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Neutral Pion Double Helicity Asymmetry in Polarized Proton-Proton Collisions at $\sqrt{s}$=200 GeV at STAR WILLIAM LEIGHT, M.I.T., STAR COLLABORATION — One of the primary goals of the spin physics program at the STAR experiment is to constrain the polarized gluon distribution function $\Delta(g)(x, Q^2)$ by measuring the double helicity asymmetry, A_{LL}, of various final-state channels. Neutral pions are a potentially powerful final state because they are copiously produced in p+p collisions and have few backgrounds. STAR can identify neutral pions using its large-acceptance electromagnetic calorimeter, combined with a track veto from the STAR Time Projection Chamber. I will present progress towards measuring an A_{LL} for neutral pions using $\sim$14 pb^{-1} of integrated luminosity taken during the 2009 200 GeV p+p run.

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