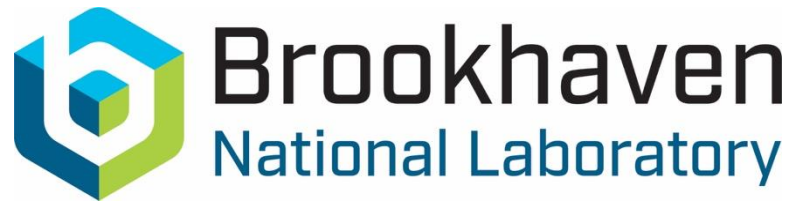# ePIC Computing and Software October 2025 Review Highlights

(The EIC International Computing Organization and Echeclon1 Resources)

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Review of ePIC Computing & Software

Review of ePIC Computing and Software October 6-7 @Jlab

- Review Committee (ECSAC) : S.Campana (CERN, Chair), P.Mato (PIC), V.Martinez Outschoorn (UMass), I.Baldin (JLab), M.Cromaz (LBNL), W.Yang (SLAC)

- Agenda

Day 1 morning session

Day 1 afternoon session

Day 2 sessions

Jefferson Lab

Review Charge Questions

1. **ePIC Computing and Software**: Assess the progress towards TDR readiness and implementing the ePIC computing model. As appropriate, assess the plans and outcomes for data challenges and other prototypes/testbeds. Assess the interfaces between the EIC detector DAQ and the ePIC computing and software organization as appropriate.

2. **Resources**: Assess the short-term and long-term resource planning relative to the near-term outcomes and long-term goals. As appropriate, comment on the delivery of resources by international partners

3. **ECSJI**: Evaluate short and long terms support resource planning and delivery by the host laboratories through the ECSJI. As appropriate, evaluate the collaboration and division of responsibilities between the two labs.

4. **Broader Community**: Assess as appropriate engagements with aligned Software and Computing organizations across nuclear physics and particle physics communities and other relevant communities.

Disclaimer

We have the draft closeout report from ECSAC, and we asked ECSAC if we could share selected topics with EICO.

several topics will be presented today

ECSJI Progress and Priorities since September 2024 ECSAC Review

- Two main tracks since September 2024 review
  - Establishing the EIC International Computing Organization
    - *Link to the slides presented at the review*
  - Estimating BNL and JLab Requirements for ePIC/EIC Computing in 2027–2032 (aka "white paper for DOE ONP")
    - Address ECSAC recommendation :
      - *Assign dedicated effort to the ePIC S&C team before the next ECSAC meeting*
    - *Link to the slides presented at Echelon0-Echelon1 workshop on October 8*

Closeout report for the ePIC Software & Computing Review 2025 (Draft) I

Charge question #2: Resources. Assess the short-term and long-term resource planning relative to the near-term outcomes and long-term goals. As appropriate, comment on the delivery of resources by international partners

- *We **recommend** the ePIC to continue engaging the institutes (including the host labs) to identify possible additional contributions for SW&C developments and operations. We expect to hear about the level of engagement of the institutes and the success in addressing resource gaps at the next ECSAC meeting*

Brookhaven National Laboratory

Jefferson Lab

Closeout report for the ePIC Software & Computing Review 2025 (Draft) II

Charge question #3: ECSJI. Evaluate short and long terms support resource planning and delivery by the host laboratories through the ECSJI. As appropriate, evaluate the collaboration and division of responsibilities between the two labs.

- Comments:
    - *We **believe** that the host labs have done diligent work understanding the future hardware resource needs and the effort to deliver E1. We believe that such an understanding is credible.*
    - *The host labs show a good level of mutual collaboration. We **believe** they identified the right model for contributing to SW&C based on their expertise.*

- Recommendations
    - None

Charge Question #4: Broader Community. Assess as appropriate engagements with aligned Software and Computing organizations across nuclear physics and particle physics communities and other relevant communities.

- Comments
  - *We **believe** that the EICO is a reasonable construct to structure the international distributed computing framework for the EIC experiment(s). It maps well with existing structures such as WLCG and many of the involved parties are familiar with these structures as they have been in place since many years*

- Recommendations:
  - *We **recommend** implementing the EICO as described during the review. We suggest a staged approach focusing initially on the aspects more related to the collaboration (Collaboration/Overview boards) and the links with WLCG.*