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Measurement of Lambda polarization in longitudinally polarized proton-proton collisions at $\sqrt{s} = 200$ GeV QINGHUA XU, LBNL & Shandong University, STAR COLLABORATION — Measurements of Lambda polarization in polarized proton-proton collisions can give insight into polarized fragmentation functions, which are still not well constrained by existing data. Over the past several years, the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory has been developing the capability to collide polarized protons. This contribution reports on the measurement of Λ polarization in longitudinally polarized proton-proton collisions at $\sqrt{s} = 200$ GeV from the data taken in 2003 and 2004. The Λ candidates are reconstructed at mid-rapidity with the Time Projection Chamber (TPC) of the Solenoid Tracker At RHIC (STAR). Their mean momentum fraction x_F is about $8 \cdot 10^{-3}$ and their mean transverse momentum p_T is about 1.4 GeV/c. The Λ polarization is extracted from the asymmetry of counts in intervals of the decay angle in the Lambda rest frame for different helicity states of the colliding proton beams. In this method the detector acceptance largely cancels. Preliminary results for Λ polarization will be given.

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