



Contribution ID: 527 Contribution code: TUPD005

Type: **Poster Presentation**

Control software and technology choices for the electron-ion collider

Tuesday 23 September 2025 16:00 (1h 30m)

The Electron-Ion Collider (EIC) will succeed the current Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory. For over two decades, RHIC and its injectors have relied on a homegrown Accelerator Device Object (ADO)-based control system, which has provided a reliable and efficient operational framework. However, the EIC's requirements—such as a greater number of subsystems, higher uptime, increased data rates, and other factors—demand significant enhancements. Advances in both hardware and software technologies since the RHIC era have expanded the range of available options, each with its own set of benefits and challenges. In response, the EIC plans to deploy state-of-the-art technologies to meet these elevated demands, favoring open-source and community-driven solutions wherever feasible. This talk will focus on the control software and the technology choices under consideration and the strategies being adopted for the EIC.

Footnotes

Funding Agency

Work supported by Brookhaven Science Associates, LLC under Contract No. DE-SC0012704 with the U.S. Department of Energy.

Author: KABIR, Md Latiful (Brookhaven National Laboratory)

Co-authors: DE SILVA, Chanaka (Brookhaven National Laboratory); JAMILKOWSKI, James (Brookhaven National Laboratory); LASTER, Jonathan (Brookhaven National Laboratory); SHROFF, Kunal (Brookhaven National Laboratory); OLSEN, Robert (Brookhaven National Laboratory); NEMESURE, Seth (Brookhaven National Laboratory); D'OTTAVIO, Theodore (Brookhaven National Laboratory); Mr YIN, Zhijian (Brookhaven National Laboratory)

Presenter: KABIR, Md Latiful (Brookhaven National Laboratory)

Session Classification: TUPD Posters

Track Classification: MC02: Control System Upgrades in Existing Facilities