Contribution ID: **80** Type: **Parallel**

Sivers effect on the single transverse-spin asymmetries in J/psi production in the collinear pQCD approach

Monday, 29 June 2026 15:45 (20 minutes)

The origin of the large single transverse-spin asymmetry (SSA) has been a long-standing mystery in high-energy spin physics since it was first observed experimentally in the late 1970s. Previous theoretical studies have shown that the Sivers effect in a transversely polarized proton could be a source of this large asymmetry. Although the quark Sivers functions have become relatively well understood over the past couple of decades, the gluon Sivers function, by contrast, remains largely unknown. Determining it is one of the key goals of future experiments such as the EIC and LHCspin. Within the conventional perturbative QCD framework, the Sivers effect can be described in terms of collinear twist-3 distribution functions. In this talk, we present our recent work on the SSA in J/\psi production within the twist-3 framework. This observable is ideal for investigating the gluon Sivers effect.

Collaboration

Primary authors: XING, Hongxi (South China Normal University); CHEN, Longjie (Institute of Nuclear Physics PAS); YOSHIDA, Shinsuke (South China Normal University)

Presenter: YOSHIDA, Shinsuke (South China Normal University)

Session Classification: Parallel session A6

Track Classification: Structure of hadrons