

# Measurement of Double Longitudinal Spin Asymmetry in Heavy Flavor Production at $\sqrt{s} = 200 \text{ GeV}$ at RHIC

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One of the main goals of RHIC-SPIN program is to determine the contribution of the polarized gluons to the proton spin. At RHIC energy, it is expected heavy quark (charm and beauty) production is dominated by gluon-gluon interaction, so measurement of double longitudinal spin asymmetry  $A_{LL}$  of heavy quark production in the polarized p+p collisions will allow us to directly probe the polarized gluon distribution inside the proton.

The PHENIX experiment collected  $3.5 \text{ pb}^{-1}$  (beam polarization  $\sim 50\%$ ) and  $7.5 \text{ pb}^{-1}$  data (beam polarization  $\sim 60\%$ ) from year 2005 and 2006 runs, respectively, and successfully reconstructed about 30K  $J/\psi$  candidates from fast online production. In this talk, we present the latest results of  $A_{LL}$  measurement in  $J/\psi$  and open charm production from the PHENIX experiment.