Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Search for collectivity in high multiplicity DIS and photo-production e+p collisions with H1 at HERA CHUAN SUN, Shandong University, ZHOUDUNMING TU, BNL, STEFAN SCHMITT, DESY, AUSTIN BATY, WEI LI, Rice University, ZHENYU CHEN, Shandong University, H1 COLLABORATION — Observations of two- and multi-particle correlations in high multiplicity p-A, p-p and ultra-peripheral Pb+Pb collisions at RHIC and LHC reveal the collective nature of particle production in small collision systems. These results motivate a study in even smaller systems such as e+p collisions in order to understand the origin of the observed collectivity. With data collected by the H1 experiment at HERA, two- and multi-particle correlations in collisions of electron at 27.6 GeV and proton at 920 GeV are measured as a function of multiplicity for deep inelastic scattering events, as well as for photo-production events for the first time. Those results are compared to available Monte Carlo models and are complementary to the studies of collectivity in other small systems.

Zhenyu Chen
Shandong Univ

Date submitted: 08 Jan 2021 Electronic form version 1.4