

Charge to the review committee (EAC)

Jeff Martin

TUCAN Collaboration

Documentation

- <https://ucn.triumf.ca/meetings-and-workshops/review-meetings/2020-02-eac-review-meeting/documentation-for-eac-review>
- Or, <http://tiny.cc/tucan-eac>

The screenshot shows a web browser window with the address bar containing the URL <https://ucn.triumf.ca/meetings-and-workshops/review-meetings/2020-02-eac-review-meeting/documentation-for-eac-review>. The browser's taskbar shows 'Apps', 'Gmail - Inbox (107)...', and 'Google Calendar'. The website is a Plone site with a navigation menu including 'Home', 'Users', 'TRIUMF facility', 'EDM', 'UCN source', 'RCNP', 'Meetings', 'Resources', 'TUCAN collaboration publications and presentations', 'UCN Runs', and 'TUCAN Collaboration I'. The user is logged in as 'Jeffery Martin'. The main content area displays the title 'Documentation for EAC review' by 'Ruediger Picker' (last modified Jan 13, 2020 12:33 PM). Below the title is a bolded text: 'Folders for UCN source, nEDM, BL1U, requirements documents, and other miscellaneous resources we might refer to in our documents that are not published (like student reports etc.)'. There are two document entries listed: 'Charge to the EAC for this review' by Jeffery Martin (last modified Jan 15, 2020 02:02 PM) and 'Charge annotated with links to relevant documents' by Jeffery Martin (last modified Jan 15, 2020 03:12 PM). A calendar for January 2020 is visible on the right, with the 24th highlighted. A search box is located at the bottom right.

The EAC is charged with reviewing the following aspects of the TUCAN project and the EDM experiment:

1. Evaluate the plan to complete the new UCN source and associated upgrades, including the technical aspects and resources (human and budget), and schedule.
2. Evaluate the plan for the nEDM experiment, including human and capital resources. This will include reviewing the Conceptual Design Report (CDR) for the nEDM experiment. We ask for some additional focus on reviewing the requirements and plan for the magnetically shielded room housing the experiment, which may include additional documents beyond the CDR.
3. Evaluate the plan of operation of the existing UCN facility in light of the above.
4. Evaluate the plan to prepare the proton beamline for full current operation and its servicing including the spallation target.

Documentation addressing the charge will be provided by Jan. 15, 2020. Presentations will be uploaded to a website by Jan. 31, 2020. The FB and Collaboration request that a brief report be written by the EAC summarizing their findings and recommendations.

Documentation

- 2nd link provide charge with links to relevant documentation.
- Directories are also ordered in order of charge/importance.

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Comments on each point in the charge

1. Evaluate the plan to complete the new UCN source and associated upgrades, including the technical aspects and resources (human and budget), and schedule.
 - UCN source CDR review 2018, JSPS support received 2018.
 - He-II cryostat nearing completion in Japan, testing at KEK in summer 2020, ship to TRIUMF.
 - Integration, LD2 cryostat prepared at TRIUMF.
 - Aiming for installation in early 2021 at TRIUMF.
 - Need to coordinate with many groups from TRIUMF. Need those groups to work with us.
 - See: “Source update” document, project management section of nEDM CDR, and other documents. **Friday AM.**

2. Evaluate the plan for the nEDM experiment, including human and capital resources. This will include reviewing the Conceptual Design Report (CDR) for the nEDM experiment. We ask for some additional focus on reviewing the requirements and plan for the magnetically shielded room housing the experiment, which may include additional documents beyond the CDR.

- General plan for each subsystem of nEDM experiment is presented in the CDR. Seeking approval of concepts and approach. Input on approach, preferably on specific subsystems.
- Magnetically shielded room: need specific input on any missing or confusing requirements, or things to watch out for when dealing with vendors. Desire to issue bidding documents soon after this review.
- Project management plan (CDR chapter) shows commissioning of nEDM experiment in 2023.
- Budget secured through CFI (and JSPS).
- **Friday PM, Saturday AM.**

3. Evaluate the plan of operation of the existing UCN facility in light of the above.
- Three successful month-long “campaigns” operating the vertical UCN source at TRIUMF, and the proton beamline, target, kicker magnet, etc. that we built.
 - Last run ended in a clog (in the cryostat) preventing operation. Debate within the collaboration as to whether to run one more time, or fully redirect to new source. Resources vs. completion of research. Collaboration will make the decision, but appreciates input.
 - Addressed in “New source update”. Recent results in “Analysis report”. **Saturday AM R. Picker and W. Schreyer.**

4. Evaluate the plan to prepare the proton beamline for full current operation and its servicing including the spallation target.
- Previous campaigns highly successful in bringing attention to the project locally, especially with accelerator division, accelerator operators.
 - Proton beamline is mainly operated by main control room (accelerator operators) when we are running. Expertise from collaboration in case of problems.
 - Transfer of servicing, targetry, and general overall responsibility to accelerator division has been slow. Challenges in transferring ownership of a beamline and target system built by experimenters, even if built to TRIUMF standards.
 - Collaboration desires responsibilities to be transferred ASAP, given the base equipment will not change, even after New UCN source installation.
 - See information in “New UCN source update”. **Friday PM. R. Picker and I. Bylinskii.**