

eeFACT 2025 - 70th ICFA Advanced Beam Dynamics Workshop on High Luminosity Circular e+e-Colliders



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Beam dynamics studies to address EIC challenges.

The Electron-Ion Collider (EIC) at BNL is designed to provide a peak luminosity of $10^{34} \text{ cm}^{-2} \text{ sec}^{-1}$ (electron-proton equivalent) in collisions between polarized electrons and heavy ions or polarized protons. To achieve this high luminosity, high beam currents in a large number of bunches are required, and ion beams with unequal transverse emittances need to be generated and accelerated. Experimental studies and simulations to address EIC beam dynamics challenges will be reported.

Footnotes

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