



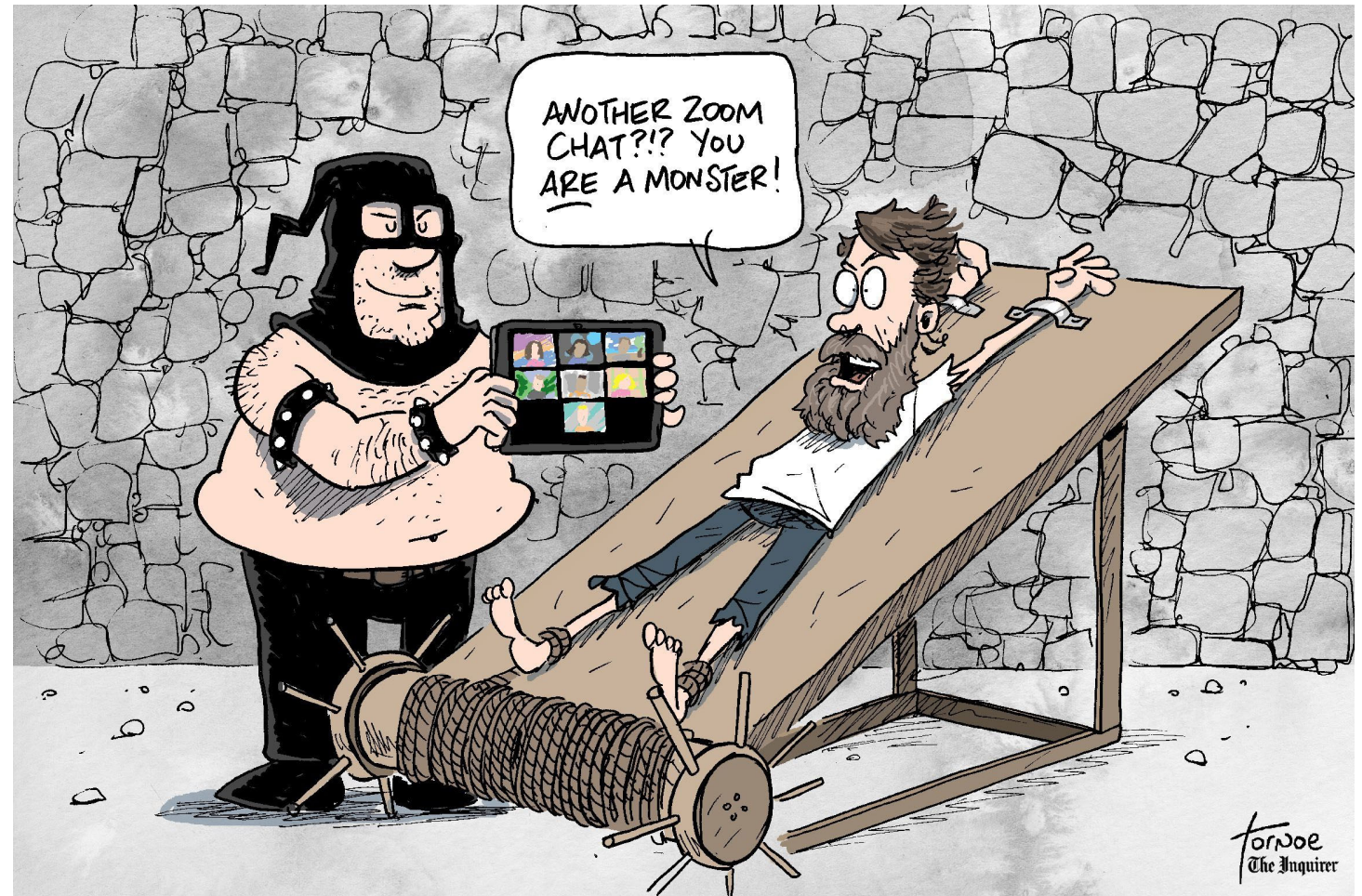
# ePIC Conveners Meeting November 18, 2022

ePIC Steering Committee

Silvia Dalla Torre, Or Hen, Tanja Horn, John Lajoie, and Bernd Surrus

# Introduction

- Recent and upcoming events
- Announcements
- Goals for this meeting



## Recent Events

- September 26 – EIC Advisory Board meeting
- October 12-13 – “Resource Review Board”-like kickoff meeting

Status: 1<sup>st</sup> RRB meeting scheduled for April 3-4. Work ongoing to prepare and finalize a document to define RRB (David Dean, Haiyan Gao, Diego Bettoni)

- October 18-19 – 60% Magnet Review @ JLab

Status: (1) We are working on a continuation of the detector solenoid magnet design contract towards a final 90% design with completion over the next 12 months (This is what is needed to initiate a vendor design-build contract).  
(2) The magnet team is working with a possible vendor on a plan for a trial sample for the envisioned conductor, defining the conductor parameters for this run, and a plan to then test the samples and improve the process if required. It looks promising to have the sample conductor run done this FY.

- October 19-21 – Detector Advisory Committee meeting

Status: meetings of Patrizia, Thomas, Elke, Rolf to go over the various DAC R&D-specific recommendations. Largest issue is how to fit in a box (mainly due to that Si MAPS-ITS3 sensors moved to project R&D). As one mitigation we have discussed with LBNL what of eRD111 could be done as PED. Another mitigation is to ensure consistent (low) overhead for all BNL Divisions/Groups. We are nearing convergence now.

Slide from 11/15 SC meeting with the project.

RRB is an organization that will survive construction into the operations phase.

Magnet is well on the way to 90% design completion by CD-2/3A.

For those in the DWG's that have been asking about R&D funding – project working to meet requests, expect convergence soon.

# Upcoming Events

## ☐ November – December 2022:

- First simulation campaign, detector subsystem reviews
  - December 6-7<sup>th</sup> : Calorimetry Review
  - December (before end of CY): Polarimetry Review
  - Incremental Integration/Installation Review (TBD)
  - January – February 2023: DOE OPA Status Review

## ☐ Additional subsystem reviews early 2023:

- Tracking, PID, Infrastructure, Magnet Incremental Design and Safety

## ☐ February-March 2023:

- GD/I reviews of Barrel EMCAL, backwards PID options

## ☐ May 2023:

- First draft of pre-TDR

## ☐ October 2023: DOE OPA CD-2/3A Review

- Final version of pre-TDR



# ePIC Collaboration Meeting

- Jan. 9-11 2023 at Jlab
  - Hybrid format
- Registration and travel information:  
<https://www.jlab.org/conference/EPIC>
- Indico Agenda:  
<https://indico.bnl.gov/event/17621/>

## EPIC COLLABORATION



*ePIC Collaboration*

**Conference Date**  
January 09, 2023 to January 11, 2023

**Conference Location**  
Jefferson Lab

The second meeting of the ePIC Collaboration will take place January 9-11th at the Thomas Jefferson National Accelerator Facility. The meeting will be held in a hybrid format to allow all members of the international collaboration to take part. The meeting is open to both current members of the ePIC collaboration as well as all interested parties.

This second meeting of the ePIC Collaboration comes at a time of major progress in the development of the technical design of the ePIC detector, the first major simulation campaign and deployment of the unified software stack, and the formation of the collaboration through a Collaboration Charter.

The agenda consists of plenary sessions held over two and a half days covering the status of the collaboration, a report from the EIC project, and status reports from the Detector and Physics Working Group members. There will be a meeting of the Collaboration Council on the first afternoon, and an opportunity to tour the laboratory facilities on the last day. The meeting will focus on planning to address the challenges in the coming year and the milestones that need to be met for the CD-2/3A review in late 2023.

**Organizing Committee**  
Silvia Dalla Torre (Trieste)  
Or Hen (MIT)  
Tanja Horn (CUA)  
John Lajoie (Iowa State)  
Bernd Surrow (Temple)

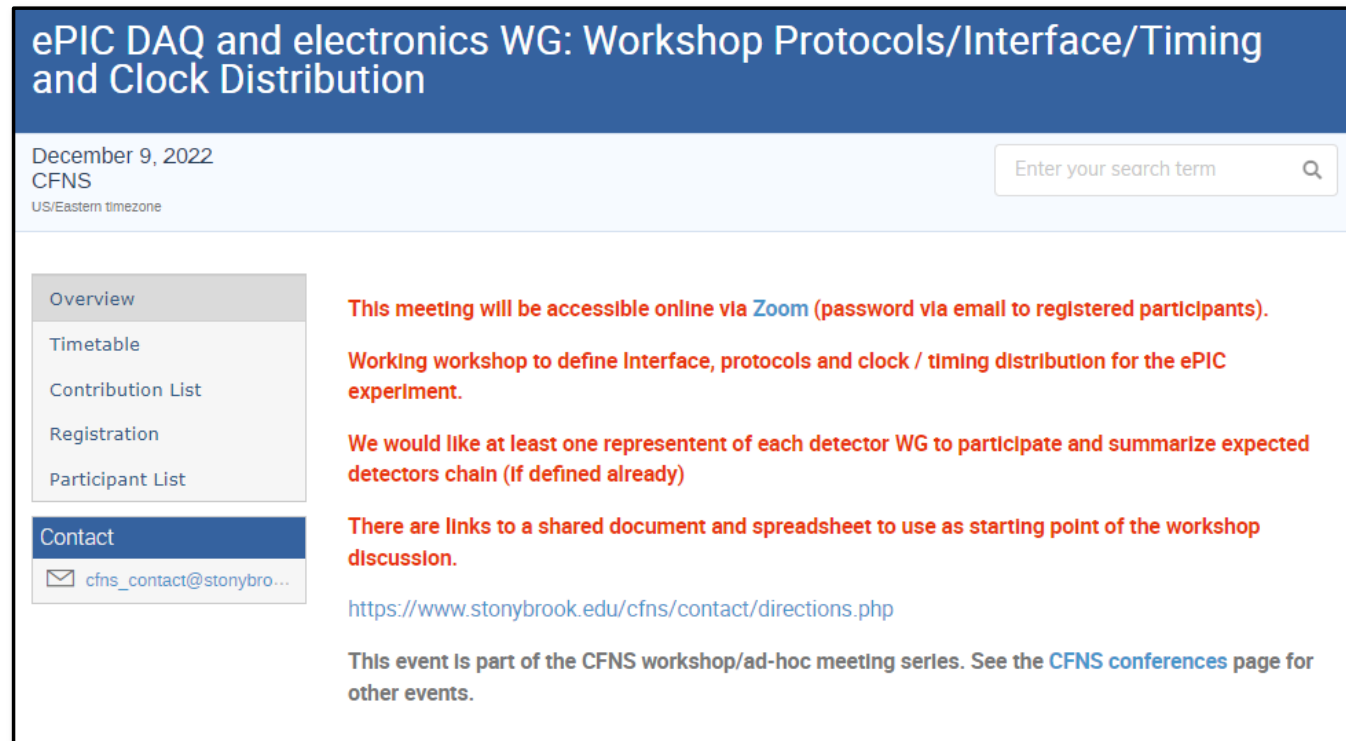
# WG Talks at Collaboration Meeting

- WG's have a 1-hour block reserved
  - Overview (WG convener)
  - Additional talks from WG contributors
  - *Opportunity for members who have been working hard to get some public recognition!*
  - We encourage conveners to nominate people accordingly, and to do so soon to maximize the possibility they can make travel plans to attend in-person.
- Please update the Indico agenda as you plan your session:  
<https://indico.bnl.gov/event/17621/>

Time	Event	Duration
8:00 AM → 12:20 PM	Working Group Reports III	
8:00 AM	Tracking WG	1h
9:00 AM	Calorimetry WG	1h
10:00 AM	Coffee Break	20m
10:20 AM	Cerenkov PID WG	1h
11:20 AM	TOF PID WG	1h
12:20 PM → 2:00 PM	Lunch	1h 40m
2:00 PM → 6:20 PM	Working Group Reports IV	
2:00 PM	Far-Forward Detectors WG	1h
3:00 PM	Far Backward WG	1h
4:00 PM	Coffee Break	20m
4:20 PM	DAQ/Electronics/Readout WG	1h
5:20 PM	Inclusive WG	1h

# Announcements

- One-Day DAQ Meeting:  
Workshop on Protocols/Interface/Timing and Clock Distribution
  - December 9<sup>th</sup>, 2022
  - Indico page for registration is at : <https://indico.bnl.gov/event/17452/>



The screenshot shows an Indico event page with a blue header. The event title is "ePIC DAQ and electronics WG: Workshop Protocols/Interface/Timing and Clock Distribution". Below the title, the date is "December 9, 2022" and the location is "CFNS" with "US/Eastern timezone" below it. A search bar is visible on the right. On the left, there is a navigation menu with options: Overview, Timetable, Contribution List, Registration, Participant List, and Contact. The "Contact" option is highlighted. The main content area contains several paragraphs of text in red and black, providing details about the meeting's accessibility via Zoom, the workshop's purpose, and the need for participants to summarize their detector chains. A link to a shared document and spreadsheet is provided, along with a URL: <https://www.stonybrook.edu/cfns/contact/directions.php>. At the bottom, it states that the event is part of the CFNS workshop/ad-hoc meeting series and refers to the CFNS conferences page for other events.

# This Meeting

- **Simulations, Production and QA:**

- It would be very helpful to the conveners if you could summarize the discussions in the simulation readiness meetings that have been held this week, since the attendance in the readiness meetings has been a bit light:
  - What major issues (showstoppers) have been identified in the current simulation geometry and reconstruction? What is the status of addressing these issues?
  - What are the next level of issues – known problems that have a workaround, or inadequacies that cannot be fixed in the immediate future? I would stress that for the PWG's it will be critically important to be aware of these items and potential workarounds to avoid multiple people having to spend time debugging the same problems.
  - What is the status of the ACTS tracking?
  - At the present time, what is the anticipated timescale for the event generator simulations? What is the anticipated timescale for simulations with background embedding?

- **Physics Working Groups:**

- Remind the group of your simulation analysis goals.
- Is there analysis software/frameworks that your PWG has been working on? What is the status, and are there opportunities to share tools and development across PWG's?
- Any first results or observations from the single-particle and/or SIDIS test events? Are there issues that are not currently on the list of items the SimQA group is working on that are critical to your analysis?
- Do you have sufficient workforce to address your simulation goals?



# This Meeting

- **Simulations, Production and QA:**

- It would be very helpful to the conveners if you could summarize the discussions in the simulation readiness meetings that have been held this week, since the attendance in the readiness meetings has been hit hard.

**Communication is the whole point of this meeting!**

**If there are aspects of/assumptions in the simulation campaign that will not meet your needs, we have to find out about this ASAP.**

- **If there are things that your WG can contribute to accelerate the development of the simulations, we should be coordinating that.**

**Use these discussions to jump-start PWG involvement in the campaign.**

are not currently on the list of items the SIMQA group is working on that are critical to your analysis?

- Do you have sufficient workforce to address your simulation goals?

What

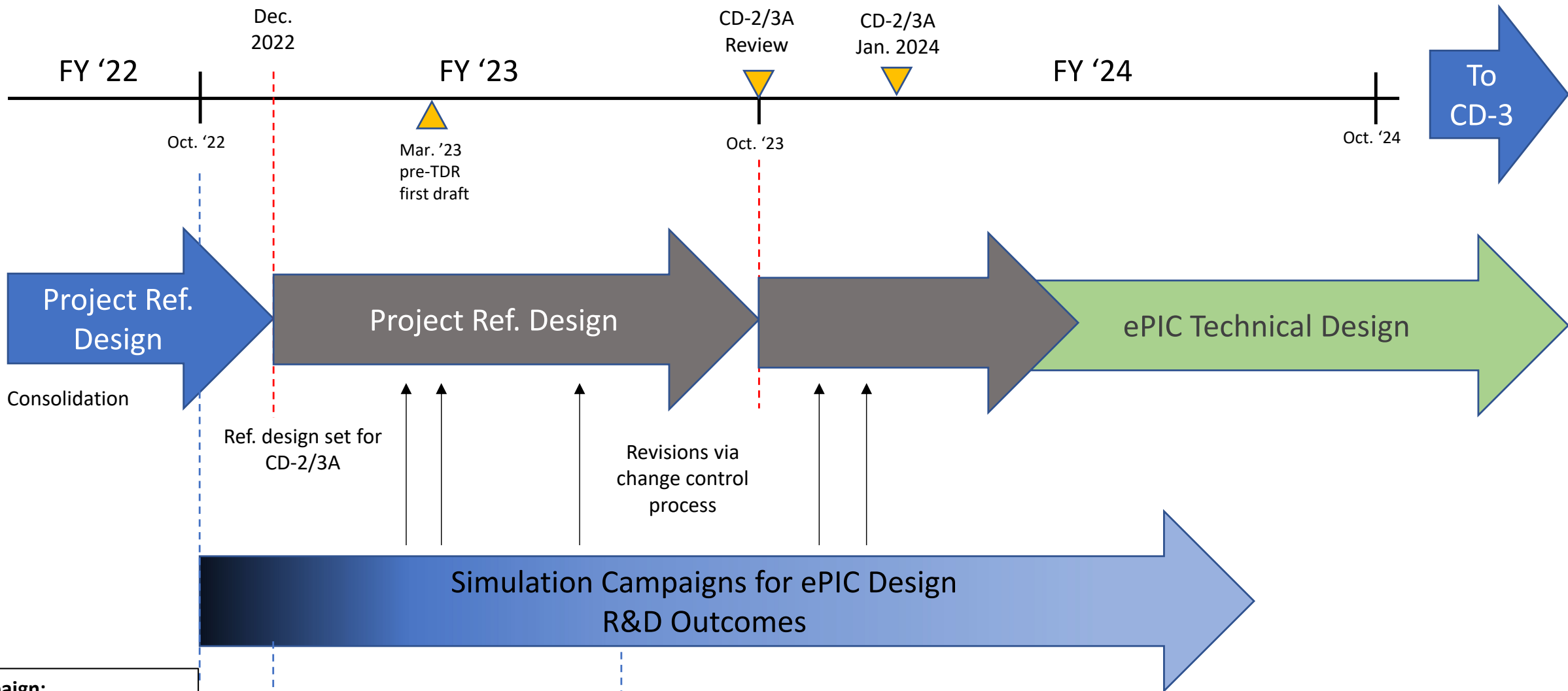
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**First Campaign:**

- Commission software stack
- Two configurations to compare large-scale variations
- Background embedding and tracking development

**Second Campaign:**

- Focus on single, integrated ePIC design
- Targeted subsystem design studies/variatiions

**Additional Campaigns:**

- As needed
- Refine detector design to include frames, etc. to assess physics impact

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# ePIC Design Towards CD-2/3A

- The Project must move forward with an ePIC reference design in order to prepare for CD-2/3A and allow for a ~60% design completion
- Nevertheless, ***the ePIC design optimization process will continue and is not expected to be completed by the end of 2022***
  - The ePIC design optimization process will proceed through a series of simulation campaigns.
  - The reference design will be updated through the project change control process
  - The change control process is important – changes must be justified by performance, cost and risk!
    - Changes should be the *exception*, not the rule.
    - Example: changing from SiPM readout to LAPPDs (technology change) or a change in detector acceptance (design change)
- This effort will result in an *ePIC Technical Design* going into CD-3