLABORATION — One of the primary goals of the STAR spin program is to determine the spin-dependent gluon distribution, ΔG , of the proton. Recent measurements of the longitudinal double-helicity asymmetry, A_{LL} , from inclusive jets place strong constraints on ΔG and, for the first time, find evidence for non-zero gluon polarization values for partonic momentum fraction x greater than 0.05. 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 gluon momentum fraction. Furthermore, di-jet measurements at forward rapidity probe the lower x values where contributions to ΔG are poorly constrained. Preliminary A_{LL} results for di-jets with $-0.8 < \eta_1 < 0.8$ and $0.8 < \eta_2 < 1.8$, from proton+proton collisions at $\sqrt{s} = 200$ GeV recorded in 2009, will be presented.

¹Work supported in part by the US National Science Foundation

Scott Wissink
Indiana Univ - Bloomington

Date submitted: 01 Jul 2016

Electronic form version 1.4