

# DRAFT FOM minutes 11.08.2020

**List of participants in ZOOM meeting:** Akroh A. Alvarez J.L.S. Amarilla M. Angoletta M. E. Biancacci N. Bojtar L. Bozzini D. Comblin J.F. Cotte D. Coupard J. Damerau H. Di Giovanni G. P. Dubourg S. Findlay A. Gamba D. Jensen L. Johnston K. Kain V. Kuchler D. Lendaro J. Lombardi A. Lozano B. M. Macina D. Masi A. Mataguez S. Mcfarlane D. Metral E. Mikulec B. Newborough A. Pace M. Papotti J. Pasquino C. Pittet S. Ponce L. Pozzi F. Pruneaux C. Rodriguez A. Roncarolo F. Rumolo G. Siesling E. Skowronski P. Steerenberg R. Timeo L. Uythoven J. Valentin P. Vollaie J. Wetton C. Wilkens H.

**Slides :** <https://indico.cern.ch/event/944959/>

## Agenda:

- Approval minutes previous meeting & Action follow-up
- Reports from Accelerators & Facilities
- Action Follow-up: Fixing and survey of moved LT/LTB elements
- AOB: Low Level RF issue PSB and ELENA

## Approval of minutes of previous meeting and action follow-up

R. Steerenberg reviewed the actions. No comments concerning the previous minutes.

### Open actions :

- R. Steerenberg: Update on electrical works in B361, 364 and 37. Discuss options within IEFM and come back to EN-EL with an answer.

Actions : M. Pace will follow up the control system freeze in ISOLDE.

## Machines Status

### TI by C. Pruneaux :

- Emergency stop in ME6 (Booster) during an electrical intervention, due to forgotten disabling procedure.
- No power cut foreseen for the coming weeks.

### Linac 4 by A. Lombardi:

- A detailed description of the measurements were presented, for details see the slides.
- The aim of the measurements were to optimize the beam current and the alignment.

### Short summary:

- Good measurements were obtained with :
  - Beam center position at 3MeV vs. RFQ voltage
  - Beam center position at 3MeV vs. LEPT steerers
  - Beam intensity vs. RFQ voltage
- Very difficult to change parameters with WIC, LEPT SIS, but they work!
- Solenoid realignment didn't improve the transmission out of the RFQ : as codes predicted but disappointing

- Milestones and planning from 10/8 to 17/8/2020 can be found on the slides.

### Questions and comments:

- B. Mikulec said that the RFQ can't run above 3 MV, so the maximum current seems to be 25 mA.
- A. Lombardi noted that with some optimization 26 mA can be probably reached. The values were measured before the source alignment.

### Booster by A. Akroh:

The main points from the presentation:

- EN-EL: Electrical Power cut affecting the ME25. From TI, the power cut comes from the ME6 (PS) due to a bad manipulation (~2h delay).
- The machine is electrically unlocked with Main-Magnet covers OFF. POPS-b tests started on Monday 10/08 PM.
- No Access allowed in the machine except for those owning the SPECIAL\_PERMIT right
- From Monday 10/08 AM - 17/08 PM: POPS-b setting-up on the real load.
- Foreseen activity in the coming weeks:
  - Week 34:
    - Main Magnet Heat Run: 18 – 19/08
    - Main-Magnet covers installation (POPS-b/Main Bus-Bars Lockout with grounding)  
20 - 21/08 (Access to Booster possible – to be confirmed)
  - Week 35/36: Magnet cover consolidation

- Daily ZOOM chat room at 9:00 ( <https://cern.zoom.us/j/98821429849?pwd=VHIPVVo0Q0FjVUVMR0lHU3VXa2FJdz09> )

### Questions and comments:

Answering R. Steerenberg's question CV said the ventilation in bat. 361 would be optimized.

### ISOLDE by S. Mataguez:

ISOLDE low energy hardware commissioning :

- Electrostatic quads and steerers polarity tests all done except for the 2 new front-end, which are not in place, and the RBO line.
- Vacuum systems progressing as planned.

REX/HIE-ISOLDE hardware commissioning:

- Beam instrumentation tests. Pending issues: Several devices don't respond to the movement requests.
- Cryogenics and SRF (W. Venturini, D. Valuch); progressing as planned.
- REXEBIS (Fredrik Wenander, Gunn Khatri, M. Lozano Benito) is progressing .

Pending issues Reported on July 28: Intermittent glitches in the control system. All controls freeze for around five seconds. Observed from time to time but less of last week.

### Questions and comments:

- Concerning glitches in the control system M. Pace said CO needs to intervene when the problem occurs, which is very short.

### **AD and ELENA by L. Ponce.**

- Beam was sent on first BTV on Thursday 30/07. Ion source pulsed at 100 kV.
- Production problem on ELENA HV connectors for electrostatic elements in transfer lines impacting the beam commissioning because of the lock out of the LNS and LNI electrostatic elements. Corrective actions on-going. It should be completed by the end this week. Reconnection to ZQ and ZD will be done when expert back from holidays. The impact on the planning of the TL commissioning still to be followed up due to holidays period (at least 2 weeks )
- A problem on LLRF identified last week during HW tests (common problem with Booster), expert needed to fix it on vacation, no LLRF for the time being see AOB.
- The HW test is ongoing with profile monitors, B-train, power converters, kicker, settings controls.
- New isolation transformer arrived at CERN.
- Few (mostly software) issues identified during HW tests. Almost all fixed except publication problem from FGC\_93 still under investigation.

### **Questions and comments:**

Answering B. Mikulec question L. Ponce said the connectors were very specific and can't be changed by other person.

### **NTOF by D. Macina:**

- Nothing to report.

### **AWAKE by V. Kain:**

- There is electron beam this week used for machine learning .

### **CLEAR by Davide Gamba:**

- Recovering from the turbo pump failure. Beam expected Wednesday.

### **LEIR by C. Wettone:**

- Nothing to report.

### **Action follow up: Fixing and survey of moved LT/LTB elements. Presentation by P. Valentin.**

The main points:

- Equipment was moved after survey for unknown reason.
- There will be warning stickers on the equipment after survey with date and the contact person's telephone number.
- There are red seals now on the screws to prevent the same situation happening again.

### **AOB: Low Level RF issue PSB and ELENA by M.E. Angoletta**

The main points:

- The problem concerns the communication via gigabit links of the boards that together make a LLRF system. The problem shows itself typically after some hours of operation (ex: ELENA last week) and it is fatal for system's operation. A reboot not always solves it.
- Probably due to firmware update. The firmware expert is on holiday and will then be absent for medical reason. Also most of the LLRF team is on holiday.
- All dry runs in Booster requiring RF train must be postponed until September.
- The problem was noticed in July, and the full extent of it only last week.

- For ELENA the firmware can be rolled back to the previous version, but in the Booster it is not possible, because new functionality being used.

### **Questions and comments:**

- Answering R. Steerenberg's question M.E. Angoletta. said there is a second expert for the firmware, but he is hired recently.
- R. Steerenberg asked what was the impact of not having an RF train on the schedule. A. Akroh answered that some of the dry runs can be rescheduled and not blocking, but this must be investigated.
- R. Steerenberg asked if a simulated RF train could be used. A. Akroh answered it might be useful, but not ideal for the experts.

### **Actions :**

- M.E. Angoletta will investigate how much work is to roll back in ELENA for the previous firmware. She will make a presentation next week.
- A. Akroh will follow up the impact on the schedule of not having RF train until September and the usefulness of using a simulated RF train.

*Minutes by L. Bojtár*