

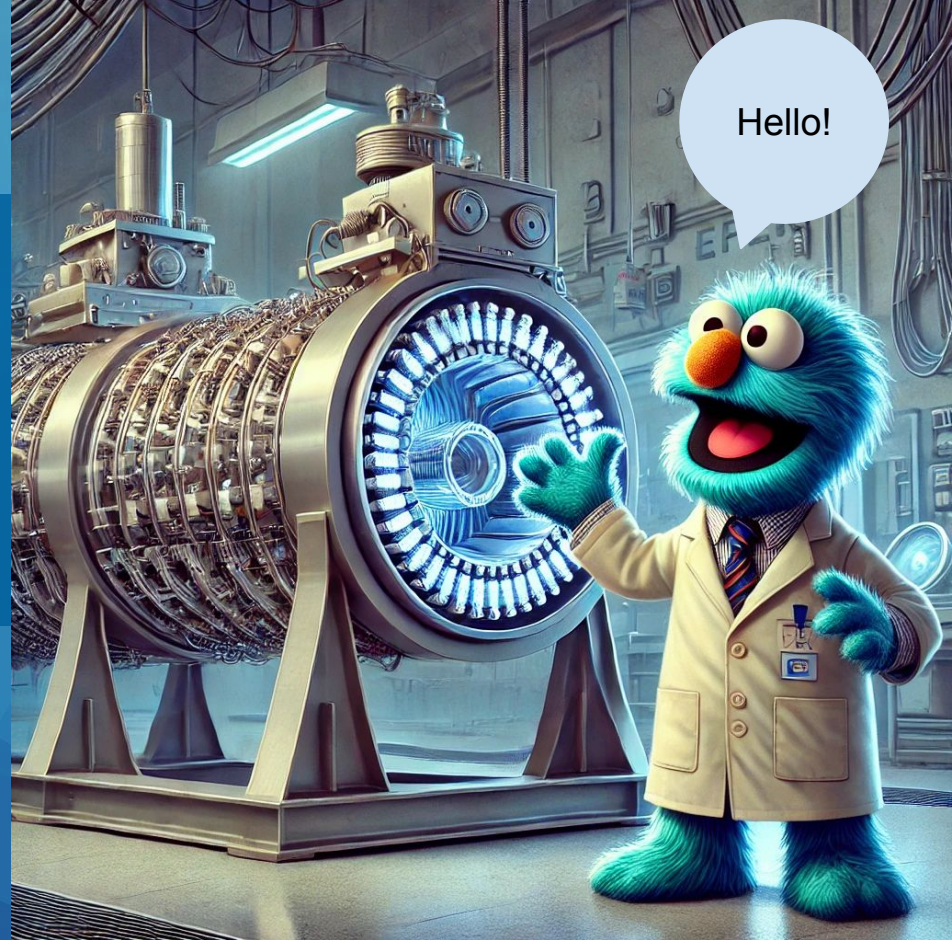
BIC General Meeting, November 22, 2024

The ePIC Barrel Imaging Calorimeter

News and Management Update

Sylvester Joosten

Argonne National Laboratory
on behalf of the BIC DSC Management



News Brief

Reviews & Meetings

Reviews

- ✓ BIC Preliminary Design and Safety Review in September went very well
- ✓ EIC Director's Review in October saw reviewers raise concerns regarding the foundry for our "large" order of AstroPix
- Next: EIC CD3b OPA Review in January - will help the Project prepare material, including slide(s) to address foundry concerns
- Full BIC PDR tentatively for Summer 2025

Meetings

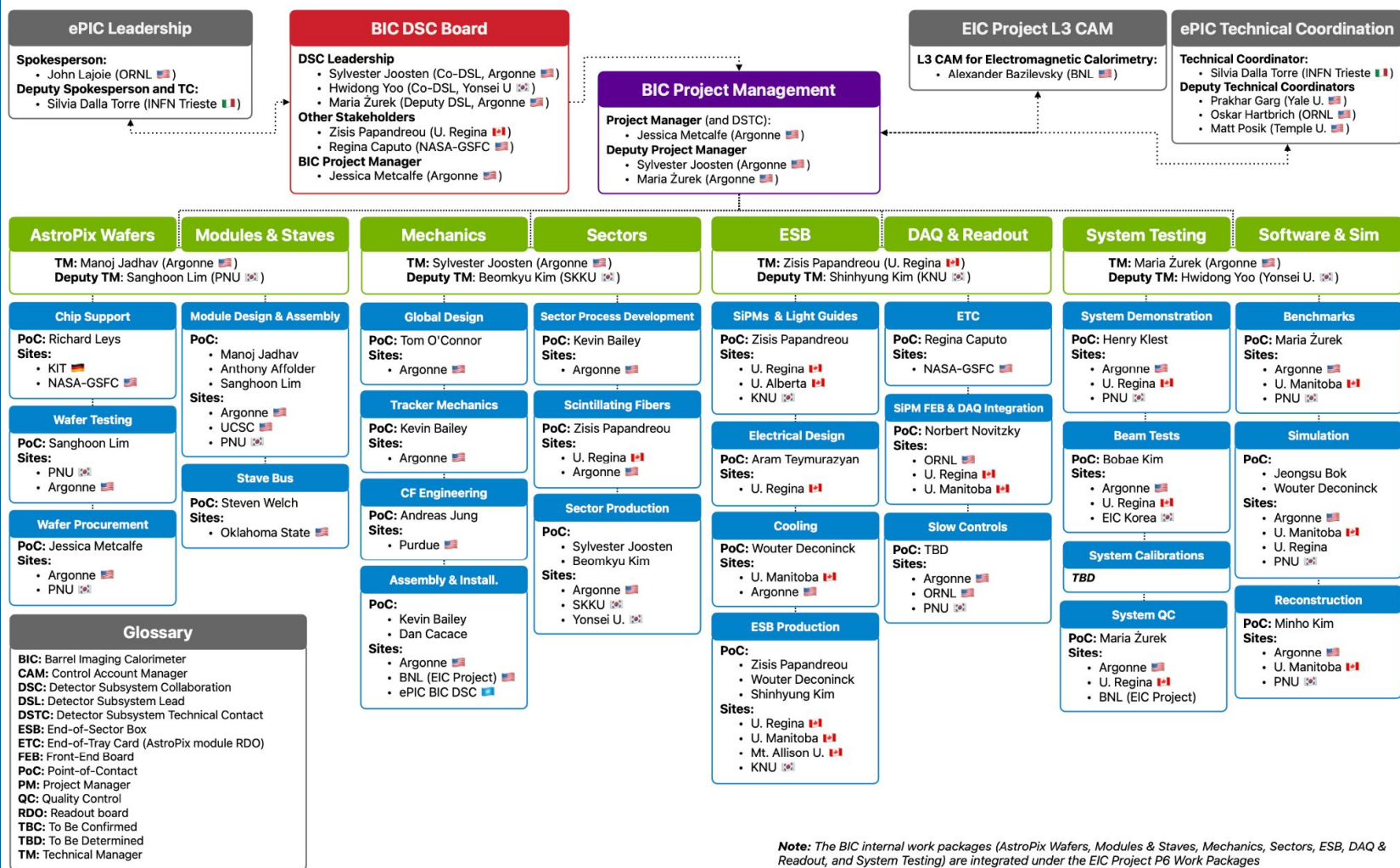
- ePIC Collaboration Meeting in Frascati, Italy (January 20-24)
- (Tentative) April BIC Workshop at Argonne

TDR

- ✓ ePIC TDR v0 released in October
- ePIC TDR v1 changes due December 6

Activities

- ✓ Major PED activities started August 2024
 - GSFC still waiting for funding, reworking timeline to avoid delays
- International partners working toward substantial international in-kind funding
- Work package leads (Technical Managers) will report on status during monthly ePIC BIC General Meetings



USA

Argonne National
LaboratoryNASA Goddard Space
Flight CenterOklahoma State
UniversityUniversity of
ConnecticutUniversity of
California Santa Cruz

Canada

University of Manitoba



University of Regina

Mount Allison
University

NSERC

Canada Foundation
for Innovation

INNOVATION

Canada Foundation
for Innovation
Fondation canadienne
pour l'innovation
Possible in-kind funds

Korea

Kyungpook
National
UniversityYonsei
UniversityUniversity
of SeoulPusan
National
UniversityKorea
UniversitySungkyunkwan
UniversityHanyang
UniversityGangneung-
Wonju National
University

Germany

Karlsruhe Institute of
Technology

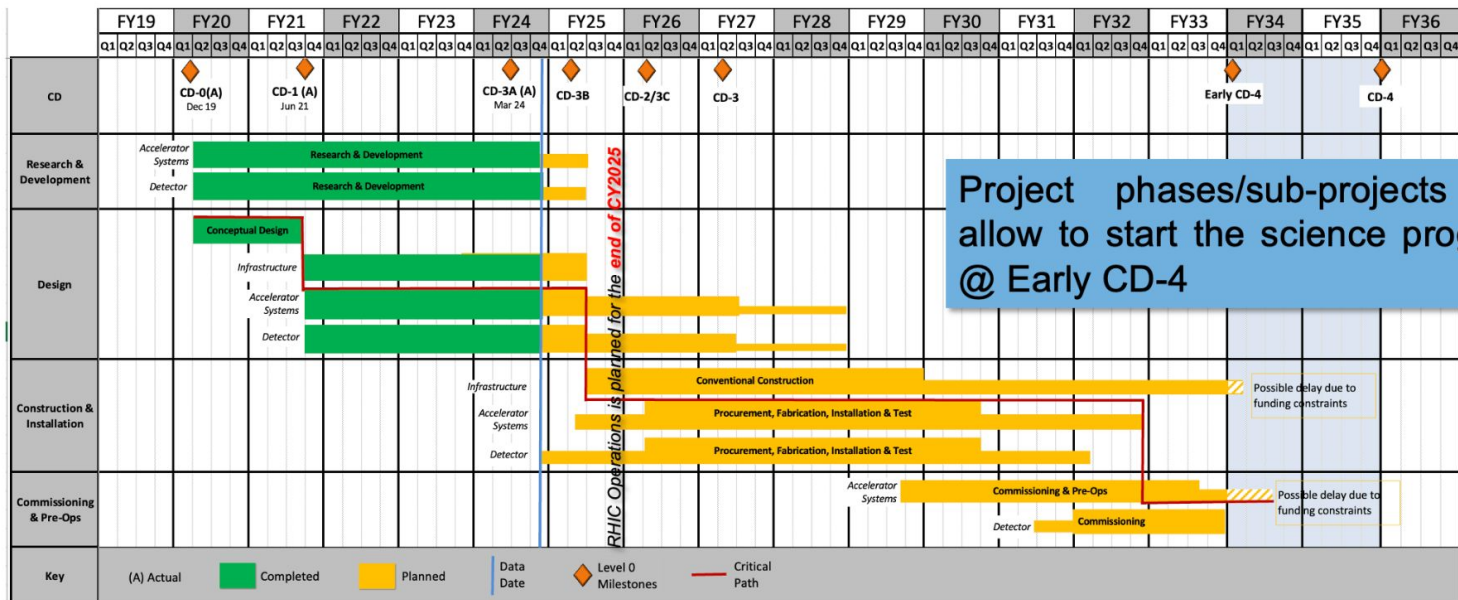
University of Giessen



ePIC BIC Detector Subsystem Collaboration

Schedule

Under finalization for CD-2; Mostly Technically Driven after FY2027.



Since CD-1, the critical path is on the Accelerator systems.

Toward pre-TDR v1.0

On track for v1.0 on December 1st



- On track to address most reviewer comments by December 1st
 - Some reviewer comments warrant discussion (see next slides)
- Created GitHub repository for analysis code of BIC TDR figures:
 - <https://github.com/eic/epic-tdr-bic>
 - This addresses the Guidelines for Reproducing TDR Plots (<https://zenodo.org/records/14170704>)
 - Will provide codes for most figures by December 1st
- Will reproduce most figures from the latest official campaign
 - Caveat: single particle samples for some studies not part of campaign, will address with production WG
- Have partial rough draft of supplemental material ready, will need iteration and expanding in the future

Guidelines for Reproducing TDR Plots

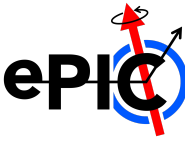
1 Procedure

We agreed to archive the information necessary for reproducing the studies and associated figures included in the TDR. After evaluating various options, we selected a method that simplifies the procedure with minimal additional steps. For reproducing the detector and physics studies, we will use GitHub repositories, subject to the following requirements:

- These repositories must be accessible to all members of the collaboration.
- Each figure in the TDR must include a direct link to its corresponding GitHub repository in the figure caption.
- Repositories must contain all scripts that begin with the primary data source to fully reproduce studies and figures. At least one Readme or a similar document should be provided, documenting the necessary steps for reproducing the studies and figures. For studies based on the ePIC simulation productions or geometry implementations, the scripts must use the centrally accessible data and geometry releases. If ancillary data are required, and they are not already accessible remotely, this data must be included in the repository.
- This approach may not be suitable for CAD drawings, Finite Element Analysis (FEA) studies, and other technical files. In these instances, the GitHub entry should include a description and contact information.

Additionally, the information necessary for reproducing the studies and figures will be copied into a dedicated repository to ensure archiving is consistent with major versions of the TDR.

Other Bussiness



- Working on more comprehensive BIC collaborator list, will contact institutional leads soon to get list of names.
- Any BIC-specific activities to be planned during the January collaboration meeting?’

Last BIC General Meeting of the year - thanks everyone for a very productive year where we made major progress toward our milestones!