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Longitudinal Double Spin Asymmetries of Di-Hadron Production at PHENIX in pp Collisions at $\sqrt{s} = 200$ GeV JOHN KOSTER, University of Illinois, Urbana Champaign, PHENIX COLLABORATION — The PHENIX detector, located at Brookhaven National Laboratory's Relativistic Heavy Ion Collider, measures longitudinal double spin asymmetries (A_{LL}) with the goal to determine the gluon spin contribution to the proton spin. The current suite of measurements at RHIC rely on inclusive jet or inclusive hadron kinematics and are successfully determining the gluon spin contribution at moderate values of Bjorken x. Historically, low x contributions were critical in the measurement of the quark spin contribution. This talk will present the current status of a di-hadron measurement which exploits the kinematics of asymmetric collisions to probe gluons at low x. The measurement selects events with two neutral pions, one at mid-rapidity and the second at forward rapidity. A new PHENIX electromagnetic calorimeter and the existing calorimetry at mid-rapidity make this measurement possible.

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