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Longitudinal Double-Spin Asymmetry for Inclusive Jet Production in Polarized Proton Collisions at $\sqrt{s} = 510$ GeV AMILKAR QUINTERO, Temple University, STAR COLLABORATION — We present an analysis update of the longitudinal double-spin asymmetry measurement for inclusive jet production in polarized proton collisions at $\sqrt{s} = 510$ GeV. The data were recorded at the STAR experiment during the run 2013 at mid-rapidity ($|\eta| < 0.9$), to further constrain the gluon polarization (ΔG) contribution to the spin of the proton. Previous STAR jet and di-jet measurements at $\sqrt{s} = 200$ GeV, provide evidence of non-zero gluon polarization for values of Bjorken- x 0.05. The measurements in 2012 and 2013, at higher center of mass energy (510 GeV), allow probing ΔG at lower Bjorken scaling. The integrated luminosity recorded at STAR used for this study is approximately 250 pb^{-1} . This luminosity is almost three times higher than the previous year, which brings new challenges to this study. We discuss and compare the status of this analysis with the previous STAR results during run 2012 and current theory models.

Amilkar Quintero
Temple University

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