

LIU project team meeting

Notes from the meeting held on 26 May 2016

Present: H. Damerau, A. Funken, B. Goddard, S. Mataguez, B. Mikulec, G. Rumolo, R. Scrivens

Excused: J. Coupard, K. Hanke, M. Meddahi

• Arising matters (G. Rumolo)

- LIU internal meeting took place yesterday to establish again the time needed for hardware tests and beam commissioning after EYETS, so that the new schedule can be presented by G. Cumer on this Friday's LS2 Committee meeting. Bettina reported that she provided a detailed list of the hardware commissioning activities and an agreement was reached that OP will make an effort to reduce the time needed for that from 4 to 3 weeks. There will be next week (3 June) an IEFEC presentation on the updated schedule for EYETS and Bettina will also briefly present. Of course, squeezing the hardware tests also entails an increased risk that there are delays for the start-up.
- The overall LIU spending as of now is 42% – mainly thanks to EPC for PSB, while the other machines are still around 20-30% of the 2016 projection (i.e. independently of the information that is being collected in the Excel template with the updated projected 2016 spending).

• Update on EYETS - YETS - LS2 planning and PLI news (S. Mataguez)

- The slides are available [here](#).
- The document with the LS2 master schedule has been released after all the suggestions and recommendations coming from the LIU-PT meeting were incorporated. Also all the dates when the different services are available are explicitly shown.
- Richard said that if there is a problem with allocation of resources, the planning for the closure and HW tests of Linac3 and LEIR can be changed. However, we need to take into account also that LHC will take ion beams first and we need to make sure that the commissioning of these beams starts early enough after the first proton beams (PROBE) are taken by the different machines.

• Linac4 commissioning progress, including source (sent by email by M. Vretenar and A. Lombardi)

- The 80 MeV beam commissioning of Linac4 has started on Thursday 19 May, when a first beam was accelerated in the CCDTL Tank 1. The following 3 Tanks, needed to reach 80 MeV, were started as soon as the LLRF modules were made available: module 2 on Friday 20.5, and modules 3 and 4 on Tuesday 24.5. The current out of the CCDTL is 14 mA; the correct phases and amplitudes of the Tanks have been determined with the usual time-of-flight method and the final energy is correctly at 80 MeV. At the moment there are still problems with the

movement of SEMgrids and wires. The 80 MeV beam commissioning finished on 26th May and the tunnel will be open for installation as of Friday 27th May 8 am.

- Round table on progress on the various activities

PSB – B. Mikulec

- Last LIU-PSB meeting focused on safety aspects. In her first presentation, Lisa explained the status of the different parts of the safety files. A discussion followed her second presentation on the inventory of radioactive waste/material and conventional/chemical waste, as it appeared that not all groups have already a solid basis of waste description (conventional and radioactive). Anne underlined that, as for LIU-SPS and LIU-ions, an update of the inventory files for radioactive waste/material was asked to the groups. In fact, some groups did not take part in the inventory exercise launched (by RP through the RSOs) last year for the radioactive waste and material storage or have only recorded a few items. The question was raised on how this should then be followed up. Since it is not only a concern for the LIU project but of all projects and activities during LS2, this should be addressed at the level of the different groups and departments and **could be triggered/followed up within the LS2 Committee, as proposed by Julie at the LIU-PSB meeting.** Action: Malika
- LIU-PSB current spending: 45% (57% including pipeline).

PS – H. Damerou

- BGI installation delayed, cannot take place during TS on 06/06. It will most probably be moved to the EYETS because at the time of TS3 PS will be already operating with ions.
- Dedicated meeting and tunnel visit took place for BLM cables and installations. Agreed solution: pass cables through shaft in 359 and install electronics in same building. Few minor details to be clarified.
- About 20% of feedback for budgets has been received so far. A reminder was sent by Klaus.
- LIU-PS meeting next week: follow-up on magnets work package and make sure that there are no further delays.

SPS – B. Goddard

- Deployment of 'soft-clamps' to short circuit the QF-SSS insulating flanges will not take place in this TS, because a) there will be no long TS and b) because tests in the machine have shown a lot of small issues to be yet solved, like insulation on the vacuum chambers, metal clips left from LEP tungsten shields, etc. Will use the 8h TS on 6th June to do all necessary preparation work, while the intervention will take place in TS3 (September). Also need to decide whether earth connections on QF are removed, to avoid the earth loops, which would otherwise be created.
- There was a request from HE for 500 kCHF to convert BA4 lift to a "goods" one - which would significantly ease the LS2 logistics. This will be discussed with HE on dedicated LIU meeting on Monday.
- Spending, update from WP holders completed, predicting 85% of the 8.9 MCHF committed and 51% paid, in 2016. Probably this is still too optimistic.

- 3 ECRs/ES from TCDIs done for the TL TCDIs, including converters for the optics changes, went through LMC
- [Review](#) yesterday on LSS5 dump system MKDV kicker system and triggering, conclusions will be presented today 10:00.

IONS: Linac3 + LEIR – R. Scrivens

- Beam performance meeting this week. The 2-frequency heating at the source, led to 10% more intensity out of RFQ but it is only a temporary installation. The cost of full installation is <100 kCHF, the budget for which can be found. LEIR would like to test this in operation before EYETS. More details will be discussed at the LIU-PT meeting devoted to ions next week.
- This week there were verification measurements from RP with 100 ms operation. No feedback from RP yet. This information should go into the 4th part of the safety files.
- Richard realised that the equipment for LBS renovation will be only ready by mid next year, therefore if there is an early Linac4 connection, this will become more difficult to be installed (but with no impact on the delivery of beam from Linac4 or of the ion beams). This has to be discussed with Linac4.

Safety – A. Funken

- LIU Safety Packages SFs:
 - LIU-SPS aC coating and flange impedance reduction: Anne will present the status of the SF to the forthcoming aC coating and flange IR meeting (30/06).
 - LIU-SPS RF systems: the descriptive part and list of hazards will be reviewed this afternoon with Gino Cipolla (and HSE).
 - LIU-Linac3: the new HSE correspondent is Sabrina Schadeegg.
 - Linac3 ventilation (consolidation not LIU project): Richard confirmed Anne that EN-CV is responsible for this project (and so of the safety documentation). A HSE correspondent will be nominated. Anne said that this will not be followed up by the LIU PSO but this information is important to collect to prepare the safety file for the Linac3 beam facility.
 - PSB and PS SPs Safety Files: Lisa will send by the end of the month the EDMS links to the documents she prepared to Malika (+ the activity coordinators/deputy activity coordinators and SPCs in Cc) to already get feedback before the formal approval process. Action: Lisa.
- Linac4, budget for the lightning protection. Anne contacted HSE to know when the report from DEKRA will be available. Jean-Paul Jullien confirmed that the studies have been done, there are some delay for the submission of the report due to the important workload for the inspections. DEKRA has been reminded. Action: Anne to follow up this with HSE.
- Asbestos hazard: the HSE expert, Olivier Prouteau, informed Anne that for certain equipment from old machines (before LEP), it is possible to find asbestos (e.g., insulation of the type litaflex on vacuum chambers, asbestos cement supports of SPS, bus-bars, ...). Therefore, the issue of asbestos shall also be addressed when a project handles old machine equipment (before 2000), and not only for works on the structures/infrastructures of buildings (e.g. ventilation systems). **Action: Anne to invite Olivier Prouteau to the LIU-PT on 16/06.**
- Lisa presented the SF status for the LIU-PSB and the topic on the waste at the LIU-PSB meeting on 23/05 (see report of Bettina above).

- **AOB**

- The [next LIU-PT meeting](#) will take place on 1st June 2016 and will be devoted to LIU-ions.

Minutes by G. Rumolo