

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



Contribution ID: 17

Type: **Invited Oral Presentation**

## 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

### Funding Agency

Work supported under Contract No. DE-SC0012704, Contract No. DE-AC05-06OR23177, Contract No. DE-AC05-00OR22725, and Contract No. DE-AC02-76SF00515 with the U.S. Department of Energy.

### I have read and accept the Privacy Policy Statement

Yes

**Primary author:** MONTAG, Christoph (Brookhaven National Laboratory)

**Presenter:** MONTAG, Christoph (Brookhaven National Laboratory)

**Session Classification:** Optics & Beam Dynamics

**Track Classification:** WG3 : Optics & Beam Dynamics