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-l@lists.bnl.gov
  - sign up at: https://lists.bnl.gov/mailman/listinfo/eic-det2-l

- Other resources
  - convener mailing list: eic-det2-conveners-l@lists.bnl.gov
  - slack channel: eic-detector-2.slack.com
  - wiki: https://wiki.bnl.gov/eic-detector-2/

D2 WG activities this fall

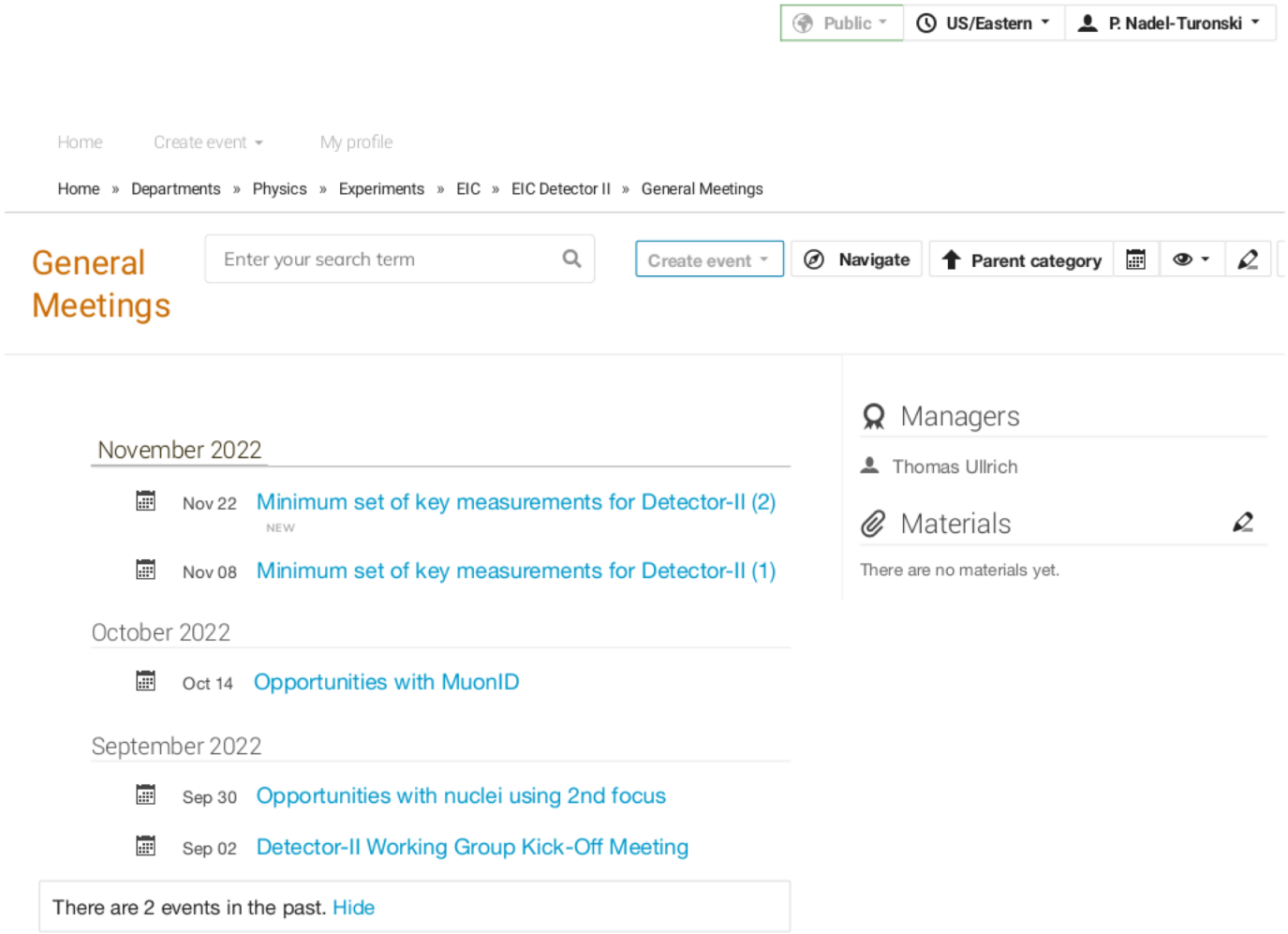
- Bi-weekly meetings: Tuesdays at 10:30 am *Note new time!*
  - all talks available on indico: https://indico.bnl.gov/category/440/
  - next meeting on 11/22:

    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/

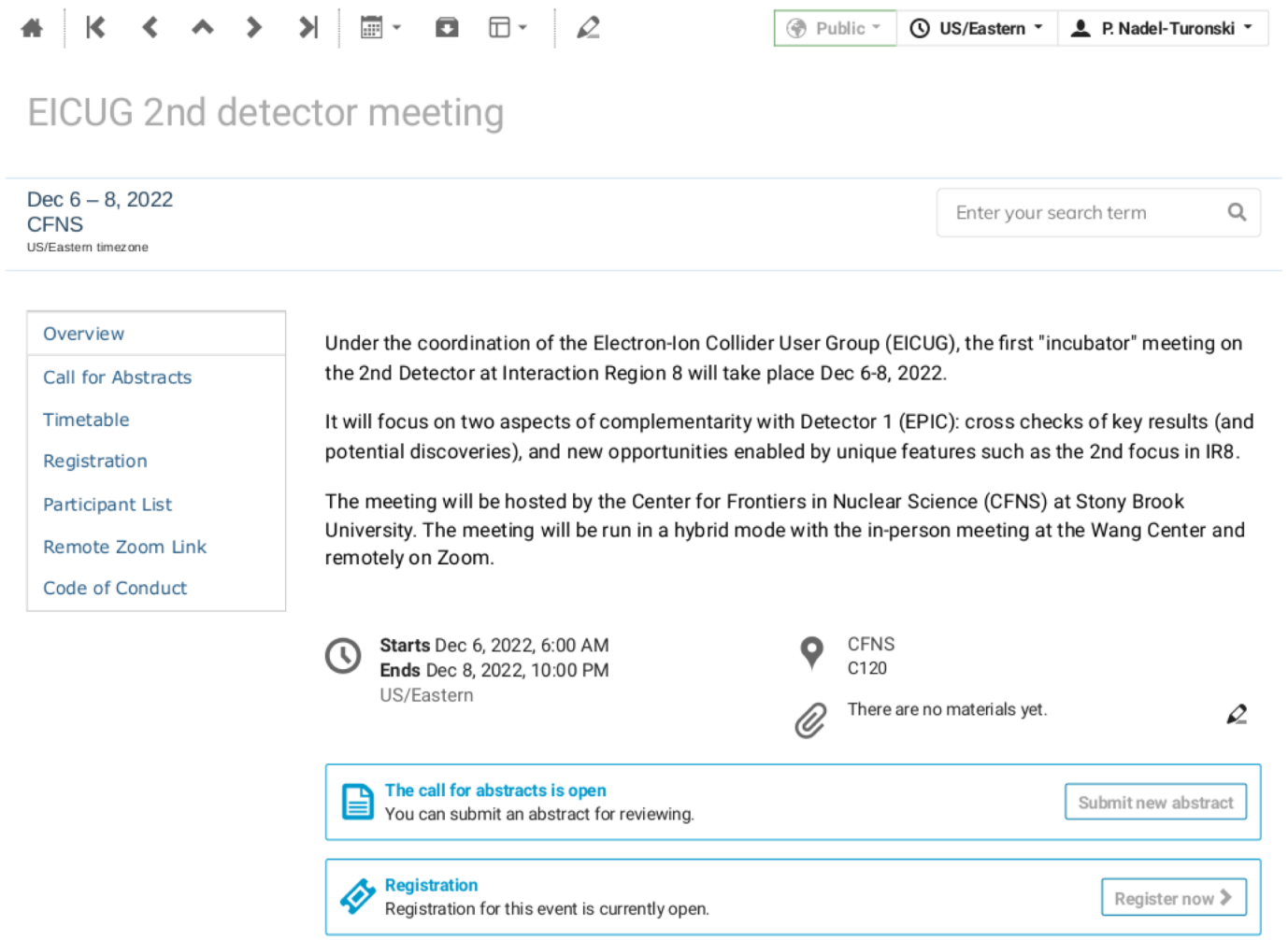


- After the kick-off,
  - First two meetings focused on new opportunities
  - Next two focus on cross checks between Detector 1 and 2

- 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/



- 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-l@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.