Minutes of the 11th FOM meeting held on 30.03.2010

Agenda:

1) Follow-up of the last meeting (K. Hanke)
2) Status of the machines (Supervisors)
3) Schedule (K. Hanke)
4) AOB
5) Next agenda

1. Follow-up of the last meeting

The minutes of the 10th FOM meeting were approved.

Follow-ups from the last FOM:

a) Check schedule of SPS RF interventions. See Schedule section.

b) Schedule PS-SEH23 intervention (2 days). See Schedule section.

c) Status of the PS-Bfield fluctuations. R. Steerenberg reported that the fluctuations are still present and the investigations are ongoing. M. Buzio (TE/MSC) is progressing with measurements and data analysis. It is clear, however, that it will not be possible to implement a definitive solution on a short time scale.

d) PS radial steering GFAs replacement/repair. R. Steerenberg mentioned that it is now clear that the observed problem is becoming more general. For that particular GFAs, a dedicated survey has been put in place to understand if the problem is related to a bad timing. The result showed that the GFA function is sometimes not properly generated and the timings were very stable.
The underlying issue is related to the PPM functioning of the GFA. CO is following the problem.
S. Hancock mentioned that the GFAs of the RF Blow-up 3 is suffering of the same problem since few years.

e) Linac2 source intensity fluctuation. G. Bellodi reported that the problem is still present. See Linac2 report.

2. Status of the machines

Linac2 (G. BELLODI):
The source intensity fluctuations are still present. The weaker spills appear in a group of two every two minutes repeated every one hour and a half. This problem is not hampering the operation but it should be understood and fixed.
On Friday at 22:00, the radiation alarm PAXS22 was triggered. This was related to a fluctuation of the AQN of the LA2.QDN44 quadrupole. The piquet EPC noticed that the flat top regulation module, changed in an intervention last week, had not been

inserted properly, probably causing a bad contact. Once this was fixed, the AQN was more stable. During Monday night the problem reappeared. The piquet power changed the power converter by its spare.

On Monday, the bouncer was not working correctly since the HV signal was very noisy. The bouncer was switched off since it is not necessary for short beams. An intervention with a stop of about 1 hour should be planned to replace the diodes and/or the transformer.

PSB (K. HANKE):
The PSB had a busy week.

The LHC and the MTE beam were delivered regularly to the PS.

On Wednesday, the kicker timings were not properly generated/distributed. The Dpsbksu2 had to be rebooted twice before the problem was solved. During all the manipulations, the ALARM system did not show the bad status of the DSC.

On Friday at midnight, the MPS went off and it was not possible to reset it remotely. The piquet found a problem on the TRIM power converter, where one of the IGBTs was burnt. He replaced the TRIM_B by the TRIM_A. The problem reappeared later in the night, but at that moment the piquet was working on an SPS problem. Once the SPS intervention was completed, the piquet changed the power IGBT of the TRIM_B.

The CNGS beam is close to being finished. The SFTPRO beam was prepared for the normal CT extraction and for the MTE operation in the PS.

PS (R. STEERENBERG):
The PS had a good week.

The LHCPROBE and LHCINDIV beams were sent regularly to the SPS.
The MTE beam also has been delivered with an intensity of 500E10 since Thursday.

During the week, the transverse emittance of the LHCPROBE was found about 10 times larger than normal. This was due to the fact that the excitation of the tune measurement was found active on the cycle.

The AD beam preparation started.

Concerning MTE, the beam is regularly delivered to the SPS.
The MD1 user has been prepared at low intensity (500E10) for the beam setting-up in the SPS. In parallel, the MD2 cycle was prepared for the high intensity (up to 1.7E13).
The MD1 cycle was taken in the SPS since Wednesday, when the first injections were done. Since then, in particular on Friday, much care has been taken to fine tune the extraction and the trajectories in TT2.

On Thursday, the BHZ377 was not pulsing. The piquet power had to change the CPU of the power converter.

EAST AREA (L. GATIGNON, mail):
"(…) In the East Area a (new) water leak was observed last week on the MNP23 magnet ZT9.BHZ01.
Unfortunately it seems this leak (on the coil) cannot be repaired in situ.
The magnet experts are now testing and consolidating the spare magnet.
In parallel Michael Lazzaroni is preparing the intervention, which implies as usual to make a big hole in the roof of the primary area. I do not have a precise time schedule yet, but keep you informed."

SPS (E. METRAL):
The SPS had a good week. The LHCPROBE and the LHCINDIV were delivered regularly whenever requested by the LHC.

As already mentioned at the last FOM, on Monday last week a small rod was found in a hood of the main magnet bus-bars, between the magnets MBB.40290 and MBB.40330, touching the bus-bars and causing a short circuit (see photos here and here). The rod was probably there since long time. The problem could be easily identified thanks to the Delta I measurement put in place in 1983. This measurement is also used to protect the bus-bars against short circuits which can cause the melting of few meters of the bus-bars.

On Saturday, a leak was found on the TED of TI2 and on Monday, on the TED of TI8. The TEDs were blocked in the out position and compensatory safety measurements were taken for the accesses in the tunnel. The problem will be solved after the media event. The vacuum leaks have been indentified in correspondence of a bellow.

J. Hansen mentioned that the spare parts for the intervention are already in production.

B. Mikulec asked if there is a general problem with the bellows for such devices, since a similar problem appeared on one of the PSB beam stoppers early this year.
J. Hansen replied that the problem is not the same, being the equipment and their design very different.

CTF3:
The facility is still down after the fire.

TI (J. NIELSEN):
Nothing special to report.

LHC interface with injectors:
No representative present.

3. Schedule / Supercycle / MD planning

The 2010 schedule (V1.5) is available at:

https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/2010-injector-schedule_v1.5.pdf

A new schedule will be issued soon. The draft is available here but it will be updated since a few changes and clarifications (like a different version number and the UA9 run) should be included.

In the new schedule, the stops for the SPS-RF maintenance have been included, in correspondence also of the former MD blocks. These will be in week 22 and 35.
During week 22, the SEH23 in the PS will be exchanged to fix a vacuum leak. The intervention will take 48 hours, with the conditioning of the septum that can be done during the following injection MD.
Even with the vacuum leak, the PS slow extraction for the EAST area beam can be used.

The technical stop of the 26 April will be confirmed or cancelled at the FOM of next week. The stop was necessary to exchange the brushes of the PS MPS. It is not clear, however, if this can be postponed to the technical stop of the week 22. There are also planned interventions for the Linac3 and LEIR water station that requires a stop of the PS water station. As S. Deleval mentioned, this would be necessary to continue the scheduled works.

Concerning the technical stop durations:

- week 17 (tbc): 8 hours;
- week 22: 48 hours;
- weeks 26, 30, 41, 46: 12 hours (6:00 – 18:00);
- week 35: 36 hours;

The precise time of the start and the end of each stop will be communicated in due time, including the period required for the radiation cool-down.

Concerning the MDs on Wednesday: during these periods, the beam must be available for the LHC if requested, but it is not guaranteed for the users in the PSB, PS and SPS. The duration of each MD is 16 hours (8:00-24:00).

During the MD blocks with the LHC setup (weeks 22, 26, 30, 35, 41), the beam must be provided to the LHC under request and to the users.

The ISOLDE start-up has been postponed by one week to finish the commissioning of the Front-End #6.

Concerning the CNGS start-up, the beam setting up will start in week 16. Depending on the progress of the MTE setting-up, the decision to use it or not since the beginning, instead of the CT extraction in the PS, will be taken in week 15.

All planned interventions for the injector complex are available via the on-line agenda:

https://espace.cern.ch/be-dep/FOM/Lists/Agenda/calendar.aspx.

4. AOB

5. Next meeting

The next meeting will be held on Tuesday, 6 April at 10:00 in 874-1-011.

Preliminary Agenda:

1) Follow-up of the last meeting
2) Status of the machines
3) Schedule
4) AOB
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Minutes edited by S. Gilardoni