

Extracting the gluon density at the Electron-Ion Collider from F_L measurements

Wednesday 24 September 2025 16:30 (25 minutes)

We present a determination of the gluon density xg from simulated measurements of the longitudinal structure function of the proton at the Electron-Ion Collider (EIC). Using the Rosenbluth separation method, we show that the EIC can achieve high precision in the extraction of F_L , even with modest luminosities. We further show the complementarity between the EIC, HERA, and fixed-target results.

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Session Classification: Session 12