Contribution ID: **23** Type: **not specified**

Probing gluon TMDs in back-to-back production of $J/\psi - \mathrm{jet}$ and $J/\psi - \gamma$ in eP collision

Tuesday 27 June 2023 09:50 (20 minutes)

We present a calculation of the azimuthal asymmetries in back-to-back production of $J/\psi - \mathrm{jet}$ and $J/\psi - \gamma$ in eP collision. We use NRQCD to estimate the J/ψ production, and assume TMD factorization for the back-to-back kinematics. We show that these asymmetries will be useful for probing the the gluon TMDs, like the linearly polarizaed gluon TMD, in unpolarized scattering, and gluon Sivers function, when the proton is transversely polarized. We give estimates of the upper bound of the asymmetries, as well as using different parametrizations of the gluon TMDs. We investigate the effect of TMD evolution on the asymmetry.

Presenter: MUKHERJEE, Asmita (Indian Institute of Technology, Bombay, India)

Session Classification: Session