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**Using Longitudinally Polarized Proton+Proton Collisions To Constrain the Polarized Gluon Distribution Through Dijet Measurements at  $\sqrt{s} = 510$  GeV at STAR** DANIEL OLVITT, JR, Temple University, STAR COLLABORATION — The production of jets from polarized p+p collisions at STAR is dominated by quark-gluon and gluon-gluon scattering. The dijet double spin asymmetry ( $A_{LL}$ ) is sensitive to the polarized gluon distribution ( $\Delta g(x)$ ). Dijets are also advantageous because the parton momentum fraction,  $x$ , of initial partons may be reconstructed to first order from the final state measurements. New data from 2013 with an estimated  $250 \text{ pb}^{-1}$ , at a beam polarization of  $\sim 55\%$  at  $\sqrt{s} = 510$  GeV, has a figure of merit  $\sim 3$  times that of the 2012 data collected at  $\sqrt{s} = 510$  GeV. This talk will discuss the new dijet  $A_{LL}$  preliminary results, this data use  $\sim 40\%$  of the total 2013 data. The 2013 results are consistent with the published STAR dijet  $A_{LL}$  measurements at  $\sqrt{s} = 200$  GeV, and the preliminary 2012 dijet  $A_{LL}$ . The 2013 dijet  $A_{LL}$  is also consistent with global fits from DSSV and NNPDF collaborations, that incorporate the published STAR inclusive jet  $A_{LL}$  at  $\sqrt{s} = 200$  GeV.

Daniel Olvitt, Jr  
Temple University

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