

3rd Detector-1 Bi-Weekly Meeting

Silvia Dalla Torre, Or Hen, Tanja Horn, John Lajoie, Bernd Surrow

Outline

- General Updates
 - General organization
 - Bi-weekly meetings schedule & rotation
 - Consortia / eRD meetings
 - Geometry database
 - Institutional survey
 - WG status and goals
- July meeting: Collaboration formation progress

General organization

❑ Collaborative tools

- List of WG conveners – now in the Wiki
- WG Convener mailing lists, e.g., eic-projdet-simqa-l-owner@lists.bnl.gov or WGs conveners can setup their own internal mail lists as needed
- Detector-1 Indico: <https://indico.bnl.gov/category/402/>
- Chat and Detector-1 web page are coming



Setting up Mattermost

→ Managed by SimQA WG

→ Financially supported by CFNS

- ## ❑ Computing Coordination Group being formalized by the EIC Project – Detector-1 WG representation included

The screenshot shows the 'Collaboration' page on the Indico platform. It features a navigation menu on the left with categories like Detector, Tracking, and Calorimetry. The main content area includes a 'Contents' table of contents, a summary paragraph, and sections for 'Collaboration' (with links to Indigo Page, Meeting Calendar, and Email-list), 'Steering Group' (listing members like Silvia Dalla Torre and Bernd Surrow), and 'Working Groups'.

The screenshot shows the 'EIC Project Detector' page on the Indico platform. It features a blue header with the Indico logo and a navigation bar with 'Home', 'Create event', and 'My profile'. The main content area includes a 'Create event' button, a 'Navigate' button, and a 'Parent category' button. Below this is a table of events with columns for event name, number of events, and a status icon. The table lists 'Project-Collaboration Management' (8 events), 'Tracking' (4 events), 'Calorimetry' (25 events), and 'Far Forward' (2 events). To the right of the table is a 'Managers' section listing the names of the event managers: Bernd Surrow, E. C. Aschenauer, John Lajoie, Or Hen, Rolf Ent, Silvia Dalla Torre, and Tanja Horn.

Bi-weekly meetings schedule & rotation

To better accommodate our colleagues from Asia, the bi-weekly meeting will rotate between Friday 10:30 AM ET & Thursday 8:00 PM ET.

Several WGs are also introducing similar rotations.

June 2022

Mon	Tue	Wed	Thu	Fri
30 14:00 Office Hours (DD4hep-based stack)	31 09:00 EW&BSM - WG meeting 12:00 EIC Project - Athena - ECCE Leadership 15:00 Office Hours (Fun4all-based stack)	1 09:00 Inclusive reactions (EIC Detector 1) - Re 11:00 CompSW Weekly Meeting 14:00 Office Hours (DD4hep-based stack) 20:00 Detector-1 calorimetry weekly meeting 22:00 Jets and HF Working Group Meeting	2 09:00 Detector 1 DAQ WG meeting 10:00 Far Backward weekly meeting 11:00 Detector-1 Tracking Working Group by-v 14:00 Simulation, Production, and QA Weekly	3 10:30 WG Convener Meeting 14:00 Office Hours (DD4hep-based stack)
6 09:00 GD/I WG: integrated Tracker-TOF detect 11:30 Detector 1 TOF-PID WG Weekly Meeting 14:00 Office Hours (DD4hep-based stack)	7 20:30 Office Hours (Fun4all-based stack)	8 11:00 CompSW Weekly Meeting 12:00 dRICH Simulation Meeting 20:00 Office Hours (DD4hep-based stack)	9 10:00 Far Backward weekly meeting 11:00 Detector-1 calorimetry weekly meeting 13:00 Jets and HF Working Group Meeting 14:00 Simulation, Production, and QA Weekly 20:00 Detector 1 General Meeting	10 14:00 Office Hours (DD4hep-based stack)
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Consortia / eRD meetings

- SC is holding a series of meeting with detector consortia and eRD efforts
- Goals:
 - Understand the scope of work (e.g. fully dedicated to EIC or more general effort) and current status of work,
 - Ensure consortia are well integrated with relevant WGs,
 - Asses personnel availability and needs.

Initial discussion points:

- Is anything missing in the overall approach for Detector-1?
 - Plans for the next year, including the transition from R&D to building and construction.
 - Relation with working groups and collaboration formation.
- Will have a dedicated presentation summarizing these meetings in the coming bi-weekly meetings

Geometry database

to provide consistency of detector envelopes between:

(From discussion with EIC
PM on 17 May 2022)

- **Sketchup:** Integration and assembly, installation, and maintenance.
- **CAD:** Detailed engineering information for construction.
- **Simulation:** Physics and detector studies using detailed GEANT-based detector simulations.
- **Analysis:** Reconstruction in simulation and physics analysis

□ **Gatekeeper:** Tanja Horn (for Detecfor-1 contacts; can work together with system engineer Walt Akers for global changes and improvements)

- Keep some info on changes and why

□ **Legs of input:**

➤ Global Detector/Integration Group:

- Collects all information from working groups
- Balances detector technology needs versus each other

➤ Detector-1 Sim/QA Working Group:

- Collects all trade-offs of material budget versus science performance
- Implements version control for simulations

➤ EIC Project Detector Leads:

- Collect input from E&D process (Space needs for frames and supports, Space needs for service/cooling, Requirements of accelerator and vacuum integration)
- Fold keep-in volumes into requirements/interface control document

Geometry Database –
<https://physdiv.jlab.org/EIC/Menagerie/>

Institutional survey

- Survey sent last week with a deadline of EOD Monday, May 30.
- Very important to respond – Survey response will serve as a starting point for Detector-1 IB membership.
- Understand that some institutions might struggle to answer questions about their future plans, especially FTE estimates.
- Request is that you do the best you reasonable can:
 - It is ok to provide very approximate answers
 - FTE-related questions are now optional, and can be answered at a later stage.
 - Critical section: General Institutional Information.
- Please reach out to the SC if you have any questions!

EIC Detector-1 Institutional Survey Form

This survey is geared towards collecting institutional information for planning purposes of the EIC Detector 1 effort. The form should be completed by each institution only once. Please consult with your institutional representative to collect the requested information. The survey will collect institutional information for both existing and new institutions. The survey is separated into several sections:

(A) General Institutional Information (Institutional representative, Name, Address, Size of research group by category, Consortia Membership)

(B) Consortia Information (Size of research group involved in consortia)

(C) Physics and Sub-system Interest

(D) Resources and Infrastructure (Lab/Computing/Machine shop)

(E) Comment and Feedback

Note: Labor estimates (Size of research group) should be estimated in units of Full-Time Employees (FTE) per year for the following labor categories, assuming the guidelines below for yearly fractional FTE efforts:

- # Annual FTE Faculty: Max. 0.25
- # Annual FTE Scientific Staff / Research Professor: Max. 0.5
- # Annual FTE Postdocs: 1.0
- # Annual FTE Graduate students: Max. 0.75
- # Annual FTE Undergraduate students: Max. 0.2
- # Annual FTE Mechanical Engineers: Max. 0.8
- # Annual FTE Electrical Engineers Max. 0.8
- # Annual FTE Mechanical Technicians/Designers: Max. 0.8
- # Annual FTE Electrical Technicians/Designers: Max. 0.8

Example: If your institution has two faculty members and you assume a yearly fractional FTE effort of 0.2 each, then 0.4 should be entered for # Annual FTE Faculty at the appropriate sections of this survey.

A link to all questions is provided here:

https://www.dropbox.com/s/vt9yfhhv71ysqq0/EIC_Detector1_Institutional_SurveyForm.pdf?dl=0.

A tutorial video featuring the survey is available here: <https://vimeo.com/711004154>.

This should help to collect the information first before submitting the actual survey. Please complete the survey by the deadline indicated below. Do not hesitate to contact Bernd Surrow (surrow@temple.edu) with any technical questions.

Deadline: Monday, May 30, 11:59PM (EDT)

hen@mit.edu [Switch account](#)

* Required

Email *

Your email

Next

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Clear form

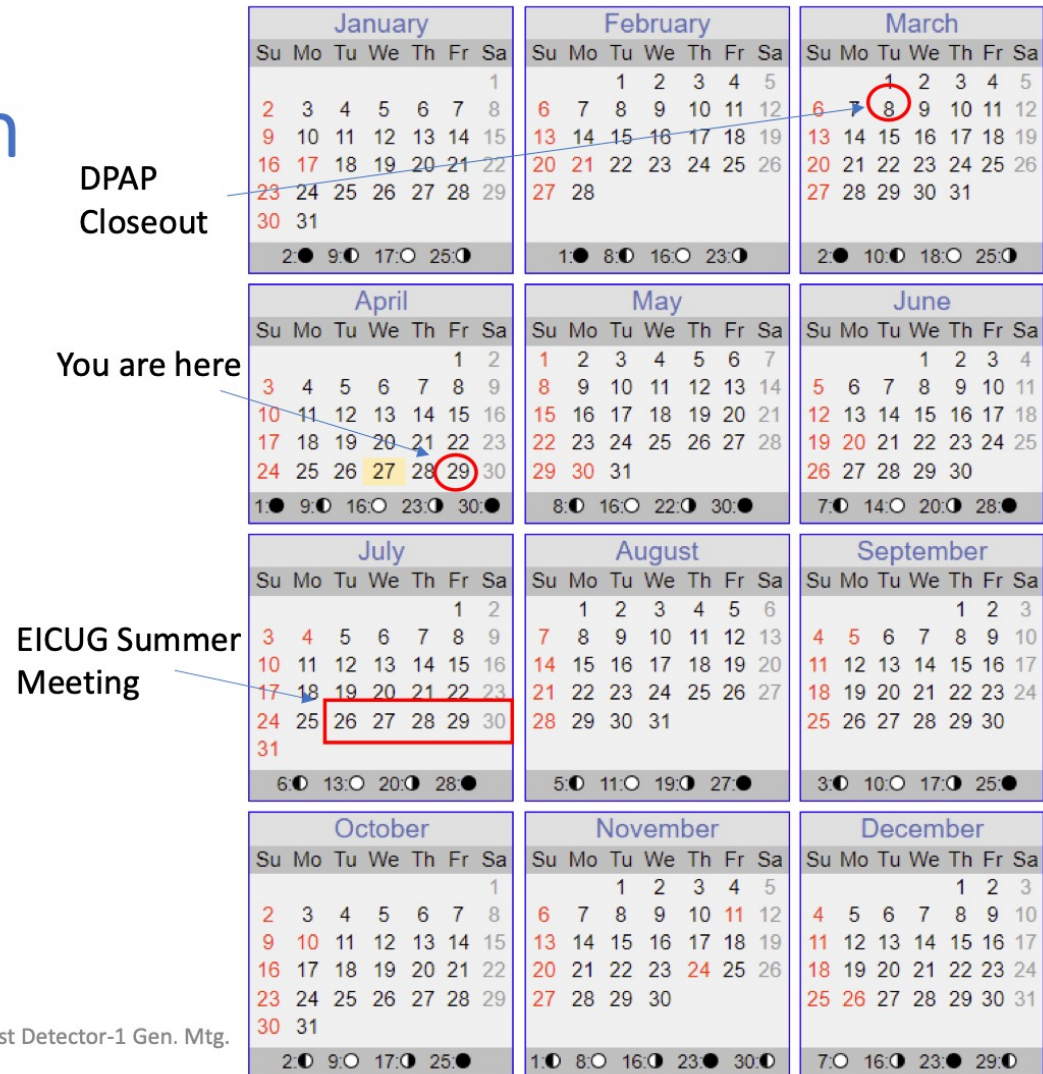
WGs status and goals

- Working groups are getting going:
 - Global charges communicated in April
 - Kickoff meetings are largely done (/ getting done).
 - WGs are formulating their specific charges and doing the work 😊
- Project define first milestone for the July Detector-1 meeting:
 - WGs should confirm the reference “advanced conceptual design”.
 - Expectation is to converge on choices between alternative technologies to the reference design.
 - Where there are still open questions, the path forward towards resolution is well defined.
 - WGs should raise a flag early if issues come up that require more time.
 - No expectation to complete the technical design and/or address all open questions.
Scope examples: Should be able to confirm the MPGD technology / layout,
Might not be able to confirm barrel EMCAL choice (mix of physics and technology choice),
Do not need to fully optimize B0 tracker.
- Work will continue towards the pre-TDR after confirming the reference “advanced conceptual design”. There will be back and forth with the project for a long time as we progress the technical design and no issues will remain un-addressed, independently of when they come up.

July Meeting: Reminder of April plan

Path to a Collaboration

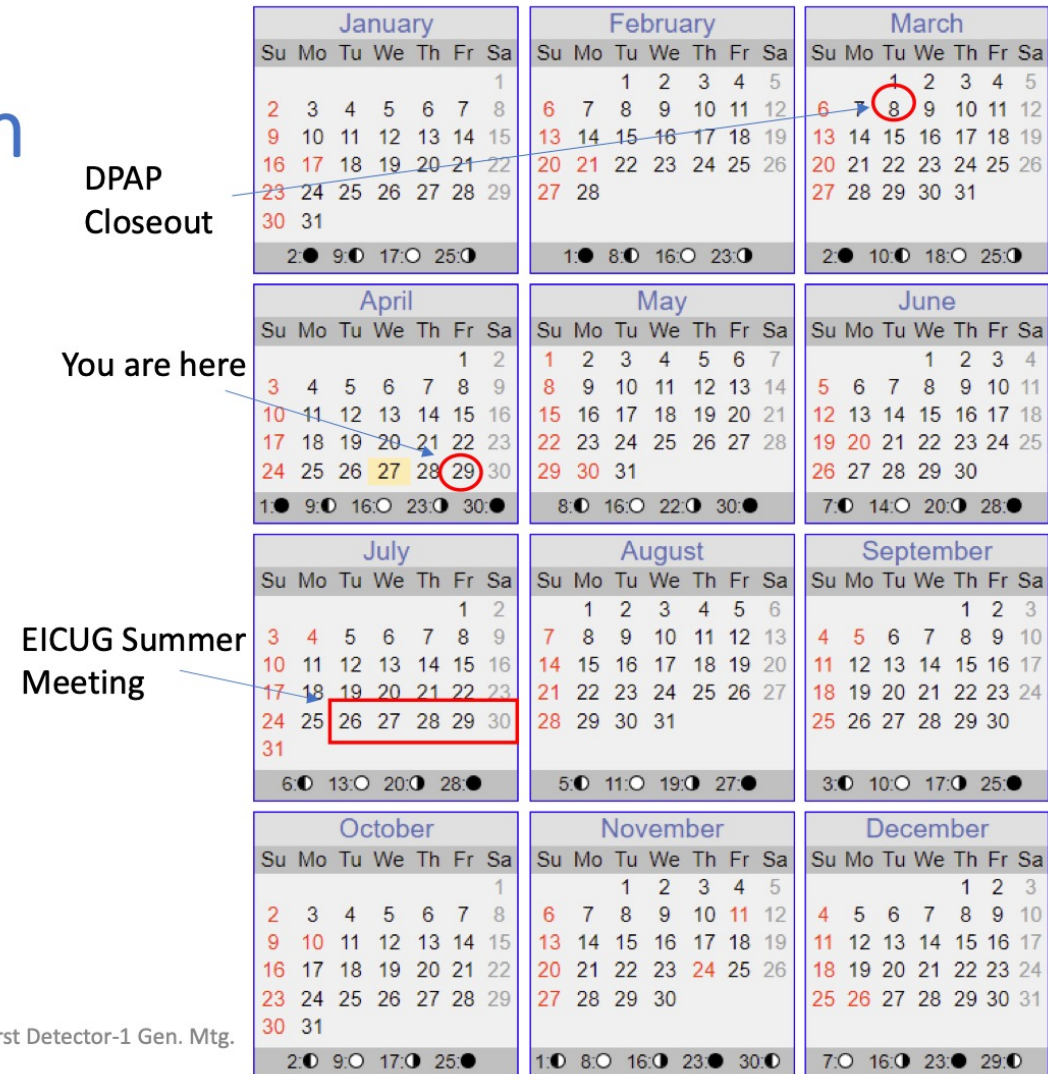
- Joint Detector-1/WG meetings now through July
 - Gradually phase out ECCE and ATHENA specific meetings
- Survey institutions interested in being involved in Detector-1
 - Confirm intent of ATHENA/ECCE institutions, solicit new members
 - Verify in-kind contributions
- Collaboration formation meeting right before/after EICUG summer meeting:
 - Establish Institutional Board



July Meeting: Reminder of April plan

Path to a Collaboration

- Done!**
 - Joint Detector-1/WG meetings now through July
 - Gradually phase out ECCE and ATHENA specific meetings
- Ongoing**
 - Survey institutions interested in being involved in Detector-1
 - Confirm intent of ATHENA/ECCE institutions, solicit new members
 - Verify in-kind contributions
- Next Step**
 - Collaboration formation meeting right before/after EICUG summer meeting:
 - Establish Institutional Board



July Meeting: current plan

EICGU Stony-Brook meeting*: July 26th – 29th

- Hybrid setup to accommodate in-person and remote participation.

Detector-1 dedicated time: 26th (starting ~noon) and 27th (full day).

Overarching goals for Detector-1 meeting:

- Facilitate direct in-person interactions and WG meetings / presentations.
- Formalize IB establishment.
(building on institutional survey participation)
- Initiate setup of collaboration bylaws committee by the IB.
- Initiate discussion on possible timeline for next steps:
 - Bylaws presentation and IB vote,
 - General elections (name, leadership etc.)

* Do not make plan based on this! EICUG will announce formal dates and agenda

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Discussion item: how to best prepare for the July meeting?

e.g.:

- Appoint agenda committee to organize & run the meeting?
- Have SC do it?
- Hold a series of open town hall meeting to discuss how detector-1 community sees this meeting?
- Other ideas?

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Open discussion

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