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Hadronic Dijet Production at the RIHC

I will introduce our recent work on the single spin asymmetry in the back-to-back dijet production in transversely polarized proton-proton collisions. Such an asymmetry is generated by the Sivers functions in the incoming polarized proton. We propose a QCD formalism in terms of the transverse momentum dependent parton distribution functions, which allow us to resum the large logarithms that arise in the perturbative calculations. We make predictions for the Sivers asymmetry of hadronic dijet production at the kinematic region that is relevant to the experiment at the Relativistic Heavy Ion Collider (RHIC). We further compute the spin asymmetries in the selected positive and negative jet charge bins, to separate the contributions from u- and d-quark Sivers functions.

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