

Abstract Submitted
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First global analysis of SSAs in SIDIS, Drell-Yan, e^+e^- annihilation, and proton-proton collisions DANIEL PITONYAK, Lebanon Valley Coll, JUSTIN CAMMAROTA, William Mary, LEONARD GAMBERG, Penn State Berks, ZHONGBO KANG, UCLA, JOSHUA MILLER, Lebanon Valley Coll, ALEXEI PROKUDIN, Penn State Berks and Jefferson Lab, TED ROGERS, Old Dominion University and Jefferson Lab, NOBUO SATO, Jefferson Lab — The analysis of single transverse-spin asymmetries (SSAs) gives us tremendous insight into the internal structure of hadrons. For example, the Sivers and Collins effects in semi-inclusive deep-inelastic scattering (SIDIS), Sivers effect in Drell-Yan, and the Collins effect in electron-positron annihilation have been widely investigated over many years in order to perform 3D momentum-space tomography. In addition, observables like A_N in proton-proton collisions are of interest due to their sensitivity to quark-gluon correlations. In this talk I will report on the first global fit of SSA data from SIDIS, Drell-Yan, e^+e^- annihilation into hadron pairs, and proton-proton collisions. I will discuss the results of our analysis, including extraction of a unique set of universal non-perturbative functions that describe all observed SSAs, agreement with lattice QCD on the nucleon tensor charge, and also explore avenues for future research.

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