

News from the 2nd detector working group

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EIC UG quarterly meeting,

November 17, 2022

D2 WG mailing lists, etc

- General mailing lists
 - mailing list: eic-det2-1@lists.bnl.gov
 - sign up at: <https://lists.bnl.gov/mailman/listinfo/eic-det2-1>
- Other resources
 - convener mailing list: eic-det2-conveners-1@lists.bnl.gov
 - slack channel: eic-detector-2.slack.com
 - wiki: <https://wiki.bnl.gov/eic-detector-2/>

D2 WG activities this fall

- Bi-weekly meetings: Tuesdays at 10:30 am *Note new time!*
 - all talks available on indico: <https://indico.bnl.gov/category/440/>
 - next meeting on 11/22:
Cross checks with Detector 1 (EPIC) – a minimum set of key measurements for Detector-II
- CFNS 2nd detector “incubator” workshop
 - December 6-8 at Stony Brook
 - Next workshop in the spring of 2023

Bi-weekly meetings

<https://indico.bnl.gov/category/440/>

The screenshot shows the Indico interface for the 'General Meetings' category. At the top, there are filters for 'Public', 'US/Eastern', and 'P. Nadel-Turonski'. Below the navigation bar, there is a search bar and a 'Create event' button. The main content area displays a list of meetings, grouped by month. The most recent meeting is 'Minimum set of key measurements for Detector-II (2)' on November 22, 2022, marked as 'NEW'. Other meetings include 'Minimum set of key measurements for Detector-II (1)' on Nov 08, 'Opportunities with MuonID' on Oct 14, 'Opportunities with nuclei using 2nd focus' on Sep 30, and 'Detector-II Working Group Kick-Off Meeting' on Sep 02. A sidebar on the right shows 'Managers' (Thomas Ullrich) and 'Materials' (none yet). A message at the bottom states 'There are 2 events in the past. [Hide](#)'.

- After the kick-off,
 - First two meetings focused on new opportunities
 - Next two focus on cross checks between Detector 1 and 2
- All users are welcome to present!
 - One new request – a discussion on software for Detector 2

Upcoming “incubator” workshop at CFNS Stony Brook, December 6-8

<https://indico.bnl.gov/event/17693/>

The screenshot shows the Indico event page for "EICUG 2nd detector meeting". At the top, there are navigation icons and a user profile dropdown for "P. Nadel-Turonski". The event title "EICUG 2nd detector meeting" is displayed. Below the title, the dates "Dec 6 – 8, 2022" and location "CFNS, US/Eastern timezone" are shown. A search bar is present. On the left, a sidebar menu includes "Overview", "Call for Abstracts", "Timetable", "Registration", "Participant List", "Remote Zoom Link", and "Code of Conduct". The main content area contains three paragraphs of text: the first describes the event's coordination by the EICUG; the second details the focus on complementarity with Detector 1 (EPIC); the third states the meeting will be hybrid, hosted by CFNS. Below the text, event details are listed: "Starts Dec 6, 2022, 6:00 AM" and "Ends Dec 8, 2022, 10:00 PM" in US/Eastern time, and the location "CFNS C120". A note indicates "There are no materials yet." At the bottom, two call-to-action boxes are visible: "The call for abstracts is open" with a "Submit new abstract" button, and "Registration" with a "Register now" button.

- Focus on two aspects of complementarity with Detector 1 (EPIC)
 - cross checks of key measurements (and potential discoveries)
 - new opportunities enabled by unique features such as the 2nd focus
- Registration and abstract submissions is open
 - program will be up soon
- About 30 speakers so far
 - Mostly remote participation

Plans for the spring

Complementarity I: cross checks and detector synergies

- The second detector should be able to cross check results from Detector 1
 - emphasis on common White Paper and key NAS report goals.
- The combined data from Detector 1 and 2 could reduce systematic uncertainties
 - *cf.* H1 and ZEUS

Complementarity II: new opportunities

- The second detector can provide opportunities to carry out measurements that cannot be undertaken with IR6/Detector 1, or could significantly extend some capabilities
 - *e.g.*, examples outlined in the DPAP report.
- Note that some new capabilities could provide direct extensions of the White Paper goals (*e.g.*, studies of the 3D structure of nuclei), while others could be physics beyond the WP (*e.g.*, BSM).

D2 WG activities

- Bi-weekly meetings: Tuesdays at 10:30 am *Note new time!*
 - talks available on indico: <https://indico.bnl.gov/category/440/>
 - next meeting on 11/22:
- CFNS 2nd detector workshop in November
 - options: week of 11/7 or 11/28
 - second workshop to follow in the Spring of 2023
- Mailing list and wiki page are up
 - mailing list: eic-det2-1@lists.bnl.gov
 - wiki: <https://wiki.bnl.gov/eic-detector-2/>

Thank you!

Detector II/IP8 and WG charge

“With a clear mandate from DPAP and the EICUG to support and organize a Detector II/IP8 effort, the SC held discussions with Project, Detector I and CORE leadership. We agreed to form a dedicated working group that would address the following charge:”

1. Engage the broader community, *including theorists, accelerator physicists and Detector I experimentalists*, to fully develop projections for the portfolio of measurements that are complementary to the Detector I physics program, including those that capitalize on the implementation of the secondary focus.
2. Work with the EICUG Steering Committee and Project to *recruit new institutions* and establish a diverse and vibrant 2nd Detector working group.
3. Utilize the extended design period for Detector 2 to identify groups that will focus on *R&D for emerging technologies* that could provide another aspect of complementarity to Detector 1.
4. Facilitate the development of a *unified concept* for a general-purpose detector at IR8. In particular, the 2nd detector should be complementary to the project detector at IR6 and may capitalize on the possibility of a secondary focus at IR8.