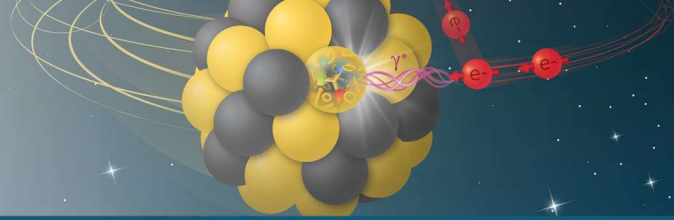


Electron-Ion Collider



EIC Directorate
Building 1005S
Upton, NY 11973-5000

www.bnl.gov/eic

Date: 08/18/2025 (DRAFT)

To: T. Raubenheimer, EIC Machine Advisory Committee Chair, and Members of the Committee
Cc: S. Nagaitsev
L. Lari

From: J. Yeck, EIC Project Director

Subject: EIC Machine Advisory Committee (MAC) on **September 16-18, 2025**

Following the MAC meeting in September 2024, the project has made steady progress across several fronts, including defining engineering requirements, specifications, and interfaces; advancing engineering designs; and preparing long-lead procurements. In April 2025, the EIC Electron Injector Cost & Design Review was conducted to assess the status of the injector's design, technical definition, and cost and schedule.

The upcoming MAC meeting in September 2025 will focus on four key areas:

1. Electron injector design progress
2. Interaction Region (IR) design progress
3. IR superconducting (SC) magnets and crab cavities – design status, fabrication, and testing plans
4. Beam dynamics and other accelerator design aspects

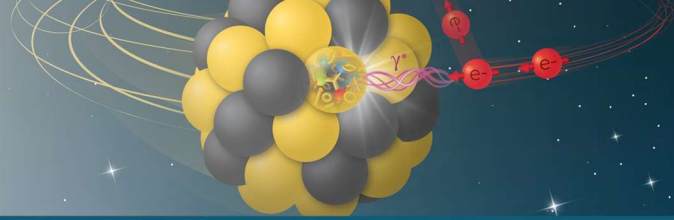
The committee's advice will help us refine the machine's technical baseline and prepare the Project Performance Baseline. Work on the Preliminary Design Report (PDR) is also underway, with the final PDR scheduled for completion in January 2026.

Charge to the Committee

We ask the committee to address the following charge questions:

- Provide feedback on the electron injector design, including the RCS and BAR rings, and the integration of the Injector into the overall design.
- Assess the maturity of the IR design, including optics, beam-beam models, SC magnets, collimation, and crab cavities.
- Review the EIC collective effects models (including beam-beam) and evaluate whether our plans for beam-based feedback and feed-forward systems are sound.

Electron-Ion Collider



- Review and comment on our plans for the Hadron Storage Ring transition crossing, wakefield and instability mitigation, and the overall radiation shielding approach.

In addition, we welcome the committee's advice on any other topics that arise during your deliberations. A draft agenda is attached for reference.

We kindly request a written report with the committee's comments and recommendations by **October 14, 2025**.