

Abstract Submitted
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Neutral Pion Longitudinal Double Spin Asymmetry Measurement at Forward Rapidity with the PHENIX Muon Piston Calorimeter
AARON VEICHT, UIUC, PHENIX COLLABORATION — The PHENIX experiment at RHIC commissioned a new forward calorimeter during the 2006 polarized proton run, the Muon Piston Calorimeter (MPC). The MPC is a PbWO_4 based electromagnetic calorimeter covering $3.1 < |\eta| < 3.7$ in pseudo rapidity and 2π in azimuthal angle. One of the main goals of the PHENIX experiment is to contribute to solving the “proton spin crisis” by determining the gluon spin contribution to the proton’s total spin. This can be done through measurements of the longitudinal double spin asymmetry (A_{LL}). Neutral pions produced at the rapidity of the MPC extend the momentum fraction x of the proton sampled, allowing for a measurement of the π^0 A_{LL} in a previously unexplored kinematic region at the PHENIX experiment — a region where quark-gluon interactions dominate so that the sign of the gluon helicity can be directly measured in A_{LL} . In this talk I will present the status from the analysis of the neutral pion A_{LL} using the 2006 $\sqrt{s} = 62$ GeV data.

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