Minutes of the 7th FOM meeting held on 08.10.2013

Agenda:

1) Follow-up of the last meeting
2) Schedule of the injector complex in 2014
3) Status of LS1 work in Linac, PSB, PS, SPS and critical items (technical coordinators)
4) First look at time lines per machine (OP responsibles)
5) AOB

1 Follow-up of the last meeting

The minutes of the 6th FOM meeting were approved.

Pending actions:

There were no pending actions.

2 Schedule of the injectors complex in 2014

K. Hanke informed that two additional Facilities Operation Meetings are scheduled for 2013 (on 5 November and on 3 December). He explained that the goal of these meetings is to define in more detail the 2014 schedule for the injector restart. After the LS1, a new access system has to be commissioned; there will be significant changes in the control system and in the hardware of several equipments. Information, discussion and optimization of the interleaved schedule between access, control, hardware and beam commissioning will be the main topic of the following meetings.

D. Manglunki requested to add the dates of the ion machines start-up for the 2014 argon run to the 2014 schedule (http://goo.gl/4aE2Is, V0.3). **An action as been opened for M. Lamont.**

The proposed dates can be found on the presentation (in http://goo.gl/AO0QKJ) and are

- 19 May 2014: Start of LEIR HW tests,
- 2 June 2014: Ar in Linac 3,
- 16 June 2014: Ar in LEIR,
- 11 August 2014: Ar in PS,

- 22 September 2014: Ar in SPS.

K. Hanke presented the Injector Schedule 2014 V0.3 (http://goo.gl/4aE2Is).

In this schedule LS1 will end on 30 April (week 18) with the closure of the PS. The closure of Linac2 and PSB is not yet specified on the schedule whilst SPS will be closed on 28 June.

During LS1, there is a 2 month slot (from week 7 to week 15) dedicated to the commissioning of the new access system. During part of the access commissioning the machines will not be accessible. The access system has to be fully commissioned before the machine closure.[1]

After their closure the machines will start the HW tests[2].

After the HW test period the machines will pass under OP responsibility for cold check-out[3] and beam setup [4].

The aim of the next 2013 FOM is to discuss the dates for access commissioning, machine closure, hardware test, cold check-out, beam setup and machine ready and to define, for the different phases, the requirements in terms of equipment and controls.

In the following tables the principal milestones of the injector complex are reported as presented in the present schedule.

	Access Commissioning	Machine closed	HW tests	Cold Checks	Beam setup	Machine ready
Linac2	?	?	?	?	?	30/05
PSB	11/02-08/04	?	05/05 - ?	? – 29/05	30/05 – 19/06	20/06
PS	11/02-08/04	30/04	01/05 – 15/05	22/05 – 19/06	20/06 -14/07	15/07
SPS	-	28/06	10/07 - 22/08	25/08 – 28/09	29/09 - 12/10	13/10

[1] During the commissioning of the access system a machine access can be requested using a special IMPACT procedure. After closure, the machine can be accessed only during a technical stop using the standard IMPACT procedure.

[2] Equipments and controls may be partly operational.

[3] All equipments and controls have to be fully operational.

[4] The upstream machine has to be ready to provide beam downstream.

From the information provided by D. Manglunki, a similar table can be filled for the ion-chain.

	HW tests	Cold Checks	Ar Beam setup	Machine Ready for Ar beam
Linac3	?	?	02/06 - 15/06	16/06
LEIR	19/05-?	? – 15/06	16/06 - 10/08	11/08
PS	-	-	11/08 - 21/09	22/09
SPS	-	-	22/09 - ?	?

3 Status of LS1 work in Linac2, PSB, PS, SPS and critical items (technical coordinators)

Linac2 (C. Mastrostefano):

The PU renovation will start at the end of the month.

The cabling campaign is completed together with the installation of the new access system.

The source checks will start at the end of October. There are no show stoppers to the present schedule with a start of the source scheduled for the 4 April.

D. Küchler added that in order to have beam in the PSB on the 30 May, Linac2 has to be restarted on 7 April. Controls, RF and water have to be provided by that date.

PSB (D. Hay):

The presentation is available at http://goo.gl/AO0QKJ.

In the present schedule the PSB will receive beam from Linac2 on 30 May and will send beam to the PS on 20 June.

The cooling circuit upgrade for the main bending and quadrupole magnet is ongoing. The new thermal switches will be installed in January 2014.

The installation of the PSB multipole power converters is near to completion.

The exchange of the leaking septum BI.SMH will take place in Week 42-43. There are delays in the kicker KFA10/20 upgrade but for the moment there is no impact on the schedule.

The new beam dump has been successfully installed.

The installation if the Finemet cavities, the upgrade of the LL RF, the CO hardware upgrades, the CV maintenance and consolidation is on schedule.

There is a possible delay due to the repair of the ring 2 wide-band PU (BR2.WCM8l1). Different solutions are being considered. The repair is scheduled for end of March 2014.

The new BLM cables already received will be installed in January 2014.

PS (S. Mataguez):

The presentation is available at http://goo.gl/AO0QKJ.

At the moment, there are 3 weeks of delay with respect to the schedule but it is still possible to meet the deadline of 1st May (machine closure).

The CV installation has to be finalized in the centre of ring.

In total 7 MU will be renovated.

SPS (D. McFarlane):

The presentation is available at http://goo.gl/AO0QKJ.

The SPS interventions are perfectly on schedule for the 28 June closure.

TT10 civil engineering is progressing (the beam line will be re-installed on January).

During February 16 coated magnets will be installed.

The irradiated cable campaign in BA1 has started and will end on 26th March.

4 First look at time lines per machine (OP responsibles)

R. Steerenberg presented the OP schedule for PSB and PS (http://goo.gl/AO0QKJ).[5]

It was pointed out that, in the present schedule,

- the PSB HW test will start without a validated access system
- weeks 15-17 are not allocated in the PS schedule
- the PS HW test, cold check-out and dry run are too short

[5] Dirac area in not included but it does not impact on the injector start-up.

- the are two DSO tests for a single access system
- there is no time foreseen for the Linac2 setup.

Therefore the following changes to the present schedule have been proposed:

- finish major LS1 work in the LHC injector complex by 31 January
- all EIS and external interfaces required by the PS PPS system need to be tested and operationally available on 10 February
- in several zones LS1 activities can be terminated during the first 4 weeks of the PS PPS tests, using specific IMPACTs
- partial HW testing could be anticipated during parts of the PS PPS test period
- DSO tests and HSE clearance can be moved to the last week of PS PPS tests
- early patrols will leave time to mitigate issues in the machine during the HW tests
- 2 shifts with 2 people per shift to start on 7 April (no weekends and holidays) and 3 shifts with 3 people per shift will start on either 22 or 30 May (to be defined)
- during the HW test period, one should not rely on full availability of the control and timing system
- at the start of the cold check-out period all HW, controls should be fully available
- Linac2 HW tests, cold check out and beam setup still needs to be integrated
- new EA IRRAD zone to be integrated and commissioned early May

M. Gourber-Pace asked the list of the devices needed for the EIS commissioning. The list can be found on the data sheet at http://goo.gl/AO0QKJ.

C. Mastrostefano pointed out that at the source restart (4 April) the source controls have to be available (~60 elements). It has still to be clarified whether the RF controls are needed or not.

A. Bland asked to add 3 “red” days for CO at the start of the 2014 and 2 days in the Easter week. He informed that next Tuesday (15 October) most of the consoles will be restarted for installation of patches.

M. Vanden Eynden, M. Gourber-Pace and B. Morand asked for a meeting to define in detail the CO requested for the access system test and Linac2 start-up. K. Hanke will organize the

meeting. [6]

Regarding SPS, K. Cornelis informed that from the 27 June 2 people will be on shift (all SPS control has to be operational from then on). The SPS will have new 18 kV cables and solid transformers, and a completely new system for the function generators of the main power supply. HW tests will begin on September.

5 AOB

There were no AOB.

Minutes edited by G. Sterbini.

[6] After the FOM, K. Hanke sent the invitation for this meeting. The meeting will be held on Friday 18 October.