Timeline: What is Coming

- CD-0 approval December 19, 2019
- Community-wide Yellow Report effort Dec. 2019 – Feb. 2021
- CD-1 review (includes CDR) January 26-29, 2021
- Call for Collaboration Proposals for Detectors March 6, 2021
- CD-1 approval June 29, 2021
- DOE/OPA Status Review October 19-21, 2021
- Status Update to Federal Project Director June 28-30, 2022, @BNL
- Technical Subsystem Reviews January – December 2022
- EICUG Meeting at SBU July 2022
- Detector-1 Collaboration Formation Summer-Fall 2023
- OPA Status Review January 2023
- Preliminary Design Complete & Review May 2023
- Final Design/Maturity Readiness for CD-3A Items May 2023
- CD-2/3A review (expectation), requires pre-TDR ~October 2023
- CD-2/3A (expectation) ~January 2024
- CD-3 review (expectation) ~January 2025
- CD-3 (expectation), requires TDR ~April 2025

Elke Aschenauer
EICUG meeting
July 2022

Detector Sub-System Reviews

Sub-System Reviews are an expectation on the way to DOE OPA Reviews. We will do these for ALL detector L3 subsystems.

Completed:

- Magnet Incremental Design and Safety Review – Preliminary 30% Design
  February 23, 2022 (6.10.07 CAM: Renuka Rajput-Ghoshal)
- IR Integration and Ancillary detectors
  April 27, 2022 (6.10.11 CAM: Yulia Furletova)

In scheduling phase:

- Integration/Installation Subsystem Status Review – mainly review logic/scope
- Electronics/Computing Subsystem Status Review (6.10.08 & 6.10.09) – ~Aug. 2022
- Independent EIC Software Infrastructure Review requested by D1-collaboration – ~mid-late Aug. 2022
- Magnet - 60% Design Complete for Vendor Contract Review (6.10.07) – Oct. 2022

Expect later this calendar year:

- EM Calorimetry Subsystem Status Review (6.10.05)
- Tracking Detectors Subsystem Status Review (6.10.03)
- Hadronic Calorimetry Status Review (6.10.06)
- Particle Identification Detectors Status Review (6.10.04)
- Detector Infrastructure and Installation Status Review (6.10.10) – one of last reviews
- Polarimetry & Luminosity Detector Status Review (6.10.14) – one of last reviews

Elke Aschenauer
EICUG meeting
July 2022

Sub-system Reviews

- Polarimetry status review probably in December of this year
- Goal of sub-system reviews is to assess progress and readiness for CD-2/3a review
- CD-2/3a review expected about 1 year from now
- Polarimetry design expected to be 50% complete by time of CD-2/3a review

- Sub-system review organized by Rolf and Elke
  - We can suggest potential members of review panel
  - We can also make suggestions for agenda and topics

Charge (example)

Technical Review of the EIC IR Integration and Auxiliary Far-Forward/Far-Backward Detectors.

Charge to the Committee

This review takes advantage of the 3D CAD layout of the RCS, ESR and HSR beam lines in the interaction region. This allowed to make the next step integrating the auxiliary detectors along the beam line: the backward small-angle electron tagging detectors, the Zero-Degree Calorimeter, the off-momentum detectors, Roman Pots, and the detector systems in the B0 magnet. This review also includes aspects of the integration of the detector with the interaction region such as expected vacuum and backgrounds, and ongoing beam pipe and detector support structure concepts. This review is mainly to check progress and ensure no scope or interface is forgotten.

You are asked to address the following questions:

1. Are the technical performance requirements appropriately defined and complete for this stage of the project?
2. Are the plans for achieving detector performance and construction sufficiently developed and documented for the present phase of the project?
3. Are the current designs for detectors and electronics readout likely to achieve the performance requirements with a low risk of cost increases, schedule delays, and technical problems?
4. Are the sub-detector fabrication and assembly plans consistent with the overall project and detector schedule?
5. Are the plans for detector integration in the interaction region appropriately developed for the present phase of the project?
6. Have ES&H and QA considerations been adequately incorporated into the designs at their present stage?

Please address these questions point-by-point.

You will be supplied with a 3D pdf file of the IR layout, copies of presentations relevant to this subject material, and the project milestones extracted from the most current EIC resource loaded P6 schedule as part of the pre-brief material.

Agenda (example)

Technical Review of the EIC IR Integration and Auxiliary Far-Forward/Far-Backward Detectors.

Review Committee: Fulvia Pilat (ORNL, Chair)
Gerrit Van Nieuwenhuizen (BNL)
Wolfram Zeuner (CERN)

Conveners: Elke Aschenauer and Rolf Ent

Agenda:

08:00 – 08:15	Executive Session (Closed Session)
08:15 – 08:30	Welcome and Introduction
08:30 – 09:00	Recap of EIC IT and MDI design review – Walter Wittmer (JLab), Angelika Drees (BNL)
09:00 – 09:40	Overview, requirements – Yulia Furletova (JLab)
09:40 – 10:00	Zero-Degree Calorimeter – Shima Shimizu (RIKEN)
10:00 – 10:20	Preliminary Design of B0 Detector – Ron Lassiter (JLab)
10:20 – 10:40	Break
10:40 – 11:10	Roman Pots and Off-Momentum Detectors – Alex Jentsch (BNL)
11:10 – 11:30	Luminosity Detector – Bill Schmidke (BNL)
11:30 – 11:50	Low-Q2 Detector – Jarda Adam (BNL)
11:50 – 12:10	Summary of Systems Engineering Requirements – Walt Akers (JLab)
12:10 – 12:20	Summary – Yulia Furletova (JLab)
12:20 – 13:00	(as needed) Further Questions
13:00 – 13:30	Break
13:30 – 15:00	Executive Session (Closed Session)
15:00 – 15:30	Closeout
15:30	Adjourn

Polarimetry Review Topics/Talks

- Overview - requirements
- Hadron polarimeters: 1 talk or 2 (H-Jet and p-Carbon)?
- Electron polarimeters: 1 talk or 2 (RCS and ESR)?
- Integration?
- Backgrounds?
- Other?