

Recent results on the gluon polarization and W production program in polarized p + p collisions at RHIC

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Summary

The PHENIX and STAR experiments at the Relativistic Heavy-Ion Collider at Brookhaven National Laboratory are carrying out a spin physics program in high-energy polarized proton collisions at $\sqrt{s} = 200$ GeV and 500 GeV to gain a deeper insight into the spin structure and dynamics of the proton.

One of the main objectives of the spin physics program at RHIC is the precise determination of the polarized gluon distribution function. Recent results will be shown on the measurement of jet production and hadron production at $\sqrt{s} = 200$ GeV suggesting a small, but non-zero spin contribution of gluons to the proton spin. Recent results on the first measurements of W^-/W^+ boson production in polarized p-p collisions will be shown along with a discussion of future prospects involving upgraded PHENIX and STAR detector systems.

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