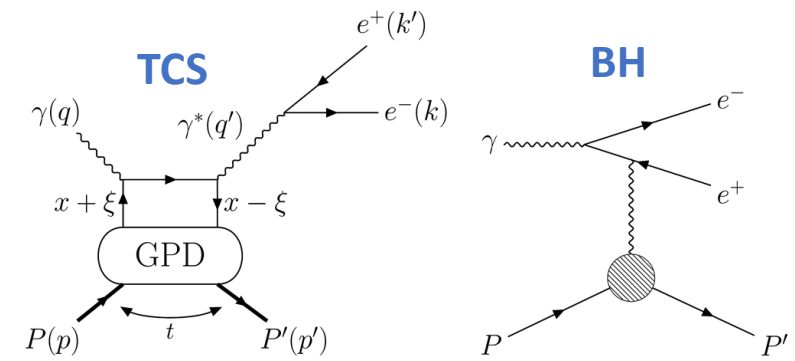


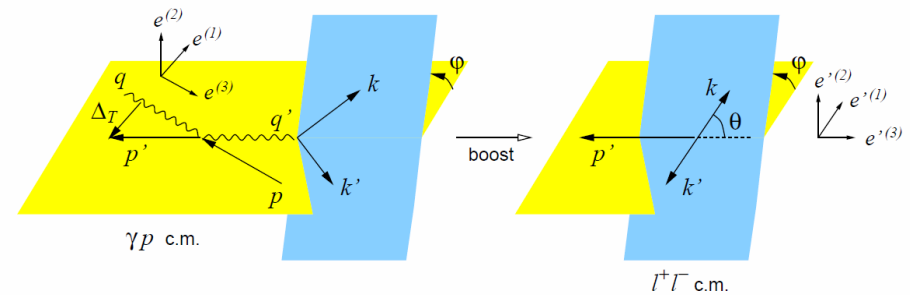
Timelike Compton Scattering with SoLID at JLab 12GeV

$$\gamma p \rightarrow \gamma^*(e^- e^+) p'$$

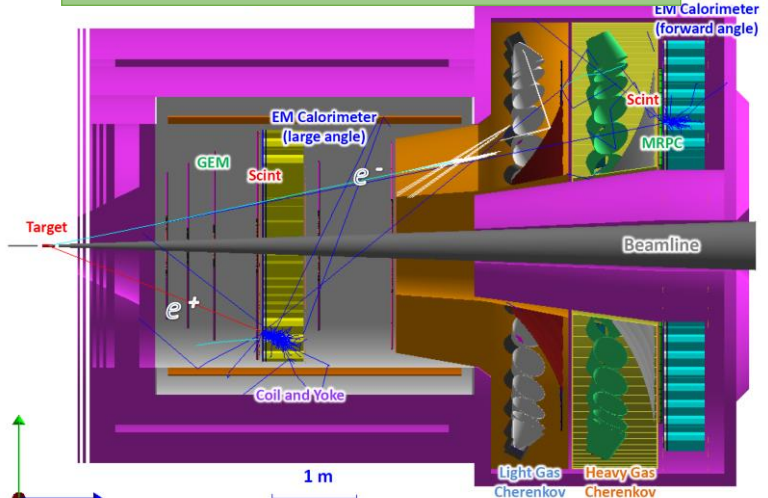
- TCS can access the same GPD like DCVS and test **universality**. It probes the real and imaginary part of GPD H and provides new observables for **global GPD fits**. The exclusive reaction has small crosssection and thus needs **high luminosity and large acceptance**
- The first CLAS12 result “PRL, 127, 262501 (2021)” obtained **nonzero** beam polarized asymmetry A_{LU} and forward backward asymmetry A_{FB} , with limited statistics
- **SoLID TCS** experiment will have 50 days of running with circular polarized e^- beam and LH2 target and collect unprecedented amount of high quality data to usher TCS study into precision era with multi-dimensional binning



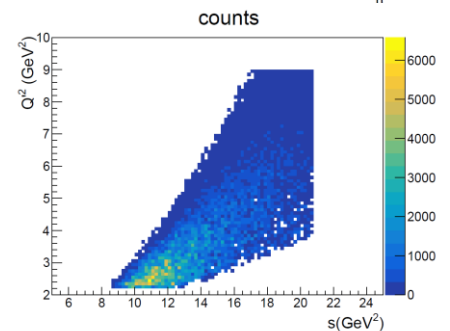
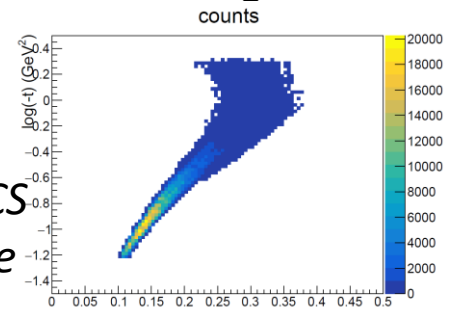
Kinematics



Lumi = $1e37/cm^2/s$
8-28 deg polar angle, full azimuthal



SoLID TCS coverage and counts



CLAS12 result

