

Longitudinal Spin Transfer in Inclusive Λ and $\bar{\Lambda}$ Production in
Polarized Proton-proton Collisions at $\sqrt{s} = 200$ GeV

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One of the main goals of the STAR (Solenoid Tracker At RHIC) spin physics program is to delineate the flavor composition of the proton spin. Lambda and anti-Lambda measurements at large transverse momenta may help constrain the polarization of strange (anti-)quarks, and yield new insights into polarized fragmentation functions. In this presentation we present preliminary measurements of the longitudinal spin transfer D_{LL} in inclusive Λ and $\bar{\Lambda}$ production in longitudinally polarized proton-proton collisions at a center of mass energy $\sqrt{s} = 200$ GeV. The data amount to an integrated luminosity of about 3 pb^{-1} and cover $p_T < 3$ GeV/c. They were collected in the years 2003-2005 with proton beam polarizations up to 50%. The $\Lambda(\bar{\Lambda})$ candidates are reconstructed via the dominant decay channel $\Lambda \rightarrow p\pi^-$ ($\bar{\Lambda} \rightarrow \bar{p}\pi^+$) at mid-rapidity ($|\eta| < 1$) using the STAR Time Projection Chamber. The $\Lambda(\bar{\Lambda})$ polarization is extracted using a method in which the detector acceptance mostly cancels. Preliminary results on D_{LL} will be presented and an outlook for future measurements will be given.