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Longitudinal Double Spin Asymmetry in Jets in $\sqrt{s}$ = 510 polarized p+p

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The longitudinal double-spin asymmetry A_{LL} in spin-polarized $p + p$ collisions provides insight into the gluon contribution to the proton's spin by accessing the gluon helicity distribution Δg. Prior RHIC 200 GeV measurements show non-zero asymmetries and hence indicate a nonzero contribution of gluon helicity to the proton spin ΔG for the Bjorken-x range $x > 0.05$ in the recent NLO analyses. The 510 GeV PHENIX π_0 and STAR jet data confirms the non-zero asymmetries and extends constraints on ΔG to lower x. A measurement of the jet A_{LL} at $\sqrt{s}$ = 510 GeV in PHENIX will provide an important cross-check. In this talk, I will detail the jet reconstruction techniques tuned for the PHENIX detector and present the status of the measured jet cross section and A_{LL}.

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