Minutes of the 36th FOM meeting held on 21.09.2010

Agenda:

1) Follow-up of the last meeting (K. Hanke)
2) Status of the machines (Supervisors)
3) Schedule (K. Hanke)
4) Special topics: status of INCA (R. Steerenberg)
5) AOB
6) Next agenda

1. Follow-up of the last meeting

The minutes of the 35th FOM meeting were approved.

Follow-up from the last FOM:

a) Status of the PS B-field fluctuations.
R. Steerenberg said that no further progress has been made.

b) INCA status: see special topics.

c) Establish procedure for support for PVSS ISOLDE vacuum control system.
E. Piselli reported that the support will be provided by the EN/ICE group.
The support provided will be the same as for the LHC.

d) Status of AD bunch length. T. Eriksson reported that the bunch length decreased to 180 ns.
Further attempts to improve the bunch length were done by changing the shape of the electron beam, but without any clear results.
The current bunch length is sufficiently good for the upcoming experiments.

The beam statistics can be found here.

2. Status of the machines

Linac2 (A. LOMBARDI):
The Linac run was without any particular problem until Monday. On Monday morning, one of the capacitor banks of the Hazemyer protection system broke down. In principle, the Linac could have continued running, but it was decided to use the Hazemyer spare. Unfortunately the switch to use the spare was broken. While repairing the switch, also the original Hazemeyer could be repaired. In the meanwhile the switch has also been repaired.

Concerning the radiation alarms mentioned last week, investigations were done to test the radiation monitor. The monitor is working correctly, so further investigations are ongoing to understand possible sources of radiation. It seems that the radiation alarms are triggered by the too high integrated intensity circulating in the PSB.

PSB (A. FINDLAY):
The PSB had a very good week that could be used to train the new operators.

On Saturday the ring3 C02 cavity broke down. The specialist had to intervene to replace an optocoupler. This caused about 3 hours down time. Later the distributor tripped. The specialist had to change a thyratron, causing an about 1.5 hour long stop.

On Monday, an MD cycle was set-up for the tests with the LHCINDIV type beam.

ISOLDE (E. PISELLI):
ISOLDE had a good week.

On Sunday morning one of the DSCs had to be rebooted.

S. Deleval checked the water flow of the cooling station. At first the flow was correct, however later it dropped again. A logging of the flow rate has been put in place. Apparently, after a first tuning, the flow slowly drifted, such that during one night it dropped from 200 l/h to 175 l/h.
There is an interlock to protect the target, to cut the target heating in case of a failure of the water flow. Anyhow a sudden cut of the heating causes a thermal shock that could damage the target.

ISOLDE users (M. KOWALSKA):
GPS was running for REX to produce a Be beam. Everything was running fine until Monday evening. During the weekend there will be some tests with a low integrated intensity.

Concerning HRS, the run was for ISOTRAP. The run was at 50 kV without any problems.

PS (Y. PAPAPHILIPPOU):
The PS had a very good week.

On Tuesday morning, a jitter in the RF train was causing bad extractions, with large losses producing radiation alarms.
The problem disappeared without a clear understanding of the source.

On Wednesday night, the functions of the low energy quadrupoles were found corrupted on the SFTPRO and CNGS users.

On Monday, an access was done to repair the C56 cavity relay gap.

EAST AREA (S. GILARDONI):
Nothing special to report.

EAST AREA USERS (H. BREUKER):
The run will continue with two spills given to the North Branch. NA62 is testing the Giga tracker plus another one in view of the choice for the future runs.

In T7, the IRRAD is running fine. Behind the shielding the CALICE calorimeter has been installed before the final installation in T9.

The ALICE test beam is progressing well as DIRAC.

TOF (H. BREUKER):
TOF is very happy since the integrated intensity realised so far is about 30% more than the scheduled one.

AD (T. ERIKSSON):
This has been the second consecutive week with operation efficiency near 100%.

The electron cooler stopped for a ground fault.

AD USERS (H. BREUKER):
Nothing to report.

SPS (E. METRAL):
The SPS had a good week, delivering regularly beam to the CNGS, the NA and the LHC.

The setting up of the cycle for the low gamma transition continued, as the steering for the MTE beam and the IONS setting up.

On Monday, it was found that the cycle for the low gamma transition was interfering with the following cycle and the ion cycle. This is due to some settings non fully PPM.

Concerning MTE, the steering in TT10 continued, also to try to understand if the PUs at the end of TT10 are working correctly or not. S. Gilardoni added that the manual steering done lead to a maximum loss between TT2 and TT10 of about 1.2%.

On Saturday there was a problem with the CNGS ventilation that required an access.

On Sunday there was a problem with the scraper. A. Masi had to access the machine to change a cable.

P. Sollander mentioned that an intervention on the ventilation in BA3 should be done soon. This intervention, in principle should not interfere with the normal machine operation.

CNGS (E. GSCHWENDTNER, mail):
“On Saturday at ~15:45 CNGS beam was stopped due to an alarm of the ventilation unit which cools the CNGS target because this unit stopped. In addition the regenerator in the ventilation unit which circulates the air in the target chamber and

service gallery was stopped due to a fault in the temperature sensor in the electrical battery.

The intervention was arranged for Sunday 00:00AM by RP. The CV piquet managed to restart the target unit after resetting the fault from the local control terminal. The motor status was verified (coil resistances) and showed no damage. Most likely it was an accidental trip. However, the transmissions belts show some deterioration, but the CV piquet didn't have spares.
The sensor of the regenerator unit was reset, but the unit couldn't restart due to a fault in the temperature relay for the motor powering. Also changing the broken fuses to a higher one of 16A did not help restarting. Measurements point to a failure in the motor itself.
As the main part of the circulating unit is still operational, we agreed to restart CNGS.

However, we will have an access during the MD on Thursday to change the belt and the motor."

NORTH AREA (S. GILARDONI):
Nothing special to report.

NORTH AREA USERS (H. BREUKER):
All users were running without any problems.

CTF3 (S. BETTONI, mail):
"Routinely come back to a flat-long pulse recombination in the combiner ring normally to slightly more than 12 A. Improvement in the extraction from the combiner ring (septum at the injection and at the extraction are in series).
The transmission downstream of the 4x recombined beam is quite good (something more than 10 A after TL2, TL2prime and TBTS).
During the week there was an issue about the form factor which we must use to fit the power produced with the model. We drifted away from the best reference and in the afternoon of Wednesday we re-adjusted the machine to maximize the power production normalized by the beam current in the PETS.

Now we are conditioning the PETS, the recirculation loop and the branch towards the accelerating structure. We reached more than 190 MW in the PETS output with the recirculation loop and about 30 MW in the accelerating cavity (60 MW is the CLIC nominal).
On Friday afternoon we tried the acceleration: the probe beam has been accelerated by 11 MeV.
We are trying to leave the machine running sending beam to TBTS also during the nights to continue the conditioning thanks to the MKS supervision by the CCC operators."

LINAC3 (A. LOMBARDI):
The source had to be retuned after a drop of beam intensity.

On Monday the intensity was a bit low but it could be increased.

LEIR (C. CARLI):

There was no beam in LEIR during the weekend as scheduled.

Since Tuesday, the beam has been delivered to the PS for the SPS setting-up. There were practically no problems

Some work was done to improve the implementation of the LLRF signals in OASIS.

The intensity from the Linac was a bit too low.

S. Gilardoni asked if it was possible to measure the transverse emittances at extraction. C. Carli replied in the positive, reporting also that the emittances are well within the beam specifications.

PS-IONS (Y. PAPAPHILIPPOU):
The ion beam is running as the other normal PS users.

R. Steerenberg added that the implementation of the YASP trajectory correction at injection is progressing.

C. Carli asked if the new injection optics taking into account the stray field has been updated in YASP. S. Gilardoni replied that the current optics is still the one without the stray field and that this optics will be used for the first tests. It will be replaced by the more correct one as soon as available.

SPS-IONS (T. BOHL):
The setting up of the LLRF is progressing.

On Friday, some beam could be accelerated up to the flat top.

The CPS complex provided regularly the beam needed for the setting up.

TI (P. SOLLANDER):
There were few problems with the cooling station of TOF.

LHC interface with injectors (M. LAMONT):
The commissioning of the LHC with bunch train is nearly finished.

The beam delivered by the injectors is the 150 ns. More intensity than nominal would be desirable. R. Steerenberg and K. Cornelis replied that it is not easy to have more than the nominal intensity. This would require some time for the setting up.

S. Gilardoni asked if the transverse emittances for the nominal 150 ns intensity are correct. M. Lamont replied in the positive.

3. Schedule / Supercycle / MD planning

Version 1.8 of the 2010 injector schedule (V1.8) is available at:
https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/2010-injector-schedule_v1.8.pdf

A draft of the 2011 schedule not approved yet by the Research Board, is available at:

https://espace.cern.ch/be-dep/FOM/Presentations%202010/09-21-2010/2011-injector-schedule_v0.1-5.pdf

The MDs and technical stops are not included yet. R. Steerenberg said that POPS will be commissioned in the first weeks of the run, before the first LHC technical stop.
D. Manglunki asked if the setting up of the ions in will really have 8 weeks.

On Thursday there will be an intervention between 13:30 and 14:00 on the database. Some of the machines in the CCC will be rebooted.
New Linux consoles will be installed.

An access to control the PU in TT10 will be tentatively scheduled for Thursday morning. The MD will start immediately afterwards. This intervention was cancelled after the meeting.

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. Special topics: status of INCA (R. Steerenberg)

R. Steerenberg presented the status of INCA.
The slides are available here with the details of the different problem and progresses in the INCA deployment.

The PPM copy and the archiving problems are now the first priority.
H. Damerau commented that it should be possible to send twice a command to equipment. R. Steerenberg replied that this is under investigation.
R. Steerenberg will report regularly to the FOM about the INCA status.

5. AOB

6. Next meeting

The next meeting will be held on Tuesday, 28 September at 10:00 in 874-1-011.

Preliminary Agenda:

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2) Status of the machines
3) Schedule
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Minutes edited by S. Gilardoni