

Preliminary design of the Interaction Region (IR) of the future Electron-Ion Collider (EIC) at BNL

Wednesday, 29 July 2020 18:45 (15 minutes)

The Electron-Ion Collider (EIC) will be built to address fundamental questions which include the origin of the nucleon spin, space and momentum distribution of partons inside nucleons, interaction of jets in nuclear medium and the dynamics of the gluon density at high energies.

In this talk we present an overview of the Interaction Region (IR) design for the EIC. The design takes into account the requirements imposed by the aforementioned physics goals.

The IR features 9 m of available space for the central detector system, a forward spectrometer for the detection of hadrons scattered at small angles, and a luminosity detector and a detector for scattered electrons at the rear side, at the direction of the outgoing electron beam.

The talk will discuss the present status and challenges of the IR design.

Secondary track (number)

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Session Classification: Detectors for Future Facilities (incl. HL-LHC), R&D, Novel Techniques

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