Minutes of the 138th EATM Meeting held on 22nd of February 2022

Minutes and slides available at https://indico.cern.ch/event/1130714/.

The meeting has taken place virtually.

Present:

Excused: M. Lazzaroni (BE-EA)

News and Follow-Ups (N. Charitonidis)

The minutes of the last EATM have been approved and are attached to the Indico page of the present EATM.

E. B. Holzer presented the draft users' schedule. The details of the H6 and H8 schedule are being worked out and the final planning will be published soon following the discussion at the next Research board. The experiments have been asked to give their feedback on the schedule.

The EATM dashboard will be regularly updated.

Action items (N. Charitonidis)

N. Charitonidis presented the updated action item list.

P. Schwarz confirmed that the first tests on the MSN.021.027 have been performed and a leak was found in the magnet's manifold. The certification of the refurbished parts is being awaited following which the leak will be repaired. A new test will be organised before the start-up as part of Individual System Tests (IST).

A. T. Charalambous mentioned that the reparation of the EHN1 roof for the leak has been performed by SCE. A report (written or oral) will be requested by SCE-SEM (Action: A. Dodard).

The EHN1 lockout has been delayed until 25th of February for the EHN1 de-cabling campaign.

Key information from different meetings (N. Charitonidis, B. Rae, S. Schuh-Erhard, G. Romagnoli)

- Highlights of pre-distributed information (N. Charitonidis)

  N. Charitonidis presented the important points of the pre-distributed information. No additional comments were made for these items.

  For AD, F. Butin mentioned that there are some delays in the bakeout operations in Sectors 3 and 1A which may lead to some delay. More news is expected in the coming days. The bakeout of the sector R20 is ending on Thursday for ELENA and the hardware commissioning with H\(^+\) is expected to start next week.
GIF++ operation was impacted due to the accidental cut of several access cables during the de-cabling campaign which have been fixed. A DSO test was organised and was successful. R. Folch confirmed that general information is being gathered from EN-AA experts regarding the XTDVs and they have confirmed that the XTDVs behaved as they were designed during the power cut. In case there is any further update, a report will be presented to the EATM.

- **Ongoing Engineering Change Requests (ECRs) (S. Schuh-Erhard, G. Romagnoli)**

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- **Updates from the EP Magnets WG (M. Mentink, T. Zickler)**

M. Mentink showed the planning for the Morpurgo and Vertex Magnets commissioning. On the 4th of March, a meeting is organized by A. Gerbershagen with equipment owners (SY/EPC, TE-MPE, EP-DT, EP-ADO), North-Area consolidation team, MADMAX representatives, and safety experts to finalize the planning for the Morpurgo commissioning and the MADMAX measurement program. Co-activity in the zone will also be discussed during this meeting and a confirmation will be given to EATM after that date. A draft of a document addressing the Morpurgo safety, commissioning and operational aspects has been prepared and will be uploaded to EDMS to initiate the approval process.

**Planning and important dates (B. Rae)**

B. Rae confirmed that the critical dates have not changed since the last EATM (see presentation) and can be found on the planning overview (https://oss-coordination.web.cern.ch/gantt/latest). The DSO tests for
the East Area have been completed and the ones for the North Area are planned for the 14th and 15th of March. For the East Area 100% of Hardware Commissioning (HWC) has been completed. Vacuum, beam intercepting device (BID) and beam instrumentation tests as part of the ISTs have also been completed. The HWC for the North Area is progressing and 65% have been completed. For the ISTs 70% has been completed for the vacuum tests and 90% has been completed for the BIDs and beam instrumentation. The North Area dry run is scheduled to start on 28th March as agreed with the experts of all the devices. The equipment experts should be available in case of a problem on any equipment or software. It has also been agreed with SY-BI that four days will be dedicated to commission the beam instrumentation with beam (pending) as part of hardware commissioning for both North and East Area.

**Update from MADMAX (P. Pralavorio)**

P. Pralavorio presented an [update from the MADMAX experiment](#). Two scenarios were presented, the first assuming access to the Morpurgo area from the 28th of March. In this case the electromagnetic compatibility (EMC) test can be prepared between 26th and 27th March in the control room and then performed on 28th/ 29th March. Then the CB100 test setup could be installed in the Morpurgo area, far from the magnet, already between 30th March and 2nd April, followed by its test and the test of the P200 test setup between 11th – 15th April. On the other hand, if access is possible only from 11th April on then the EMC test will be performed in the control room between 4th and 6th April followed by the test of the P200 test setup in the Morpurgo area between 11th and 15th April assuming MADMAX can have 24/7 access to the Morpurgo area during this period. The final decision between the two scenarios will be taken during the meeting on 4th March.

**MPP and possible follow-ups for K12 (J. Bernhard)**

J. Bernhard presented the [outcome of the Machine Protection Panel meeting concerning the slowly drifting dipole in K12](#). The vertical beam position measurement at the end of NA62 was found drifting at two instances in the past run which was caused due to a wrong current in the Bend5 magnet. This was not detected by the DCCT of the power supply and thus did not trigger the P0survey interlock which closes the P42 XTAXs in case of any deviation of the magnet currents. The issue was fixed by changing the regulation card both times. The monitoring of the vertical beam position has been included in the SPS SIS thanks to the help of BE-OP-SPS. However, this relies on only one detector and is no direct measurement. In the long-term, consolidation of all power supplies is foreseen as well as deploying a Beam Interlock System (BIS) for the North Area. However, for the secondary beams and P42 this is not planned before LS4. A second wire chamber will be installed close to the existing one during the YETS as agreed with SY-BI. Additionally, the amplifiers of the control cards of the seven most critical circuits will be exchanged. A dedicated SIS instance for the North Area has also been requested from BE-CSS and the deployment is underway. In the medium term, the interlock strategy could be reinforced by installing Beam Loss Monitors (BLMs) and a beam permit signal under conditions to be defined by NA62. The possibility of replacing more amplifiers on the control cards and procuring a flexible DCCT device to check some of the circuits concerned will also be investigated.


F. Duval mentioned that the recent nitrogen leak in ECN3 is being followed up directly with TIOC. He pointed out that the BE-EA TSO was not informed about the incident as the owner of the cavern and that the communication during such incidents need to be improved for the future. N. Charitonidis proposed to organise an offline discussion to clarify the reasons for this miscommunication to avoid it in the future (Action: R. Folch, TI contact list to be updated).
B. Parsamyan confirmed that currently the repair of the DC5 chamber is on track for COMPASS and all works for the run are proceeding as planned.

J. Friedrich also mentioned that work is ongoing at the home institutes for the AMBER run which is planned for the end of this year.

S. Kowalski added that the activities on site will start in two weeks for NA61 and work is proceeding as scheduled for the beam run.

M. Jaekel affirmed that everything is ok for GIF++.

F. Ravotti confirmed that cleaning up of the irradiation facilities is ongoing for IRRAD/CHARM. Work is also ongoing with SY-BI to have the everything ready before the run and measurements are being planned together to characterise the intensity of the beam. The user requests have been opened and preparation of the schedule is ongoing.

F. Ignacio Garcia Fuentes clarified with M. Jeckel that for TOTEM all systems can be switched back ON from 25th February afternoon.

AOB (M. Jeckel, N. Charitonidis, J. Lehtinen, P. Schwarz)

Some water leaks have been detected in TT83. P. Schwarz confirmed offline that there was a visit following the EATM wherein some valves were found to be open which should have been closed. This has been fixed and the situation is expected to improve. However, there are some valves that are not leak-tight, and their repair would only be possible during the consolidation of the valves planned for the next YETS. The repair of these valve requires emptying all the tube lengths before them which would stop the water circuit in the area. J. Lehtinen pointed out that this also has the potential to stop the cooling stations in case the limit of the water is exceeded. A report will be given in the coming EATM.

M. Jeckel reminded that all systems should be checked at the end of the lockout following the de-cabling campaign to make sure everything is working fine and in case of issues he should be contacted.

N. Charitonidis announced that Xavier Genillon will serve as the new SY-EPC co-ordinator replacing Yves Gaillard in this role and thanked Yves for his excellent work during the last years.

J. Lehtinen mentioned that the chilled water circuit has been started last Friday and from Monday all cooling systems from EN-CV will be in service. In case of any issues everyone has been reminded to contact EN-CV.

N. Charitonidis reminded that a table is being prepared with a list of all requested survey activities for the YETS 2022/23.

D. Banerjee,

Feb 28, 2022