Charge for the Review of ePIC Software and Computing

October 19-20, 2023

The Electron-Ion Collider will be a state-of-the-art accelerator located at Brookhaven National Laboratory (BNL). Its realization is led jointly by BNL and Jefferson Lab. The accelerator and a detector system will be constructed over the next ten years as a DOE construction project and with non-DOE in-kind contributions. The ePIC collaboration is designing the detector systems to meet the goals as outlined in the 2015 NSAC Long Range Plan.

The ePIC computing model is anticipated to reflect the tight integration between the detector elements, the join-responsibilities of BNL and Jefferson Lab as host Labs and allow for in-kind contributions to ePIC Software and Computing.

The EIC Resource Review Board (RRB) provides coordination among the different funding partners during the project's detector development and construction phase and during the operations of the following experiments. Computing is included in this RRB.
As the EIC is a partnership between BNL and Jefferson Lab, it is reflected in the creation of the EIC Computing and Software Joint Institute (ECSJI). The ECSJI will be formed on October 1, 2023. This first step will enable the resource planning needed to support the ePIC collaboration.

A committee of experts, the EIC Computing and Software Advisory Committee (ECSAC), has been formed to advise the host laboratories on the progress and status of computing and software for the ePIC collaboration. Reviews are expected to take place on a regular cadence, with a charge reflective of the EIC schedule, the stage of the ePIC experiment, and impending deadlines. This charge covers an assessment of the ePIC computing model in preparation for the December 2023 RRB meeting. The scope of this review also includes the organization of the newly formed ECSJI.

1. At this stage, approximately ten years prior to data collection, is there a comprehensive and cost-effective long-term plan for the software and computing of the experiment?
2. Are the plans for integrating international partners' contributions adequate at this stage of the project?
3. Are the plans for software and computing integrated with the HEP/NP community developments, especially given data taking in ten years?
4. Are the resources for software and computing sufficient to deliver the detector conceptional and technical design reports?
5. Are the ECSJI plans to integrate into the software and computing plans of the experiment sufficient?

An agenda will be developed with talks from the ePIC collaboration and ECCJI to address these charge elements.

A report should be submitted by November 13, 2023.

We appreciate your willingness to lend your time and expertise in this important process and look forward to receiving your assessment.

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8/22/2023
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