

Abstract Submitted
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Measurement of dipion azimuthal angular correlations intrinsically polarized pp collisions at $\sqrt{S} = 62.4$ GeV in Center of Mass using PHENIX detector at RHIC.¹ NATHAN MEANS, SUNY Stony Brook, PHENIX COLLABORATION — It has been recently suggested that observation of azimuthal asymmetry in back-to-back jets produced in single transverse polarized pp collisions at RHIC would be a direct evidence for non-zero transverse momentum in the nucleon [Boer and Vogelsang]. The connection of this transverse momentum and the orbital angular momentum of the partons in the nucleons has also been discussed in the literature. PHENIX is a multipurpose detector at RHIC with electromagnetic calorimetry ($d\phi \times d\eta = 0.01 \times 0.01$) in the diagonally opposite $d\phi = \frac{\pi}{2}$ regions around the horizontal plane, and a pseudorapidity range of $|\eta| = 0.35$. This enables PHENIX excellent measurement of π^0 's which may be the remnants of produced the jet in pp collisions. In the recently finished run (RHIC Run-6) we added the Muon Piston Calorimeter (MPC), a new PbWO_4 crystal calorimeter, which covers the pseudorapidity range 3.1 to 3.6 and $\phi = 2\pi$. With these two EM calorimeters we plan to make the back-to-back angular correlation measurements in double pion production from the transverse spin proton-proton collisions. About 20 nb^{-1} of data with an average beam polarization of 57% were collected in Run-6. I will present the status of this analysis from Run-6 data.

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