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Recent Progress in Extracting the Sivers Function JOHN TERRY, ZHONG-BO KANG, UCLA, MIGUEL ECHEVARRA, Universidad de Alcal a — In this talk, I'll discuss our recent global analysis of the Sivers asymmetry which was performed within the transverse momentum dependent (TMD) factorization formalism. In this work, we simultaneously fit Sivers asymmetry data from Semi-Inclusive Deep Inelastic Scattering (SIDIS) at COMPASS, HERMES, and JLab, from Drell-Yan lepton pair production at COMPASS, and from W/Z boson at RHIC at next-to-leading order (NLO) and next-to-next-to-leading logarithmic (NNLL) accuracy. We find excellent agreement between our extracted asymmetry and the experimental data for SIDIS and Drell-Yan lepton pair production, while tension arises when trying to describe the spin asymmetries of W/Z bosons at RHIC. We find that the quality of the description of W/Z vector boson asymmetry data could be strongly sensitive to the DGLAP evolution of the Qiu-Sterman function. I'll present a discussion on this effect, possible implications for measurements of the transverse-spin asymmetries at the future Electron-Ion Collider, as well as comparisons of the extracted Sivers function obtained in other recent extractions.

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