Minutes Linac4 HW and BC Working Group Meeting 07/08/2019


Presentations and Discussions:

Approval of Minutes and Open Actions (B. Mikulec)
- The minutes of the last meeting were approved.
- Open Actions:
  - Strategy for the emittance measurements: A. Lombardi will organise a meeting end of August.

Linac4 Connection to PSB – Issues and Non-Conformities (L. Timeo, J. Coupard)
- J. Coupard reported on the progress of the Linac4 and Linac4 connection shutdown activities.
- Linac4:
  - DSO tests were performed last week Thursday.
  - 3 leaks on sector 6 that were temporarily fixed.
  - For the smoothing of Linac4 and L4T 3 weeks were allocated, which reduces the time for HW commissioning. It was also seen that one intertank has to be aligned, but the structure has to be vented; 2-3 days are needed for this work. A. Lombardi confirmed that this was important to do before the start of the LBE line run.
- Linac4 connection:
  - CV works still ongoing for demineralised water; pressurised air OK. 2-3 days might still be needed next week.
  - Power converter cooling in 363 has been done.
  - Passerelle work and painting still outstanding.
  - SWY installation progressing well, but no margin.
  - LBE line: 3 girders are in place and will be aligned this afternoon. Some equipment on girders still needs to be installed. Wire scanners and Semgrids might only be ready beginning of September (access control).
  - LTB will be closed and should be under vacuum next week.
  - LT was aligned last week; one issue with one quadrupole, but it is fixed now.
  - Smoothing measurements will continue next week.
  - Next week power converter tests will start in 363, connected to the magnets beginning of September.
  - DSO tests planned for 29th of August.

Progress Report of the 3 MeV Run (A. Lombardi)
- A. Lombardi explained that there were several issues related to timing preventing beam production; pre-chopper and chopper are still not working, which should be solved rapidly. BE-CO and BE-OP will continue investigations after the meeting together with the equipment specialists.
• This week the priority is with Autopilot.
• Next week beam optimisation is planned for the mornings and Autopilot tests for the afternoons.
• No caesiation foreseen yet – running at reduced current.

**BI Status** (A. Goldblatt)

- **A. Goldblatt** explained the status of BI before the LBE line run.
- The L4Z.BSGH.V0253, L4Z.BSGH.V0267 and L4T.BSGH.V1247 Semgrids were installed and tested. The third L4Z Semgrid (253) could not be exchanged due to lack of time.
- L4T.BWS.1247 was installed and signals tested; motion test has still to be done end of August.
- L4T.BEP.0422 was installed.
- BCT HW maintenance has been performed; BCT ISTs finished.
- BPMs: there is currently a FESA class issue to be solved.
- Laser: alignment done and damaged fibre replaced (diagnosis of new fibre to be done end of August); DAQ checks planned for September.
- BLM: ISTs are scheduled for last week of August.
- BSM: the leak on L4T.BPLFS.1663 was repaired with VacSeal; it is not yet connected, and an access is needed. ISTs planned for last week of August.

**BWS ISTs:**
- 100 kHz noise with gain 1000 for L4T.BWS.0223
- It is impossible to inject a test signal for L4T.BWS.0243; to solve the cabling issue, the vacuum would need to be opened. As there were valid measurements last December, it is nevertheless expected to work fine.

**BSG ISTs:**
- L4C.BSGV.0421: only 4 wires work (9, 11, 13, 15); known issue → it might be necessary to open the vacuum
- L4P.BSGV.0121: issue with wire 15
- L4Z.BSGH.V0253: issue with wire 25; bad contact in preamps box output connector
- L4T.BSGV.1247: wires 25+23 and 6+7 in short circuit
- L4T.BSGV.0523: issue with wire 17

**LBE line Semgrid installation status:** the tanks are installed, but not the grids. All installation work should be terminated by the end of August. **C. Vuitton** mentioned in an email that he would only be ready beginning of September, for which the compatibility of the works will need to first be checked with the other groups.

**Status of ISTs**

- **B. Mikulec** went through the list of ISTs that should have been finished by now. The planning for the ISTs can either be found in the EN-ACE Microsoft Project planning for the LBE line run or on ASM.
- BI ISTs already mentioned above.
- W30: **J. Coupard** mentions that the vacuum ISTs were done.
- W31: Klystron and RF controls tests to be ready for DSO tests performed.
- W32: **B. Mikulec** will contact the RF team for an update of the RF ISTs.
AoB and Tour de Table

- There will be a Linac4 coordination meeting tomorrow to which everybody is invited (J. Coupard).
- J. Parra-Lopez reported that the new FGC63 class will be first deployed for ELENA; the date for the Linac4 deployment has been postponed to the 26th of August.
- C. Bracco requested to select the empty foil position for the stripping foil test stand. This is already the case.

Minutes by B. Mikulec 08/08/2019