

Minutes of the 33rd FOM meeting held on 3.11.2009

Agenda:

- 1) Follow-up of the last meeting (K. Hanke)
- 2) Status of the machines (Supervisors)
- 3) Schedule (K. Hanke)
- 4) Injector operation during the LHC winter run (M. Lamont)
- 5) AOB
- 6) Next agenda

1. Follow-up of the last meeting

The minutes of the 32nd FOM meeting were approved.

Open actions from last FOM:

- a) Follow up with equipment specialists radiation alarms linked to PS extraction elements.
R. Steerenberg mentioned that there was only one radiation alarm during last week triggered by a bad extraction. The number of faulty extractions could be reduced by replacing a pulse repeater used to generate the RF fiducial train.
- b) Follow up with RP specialists radiation alarms linked to PS extraction.
S. Gilardoni mentioned that a series of measurements has been taken by M. Widorski to correlate the dose measured in the Linac3 tunnel and the losses in the PS ring. The analysis is still ongoing.
- c) Follow up of failure of TIM and LASER.
K. Sigerud mentioned that the failure was caused by an incompatibility problem between new libraries and the limited amount of memory available for the system. Once those two issues were solved, the problem did not reappear.

2. Status of the machines

Linac2 (R. SCRIVENS):

The Linac had a good week without any problem.

On Wednesday the regulation card of the operational BHZ30 power supply was tested with the spare supply with success. The spare cards were not adjusted yet. This operation can be done only during the next machine stop. Furthermore the quadrupole power converters of tank three had their broken ventilators replaced and an under-temperature alarm was added to the RF cavity water station.

PSB (A. FINDLAY):

During the stop on Wednesday, the faulty RF tubes of ring 4 were exchanged. After the intervention, the AD and ISOLDE beam could be retuned to reach again the nominal specifications on all the rings.

On Thursday at lunchtime, the MPS went down and dropped again a few minutes after the first reset. The EPC piquet intervened to fix the problem. The driver card for the TRIM 1+4, called “Trim A”, was overheating, so it was replaced by the spare “Trim B”. The MPS went down again later in the evening with the same fault. The piquet PO restored the faulty card on “Trim A”, which was repaired in the meanwhile. The expert will investigate the fault once back at CERN on Monday.

K. Hanke asked whether the temperature fluctuation of the PSB cooling water could be related to recent modifications of the circuit. These fluctuations were supposed to cause the fault on the septum during last week. S. Deleval replied that the cooling system is the same since the 1990s and that the temperature has not been fluctuating in the last weeks.

ISOLDE (M. ERIKSSON):

GPS: there were no particular problems during the week. The vacuum valve detecting the correct coupling between the target and the front-end is still broken. As mentioned in the last FOM, the signal from the valve is replaced by a simulated one to bypass the interlock.

HRS: since the beginning of the week, the stable beam setting up was perturbed by a ripple. One of the EPC experts found that the neutral HV voltage connection was missing in a fuse box. Once the connection was fixed, the ripple disappeared. On Thursday, after the drop of the front-end, the Fire Brigade contacted the supervisor for a fire alarm triggered in the target zone. A first inspection of the target zone via the video cameras did not show any problem. Finally, it was found that the alarm was triggered by a faulty air pump of the fire alarm system itself. The facility had to stop until the pump was replaced. At the restart, two 24 V power supplies had to be exchanged due to the same problem observed last week. The beam could be delivered to the users on Friday.

ISOLDE users (J. VAN DER WALLE):

The different users could conclude their physics program, with the REX run proceeding as scheduled.

For the new run, the users would like to have as many consecutive pulses as possible. R. Steerenberg will check the compatibility of the request with the scheduled Supercycle composition.

PS (E. METRAL):

The PS had a calm week. On Wednesday, the distribution of the 10 MHz GPS was very perturbed. The central building had to use a locally generated 10 MHz signal until a new cable in the building 354 was installed.

On Thursday, one hour was lost for the replacement of the power converter of the DSC DCPSRING.

On Friday, the thyatron of the BFA21 staircase had to be replaced by its spare. In the meanwhile, it was not possible to deliver the CNGS and SFTPRO beams to the SPS.

On Saturday, the 10 MHz cavity in SS36 tripped. It was not possible to use the one in SS11 as spare since the bunch splitting h8 to h16 was not done correctly. The LLRF piquet solved the problem.

The BWS application caused few problems during the week. The expert installed an application to help OP in the debugging of the system.

The MTG telegram has been updated to include a line TT2_D3C. The information has been added to clarify when the LHC is master. The VISTAR has been also updated to change the colour of the LHC user whenever the LHC is master.

K. Hanke asked about the status of the MTE. S. Gilardoni replied that the setting up is progressing. The extraction per se is working very well. The beam was sent few times to the SPS for optics measurements. The work is still focused on the improvement of the spill.

East Area (L. GATIGNON):

All the lines had a smooth running for the entire week. In T9, the users changed from FACTOR to CALICE. CLOUD will start to take the beam next week.

There was a water leak of a T7 magnet, which is not in use. An access in the primary zone will be done as soon as possible to fix the leak.

East Area Users (H. BREUKER):

All users are satisfied.

AD (L. BOJTAR):

The AD had only minor problems during the week. On Monday, an MD took place. On Tuesday, the stochastic cooling pre-driver needed few resets. On Friday, a time repeater had to be reset. On Saturday, the GFA of DR.DVT2608 had to be reset.

A. Bland asked if it would be possible to upgrade to SLC5 a console used by the AD operators. L. Bojtar replied that the magnetic cycle editor might have some problems to run on a SLC5 machine. The upgrade will be done after the tests of the cycle editor on an SLC5 console.

AD users (H. BREUKER):

The Vienna group of ASACUSA finished the run period.

The AD users requested an extension of the run in the period when the PS should serve only as LHC injector. The request is under the evaluation of the DG.

In case of approval, the Tokyo group of ASACUSA will be, most probably, the next user.

ALPHA is running fine whereas there are no news from ATRAP.

NTOF (H. BREUKER):

The delivered intensity is increasing towards the committed one.

N. Chohan asked if the target intensity to be delivered for the run of the next year is already known. R. Steerenberg replied that this is not known yet.

SPS (K. CORNELIS):

The SPS had a good week. On Thursday, the CNGS beam transmission was particularly poor. A phase error was found on a cavity.

The CNGS intensity could be increased during the weekend. With such high intensity, the beam had to be stopped from time to time due to a temperature interlock in the target area.

A vacuum gauge of the extraction kicker gave faulty signals. The related interlock was stopping all the beams. The problem was fixed on Tuesday.

On Monday, the BA2 water-cooling system had a regulation problem.

On Tuesday and Wednesday are scheduled a series of MDs.

K. Hanke asked about the interventions on the doors in TI8 and TI2. K. Cornelis replied that the first necessary intervention, the one for the CNGS/TI8 door, will be done during the MD time. This door is necessary to allow the shutdown interventions in the CNGS while the LHC will be running. The second door, the one separating the SPS from the LHC, will be done whenever the LHC will stop.

CNGS (E. GSCHWENDTNER):

The goal of $3 \cdot 10^{19}$ protons has been reached on Friday. Currently, the experiments have about 3200 neutrino interaction candidates.

During the MD, a series of de-humidifier will be installed to measure the humidity level and to check the tritium content in the air.

An access might be requested on Monday next week.

SPS North Area (L. GATIGNON):

The North Area had a smooth running. On Thursday, TOTEM found the H8 experimental area occupied by another user starting the installation in advance and without prior consultation. Moreover, TOTEM found the floor of the experimental barrack open for network cabling installations. This intervention was not announced in advance. A proper situation could be re-established by the end of the day.

NA62 completed the R&D program successfully.

COMPASS took hadron beam data plus two shifts with electrons. After the MD they will switch to muons.

SPS North Area Users (H. BREUKER):

AMS started the test-beam installation in the TOTEM area in advance with respect to the schedule, interfering with the TOTEM beam time.

All other users had no particular problems.

LINAC3 (R. SCRIVENS):

The beam could be recovered on Tuesday after the oven refill.

Over the weekend, the 14 GHz klystron failed in an unusual way. The problem was diagnosed and the klystron replaced on Monday. The beam could be again delivered, even if unstable, by the end of the day.

The shutdown of the source, ready for some repairs next Monday, needs to be planned with LEIR.

LEIR:

K. Hanke mentioned that the run should stop on Friday.

CTF3 (S. BETTONI, mail):

“The majority of the week was dedicated to send beam in the PETS structures in CLEX to condition them using only the factor 4 of recombination from the combiner ring. The beam time has been shared between the TBTS (80% of the time) and the TBL line. In TBL some hardware checks have been done and the beam was transported at the end of the line for the first time.

Sometime has been given also to the coherent diffraction experiment. The first meaningful interferogram has been obtained.

Last week for CALIFES was dedicated to the preparation of the restart on this Monday.

Faults: again severe problems with the Lapp BPM system”

TI (J. NIELSEN):

Nothing to report.

LHC interface with injectors (M. Lamont):

A second injection test is foreseen for the weekend, starting from Friday afternoon. The LHC will request the LHC PROBE beam.

3. Schedule / Supercycle / MD planning

The 2009 schedule (V3.6) is available at:

<https://espace.cern.ch/be-dep/BEdepartmentalDocuments/BE/Schedule2009.pdf>

Tuesday and Wednesday are scheduled as MD time.

A second round of LHC injection tests, not reported in the official schedule, will start on Friday. The injectors should deliver the LHC PROBE beam.

A. Bland announced a network intervention affecting the North Area for Wednesday.

K. Kostro announced a security upgrade of the LASERDB and the DBABCO clusters.

The intervention agenda can be found at:

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

4. Injector operation during the LHC winter run (M. Lamont)

M. Lamont reported about the injector operation during the LHC winter run.

The slides are available [here](#).

The injector physics run will end the 23 November. After this period, the injectors, in principle, should run only to deliver the beam to the LHC to reduce the power consumption.

N. Chohan asked if the extension of the AD run has been confirmed as the AMS test beam in the North Area. M. Lamont replied that the AD run extension has to be approved by the DG, who is currently considering the request. H. Breuker added that the AMS test beam has been approved for the period 7-12 December.

The LHC will take the beam from the 21 November until the 16 December. The run should restart the 4 January. The restart might be delayed by 3 weeks depending of the schedule of the new QPS commissioning. During these three weeks the injectors should be ready to deliver the beam to the LHC in whatever moment.

During the LHC running, MDs in the PSB and the PS have been officially approved during daytime. The only constraint will be that the power consumption must be limited below 180 MW. The SPS could not run for MDs to limit the power consumption.

N. Chohan asked if the LHC is represented at the FOM to inform the injectors about the LHC requests. K. Hanke replied that this is already the case since the last few FOMs.

N. Chohan added that the machine superintendent should be informed about the request of interventions during the shutdown to coordinate the activities.

The superintendents are:

- a) SPS – N. Gilbert
- b) PS – R. Brown
- c) AD, LEIR, PSB – D. McFarlane
- d) East Area, AD expt. area, TT2(a), nTOF – M. Lazzaroni

A. Bland asked if it would be possible to upgrade the PCs of the control systems during the first three weeks of January.

K. Hanke replied that the Xmas break has to be considered not as a shutdown period but as a technical stop. All the activities, included the upgrade of the PCs, should be communicated to the machine superintendents to coordinate the interventions.

5. AOB

N. Chohan asked if the tests of the electrical emergency stop switches will take places during the shutdown.

F. Tarita replied that the usual campaign has been for the moment cancelled/postponed. The only tests will take place the 3 January 2010 and will cover only the administrative sector of the Meyrin site.

A detailed schedule can be found [here](#).

S. Hutchins mentioned that after the Xmas break, it could be possible that DSO tests will be required. K. Cornelis asked why the tests are foreseen, since the operators will supervise all the accesses and the machines kept closed. K. Hanke replied that the tests will be pre-scheduled in case they will become necessary.

6. Next meeting

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

Preliminary Agenda:

- 1) Follow-up of the last meeting
- 2) Status of the machines
- 3) Schedule
- 4) CV activities during the Xmas stop (S. DELEVAL)
- 5) AOB

Minutes edited by S. Gilardoni