

# Minutes of the 39th FOM meeting held on 15.12.2009

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 38th FOM meeting were approved.

Open actions from last FOM:

- a) Follow up with RP specialists radiation alarms linked to PS extraction.  
S. Gilardoni mentioned that the measurement campaign is finished and data analysis ongoing.
- b) Plan the January restart. See the Schedule section.
- c) Plan the restart of the machines in case of the AMS run during week 1 of 2010.  
The AMS run in January has been cancelled. See Schedule section.
- d) Coordinate availability of piquets and experts during the Christmas break and at the restart 2010. See Schedule section.

The weekly FOM meetings will be suspended until the 26 January.

## 2. Status of the machines

**Linac2** (R. SCRIVENS):

Linac2 had a very quiet week.

Concerning Linac2, here the general technical stop procedure communicated by R. Scrivens (mail):

“The following will be the situation from 18:00 on 18/12, over the 2 week stop.

All power supplies and RF equipment will be put OFF, by remote control.

There are no precautions taken to avoid them being switched ON.

The LI and LT beam stoppers will be condemned IN.

The LT.BHZ20 magnet will be condemned between the power supply and the magnet (the power supply itself will be left on to confirm to the access system that its status is OFF).

Sector valves closed

Note that the following equipment does run:

Vacuum pumps and gauges.

From 4 January:

At any time, equipment may be switched back on for testing (except the beam stoppers and BHZ20).

Anyone making an intervention requiring the area to be electrically safe, needs to contact C Mastrostefano”

**PSB (B. MIKULEC):**

The PSB had a very good week. The LHCINDIV and LHC PROBE beams were delivered for the LHC regularly and within specifications.

The wire of the BWS of ring 3 broke. The BWS will be exchanged during the technical stop.

One of the bumpers of the slow extraction bump needed to be reset.

Losses were observed throughout the week on ring 3. This was due to a problem with the power converter of one of the normal quadrupoles and a wrong tune setting.

K. Hanke reminded the BI representative that the broken BWS of ring 3 must be exchanged during the technical stop, and that the PMs of the wire scanners on rings 1, 3 and 4 should be upgraded in the same way as already done for ring 2.

**PS (R. STEERENBERG):**

During the week the PS operated for the LHC beams and for the MTE setting up.

The few problems of the week could be solved in the shadow of the LHC stops.

One RF switch has been installed to minimise the risk of injecting a bunch of the LHC type beams in the wrong SPS bucket.

On Monday, one of the GFAs was showing a wrong function even if the function in the HW was correct.

On Tuesday the 10 MHz in SS51 had a failure and was replaced by its spare. Its final amplifier tube was replaced on Monday of the following week.

A problem with the 200 MHz cavities required a bit of time to be solved since LASER was showing a problem with the high level power whereas it was a LLRF problem.

R. Brown communicated the details of the interventions in the PS during the technical stop:

“[...]”

Some of the salient points are:

Access control will be maintained from the CCC.

Wednesday 16/Dec. 18:00 LHC beam injection stop, PS MD 18:00 until 24:00, 24:00 PS beam off.

Thursday 17/Dec. Magnet patrols in the PS and TT2,

Friday 18/Dec. HV tests on main magnets, main and auxiliary magnets consigned.

Monday 21/Dec. Magnet cooling water off.

Monday 4/Jan until Friday 29/Jan Shutdown, PS and TT2 tunnel access.

Monday 11/Jan. Magnet cooling water re-established.

25/Jan until 29/Jan is an extra week which will probably transform into a hardware test period, as required.

Friday 29/Jan pm. Tunnel handover to operations.

Monday 01/Feb. PS complex restart.

The planning for the PS shutdown can be accessed from the EN/MEF/ABA web site:

<http://en-dep.web.cern.ch/en-dep/Groups/MEF/Sections/ABA/Accelerators/PSold.htm>”

Since . all septa installed in the machine will be exchanged, L. Bruno mentioned that the ALARA procedure will be strictly followed, also in the view of the large doses observed in the tunnel.

**SPS (K. CORNELIS):**

The SPS was running exclusively for the LHC type beams. The LHCINDIV beam was found with a large emittance. The emittance blow up is generated in TT2-TT10 or at injection in the SPS, but it was not possible to identify the source yet. The blow-up was not observed during the last MD with the LHCINDIV. The reduction of the emittance back to the correct value is done by scraping the beam.

At the restart in January, the SPS will require a fast extracted SFTPRO for the beam-based alignment since four quadrupoles will be replaced during the technical stop.

**LINAC3 (R. SCRIVENS):**

The MD with the source was completed last week. The run is now finished.

**CTF3 (mail from P. SKOWRONSKI):**

“Monday:

The gun started producing non uniform pulses, with linearly decreasing intensity towards the end of the pulse.

Decided not to intervene since it was expected to be difficult and lengthy to diagnose, and it was the last week of running.

One of the klystrons was giving different power with and without

beam.

Found that lowering its power by 5% made the effect gone.

Readjusted the machine to the new conditions.

Tuesday:

Work on correcting the dispersion pattern in DL.

Orbit correction in TL1 and CR after applying the adjustments for dispersion from the previous week for recombination factor 8.

Wednesday:

Working on improving the recombined beam transmission through TL2. 15A of 24A delivered to power extraction cavities.

Thursday:

The gun goes down completely. The specialist diagnoses that it is the pulser. Access organized to replace the device, what solves the problem. Huge improvement in stability.

Work of Test beam line, increasing the transmission and optimization of bunch length to improve the RF power production.

Friday:

Power production in Two Beam Test Stand (PETS conditioning).

Monday:

Winter shutdown: power supplies locked out, etc.”

**TI (P. SOLLANDER):**

Nothing to report.

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

The LHC run has been successful. Collisions have been delivered to the experiments at 450 GeV/c to reach about 700000 events. Then two PILOT beams were accelerated to 1.18 TeV/c. 300000 collisions were collected by the experiments at top energy.

The vacuum spikes observed last night were due to a faulty gauge.

First tests were done injecting sixteen bunches.

The squeeze will be done during the current week. The LHC will stop Wednesday at 18:00. G. Roy mentioned that Wednesday afternoon there will be intrusion tests.

### **3. Schedule / Supercycle / MD planning**

The 2010 schedule (V1.2) is available at:

[https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/2010-injector-schedule\\_v1.2.pdf](https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/2010-injector-schedule_v1.2.pdf)

This schedule has been approved by the research board.

The updated detailed schedule of the activities until the X-mas stop is available [here](#) and the list of the activities has been included in the intervention agenda accessible at <https://espace.cern.ch/be-dep/FOM/Lists/Agenda/calendar.aspx>.

The AMS run, tentatively planned for the week 1 of 2010, will not take place. The complex will have a technical stop ending the 29 January 2010. The detailed schedule of the next month and the restart can be found [here](#). During this period OP will manage the accesses. There will be no piquet services during this phase except for VCS (vacuum). In case of problems, the equipment expert has to be contacted.

In particular, concerning PO, C. Munier communicated the availability of the experts (mail):

“A) Fermeture du CERN:

Nous sommes en train d'établir une liste des personnes du groupe joignables durant cette période. Ce n'est pas un piquet, ce sont des personnes qui, sur la base du volontariat, vont s'arranger pour être joignables, mais elles n'y ont pas obligation. Sur le nombre, il sera sans doute possible de trouver quelqu'un pour intervenir en cas d'urgence. Cette liste sera envoyée aux salles de contrôle demain.

B) "Shut-Down"

- Piquet Injecteurs (160391): Pas de piquet, tout le mois de Janvier. Si tu souhaites un piquet pour le week-end des 30 et 31 Janvier, c'est possible, mais si ce n'est pas une obligation, j'aimerais mieux reprendre à partir du Lundi 1er Février. à toi de voir...

- Piquet FL (Zones Expérimentales) (163668): Pas de piquet, mais une permanence sera à disposition pendant les heures ouvrables au 163668, pour les mises en sécurité des installations (consignations, condamnation...) ou pour tout autre problème sur les injecteurs et les zones expérimentales. Les techniciens FL donneront directement une réponse à vos demandes ou transmettront à l'expert concerné.

- Piquet LHC (161919): Pas de piquet les deux 1ères semaines de janvier, mais une permanence à disposition pendant les heures ouvrables au 161919. La reprise du piquet reste à définir.

Les "Experts" quand à eux vont profiter de cette période pour faire la maintenance ou corriger certains dysfonctionnements de leurs équipements, ils seront donc également très faciles à contacter.”

Concerning the CO activities during the technical stop, C. Kostro communicated the details of the different interventions (mail and details available [here](#)):

“We have a long list of upgrades, bug fixes etc which accumulated during recent months and which will be deployed during the technical stop. Most of these changes have limited impact, the complete list is attached.

Some upgrades may have larger impact:

The nfs server cs-ccr-nfsdev which is serving user accounts will be upgraded and rebooted on Jan 4. This will interrupt access to Linux home directories.

The new cmmnbuild will be deployed on Jan 5.

New versions of JAPC, CMW, RBAC for Java will be delivered on Jan 7, 8.

New versions of FESA, CMW, RBAC for C++ will become active as of Jan 11.

FESA developers will be informed about details.”

S. Deval announced that the CV interventions originally scheduled for the X-mas stop will now be done during the technical stop in January. Since the access system interventions have also been postponed, there will be no interventions during the X-mas closure.

#### **4. AOB**

Last week, there was a problem with the access in TT70. The two water pumps installed in the zone broke down in the past and the one temporarily installed failed. OP did not permit access to the area since there is the possibility to directly access the AD target zone.

G. Roy added that there should be actions to avoid these repeated pump failures requiring access in TT70. S. Deval will follow up the improvements of the installation, whereas R. Steerenberg will follow up the implementation of a different sectorization of the zone in the framework of the access system renovation. The zone will be put in key access mode.

In the meanwhile, the accesses will be managed according to this mail by T. Eriksson: “Access to the zone (part of TT6) below the AD target area via D701 and D314 can be now granted. Please observe the following:

- Both AD target area and TT70 have been returned to key-access.
- OP9 total has been applied to the AD target area.
- Emergency exits have been verified
- A list of people that might need access in the near future has been established, these people have been instructed by RP about the radiation and safety issues.
- Only people from this list can be allowed access under present conditions (D314 open).
- A detailed worklist will be established once the exact nature of the required work is known.

List of people who have been instructed about RP and safety issues and are likely to access through D701:

Tommy Eriksson  
Alemanno Antonio  
Serge Deval

Jean Mormile id 89121  
Salim Difli id 58127

Arif Avanoglu

Kemal Avanoglu

Youssef Draoui  
Bombaerts Pascal

Khalid Elkouache  
Azriouil Zine-Eddine  
Roman Dididier

Hirsescu Ovidiu  
Christophe Perez  
Bertrand Barruel

Garcia Antonio  
Vuailat Jean-Marie  
Coudurier Frederic”.

## **5. Next meeting**

Regular FOM meetings will resume on 26 January. An invitation will be sent in due time. Any important information will be distributed via the FOM mailing list.

Minutes edited by S. Gilardoni