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**Drell-Yan Cross Section and Longitudinal Double Spin Asymmetry in the PHENIX Experiment at RHIC** GONADUWAGE PERERA, New Mexico State University — Analysis of the Drell-Yan process in high energy polarized proton-proton collisions is a unique method for probing the proton spin structure. Measurement of the longitudinal double spin asymmetry ( $A_{LL}$ ) in the Drell-Yan process provides 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 forward muon spectrometers, allows us to study the Drell-Yan process by detecting the muon pairs in the forward region ( $1.2 < |\eta| < 2.4$ ) while also suppressing backgrounds due to heavy-flavor production. In this talk we present the status of the Drell-Yan cross-section and  $A_{LL}$  measurement for the intermediate mass region ( $4 \text{ GeV} < M < 8 \text{ GeV}$ ) using the RHIC 2013 data of proton-proton collisions at a center of mass energy of 510 GeV.

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