# Minutes of the 13th FOM meeting held on 26.04.2011

Agenda:

1) Follow-up of the last meeting (B. Mikulec)
2) Status of the machines (Supervisors)
3) Schedule (B. Mikulec)
4) Preliminary list of intervention for the technical stop in week (machine superintendents)
5) AOB
6) Next agenda

## 1 Follow-up of the last meeting

The minutes of the 12th FOM meeting were approved.

Follow-up from the last FOM:

### *1.1 Pending actions:*

*Problems with POPS (3 actions)*

Studies will be resumed when POPS is back. Actions not closed.

*Make the orbit measurement system work with the presently defined user files (PS supervisor/BI)*

A. Grudiev said he had no news. He mentioned that the orbit correction tool works, but it has to be adapted. Action not closed.

## 2 Status of the machines

**LINAC2 (M. O'Neil):**

It was a quiet week for LINAC2.

The only event was a trip of an amplifier of buncher number 2, which occurred due to excessive sparking. The trip was resettable. Adjustments were made later by RF, and since then it has been ok.

**PSB (G. Rumolo):**

Beam quality was checked with an intensity of 3.7e13 p for ISOLDE.

One small problem is still remaining with ring 1 (the intensity is 10% lower than usual and there are still losses at injection/capture).

Tuesday and Wednesday, a problem occurred when loading back archives for the MPS GFAs following a timing renovation. Few more changes are needed, but instructions have been provided, so that LHC50 managed to be restored. There is no problem anymore now.

Besides this, it was a quiet week. Lots of adjustments on LHC beams were performed to equalize intensities and emittances at the request of SPS and LHC (standard and non standard changes). A second user LHC_B is now devoted to switching more quickly from 12 to 36 bunches. G. Rumolo insisted that sometimes it is clear the inhomogeneity in bunches comes from PSB, but sometimes it also comes from other sources. Therefore observations in the LHC concerning bunch inhomogeneity should not automatically be attributed to the PSB.

In particular, he reminded that it is difficult to measure 10-20% differences in emittance in the injectors, as the precision of the instrument cannot be better than 10%. K. Cornelis said that in certain cases the emittance inhomogeneity transforms into an intensity inhomogeneity with the scraping, in which case it is clear that the emittance has to be reduced.

## ISOLDE (D. Voulot):

E. Piselli and E. Siesling reported that the measurement SEM grid should be installed this afternoon in place of the GPS target and later in the week in place of the HRS target. Next steps are steering on target (BTY) and preparation of the watchdog. The beam permit is still missing, but it should be sorted out this morning, following the check of the security chain.

M. Kowalska said that physics is expected to start next week (on Thursday).

## PS (A. Grudiev):

It was a smooth week for the PS.

As in the PSB, 2 separate users were set for LHC50 (12 bunches and 36 bunches) to be able to adjust both beams simultaneously.

CNGS, TOF and AD beams were also produced this week.

On Tuesday, a 2.5h stop occurred for an intervention on SEH23, which is operational from then on.

On Thursday, a 1h stop was decided to deconsign F61.STP01/02 stoppers.

Another 1h stop was caused by the need to exchange a relay gap of the C36 cavity.

On Sunday morning a glitch caused a resettable trip of the PS MPS, C86 and C96.

On Monday, a series of trips occurred on kickers, but it went back to normal.

East Area starts next week, but the beam permit was not signed yet.

## PS users:

TOF (H. Breuker): no news.

## AD (P. Belochitskii):

AD is in the middle of start up. There are two more weeks before physics start-up and no major problem was encountered. Beam was seen at the end of 2 experiments (AEGIS and ASACUSA).

Three new GEM detectors were installed at the end of each line. The deceleration efficiency is 95% (90% were achieved last year). The bunch length (160 ns) is also better than last year. The next step is to set the injection energy and check the two beam lines. P. Belochitskii also said that there are fewer injected protons (3.5e7 instead of 4e7), and he mentioned that the beam reaching target is not round. He wondered who was currently in charge of AD optics (it used to be S. Gilardoni).

H. Vincke asked whether the access zone would still be valid following the beam permit changes in this zone. S. Hutchins answered that this zone will be cancelled.

The next AD user meeting is next Tuesday.
The next PS-SPS user meeting will happen this week.

## SPS (D. Manglunki):

It was a good week for the SPS.

SPS delivered beams to LHC50 and CNGS for physics.

The CNGS target temperature threshold was raised to 80 degrees, which enabled to reach accumulated 1e19 protons on target.

On Tuesday, E. Carlier modified the PFNs for the MKP (15 ns were gained on the rise time).

On the night of Tuesday to Wednesday, a BIC interlock was generated by the breakdown of the power supply of front ends.

On Wednesday and Thursday, the RF team worked on injection MMI settings of LHC25, LHC50 and LHC75 to adapt to new RF settings in the PS.

Since Thursday evening, LHC50 with 12 bunches and 36 bunches have been treated as two different users in the Booster and PS and the sequence and BCD have been generated accordingly.

On Sunday the low level RF piquet was called to retune the 800 MHz frequency which had drifted. The power piquet was called on Sunday night to intervene following a trip of TRX7.

It was asked whether wirescanners were working correctly in the SPS, D. Manglunki answered that they were. B. Mikulec proposed that crosschecks between wirescans in Booster, PS and SPS should be performed.

A Vistar issue (drifts from left to right) is currently addressed by CO, but not completely fixed.

## SPS users: NA (H. Breuker):

H. Breuker mentioned that changes in both access conditions and in safety forms for users should be repeated to users throughout the year, and that he hoped that the changes will not cause too much trouble.

## CNGS

CNGS is producing well.

**CTF3 (D. Manglunki):**

There was a CALIFE run last week.
Fire detector installation should be finished and drive beam is planned to be restarted this week.

**TI (P. Sollander):**

A glitch occurred (mentioned in the PS section) on the 400 kV network. A 60 ms dip of 20% of the voltage had an impact on all machines for a few minutes, and an impact on the LHC for a few hours.

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

It was an interesting week for the LHC. A peak luminosity of 5e32 $cm^{-2}s^{-1}$ was reached. 107 $pb^{-1}$ were accumulated in one week, while 49 $pb^{-1}$ were obtained for the whole of last year. Adjustments in the injectors to equalize intensity and emittances have been much appreciated. The next step is to collide with 624 bunches. An MD will occur for 4.5 days before the technical stop (starting on Wednesday 4th May at 6am). In the schedule it is mentioned that all types of beam will be needed. G. Papotti already sent the list of beams to G. Rumolo, who is checking which beams have to be prepared in the injectors. B. Mikulec said that R. Assmann will be invited to the FOM next week to present the LHC MD beam requests for the injectors.

## 3 Presentations of the list of interventions for the next technical stop

**Linac2**

See slides presented by M. O'Neil.
Linac2 should be ready to restart by 5pm on Tuesday May 10th. M. O'Neil said that Linac2 would like to restart as soon as the interventions finished. As already mentioned after the last technical stop, Linac2 requests to leave the RF running as long as possible.

**PSB:**

See slides presented by N. Gilbert.
Planned interventions should be finished before 5pm. Interventions in the ring should be finished even before.

**PS:**

See slides presented by R. Brown.
CV interventions may affect the RF (cooling central building). R. Brown will check. S. Deleval said that this intervention will affect the cooling of the PS, but not the air conditioning.
There are some planned interventions that could not be done at Christmas.
The other CV intervention is expected to generate a very short temperature rise in Linac2 and PS (during 2 hours).
R. Brown sees no reason at the moment why the PS should not be ready by 5pm.

**SPS:**

See slides presented by D. McFarlane.
There is a request for work on the lift between 6am and 8am (instead of the planned start at 8am).
In BA2: RF work (12h) will need water, and CV wants to cut it for the day. RF requests 12 hours from 8am to 8pm, with all services running. This is a maintenance that is normally done during winter shutdown. D. McFarlane will discuss this with RF and CV, and it may be that one of the interventions will have to take place during the night.
In BA7, access is foreseen for 3 days for HiRadMat, as access there is compatible when no beam is sent to the LHC.

Helmut Vincke asked about the TCCT2 work. This has to be checked with Ilias.

On the RP side, the beam stop time will be defined next week. H. Vincke said he sees no problem in the SPS, but some things need to be checked for the PS.

It looks like the complex could restart beam on the evening of Tuesday (good to accumulate ECloud data). The schedule for the injector MDs is on the MD page. K. Cornelis said that maybe RF people have to work during the night.

In principle, CTF3 should be running during the technical stop.

## 4 Schedule / Supercycle / MD planning

The 2011 schedule (V2.0) is available at:
https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/injector_schedule.pdf

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

## 5 AOB

A. Bland mentioned he will release a Vistar upgrade this week.

## 6 Next meeting

The next meeting will be held on Tuesday, 3rd May at 10:00 in 874-1-011.

Preliminary Agenda:

1) Follow-up of the last meeting
2) LHC MD beam request for the injectors
3) Update on POPS
4) Status of the machines
5) Final list of intervention for the technical stop on May 10th
6) Schedule
7) AOB
8) Next agenda

Minutes edited by B. Salvant