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## Probing Gluon Helicity with Dijets from $\sqrt{s} = 510$ GeV Polarized Proton Collisions at STAR

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The production of jets in polarized proton collisions at STAR is dominated by quark-gluon and gluon-gluon scattering processes. The dijet longitudinal double-spin asymmetry ( $A_{LL}$ ) is sensitive to the polarized parton distributions and may be used to extract information about the gluon helicity contribution ( $\Delta G$ ) to the spin of the proton. Previous STAR jet measurements at  $\sqrt{s} = 200$  GeV show evidence of polarized gluons for gluon momentum fractions above 0.05. The measurement of dijet  $A_{LL}$  at  $\sqrt{s} = 510$  GeV will extend the current constraints on  $\Delta G$  to lower gluon momentum fractions and allow for the reconstruction of the partonic kinematics at leading order. Preliminary results from the dijet  $A_{LL}$  measurements from  $\sim 80 \text{ pb}^{-1}$  of  $\sim 53\%$  polarized proton data taken during the 2012 RHIC run will be presented.

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