

EIC wish list

Regarding DATA

- Measure cross-sections instead of ratios for a more dedicated analysis
- Release both QED corrected and uncorrected data
- Develop method for unbinned cross-sections

Regarding PDFs, FFs and other distributions

- Replication of PDF4LHC and HERA efforts for EIC : PDF4EIC
- Perform global NNLO analysis of polarized PDFs
- Impact of QED corrections on polarized PDFs
- Perform global analysis of DVCS
- Generate threshold resummed PDFs and FFs
- New set of photon PDFs (existing are outdated)

Regarding Perturbative corrections (QCD/QED)

- Jets in DIS: matched NNLO + q_T resummation
- DIS with QED/EW corrections
- Calculations for dihadron production

Regarding Theoretical Issues

- Discuss (non)universality of TMDs
- Search for ideal observables to measure Wigner distribution
- Role of lattice in PDFs (in two slides!)
- Studies for Λ polarization at EIC
- N^* , Δ electro-couplings at $Q^2 > \text{GeV}^2$
- Proton structure functions from transition regime to DIS
- Small- x dipole and quadrupole amplitudes

The list was also presented at the pre-town meeting at MIT (supported by CFNS) and met with much interest by the community. We now propose a follow-up CFNS workshop to further address the issues on the list and to streamline the list. The workshop would identify the topics for future EIC theory work and focus the activities of the field. We also hope to attract scientists who were not present at the first workshop, especially early-career scientists and/or scientists from underrepresented minorities.