

Minutes of the 166th EATM Meeting held on 13th February 2024

Minutes and slides available at <https://indico.cern.ch/event/1375248/>

Present: D. Banerjee (BE-EA, chair), J. Bernhard (BE-EA), D. Bozzato (HSE-RP), M. Brugger (BE-EA), N. Charitonidis (BE-EA), H. Danielsson (EP-DT), O. Denisov (EP-UFT), J. Devine (EP-DI), F. D. Carvalho (BE-ASR), L. Gatignon (EP-UFT), M. Jaekel (EP-DT), Y. Kadi (BE-EA), V. Kyrgiannaki (BE-GM), D. Lazic (EP-UCM), J. Lehtinen (EN-CV), D. McFarlane (EN-AA), M. Mentink (EP-ADO), L. M. Bueno (EP-UFT), B. M. Veit (EP-UFT), L. Nevay (BE-EA), A. Onnela (EP-DT), I. O. Ruiz (SY-BI), H. Ozcanli (BE-EA), S. Pelletier (EN-HE), P. Podlaski (EP-SME), V. Poliakov (EP-UF), B. Rae (BE-EA), F. Ravotti (EP-DT), A. Rummler (EP-ADO), N. Y. Kahn (BE-EA).

Apologies: R. Folch (BE-EA), E. B. Holzer (EP-SME), X. Genillon (SY-EPC), S. Girod (BE-EA), M. Lazzaroni (BE-EA), P. Schwarz (TE-MS).

News and Follow-Ups (D. Banerjee)

The minutes from the previous EATM were approved.

Action items (D. Banerjee) – Slides

D. Banerjee confirmed that the visit with RP to validate the F6D.TDE018 East Dump improvement was done on 24th January.

The ATEX ventilation works are ready to go ahead but this requires some work on the false floor first following the recommendation during the VIC. **J. Lehtinen** is coordinating with **S. Girod** and **M. Lazzaroni** for this work to be done (**Action → M. Lazzaroni, S. Girod**).

J. Lehtinen reported that the consolidation of chilled water in EHN1 is very late according to the schedule. The contractor has promised to commit major resources to rectify this repeatedly but it remains late. The EN-CV contract manager is aware and are in contact with the management of the contractor. It was noted that the scaffolding for these works should be removed by 9th April before users arrive for beam time. **M. Brugger** proposed a deadline in two weeks which was agreed upon by all to reconvene on the issue and define priorities for the users to start with a backup plan for operation if all the works cannot be completed on time. **D. Banerjee** asked if there was an alternative if the works were not completed. Only temporary installations would be viable which are not preferred.

D. McFarlane reported on the consolidation of the fire sprinkler stations in BA80 / PA80 / TA802. The majority of the work has been completed and only the 'antennae' on the sub-levels remain to be completed. Pressure tests are scheduled on February 26th and the full system should be online after this time. **F. D. Carvalho** asked if there were results of the X-rays of the welds to which **D. McFarlane** responded that this is ~80% complete and should be fully completed shortly.

I. O. Ruiz commented that the optical fibres for the rad-hard monitors will be pulled this week and the work is on schedule.

Key information from Different Meetings

SBA Highlights (D. Banerjee) – Slides

AUG / AUL for GIF++ - the replacement document still has to be approved by HSE and the removal is planned for YETS 24/25.

N. Charitonidis inquired about the water infiltration in TT81. **D. Banerjee** replied that its pending update from **M. Lazzaroni** and **S. Girod**. It will be added to the sba-information list for follow-up.

The M2 CEDAR refurbishment is progressing well and the first CEDAR should be completed this week and work will start immediately on the second after this.

ECRs (N. Y. Kahn) – Slides

The status of the ECRs for information and future approval was summarised and the full list can be found in the slides. Presented for approval:

- 1) HiRadMat primary vacuum manifold. **Approved**. (works on-going)
- 2) User requirements for the micro-collimator in the H8 line in the North Area. **Approved**.
- 3) User Requirements for XCED detectors in the North Area beamlines. **Approved**.
- 4) Installation of new test beam experimental area at AD/ELENA. **M. Brugger** commented that the budget is still pending approval but the technical changes proposed are ok. **Approved**.

EYETS Planning Update / Critical Paths (B. Rae) – Slides

Although work is progressing, the sprinkler system installation is still on a critical path and HSE has been contacted in parallel to investigate alternative solutions if any delays happen in the work before operation. The BA81 fire detection activity has been postponed until YETS 24/25.

The updated schedule was presented as per the slides and **B. Rae** reminded all to take note of the DSO test dates where access would be restricted.

M. Jaekel commented that the recent IST test had a negative effect for GIF++. It wrongly triggered an interlock which blocked GIF++ operation from Friday evening through the weekend until mid-Monday. **M. Brugger** highlighted then that the appropriate checks were not done after the test. **B. Rae** proposed that this test would not be done on a Friday next year and it was agreed that **R. Folch** would follow this at the TIOC.

M. Brugger asked if there was any progress on the water leak in TCC2. A replacement pump has been ordered and transport is booked for it.

HWC / IST / BC Status – B. Rae – Webiste Link

B. Rae showed the status through the link: <https://checklist.cern.ch/machine/18?tree=open> The checklist is fully implemented with all the equipment.

M. Brugger asked whether the additional vacuum solution for T08 (East Area) was implemented but this is currently being studied by **P. Boisseaux-Bourgeois**. **J. Bernhard** added that it is important to integrate the beamline instrumentation with the beamline vacuum to remove material from the superfluous windows. **D. Banerjee** confirmed that this is also being followed up indeed with SY-BI. (**Action → P. Boisseaux-Bourgeois, D. Banerjee, SY-BI**).

Neutrino Platform Beam Readiness & Critical Paths – Slides

The schedule of requirements for NP04 was presented. In the slides, the highlighted red sections show dates with restricted access to this area. It is foreseen to be fully operation by the April 8th, leaving two days for beam commissioning. However, it is likely the NP04 beam time will not be scheduled in the first few weeks which may provide extra time if needed.

I. O. Ruiz asked whether NP02 will run in 2024 but **M. Brugger** responded that the SPSC has decided it will not but that any preparations that are synergistic with NP04 preparations will be undertaken.

D. Banerjee asked if it was confirmed with GIF++ if the vacuum can be completed. **N. Charitonidis** responded that ~2m will remain without vacuum and during GIF++ beam time, a larger section will be removed to make room for experiments there.

J. Lehtinen requested, that for EN-CV information, the compressed air requirements be provided. **B. Rae** will follow this up (Action --> B. Rae).

GIF++ Gas Infrastructure Requests (M. Jaekel) – Slides

GIF++ is a joint facility between BE and EP. A recent activity is the search for more environmentally friendly gases for LHC experiments, therefore, more gas mixtures are (will be) used in parallel. However, the current space available for gas racks is full. Presented is a proposal of two options to extend the gas rack area. This extension does not need to be constructed during the YETS and could happen even during operation from the point of view of GIF++.

M. Jaekel also commented that the upcoming EHN1 gas system renovation will stop the facility for 2-3 weeks. **Y. Kadi** responded that this is a priority and requires more time than a technical stop affords. It has also been postponed three times. **M. Jaekel** responded that GIF++ accepts the time required but proposes that it would align with the GIF++ maintenance period to minimise the downtime. This has been noted and will be taken into account in the planning once the contractor is secured. It was stressed that GIF++ inform **D. Jaillet** for the request for new gas lines as soon as possible as the contract for gas piping is already out to tender and the final diagrams must be in place imminently. The ECR will also need to be updated to take this addition into account. This will be followed together with **N. Charitonidis, M. Jaekel** and **D. Jaillet (Action → M. Jaekel, N. Charitonidis, D. Jaillet)**

News from Experiments

AMBER – B. M. Veit – installation is on-track without issue and the cold-box installation has started.

NA62 – H. Danielsson – maintenance progressing as planned. The GTK modules will be installed in week 9.

NA64 – L. M. Bueno – waiting on a decision about the beam time schedule. For the electron mode it will be a similar setup to 2023 and for the muon run there is a dedicated CBWG EHN2 technical meeting on Friday 16th to discuss the setup.

J. Bernhard asked what the maximum electron intensity requested is to which V. Poliakov responded that the maximum the experiment can accept is 6.8×10^6 electrons per spill. J. Bernhard highlighted the inquiry was to find out if a shorter beam time with a higher intensity would be possible, but it would not.

NA61 – P. Podlaski – a request will be made to install the wire chambers needed for four weeks. The intention is to use the liquid hydrogen target this year and meetings with EP-Safety are arranged. The ATEX equipment is already installed and if the test is successful this year, it will be used for longer in 2025. There will be a presentation at the next EATM on this installation.

CLOUD – A. Onnela – CLOUD will run from mid-September until December in 2024. Before this, however, there will be many test periods without beam. P349 would visit for a test beam in the T11 space before the CLOUD run and a tentative schedule has been agreed between the users pending confirmation from the PS-SPS co-ordinator. **L. Nevay** added that the email exchange with the agreed dates will be sent to the PS-SPS co-ordinator for confirmation.

L. Nevay added that for P349 experiment a small setup in 2024 is foreseen that can be mounted on scaffolding and should be relatively self-contained and not impact the CLOUD test activities or operation. A visit had taken place on February 5th at T11 with P349 and CLOUD to agree on a possible installation. A proposal to the SPSC will be made for a full experiment in 2025 possibly involving a liquid hydrogen target but this is still being studied.

IRRAD/CHARM – F. Ravotti – all maintenance is going well and cleaning is scheduled shortly before the upcoming DSO tests. A second place is now planned for ion tests and this requires new cables to be pulled and this is on-going. An ECR for higher intensity operation is circulating for engineering checks. Two extra days at the end of the ion run were requested at the IEFC and this was approved.

D. Banerjee asked if any modification is needed/planned for the implementation of the 1s spill length to T08 while the secondary lines will continue to have the 0.4 s cycle. **F. Ravotti** will follow up on this.

GIF++ – M. Jaekel – reported earlier in the meeting.

Hiradmat – N. Charitonidis – beam time was approved as were the dedicated commissioning periods.

A. O. B.

RP have made recommendations for the installed XCIO in PP134 and more shielding will need be installed as a consequence before start of operation. This will be added to the sba-information for follow-up.

SY-EPC – X. Genillon (offline) - power converter commissioning in BA80 has started since last week and going well. Commissioning in BA81 is expected to start next week. The spectrometer tests are scheduled as follows:

- 27th February: SM1 and SM2
- 28th February: MNP33

L. Nevay, 16th February 2024