# Minutes of the 4th FOM meeting held on 09.02.2010

## ***Agenda:***

1) Follow-up of the last meeting (K. Hanke)
2) Status of the machines (Supervisors)
3) Schedule (K. Hanke)
4) Special topic: Status of the PS MPS (J.-P. Burnet)
5) AOB
6) Next agenda

## 1. Follow-up of the last meeting

The minutes of the 3rd FOM meeting were approved.

K. Hanke mentioned that Prof. S. Ting and P. Collier wanted to congratulate all the colleagues that managed to deliver in such a short time the AMS beam. The complex was started and ready to deliver the AMS beam in only 48 hours.

Open actions from last FOM:

a) Clarify the technical stops of the 22 Mars and 26 April. The two technical stop are confirmed. All the colleagues should send the information about the different interventions scheduled for the 22 Mars to the machine superintendents. For the SPS, the information should be sent to K. Cornelis.

b) Clarify the beam requests for the LHC start-up.

   The LHC will request the LHCPROBE for the start-up.

c) Clarify when the LHC will need beam from the injectors.

   The LHC will require beam for injection test the 17 February. The commissioning with circulating beam will start the 22 February.

## 2. Status of the machines

### Linac2 (F. GERIGK):

The Linac2 start-up was without any particular problem. On Wednesday, a vacuum leak was identified in the BI line. After investigations, the leak was found on a bellow of beam stopper BI.STP. A temporary fix was found by spraying some varnish. The replacement of the bellow will be done on Wednesday.

S. Gilardoni asked if the source sparking improved. D. Kuchler replied in the affirmative.

### PSB (K. HANKE):

The start-up of the PSB went without any problems, with the usual number of resets and reboots typical of a normal start. The first beam, SFTPRO type for the AMS run, was produced already on Tuesday evening, after the PS tunnel was patrolled and closed.

By Wednesday, the SFTPRO beam was ready, first only one ring, and then two. All the four rings were eventually prepared, but only two were requested.

The BWS application could not be started. The expert solved the problem.

The vacuum leak described in the Linac report was not detected by the alarm system in the CCC.

On Thursday, the filters of the PSB compensator were connected. Unfortunately the intervention took more time than foreseen.

On Monday, the MPS tripped two times but the recovery was without any problem.

After the delivery of the SFTPRO beam for the AMS test, the LHCPROBE, LHCPILOT and LHCINDIV were also prepared.

### PS (Y. PAPAPHILIPPOU):

The PS has a smooth start-up. The patrol was done on Tuesday morning. The AMS beam could be injected by Tuesday evening and fast extracted by Wednesday evening. The beam was produced by a slow Bdot cycle due to the limitation imposed by the 13 MVA transformer replacing the MPS.

There were a few problems with the 10 MHz RF cavities, which could be solved by the specialists.

M. Widorski reminded that the access request form should be filled in case of interventions in the tunnel.

### SPS (K. CORNELIS):

The AMS beam could be delivered as requested, even if the beam transmission in the SPS was quite poor. About 50% of the beam was lost in the SPS, but this was not a problem due to the very low intensity of the beam (~200e10 protons). The AMS run ended on Tuesday at 8:30. The beginning of the run was difficult, due to the short setting up time available and energy fluctuation from the PS.

Prof. S. Ting wishes to congratulate everyone to starting up the complex so fast.

K. Hanke asked if there was already a decision about correcting the orbit by moving some quadrupoles. K. Cornelis replied that more measurements will be done to decide if this is needed or not. This will be done by the end of the morning. If needed, the realignment will be done on Wednesday.

C. Mutin asked if the FirstLine piquet service can be interrupted for the NA. K. Cornelis replied in the affirmative and it can be stopped starting by Wednesday.

There will be an access to TT20 on Thursday afternoon. The goal is to check if the vacuum valves in front of the splitter close.

F. Tarita mentioned that some tests should be done to investigate the source of the HV network overload in BA2 during last week. 8 hours will be necessary to check the bus-bars. After discussion, the investigations will be tentatively organised for Wednesday or Thursday, depending on the availability of the external company in charge of the installation. In case this would not be possible, the intervention will be postponed to the next technical stop in week 12. F. Tarita mentioned that the controls should be done as soon as possible, since there is a risk that the fault will reappear.

### North Area (L. GATIGNON):

AMS had a quite intensive data taking. Electrons at different energies, photons and primary protons were sent to the experiment.

K. Hanke asked when the water-cooling circuit maintenance will be done. S. Deleval replied that this is planned for next week.

### TI (J. NIELSEN):

The network perturbation expect for next week will concern only the LHC cryogenics.

## 3. Schedule / Supercycle / MD planning

The 2010 schedule (V1.3) is available at:

https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/2010-injector-schedule_v1.3.pdf

The machines will stop on Tuesday at 14:00 to allow the switch from the 13 MVA to the MPS of the PS. The restart of the machines is foreseen for Thursday afternoon. The schedule of the different interventions approved for this period is:

***Tuesday 9 February:***

- AMS run finished at 08:30
- SPS continues taking beam for measurements until 14:00 (OP)
- Beam stop in all machines at 14:00 (OP)
- TI2/TI8 DSO tests at 14:00-15:00 (S. Hutchins)
- Intervention on the PS generator starts at 14:00, EPC will inform SPS OP (J.-P. Burnet)

***Wednesday 10 February stop all day.***

The following interventions have been approved:

- Linac2 radiation measurements (D. Kuchler)
- PS intervention on the 8 –loops (D. Bodart)
- Booster vacuum leak repair (J. Hansen)
- Booster inspection LBE-LBS lines (T. Hermanns)
- SPS alignment if necessary, t.b.c. (K. Cornelis)
- Inspection and possible intervention on BA2 bus bars tentatively tomorrow or Thursday 11/2, depending on whether external contractors can intervene at short notice (F.Tarita)
- Conditioning of kickers in the SPS, to be coordinated with possible access to the machine (J. Borburgh)
- 19:00 15min database intervention (CO).

***Thursday 11 February, morning:***

- intervention and tests on PS generator continued (EPC/Siemens)

- tentatively re-start of the complex around lunch time, depending on status of generator, t.b.c. (OP)

- as from 14:00 setting up of LHC beams in the injector chain (OP)

- in case contractors cannot intervene on BA2 bus bars on Wednesday, this intervention will be done on Thursday 11 February; in case this is not possible either, the intervention will be scheduled for the next technical stop on 22 March. (F.Tarita)

A series of the CO interventions are available in the web page https://espace.cern.ch/be-dep/FOM/Lists/Agenda/calendar.aspx.

There is no official approval of advancing the CNGS start by 2 weeks to date. It is possible that the interventions in the CNGS site will not be finished in time to start two weeks in advance of the original schedule.

## 4. Special topic: Status of the PS MPS (J-P. Burnet)

J.-P. Burnet presented the status of the work ongoing to repair the PS MPS (slides available here). The damaged collector was replaced by the spare built in the 1975. The installation of the spare was possible also thanks to the help of the VCS group. This is because the element has to be heated up before installation. The thermal dilatation makes possible to slide the part on the motor. Unfortunately, the spare collector is 9 mm shorter than the original one. It was then necessary to rebuild the support of the brushed to adapt the mechanics to the new position of the sliding rings.

Once the mechanical work will be finished, by Tuesday, the network will be reconfigured to connect the MPS instead of the 13 MVA. Once all the tests will be done in collaboration with the Siemens technicians, the MPS is expected to be back for machine operation by Thursday afternoon.

## 5. AOB

## 6. Next meeting

The next meeting will be held on Tuesday, 16 February at 10:00 in 874-1-011.

Preliminary Agenda:

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2) Status of the machines
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Minutes edited by S. Gilardoni