

EIC Resource Review Board (RRB) Minutes

December 7-8, 2023 at The Catholic University of America

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Hosts:

Haiyan Gao, Co-Chair, Associate Laboratory Director, Nuclear and Particle Physics, BNL
Diego Bettoni, Co-Chair, Vice President, INFN
David Dean, Deputy Director for Science, TJNAF
Tanja Horn, Professor of Physics, The Catholic University of America
Jim Yeck, EIC Project Director, Associate Laboratory Director, BNL(Remote)

EIC RRB Participants:

Jaroslav Adam, Czech Technical University in Prague, Czech Republic
Pietro Antonioli, INFN Bologna, Italy
Helen Beadman, UKRI-STFC, UK
Maurizio Biasini, Embassy of Italy, Italy
Francesco Bossù, CEA, Italy (Remote)
Carlos Munoz Camacho, IJCLab, France (Remote)
Wouter Deconinck, University of Manitoba, Canada
Yuji Goto, RIKEN, Japan
Marcella Grasso, IN2P3/CNRS, France
Taku Gunji, Center for Nuclear Study, University of Tokyo, Japan
Tim Hallman, Associate Director of the Office of Science for Nuclear Physics, DOE
Peter Jones, University of Birmingham, United Kingdom
Kyungseon Joo, University of Connecticut, South Korea
Oumar Ka, Cheikh Anta Diop University, Senegal (Remote)
Chia Ming Kuo, National Central University, Taiwan
Mark Lagacé, Canada Foundation for Innovation, Canada
Arnaud Lucotte, IN2P3/CNRS, France
Rosario Nania, INFN, Italy
Keisuke Okamura, Embassy of Japan in the USA, Japan
Mariusz Przybycien, AGH University of Krakow, Poland
Franck Sabatie, CEA Saclay, France
Kyu Chul Song, Embassy of Republic of Korea, South Korea
Yahya Tayalati, University Mohammed V in Rabat, Morocco (Remote)
Marek Vyšinka, Ministry of Education, Youth and Sports, Czech Republic

EIC Project, BNL & TJNAF Participants:

Elke Aschenauer, Co-Associate Director for the Experimental Program, BNL
Paolo Berrutti, In-Kind Contributions Engineer, BNL
Maria Chamizo-Llatas, EIC Advisory Board Scientific Secretary/Deputy Associate Lab Director/NPP, BNL
Abhay Deshpande, EIC Science Director, BNL/SBU
Rolf Ent, Co-Associate Director for the Experimental Program
James Fast, EIC Associate Project Manager, TJNAF
Luisella Lari, EIC Project Manager, BNL

Alyssa Petrone, EIC Chief of Staff to the Associate Laboratory Director/Project Director, BNL (Remote)

U.S. Department of Energy Participants:

Corey Cohn, DOE Office of Science
Latifa Elouadrhiri, DOE Office of Science for Nuclear Physics
Michael Famiano, DOE Office of Science for Nuclear Physics
Paul Mantica, DOE Office of Science for Nuclear Physics

Other attendants:

Amber Boehnlein (TJNAF, presenter)
Silvia Dalla Torre (INFN Trieste, ePIC deputy spokesperson, presenter)
Markus Diefenthaler (TJNAF, presenter)
Stuart Henderson (TJNAF, Laboratory Director, presenter)
JoAnne Hewett, (BNL, Laboratory Director)
John Hill (BNL, Deputy Director for Science and Technology)
Ed Kinney (University of Colorado at Boulder, presenter)
John Lajoie (Iowa State, ePIC spokesperson, presenter)
Eric Lancon (BNL, presenter)
Allison Lung (TJNAF, Chief Planning Officer)

Day 1- Thursday, December 7, 2023

Ralph Albano (CUA Vice Provost for Sponsored Research, Research Compliance, and Technology Transfer) and Tanja Horn (CUA Professor of Physics) welcomed the participants to CUA and provided an overview on CUA's history and science program for the EIC. John Hill (BNL Deputy for Science and Technology) and Stuart Henderson (JLAB Director) welcomed the participants on behalf of the host labs.

A moment of remembrance was held for Professor Yongseoh Oh, who participated in the April 2023 RRB meeting.

RRB Co-Chair, Haiyan Gao initiated a vote for the approval on the minutes from the April 2023 meeting, which was unanimously approved. The goals of the December 2023 meeting were presented:

- Address questions/requests from the April 2023 meeting
- Next EIC major EIC milestone CD-2
 - In-Kind contributions
 - Agreements and timeline
- EIC: new facility international in character
- Common Funds
- RRB: members and observers

Luisella Lari (EIC Project Manager) on behalf of Jim Yeck (EIC Project Director) presented a Project Status Update and the In-Kind Path to CD-2/3. The 2023 NSAC Long Range Plan recommends "the expeditious completion of the EIC as the highest priority for facility construction." The project recently completed a successful DOE OPA CD-3A Long Lead Procurement/Status Review in

November 2023. ESSAB approval for CD-3A is anticipated for late January or early February 2024. Other upcoming milestones include a CD-3B, Long Procurement Approval in October 2024, and CD-2/3, Performance Baseline/Construction Start Approval in April 2025.

In-Kind contribution goals remain at 30% for the Detector and 5% for the Accelerator. In order to baseline the project, appropriate binding and non-binding agreements for significant/critical in-kind contributions need to be signed before CD-2. The Project & In-kind Support Office provides support to EIC Partners to develop the Lab level documentation.

April 2023 Action Item: Provide a “PoP” needed for the detector and accelerator.

Response: Directions and templates for lab-level agreements required for the baseline of the EIC Project were provided in Luisella Lari’s talk and posted on the Indico site.

Other presentations included:

- Report from the EIC Advisory Board by Stuart Henderson
- Report from the EIC Detector Advisory Committee (DAC) by Edward Kinney
- Short Reports on the Nuclear Physics LRP (US, Japan, and Europe) by Haiyan Gao, Taku Gunji and Diego Bettoni
- EIC Project Detector Overview by Elke Aschenauer and Rolf Ent
- Report from the ePIC Collaboration Spokesperson by John Lajoie
- Report from the ePIC Technical Coordinator by Silvia Dalla Torre

Day 2- Friday, December 8, 2023

RRB Co-Chair, Diego Bettoni led a discussion on the threshold for RRB Members vs Observer countries. At this stage, flexibility will be applied to membership in the RRB. There is currently no set timeline for distinguishing between members and observers. However, it would make sense for it to align with the CD2/3 milestones. To remain inclusive, some ideas on a possible two-tier system or holding open meetings with some closed sessions were mentioned.

Presentations included:

- Report from the ePIC Computing Coordinator by Markus Diefenthaler
- Host Labs’ Computing Support and Partner Expectations by Amber Boehnlein and Eric Lancon
- Commons Funds by Elke Aschenauer and Rolf Ent

A further discussion on Commons Fund and Agreements was led by David Dean, Luisella Lari and Maria Chamizo Llatas. Updates were given by funding agencies and/or PIs for the following countries.

- Canada
- Czech Republic
- France
- Italy
- Japan
- South Korea
- Senegal

- Taiwan
- United Kingdom
- USA

The 3rd RRB Meeting will be held in Italy on June 3-4, 2023, location TBD. Topics will include:

- A more complete proposal on common funds
- Computing and Software
- Timeline for distinguishing between RRB Members vs Observers

Action Items:

- Luisella Lari (BNL)/Diego Bettoni (INFN)- Follow up on whether agreements with INFN will be bi-lateral or tri-party.
- Luisella Lari (BNL)/Peter Jones (University of Birmingham)- Evaluate iCRADA or PPDs to find the best solution for the UK.
- Rolf Ent (TJNAF, John Lajoie (ePIC), and RRB member(s) - Develop a more concrete proposal for Common Funds
- Luisella Lari (BNL) - Establish POCs for establishing agreements with each agency