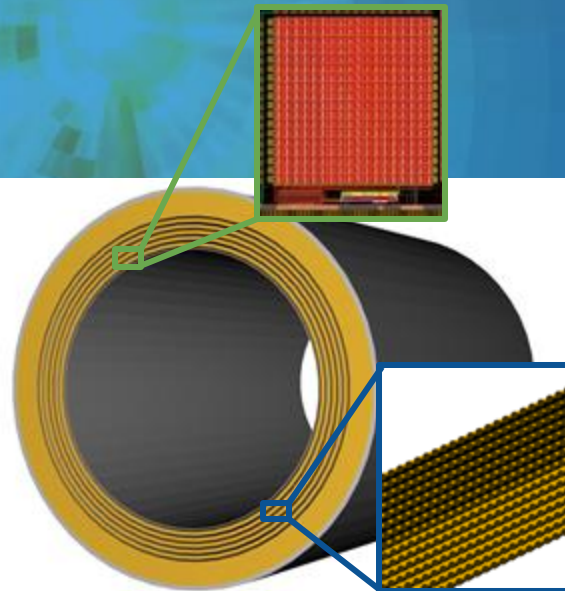


The ePIC Barrel Imaging Calorimeter

News

Jessica Metcalfe
Argonne National Laboratory

BIC General Meeting
July 25, 2025

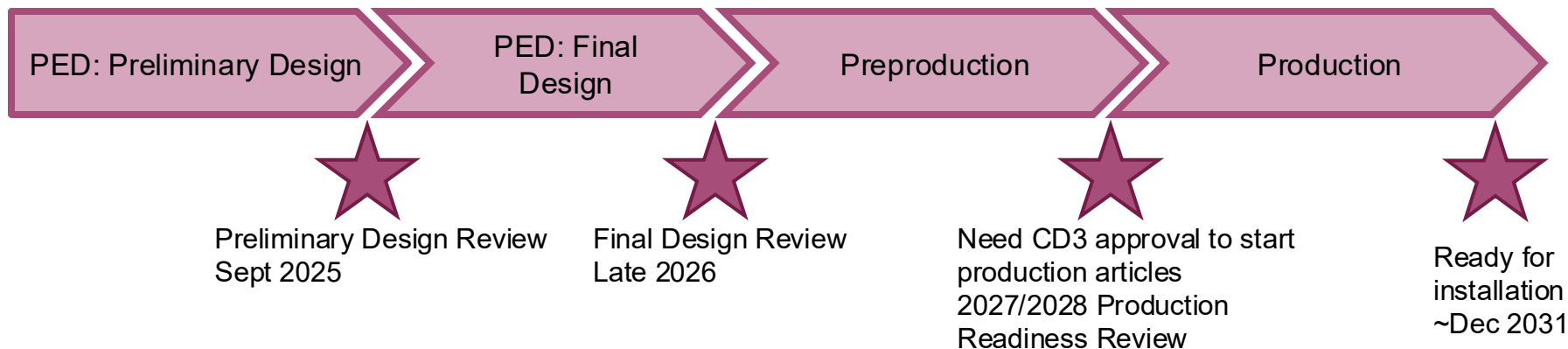


BIC Preliminary Design Review (PDR) September 17-18

- Went very well
- **A HUGE Thank You to everyone**
- Represented a lot of progress over the last year –from everyone in the community
- Review page: [Incremental Preliminary Design and Safety Review of the ePIC Barrel Imaging EMCal \(17-18 September 2025\) · Indico](#)
- **Access Key:** PDR2025BIC



BIC Project Phases



- Preliminary Design Review, 60% design completion
- AstroPix v3 (and v4)
- BabyBCal & Lanky BCal
- Individual components
- First (second) test articles

- AstroPix v5
- One full sector
- Final designs (90%)
- Production style procedures
- AstroPix v6 validation tests

- AstroPix v6
- 48 sectors

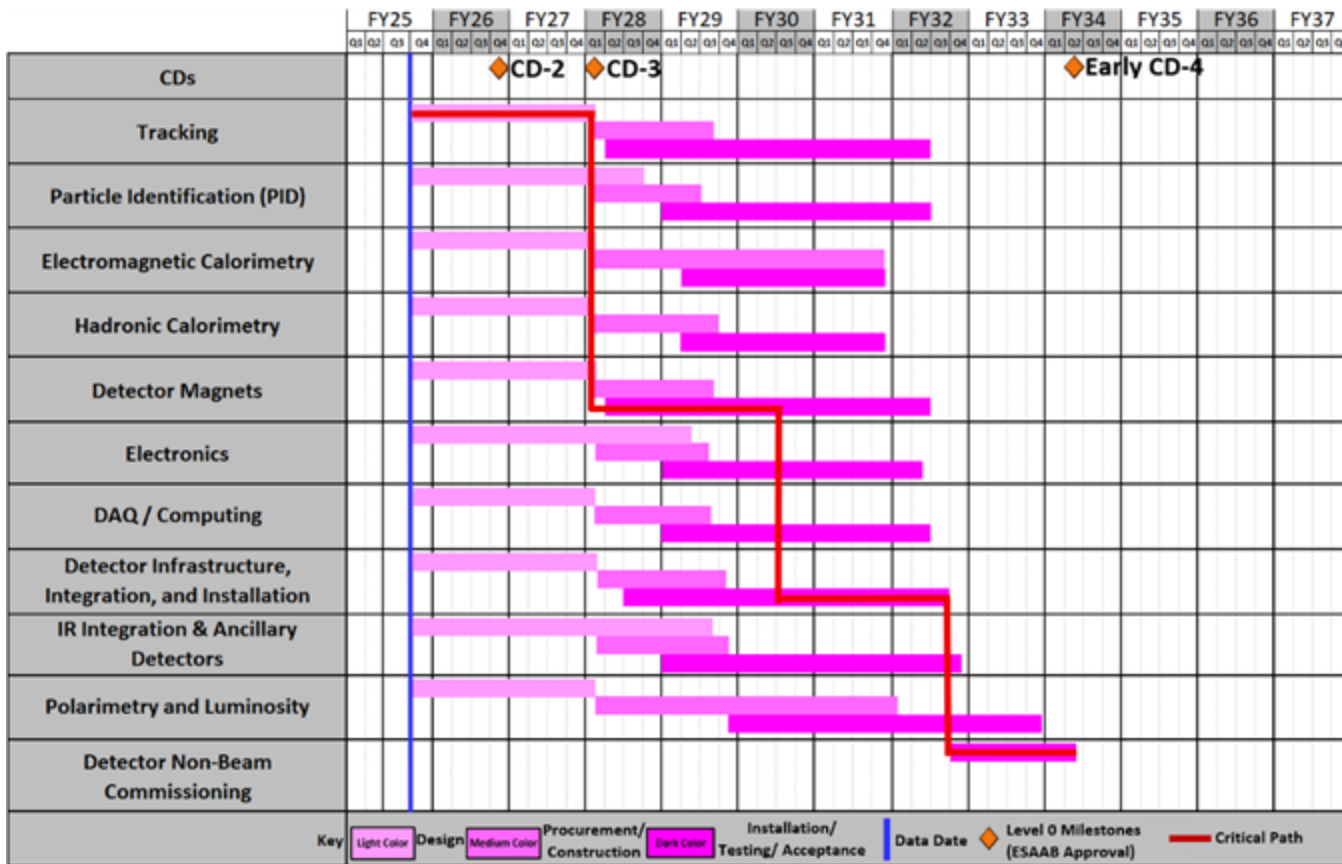
Next Steps



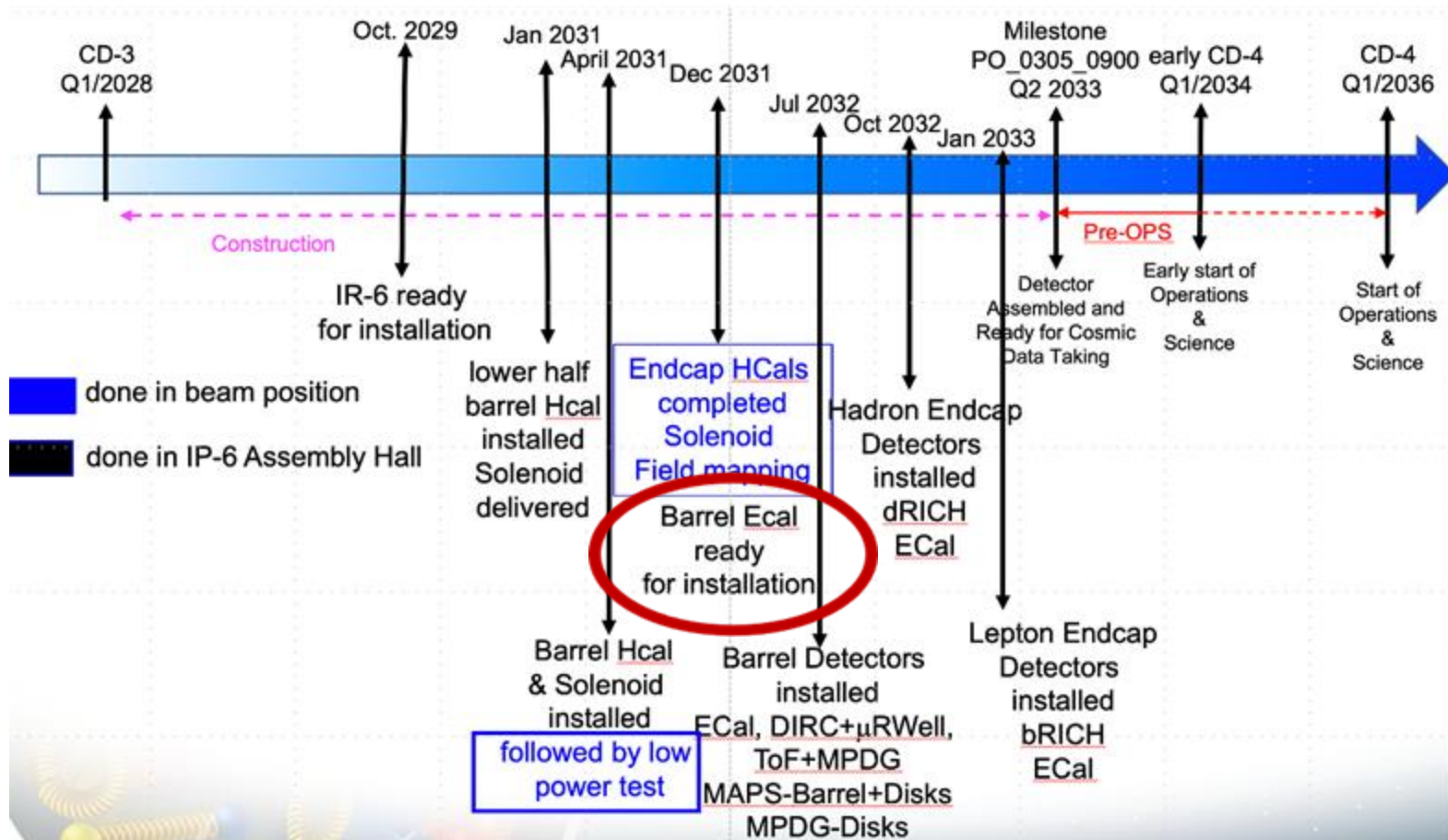
- Continue moving forward with the plan laid out in Merlin
- Working toward the final design review in ~1 year
- Final designs should match all requirements for the final detector production, but could still have minor changes based on findings from preproduction → 90% complete
- We will need to work on the final production model in detail before the FDR

BIC Organization

EIC Project Dates

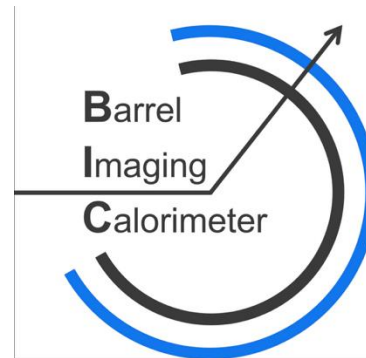
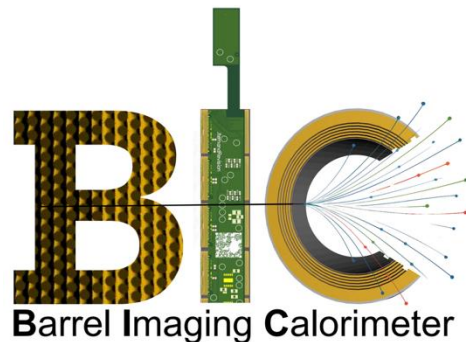
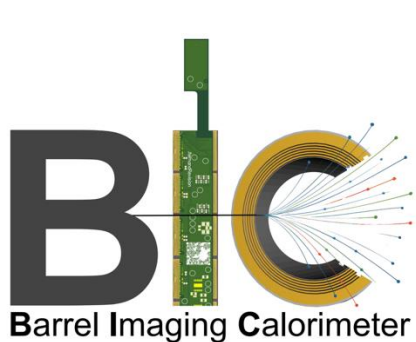
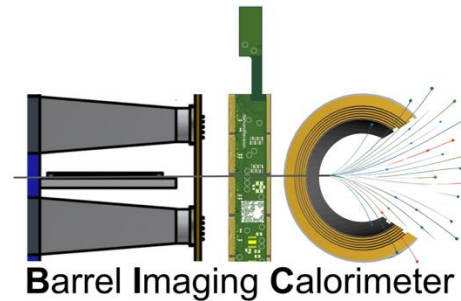
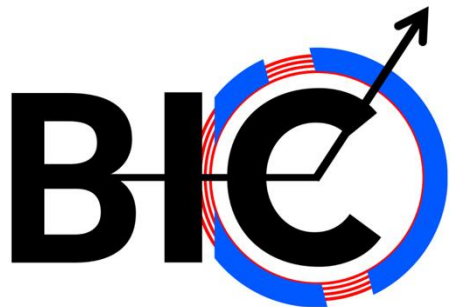


ePIC Schedule

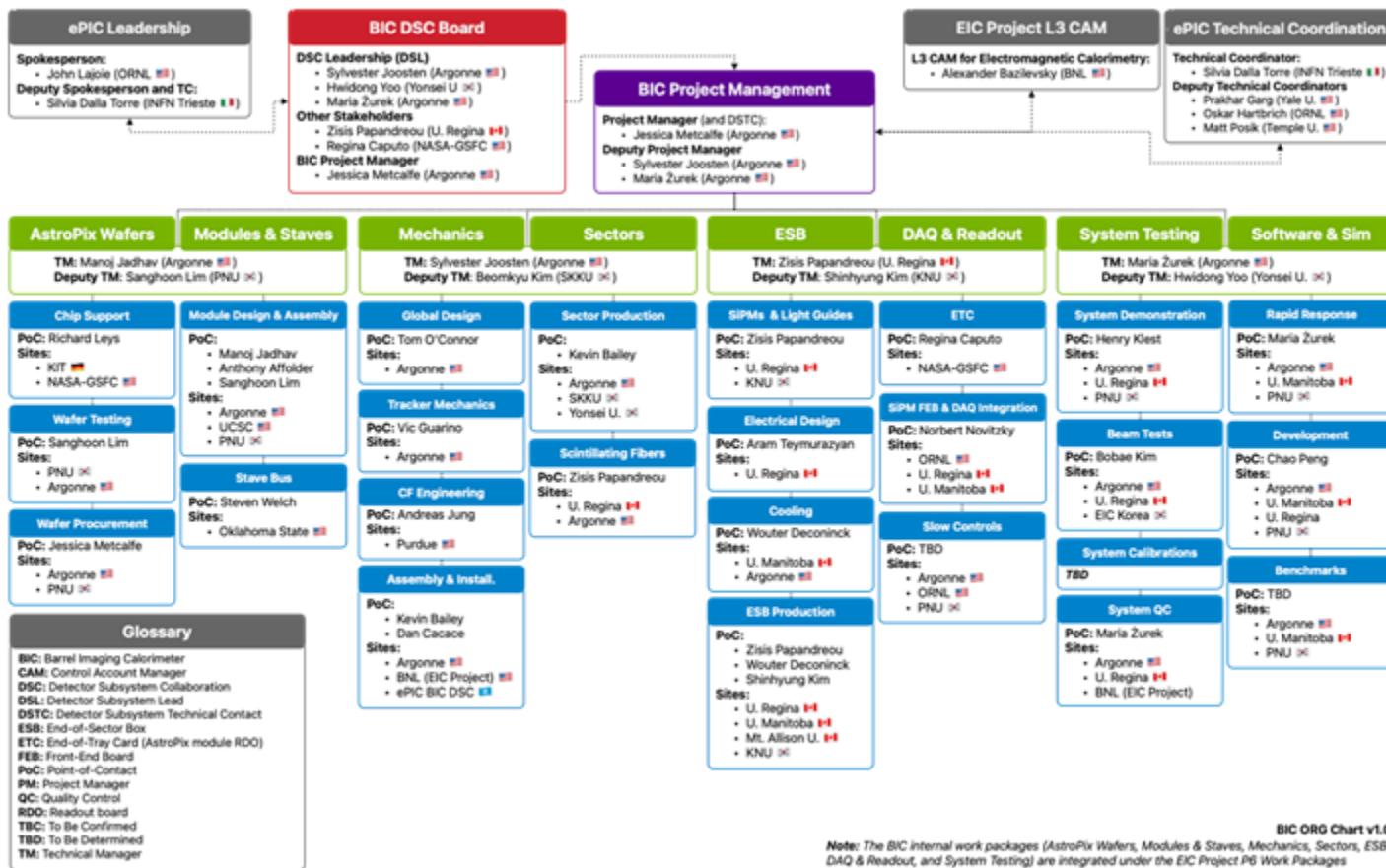


BIC Logo Contest

Pick your favorite—voting link sent after meeting



BIC Organization Chart



BIC ORG Chart v1.0

Note: The BIC internal work packages (AstroPix Wafers, Modules & Staves, Mechanics, Sectors, ESB, DAQ & Readout, and System Testing) are integrated under the EIC Project PB Work Packages

BIC Organization Chart

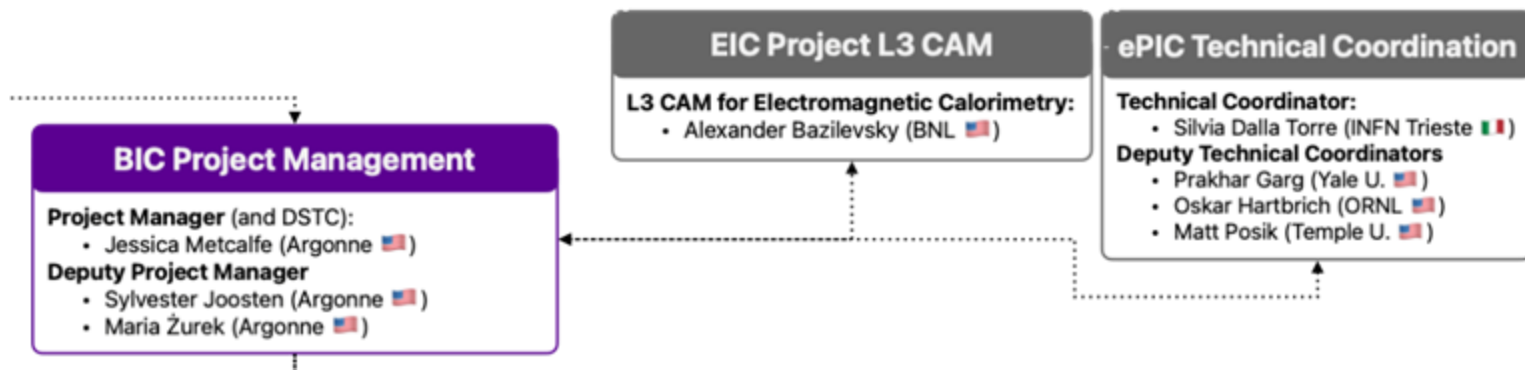


ePIC Collaboration:

- international user organization
- responsible for community needs, physics performance
- Detector Subsystem Collaboration → Red Team
 - DSL's Detector Subsystem Leads
 - provide oversight to the BIC collaboration
- Detector Subsystem Technical Contact
 - also BIC project manager

Glossary
BIC: Barrel Imaging Calorimeter
CAM: Control Account Manager
DSC: Detector Subsystem Collaboration
DSL: Detector Subsystem Lead
DSTC: Detector Subsystem Technical Contact
ESB: End-of-Sector Box
ETC: End-of-Tray Card (AstroPix module RDO)
FEB: Front-End Board
PoC: Point-of-Contact
PM: Project Manager
QC: Quality Control
RDO: Readout board
TBC: To Be Confirmed
TBD: To Be Determined
TM: Technical Manager

BIC Organization Chart



EIC Project:

- DOE funded project
 - accelerator & detector
 - responsible for building/delivering
 - US funds for the project are controlled by the Project
- BIC reports to the EM Calorimeter Control Account Manager (CAM)
 - Institutes receive funds via a contract with Statement of Work (SOW)

Glossary
BIC: Barrel Imaging Calorimeter
CAM: Control Account Manager
DSD: Detector Subsystem Collaboration
DSSL: Detector Subsystem Lead
DSTC: Detector Subsystem Technical Contact
ESB: End-of-Sector Box
ETC: End-of-Tray Card (AstroPix module RDO)
FEB: Front-End Board
PoC: Point-of-Contact
PM: Project Manager
QC: Quality Control
RDO: Readout board
TBC: To Be Confirmed
TBD: To Be Determined
TMI: Technical Manager

BIC Project Management Team



BIC Project Management Team



Purple Team:

- manage and support the BIC community
- deliver the BIC detector

Green Team Leaders:

- manage a major technical area
- contact for the BIC community in that technical area
- meet key deliverables and milestones within their area

BIC Management Roles & Responsibilities



Meeting Schedule



Green Team or Technical Area Meetings:

Wafers: Manoj

- Mondays at 4 pm Central—bi-weekly

Modules & Staves: Manoj

- Mondays at 4 pm Central—bi-weekly

Mechanics & Sectors: Sylvester

- Fridays at 1 pm Central

ESB, DAQ, & Readout: Zisis

- Tuesday at 8 am Central—bi-weekly

System Test: Maria

- Tuesday at 8 am Central—bi-weekly

Simulations: Maria

- Tuesdays at 2 pm Central

BIC General Meeting:

- ~Monthly
- Fridays at 8 am Central
- Organized by Jessica, Maria, Sylvester

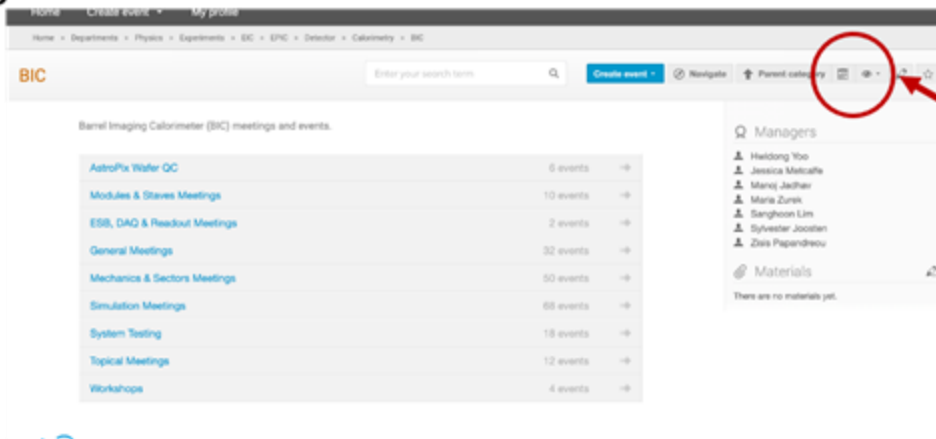
Weekly Summary:

1. Mondays @ 4pm
2. Tuesdays @ 8am
3. Tuesdays @ 2pm
4. Fridays @ 1pm

BIC Meeting Indico Calendar

■ Indico link

- All meetings can be found on indico
- You can add the meetings to your calendar
 - All of the BIC meetings from the BIC category
 - Or some by going to a sub-category and using the calendar link on that page



Calendar link to add (past) future meetings → automatically updates your calendar as new meetings are added

Documents

Zenodo

- ePIC endorsed file management system hosted by CERN
- version controlled
- share with collaboration
- searchable by keywords
- critical to get correct keywords
- epic-eic & bic

BOX

- BOX folder for sharing technical drawings
- Argonne hosted
- request access permissions to anyone in the Purple Team

Google Drive

- collaborative documents → shared editing
- presentations for reviews
- reference documents

Design Document Review/Approval



- Review key designs before fabrication
- Review/Approval Log

- 1) Make the design available on the google drive and fill in description, links, and deadline in the log. Define required approvers.
- 2) Present at a relevant meeting that is announced 1 week in advance (prefer if documents ready in advance, but not required)
- 3) Email BIC list and required approvers with request to review by deadline (minimum 1 week after presentation). Provide links to documents, presentation, comment collection document
- 4) Respond to comments
- 5) Final approval is logged

Presentation/Paper Review Process



For ALL BIC (or ePIC/EIC) related presentations or paper that will be shared outside the collaboration:

- review process to ensure the quality and consistency of results
- Instructions:
 - submit document via zenodo
 - request approval in zenodo and send an email notification
 - approvers for BIC should include Green Team Leader and/or Purple Team

Backup

Reference Documents



- BIC Management Roles & Responsibilities
- Interface Document
- Organization Chart
- Risk Register/RAID log
- Presentation/Paper Approval Instructions
- Design Review/Approval Log