

## Transverse Momentum Dependent Parton Distributions and EicC Projection

We present the global analysis of Sivers functions, worm-gear distribution functions, transversity distribution functions, and Collins fragmentation functions within the transverse momentum dependent factorization. This analysis encompasses the latest data from SIDIS, DY, and  $W^\pm/Z$ -boson production processes. In addition, based on a combined analysis of world data and simulated data, we quantitatively demonstrate the impact of the proposed Electron-Ion Collider in China on precise determinations of the Sivers, worm-gear and transversity distributions.

**Primary authors:** ZENG, Chunhua (IMP); DONG, Hongxin (NNU); YANG, Ke (山东大学); SUN, Peng (IMP, CAS); LIU, Tianbo (Shandong University); ZHAO, Yuxiang (University of Science and Technology of China (USTC))

**Presenter:** DONG, Hongxin (NNU)

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