Minutes of the 6th FOM meeting held on 23.02.2010

Agenda:

1) Follow-up of the last meeting (K. Hanke)

2) Status of the machines (Supervisors)

3) Schedule (K. Hanke)

4) Special topics:

How to prevent protons from going into the NA during ion runs. (D. Manglunki)

5) AOB

6) Next agenda

1. Follow-up of the last meeting

The minutes of the 5th FOM meeting were approved.

Follow-ups from the last FOM:

a) The technical stop of the 22, 23, 24 March has been confirmed. The colleagues should send the different activities to the machines superintendents (list available here). J. Ridewood is replacing N. Gilbert for the SPS-related activities.

b) Availability of cooling water in NA. S. Deleval confirmed that, in case of an unexpected request from AMS for a new test beam, the water will be available in the NA.

2. Status of the machines

Linac2 (M. O'NEIL):

The Linac2 run was without any problem.

P. Chiggiato asked if the vacuum levels are good. M. O'Neil replied that the vacuum is stable.

PSB (J. Tan):

On Tuesday, the spare power converter of BT.BVT20 was replaced by the operational one. The piquet power and specialists managed to identify the problem on the converter: the starting trigger was taken on the following user in the super cycle and not on the current one. The problem was solved. The OASIS signal is also available.

The BTM.BHZ10 was left in LOCAL mode and the piquet had to intervene to reset is and have the control in REMOTE.

On Wednesday, 45 minutes were lost due to a fault on the lift interlock. At the same time, the piquet power did some work on the regulation of the multipoles.

On Thursday, the preparation of the MTE beam was concluded and the first beam was sent to the PS for the setting up.

On Friday, the AD beam preparation started, with the first beam injection in the PS on Sunday.

The weekend passed without any problems.

Some magnets in the lines were found pulsing on the ZERO cycle at values different than for other users and missteering the other beams. This was corrected by changing the values.

The beams prepared so far are:

LHCPROBE, LHCPILOT, LHCINDIV, MTE. The users have been archived.

NORMGPS, AD and LHC50 are in preparation.

K. Hanke asked if the first beam required for fixed target physics at the SPS will be the CNGS or the SFTPRO. D. Manglunki replied that in any case, even if the CNGS will start two weeks in advance, the intensity required will be small, so one user is equivalent to the other.

ISOLDE requested to pulse the BTY line magnets. This will be possible but the first two vertical bends of BTY will remain consigned as safety elements to avoid sending the beam to ISOLDE. This was approved by S. Hutchins.

PS (S. GILARDONI):

The PS had a good week without particular problems. The MPS is working without any problem. The frequent trips of the PFW of last week did not reappear after the intervention of the specialist.

The week was dedicated to the LHC beams setting up and the preparation of the MTE beam.

The orbit was also subject of a lot of work. Compared to last year, the H orbit at

10 GeV/c is quite distorted, whereas the V is pretty much the same. Since the main magnets were not touched during the last shutdown, the source of distortion is not clear yet. In any case, this is not a problem for the LHC beams: it will be for the high−intensity ones due to the reduction of the available aperture.

The idea would be to correct the orbit with the magnets displacement during the next technical stop in March, using the remaining weeks to monitor and understand the source of the orbit distortion.

On Monday, the emittance of the LHCPROBE was too large by a factor of five. The source was a bad injection steering in the PS. Once corrected, the beam was back to the good emittances.

On Tuesday, the setting up of the LHC beams and the MTE one continued.

On Wednesday, the measurements of the matrix of the low energy quadrupoles started.

On Thursday, a radiation alarm was triggered by to a problem with the ARCON−SUD monitor. M. Widorski could solve the issue.

On Friday, the setting up of the 200 MHz cavities (re−phasing) for the high intensity of the MTE beam was done.

On Saturday, a B field fluctuation was observed on the 3.5 GeV/c porch. This is probably due to the incomplete setting up of the MPS. This will be followed with the specialist this week. The fire brigade intervened in the nTOF area due to a fire alarm triggered by a broken neon lamp. The area was not yet patrolled and the beam has not yet been sent to the zone this year.

Some measurements of the non−linear working point of the LHC−like beam at extraction showed a negative vertical chromaticity. This was corrected on Monday without affecting the quality of the beams.

On Sunday the fine setting−up of the LHCINDIV and LHCPROBE extractions was done in the afternoon as well as the first injection of the AD beam.

Available beams and status:

LHCINDIV, LHCPROBE: ready and taken by the SPS.

LHCPILOT: prepared.

SFTPRO: low intensity for the PS and the SPS orbit measurements.

MD1 (MTE): beam setting up in progress. The intensity injected was up to 1900E10.

The beam has been accelerated and fast extracted with slow MTE bump and fast MTE kickers. The commissioning program for next week is to resume the capture and the MTE extraction.

AD: setting up of the injection.

Status of the instrumentation:

Orbit: operational with few hiccups followed up with the specialists.

BWS: an offset of the position for the H scanners has been found. The specialist has been informed. The measurement of the emittances is coherent with the measurements in the SPS.

BBQ: frequent resets needed of the transverse damper used as exciter for the

BBQ. This will be followed up with the specialist next week.

SPS (D. MANGLUNKI):

The SPS ran all week with the LHCPROBE and LHCINDIV beams, respectively on LHCFAST1 and LHCFAST2 users. During the night from Thursday to Friday, between 22:00 and 6:00, the probe beam was extracted into TI2 then TI8. For TI8 the intensity had to be decreased down to 3E9 p using the horizontal scraper on request of LHCb. Both beams are not executed during weekends and nights in order to save electricity. The only exceptions to this are the regular emittance measurements.

There was a problem with ZS ion traps; the interlock has been masked and an intervention is foreseen on 22 March for the repair.

CTF3 (D. MANGLUNKI):

Half of the Linac RF has been conditioned during last week. Unfortunately, at the moment of starting with beam it appeared the electron gun was not working. After many investigations, the cathode is now suspected and being changed.

During the technical stop of March, CTF3 intends to run.

TI (E. LIENARD):

No problems to report.

LHC interface with injectors (M. LAMONT):

5 over 8 sectors have been given to operation, whereas for the last three the commissioning of the QPS is still progressing. It is foresee to have all the octants ready for operation by Wednesday and to take the beams, at least for injection, by Thursday.

The beam requested is the LHCPROBE.

K. Hanke asked for when the LHC50 will be requested. M. Lamont replied not before the next 2 weeks.

The setting up of this beam has started on Monday in the PSB.

K. Hanke asked for when will be the press day. M. Lamont replied either the 16 or the 30 March.

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 LHC will take the LHCPROBE beam from Wednesday.

A database intervention and the reboot of the SPS SIS are foreseen for the afternoon.

All planned interventions are available via the on-line agenda

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

4. Special topics

D. Manglunki presented a proposal of how to prevent protons from going into the NA during ion runs. The slides are available here.

A test with a fragmented ion beam is foreseen for the end of the 2010 run, when the SPS proton run will be already completed. Therefore there is no issue for this year. During the 2011 run however, a physics run with ions in the NA will be in parallel with the high intensity proton run. To avoid the risk of sending the primary proton beam into a zone which is not foreseen for this, a safety system has to be put in place. The current solution is to add two new BCTs (redundancy) in the ring that will disable the extraction elements to the NA when the beam will exceed the intensity of 2E11 p. This will require dedicated BCTs.

The alternative solution to move the experiment to another area can essentially be excluded due to lack of space.

H. Vincke mentioned that it will be necessary to check if the limit of 2E11 p is safe enough for the concerned area.

5. AOB

6. Next meeting

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

Preliminary Agenda:

1) Follow-up of the last meeting
2) Status of the machines
3) Schedule
4) Special topics: activities for the next technical stop (superintendents)
5) AOB
6) Next agenda

Minutes edited by S. Gilardoni