

Abstract Submitted
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Sivers Transverse Single Spin Asymmetries for Di-jet Production in $\sqrt{s} = 200$ GeV Polarized Proton-Proton Collisions at STAR ISSAM QATTAN, Indiana University Cyclotron Facility, STAR COLLABORATION — Deep inelastic scattering experiments with polarized beams and targets have established that no more than 30% of the proton's spin can be attributed to a net preferential spin alignment of quarks and antiquarks. The rest of the spin must arise from some combination of gluon spin alignment and parton orbital angular momentum. One possible manifestation of the orbital contributions is the Sivers effect [1]: a correlation between the transverse momentum direction of partons in the initial state and the transverse spin orientation of the parent proton. We will present the first measurements, from the STAR Collaboration at RHIC, of single spin asymmetries sensitive to the Sivers effect for di-jet production in collisions of transversely polarized proton beams. The data span a wide range in jet pseudorapidity, thereby probing parton transverse momentum preferences in both the valence and (gluon-dominated) sea regions. We will present final results for a sample of 3 million di-jet events from the 2006 RHIC run based on partial jet reconstruction from the electromagnetic calorimeter contribution to jet energies, as recorded online at the trigger level, as well as the status of full offline jet reconstruction incorporating charged-particle tracks. [1] D. Sivers, Phys. Rev. Lett. D41, 83 (1990)

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