

## FOM **DRAFT** Minutes 04.08.2020 (report on week 31)

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**Indico & Slides:** <https://indico.cern.ch/event/941606/>

### **Agenda:**

1. Approval minutes previous meeting & Action follow-up
2. Reports from Accelerators & Facilities
3. EN-EL: Update on the electrical works in B361, 364 and 37
4. AOB: Water leak in bldg. 361 and consequences on Linac 4 run

### **1. Approval of minutes of previous meeting and action follow-up:**

The minutes were approved without further comments.

The action on Survey to report on the lose screws remains open and will be addressed at the next FOM.

### **2. Reports from Accelerators & Facilities:**

#### **TI by R. Ledru:**

- The tests between the normal and secured network of Thursday 30.07 went as scheduled.
- Thursday 30.07 an important water leak occurred during the filling of the chilled water circuit. The circuit was filled while it was not fully closed (blind flange missing), causing flooding in several PSB equipment rooms, including the PSB tunnel.
- More details later in this meeting under point 4.

#### **Linac 4 by B. Mikulec:**

- Presently in the middle of the 3 MeV run which is led by ABP.
- Alignment of LTB line was main activity last week.
- Beam was at 3 MeV on Wed. 29.07 with 84% transmission through RFQ at low current and 71% in MEBT at about nominal current. The aim for the coming days is to improve the transmission.
- Thu. 30.07 the normal – secured network test was performed without too many consequences beyond the normal restarting after having powered down equipment.
- Thu. 30.07 the PSB chilled water leak caused also issues for L4, mainly on the timing system and a network star point.
- Some delay has been accumulated and the proposal to extend the 3 MeV run by 1 week was agreed by LIU and R. Steerenberg. This delay will be absorbed in the L4

beam commissioning and will therefore not impact the delivery of the beam to the PSB.

**PSB by F. Chapuis:**

- After 4 week of hardware commissioning 1 week of delay has been accumulated, mainly caused by issues related to the electrical network and cooling systems.
- The delay will be absorbed in the remaining time and by optimizing the procedures and time during the consolidation of the magnet covers.
- Last week about 36 hours were lost due to the EN-CV issue reported under points 1 and 4.
- During the normal/secured network test a major part of the equipment was stopped to prevent damage.
- The commissioning and testing of the BDL circuit is not yet completed despite the extension and will continue next week.
- BT1/BT4.BVT10 magnet stack had the coils moving. Fixing pieces have been installed.
- Polarity check have been performed on the injection and extraction lines. The polarities in the BI line were mostly ok, but quite some inversion have been found in the BT/BTM lines which will be corrected in week 32.
- Access was allowed in the whole machine on Mon 03.08 and Wed. 04.08.
- Wed. 05.08 to Fri. 07.08 Continuation of the BDL commissioning, polarity check in the ring.
- Fri. 07.08: Machine patrol in preparation of the DSO test on Monday to qualify the POPS-B interlocking with the access system.
- The tightening of the magnet support bolts, and subsequent alignment need to be confirmed and will require lock-out of the circuits concerned. (see action under 1)
- For the coming weeks:
  - o Week 32: start of POPS-B commissioning with main magnets as load.
  - o Week 33: Main magnet heat run.
- For the POPS-b test the new flow meters need to be installed. For the moment only 2 out 4 flow meters required are available. This afternoon a meeting is organized to address this issue.
- Everybody concerned is invited to join the daily VIDYO chat room for a briefing at: L4-PSB-OP-DESK - <https://vidyoportal.cern.ch/join/pPOR2L2sFG>

**Action (B. Mikulec): report at next FOM on outcome of the meeting related to the flow meters for the water-cooled cables.**

**ISOLDE by E. Piselli:**

- Optimisation of the beam charge breeding in the REX-EBIS after injection from the REX-TRAP local ion source is continuing.
- Cool down of SC cavities has continued using helium gas. Cavities are around 175K and the frames at 160K.
- SRF team (W. Venturini, D. Valuch) are working on the initial conditioning of the cavities.
- REX-EBIS application timing issue solved quickly by BE-CO (G.Kruk and his team in BE-CO).

- Instabilities of the CANCUN power converters and their control electronics has been solved following installation of new control software (firmware and low level software) (L. De Mallac TE-EPC).
- The new REX/HIE-ISOLDE beam instrumentation has been integrated in the working sets and in the control system. The high-level application is ready and testing is being coordinated with BE-BI.
- Hardware recommissioning of the older beam instrumentation in the post-accelerator has started
- No major issues to restart the facility after the normal – secured network tests.
- Great help from G. Merino (TE-VSC) to solve small problem on the vacuum side.
- There is a pending issue related to the freezing of all consoles from time to time for about 5 seconds. M. Gourber-Pace asked that despite the short freeze the INCA team is called whenever it happens. R. Steerenberg inquired if this is also observed on other accelerators and facilities. D. Gamba reported they had similar problem but that it was related to the INCA server being temporarily overloaded due to many setting changes. This does not seem to be the case for ISOLDE.

**Action (BE-CO): investigate the temporary freezing of the ISOLDE work stations.**

**PS by F. Pedrosa :**

- Still under coordination of EN-ACE
- All progressing according to plan.
- The PS-SWY will be closed by the 27<sup>th</sup>

**AD/ELENA by B. Lefort:**

- The High voltage test on the transfer lines started last week and a problem was discovered on all ZQ and ZD connectors. Corrective action has started and may take 2 weeks.
- This prevents beam injection in ELENA due to the lock-out of the beam line elements racks that includes the injection elements.
- No beam for about 2 week in ELENA, but local ion source tests can continue.
- Impacted task and subsequent delays are:
  - o Check H- beam properties life-time versus ion switch decay time → launch action if needed → Not before end of August
  - o Measure/optimize emittance → Not before end of August H- extraction for Gbar (Not sure, not ready). In any case the GBAR vacuum is also not ready yet.
  - o Test of profile monitors electronics → on-going in LNS

**SPS by V. Kain:**

- Nothing to report - still under coordination of EN-ACE

**East Area by N. Charitonidis:**

- Nothing to report.

**nTOF:**

- No presence.

**AWAKE:**

- No presence.

**CLEAR by D. Gamba:**

- Not much beam time during week 30 and 31 due to AUG test and the normal/secured network test.
- Last week there was also a water leak that was repaired.
- One vacuum pump broke during the AUG tests, causing high pressure at the end of the line – being solved.

**LINAC3 by R. Scrivens:**

- Radiographies for CV pipework will take place in building 351 from 19:00 on 07/08/2020 – No one should access, signage will be placed by the company.

**LEIR by R. Scrivens:**

- Nothing to report.

**3. EN-EL: Update on electrical works in B361, 364 and 37:**

- No presentation was given. All necessary information is available and R. Steerenberg, who is in favour of postponing the work to a YETS, EYETS or even LS3 will check with R. Losito as chairman of the IEFC.

**Action (R. Steerenberg): Discuss options within IEFC and come back to EN-EL with an answer.**

**4. AOB:****Water leak in bldg. 361 and consequences on Linac 4 run by G. Petrika:**

- On Thu. 31.07 at 12:20 there was an important water spill that occurred during the purging of the buffer tank. The reason was a dead-end pipe that was left open, following a communication error.
- Action taken after event:
  - o Fire brigade intervention to evacuate water
  - o Restart of CV ventilation
  - o Water clean-up (10 pers. CV + contractor)
  - o Installation of mobile fans to dry up
- On Fri. 31.07 at 10:00 the BCER racks could be restarted.
- The issue is understood and measure to prevent this in the future have been taken. A new logbook was created in which all action taken on CV installations will be reported daily.
- Investigations continue to have the full picture.
- The TIOC will follow-up the issue
- Some issues and non-conformities will be followed-up before making the station operationally available. Until then the temporary chiller remains in operation and later also as back-up until September.