# FOM minutes 13.04.2021

**List of participants in ZOOM meeting:** Albright S. Alvarez J.L.S. Antoine A. Antoniou F. Blancac N. Bojtar L. Chapuis D. Cotte D. Delrieux M. Desquiens V. Fadakis E. Fernandez R. A. Findlay A. Garcia M. E. A. Giovanni P. D. Guillot N. Haase M. Hanke K. Huschauer A. Jensen L. Johnston K. Kain V. Karpov I. Lang T. Lasheen A. Lozano B. M. Mataguez S. Matheson E. Mcfarlane D. Mikulec B. Nielsen J. Nuiry F. X. Oliveira J. C. Pace M. Papotti J. Piselli E. Pittet S. Ponce L. Porta G. Z. D. Pozzi F. Praena J. Rae B. Roncarolo F. Rossi C. Rumolo G. Salvant B. Schenk M. Scrivens R. Simon P. Skowronski P. Somoza J. A. F. Tecker F. Timeo L. Velotti F. M. Wegner R. Wetton C. Zamantzas C. Tock J. P. Rothe S.

## Slides: https://indico.cern.ch/event/1020415/

## Agenda:

1. Approval of the minutes of the previous meeting & Action follow-up
2. Reports from Accelerators & Facilities
3. Technical stop activities
4. A.O.B

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

- The minutes are approved without further comments.

## 2. Reports from Accelerators & Facilities

**TI by J. Nielsen:** Nothing to report.

**Linac 4 by P. Skowronski:**

- On Saturday 2 a.m. the pre-chopper went down resulting in 5.5 h downtime, out of which 3.3h is on operations, becausethey called the SY-RF piquet instead of the SY-ABT. Apologies for unnecessarily waking up 4 specialists. Dashboards are being updated.
- A high-voltage cable had to be exchanged (access needed).
- On Sunday 2 p.m. there was a problem with a ventilation fan of a CCDTL1 klystron, 3h down time.
- Stray Field Compensation on SIS updated. The values of the SFC correctors did not update correctly when set with YASP of PPM copy.
- Identified that most of the pre-chopper faults is due to L4X.TAILCLIPPER LTIM not triggering. To be followed up.

**Questions and comments:**

- Answering K. Hanke’s question P. Skowronski said that steps are taken to make it more clear whom to call for which equipment.

**Booster by G. P. Di Giovanni :**

- Recurrent faults of POPS-B over the long Easter week-end linked to a mis-configuration of the B-Train in Ring2. Most of the downtime in the week-end due to faults in Linac4.
- Beam needed for PS/SPS beam commissioning provided as requested.

- MTE High Intensity version ready: Issues with the RF splitting and synchronization fixed. More fine tuning needed, but the beam is ready for PS BC. Available with an intensity up to 500 ppr and eH/eV ~12/3.5 mm.
- BCMS25: First version for the PS RF setting-up was prepared and being actively used by PS.
- PSB injection reviewed and optimized, Stripping Foil testing ongoing.
- Transverse emittance measurements: Ongoing work to clean up HW/SW settings and understand discrepancies across instruments. BTM SEM grid application updated to get the latest optics.
- Intense measurement program to understand the resonances and their compensation and to identify the root cause of the tails in the profile of the vertical plane observed on LHC25.

**Questions and comments:**
- K. Hanke asked about the availability of calibrated spares for the wire scanners. F. Roncarolo said they have already prepared them for the technical stop.

**ISOLDE by S. Mataguez:**
- EN-CV started some activities related to the target area ventilation consolidation. First step has been the relocation of a water reservoir which is part of the targets cooling system. Implication for the commissioning is that there will be not front ends operation as of the 07/04 until the 09/04 included.
- Target change in GPS and gas line identification in HT room done. Also solved SY-STI Interlock when GPS target in place.
- The scanners YHRS.BSC4820/30 have been mounted before the SEM-grid YHRS.BSG4700 / slits and collimator. This causes difficulties for the calibration of the scanners and the correct functioning of the slits to block off neighboring masses. Cannot be seen or verified on the scanners anymore.
- Low Energy beam lines: COLLAPS Beam commissioning started 06/04 and on-going. Friday 09 April of both front ends and targets restarted successfully. HRS send beam trough the ISCOOL / RFQ with 83% transmission.

**Action (F. Roncarolo): Follow up the problem with the scanners.**

**PS by D. Cotte:**
- Beam commissioning: Trying several local vertical bumps in order to remove losses mainly after injection. New LSA parameter relativistic beta implemented in order to get the correct dispersion in FWS app. Correlation found between vertical shaving in PSB and losses reduction in SS80-SS100 at injection. LHC25#72b high losses at extraction observed when splitting is enabled. Week-end: many tests performed in order to find the best SMH16 position with and without TPS15. Several trips of KFA45 due to vacuum spikes.
- There were issues with: BLMs, SMH16 position, POPS and DFA.
- BHZ377/BHZ378: Economic mode not taken into account. REF.ECONOMY.DEST.MODE was set enable but not REF.ECONOMY.MODE.

**Questions and comments:**
- K. Hanke said that weekly PS coordination meetings will start next Monday.
- B. Mikulec pointed out the problem with the BHZ377/BHZ378 economic mode can be dangerous and should be discussed with EPC. V. Kain added the SPS should be involved in this discussion.

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

- ELENA transfer line: Vacuum OK in LNE02 and LNE05. Electrostatic elements connected according to new optics in LNE02. Powering tests validation on-going. The electronics is missing for the profile monitors for the special H one in AEGIS zone.
- Cycle accelerating and decelerating the beam: Continue working on improving setting of working point. Orbit correction along the cycle, test of e-cooler compensation knobs. Work on-going to improve injection efficiency. Continue testing new RF functionalities. Synchronization problem on scrapers instrument to be followed-up with STI and BI.
- HW commissioning in AD: Vacuum leak in stochastic cooling kicker repaired with resin. Access system interlock cable repaired. DSO tests planned for 16/04. Repair/re-installation of magnet interlock cables on-going.

**SPS by V. Kain:**
- HW commissioning: SBDS reliability run is ongoing, good progress. Re-testing of ring and injection BIS and timing on BHZ377, BHZ378, MDSH.1197 are done. BT working on an auto soft-start if the SBDS does not pulse at high energy for a given time to avoid a vacuum spike in the MKDV1. Not yet implemented, will be done shortly.
- DSO tests: SPS ring phase 2, Ion interlock and WANF neutrino pits on 7 April done. North Area primary chain 8, 9th April done.
- 4 FMCMs need to be checked and two others rechecked, because of power converter instabilities.
- Installation and test of the fast interlock from the WIC to fire beam dump if a main circuit trips done for SMD, SMQF and SMQD.
- Prepared beam permit to inject the beam on 12 April. TEDs consigned at each extraction channel.
- Inversed cooling pipes will be resolved during TS.

**Questions and comments:**
-K. Hanke asks about the updated start-up schedule for the SPS V. Kain answered that next week she will givean update on this.

**AWAKE by G. Z. D. Porta:**
- Preparation for laser experiments studying behavior of ionizing laser pulse propagation through the Rb vapor source when laser is on/off-resonance with Rb.
- TAG41 accesses: scheduled CV intervention on Electron Gun water cooling circuit.
- BB4 elevator: stuck between 0 and -1 with a person inside for 1 hour, then restarted by itself. Inspection the following morning found no fault.
-Vapor source: warmed up to 200 C in preparation for plasma experiments.
- Laser: installation of new oscillator  for on/off-resonance studies of ionizing laser pulse propagation through the Rb vapor source compression with stretcher, compressor, and Mazzler.
- Laser/DAQ: Setup and debugging of diagnostic and trigger systems for laser pulse propagation experiments.

**Questions and comments:**
-J. Nielsen asked whether TI and the fire brigade had been informed about the incident with the elevator, as 1h seems a long time for a person to be stuck.  The fire brigade was called but arrived only after about 1h. J. Nielsen will follow this up with them.

**LINAC 3 by E. Mahner:** The plasma chamber of the ion source was exchanged. This week the source will be restarted.

**NTOF :**  Welding the target, noting to mention otherwise.

**EAST AREA, HiRadMat:** Nothing to mention.

# 3. AOB

**3.1 Linac4 technical stop by J.P. Tock:**
- As agreed with SY and EN department heads, Luca Timeo will be acting as facility coordinator for the coming April technical stop in Linac 4.
He will be supported by F Pedrosa and S Perrault from EN-ACE-OSS.

**Questions and comments:**
R Scrivens asks if EN-ACE is also ensuring coordination for Linac3. This is under discussion. R. Alemany Fernandez asks what the situation for LEIR is. This has been discussed but not concluded.

**3.2 PSB technical stop activities by M. Albert:**
- A total of 9 impacts have been declared, with 2 outside of the machine. The available time for all PSB interventions is: 21/04, 8:00 – 22/04, 12:00. OP proposal: Beam stop 7:00. RP cool down during 30min. Full RP survey @ 7:30 and lockout of mains by SY-EPC. Access @ 8:00. End of access 22/04 @ 12:00

**Questions and comments:**
- F. Pozzi added the cool down time of 30 min. before access seems too short. They need to know what kind of beams will be in the machine before. B. Mikulec added the location of the intervention should be taken into account.

**3.3 PS and TT2 technical stop activities by M. Albert:**
- As announced in the last IEFC by Rende Steerenberg, the reasons for a longer Technical Stop (48h) are no longer present, so the technical stop has been reduced.
-The agreement is: Will close the PS SWY on Thursday at 11:59AM. All works must be completed by then including those in the ring and surface with one single exception. Will keep the PS Ring in restricted access mode until Thursday 17:00 for the Fast Tuner test.

**3.4 SPS technical stop activities by D. Mcfarlaine:**
- Access Wednesday the 21st and Thursday the 22nd April 2021. Access time yet to be defined.
-IMPACT intervention period TS1-SPS-2021, 36 IMPACTs are declared.
- BE-OP are still in the process of re-starting the machine after LS2 so only works that are essential and that cannot be done at any other time, should be done.
- In order to reduce the amount of patrols that OP will need to do after the technical stop, only open the doors that you have to open. DO NOT FORCE ANY DOORS!

**Questions and comments:**
K. Hanke adds that RP shall assess the exact cool-down times per machine based on these lists of activities and communicate the time lines at the next FOM meeting. In case there is an update on the lists presented today, this shall also be announced at the next FOM meeting.

*Minutes by L. Bojtár*