

# Minutes of the 1<sup>st</sup> FOM meeting held on 08.01.2013

Agenda:

- 1) Follow-up of the last meeting
- 2) Status of the machines
- 3) Schedule
- 4) AOB
- 5) Next agenda

## 1 Follow-up of the last meeting

The minutes of the 43<sup>rd</sup> FOM meeting (2012) were approved.

### ***Pending actions:***

ISR8 door and cooling of TOF target. K. Hanke will report the problem at next IEFM.

## 2 Status of the machine

### Linac2 (D. Kuchler):

After the power cut on Wednesday 19<sup>th</sup> December, Linac2 had some problems to restart. During that week (51 week) there were nor CO neither EPC piquets available. The Linac2 operators finally managed to contact the different specialists for solving the different issues.

During the Christmas stand-by the source was kept on.

Yesterday (7th January) Linac2 was restarted. Apart from problems related to the radiation monitors and the OASIS database beam was back after lunch-time. TI was acknowledged for its support during the Christmas stand-by period.

K. Hanke added that the power cut is in general done after the complex shut-down. This year, due to the special schedule, it occurred before the stand-by period. Adequate piquet coverage had been requested but, unfortunately, had not been organized. C. Kostro and C. Mugnier agreed that during the week 51 there was no piquet, pointing out that during all the Christmas period the EPC piquets was available and CO provided best effort support. C. Kostro added that CO piquet support for the injectors will be stopped anyway in the future.

### PSB (K. Hanke):

The Christmas stand-by period was very smooth for the PSB. A lot of specialists were required for restarting the different PSB equipments on Monday 7 January. The last system recovered was the MPS that was back after lunch-time.

After some measurements with RP (radiation levels in the PSB while sending beam on the LBE/LBS dumps and BI beam stopper), it was tried to inject beam into the PSB around 15h30. However there was a problem related to the BLMs which were not reset at the end of each cycle and therefore they were continuously triggering radiation alarms and run into saturation. A lot of time was spent to understand the source of the problem with the help of the BI expert and CO piquet. Finally a broken repeater was replaced and the issue was solved.

PSB delivered low intensity TOF beam for the PS around 18:00, and during the night the 200 ns proton beam needed for the proton-ion run in the LHC was set up.

During the restart, it was found that the SEM grids were not working properly. BI had disconnected the rack in order to displace it during LS1, not being aware that the PSB would still run in the first part of 2013. The operation will be reversed.

K. Hanke summarised that the restart, even if the machine was in stand-by and there were no major faults, was not as smooth as one would have hoped for and did require the intervention of a large number of specialists.

#### **PS (A. Guerrero):**

The PS cooling tower was back in operation by lunchtime on Monday (7<sup>th</sup> January) and in the afternoon POPS was running again.

The PS had ion beam in the afternoon but they were not extracted since there was a problem with the extraction bump solved only during this morning (8<sup>th</sup> January).

There were minor problems with the control system but nothing critical.

The TOF beam also was injected and extracted.

The machine setting up is still on going.

#### **SPS (K. Cornelis):**

SPS started to reboot some services (e.g. the access system service).

The main power supply is not yet available since some modules have to be replaced. This intervention was approved for the TS5 in week 51 but the system is not yet operational. D. MacFarlane added that the specialists should have completed their intervention by yesterday morning but it was not the case. They will complete it today. Also in this case the specialists needed to be reminded that the start-up of the machine is imminent and that we are not in shutdown mode.

There will be beam in SPS probably today (8<sup>th</sup> January). This would allow delivering beam to the North Area already during the week.

#### **TI (P. Sollander):**

There was no major problem during the Christmas period. Mild temperatures made the situation easier to handle.

#### **LHC interface with injectors (M. Lamont):**

The LHC cryogenics is still floating. It will be ready by next Wednesday or Thursday (10<sup>th</sup> January). LHC will take beam on Friday. At the moment all systems seem to work properly.

K. Hanke asked if LHC would start taking protons or ions. M. Lamont answered that the lead-proton squeeze will be commissioned initially with protons.

#### **IONS**

#### **Linac3 (D. Kuchler):**

On Wednesday 19<sup>th</sup> December the oven was refilled and a short circuit on the first oven was noticed and repaired. In addition there were some RF control fault: the specialist solved the problem during the Christmas period.

At the moment the BCTs have a negative baseline and therefore the current reading is very low. The source, the quadrupoles and the steerers are running properly. On Sunday the oven was refilled. The source needs some further tuning but is in good shape.

#### **LEIR (D. Manglunki):**

The beam was available on Monday (7<sup>th</sup> January) at noon; D. Kuchler, R. Scrivens and M. O'Neil who took care of the source during the Christmas holidays were acknowledged.

LEIR restart took place quite rapidly, with very few problems (1553 RTI on ER.QFN1030, OASIS database...).

An intervention was needed in the extraction line (exchange of thermal protection switch on EE.BHN1020), which took all afternoon. A. Cretin and A. Newborough were acknowledged. After the intervention the machine was restarted and it immediately delivered beam to the PS.

#### **PS (A. Guerrero):**

The machine settings up are ongoing.

#### **North Area (H. Breuker):**

The NA61 is in standby.

### **3 Schedule / Supercycle / MD planning**

The LHC will accept beam from next Friday and the injector complex seems in good shape for providing it.

On the 17<sup>th</sup> January the Linac3 source will be refilled.

S. Baird asked how the MD will be organized in this last part of the run. G. Rumolo answered that all MD will be done in parallel except on the 17<sup>th</sup> and 30<sup>th</sup> January when, exploiting the stop due to the Linac3 source refilling, there will be dedicated MD.

A. Bland informed that on week 13 (Monday, Tuesday and Wednesday) a general rebooting and patching of several services has been scheduled (200-300 services will be affected).

The 2013 schedule (V1.2) is available at:

[https://espace.cern.ch/be-dep/BE/DepartmentalDocuments/BE/LHC\\_Schedule\\_2013.pdf](https://espace.cern.ch/be-dep/BE/DepartmentalDocuments/BE/LHC_Schedule_2013.pdf)

All planned interventions for the injector complex are available via IMPACT at:

<http://impact.cern.ch>

#### **4 AOB**

J. Vollaire presented some proposal for measuring the radiation level in the PS tunnel when beam PSB is operating (e.g. providing beam to ISOLDE). The final goal is to define the condition to allow access in part of the PS tunnel while there is beam in the PSB.

The slides can be found at:

<https://espace.cern.ch/be-dep/FOM/Presentations%202013/Forms/AllItems.aspx>

In order to assess the radiological conditions in case of beam losses at critical locations, two beam losses scenarios were proposed.

1. Stable losses of 5 min in the Linac2 to PSB transfer with current ranging from 0.5 to 2  $\mu$ A.
2. Stable losses of 5 min in the PSB in the region close to the PS with the possibility to send the beam to the BTP.STP stopper and to the wall separating the PS-PSB with a convenient setting of the BHZ10.

The BHZ10 has no spare. Scenario 2 implies a risk for the magnet and the vacuum chamber.

D. Manglunki proposed to perform the MD at the end of the run. S. Baird pointed out that the magnet replacement would mean a significant effort and is presently not foreseen in the LS1 planning. R. Steerenberg asked if the losses duration could be reduced from 5 min to a few pulses. J. Vollaire answered that more accurate simulations have to be done and will follow.

K. Hanke concluded that the FOM will assess again the proposal when all relevant information will be collected.

A. Bland informed that tomorrow (9<sup>th</sup> January) at 07h00 the VISTAR services will be

rebooted (VISTAR will not be available for 10 minutes).

## **5 Next agenda**

The next meeting (2<sup>nd</sup> FOM) will be held on Tuesday, 15<sup>th</sup> January at 10:00 in 874-1-011.

Preliminary Agenda:

- 1) Follow-up of the last meeting
- 2) Status of the machines
- 3) Schedule
- 4) IT activities during LS1 (S. Lueders)
- 5) AOB
- 6) Next agenda

Minutes edited by G. Sterbini.