

Abstract Submitted
for the HAW14 Meeting of
The American Physical Society

Efforts to Measure Drell-Yan Cross Section and Longitudinal? Double Spin Asymmetry in the PHENIX Experiment at RHIC GONADUWAGE PERERA, New Mexico State University, PHENIX COLLABORATION — Drell-Yan process in high energy polarized proton-proton collisions provides valuable and unique information concerning the proton spin structure. The longitudinal double spin asymmetry (A_{LL}) in the Drell-Yan production is sensitive to the sea-quark polarization and provides a clean access to the anti-quark helicity distributions without involving quark fragmentation functions. In the PHENIX experiment at RHIC, the Forward Silicon Vertex Detector (FVTX), together with barrel Silicon Vertex Tracker (VTX) and forward muon spectrometers, creates an opportunity for us to study the Drell-Yan process by detecting forward muon pairs ($1.2 < |\eta| < 2.4$). In this talk we present the status of the Drell-Yan measurement for the intermediate mass region ($4 \text{ GeV} < M < 8 \text{ GeV}$) using the RHIC 2012 and 2013 data of proton-proton collisions at a center of mass energy of 510 GeV.

Gonaduwege Perera
New Mexico State University

Date submitted: 29 Jun 2014

Electronic form version 1.4