Minutes of the 20th FOM meeting held on 04.08.2009

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 19th FOM meeting were approved.

Open actions from last FOM (short term):

a) Coherence of equipment AQN refreshment in the PS for supercycles longer than 30bp. K. Kostro said that a first solution has been implemented and it is under test.
b) LASER alarms not shown by PSB consoles. The problem still exists. K. Hanke added that unfortunately the last time when the problem occurred, the CO expert was not called in. K. Sigerud mentioned that the operator should call the 79898 as soon as the problem appears.
c) LEIR transformer acquisition. L. Jensen mentioned that work will be done to solve the problem.
d) GFAs not correctly taken into account once sent in PS and PSB. C. H. Sicard mentioned that he could reproduce the problem in the laboratory. This seems to be intrinsic to the GFA design, such that if the GFA is sent to some specific time, the programming is not taken into account. Unfortunately is also difficult to put a diagnosis on the GFA, in particular for applications which have to read and send the GFAs. K. Hanke mentioned that the problem seems to be new. C. H. Sicard replied that the problem is known in the AD controls since long time. It is now appearing more often also in the PS most probably because the GFAs are programmed more often than in the past. A simple solution to the problem would be to implement an automatic procedure in the applications to resend the GFAs functions and cross-check it with the acquisition.

2. Status of the machines

Linac2 (D. KÜCHLER):

The Linac had a week without problems, apart from 10 minutes lost due to a power glitch.

K. Hanke mentioned that during the power glitch, LASER did not show any alarms.

PSB (K. HANKE):

The extraction septum was tripping very often, even if the fault was always resettable remotely. On Wednesday and Thursday, the power piquet and the equipment specialist tried to solve the

problem, until they decided to change the entire power chassis. Even if the source of the problem has not been understood, and it seems related to the ISOLDE high intensity beam, since then the septum is working correctly.

On Monday, the MPS of the Linac2 tripped due to a small power glitch, which caused a stop of 20 min.

On Tuesday, the CO4 cavity of ring 4 tripped with a problem on an auxiliary power supply.

Concerning the beam preparation, the 50 ns single batch is ready to be injected in the PS. The commissioning of the BWS is ongoing.

ISOLDE (P. FERNIER):

HRS: the target #407 Ta-W-Ir-MK5 has been installed. Unfortunately, during the installation, a bad displacement of the robot blocked the robot and the target on the front-end. A manual intervention was needed to unblock everything and install the target. About ¾ of a day was lost for physics. The robot has been tested afterward and no problem appeared.

K. Hanke mentioned that it is not ALARA changing manually a target.

On Monday morning the ISOLDE vacuum went down and setting up continued with stable beam.

GPS : the run was done with the target #406 Uc2C at 30.2 kV for Miniball via Rex.

The delivered beam was of good quality, but with many interruptions due to a problem with the RF amplifier on the 7 gap cavity. The beam could be delivered on Wednesday, but the period was too short to be useful for the physics program.
Since Thursday, the run was at 60kV for IS453 on the line LA1 and for IS489, IS492, IS487 on the line GLM. Everything worked correctly until Friday at 17:00, when the front-end started to spark. After checking the HV, the cooling and the dehumidification system, it became clear that the problem was related to a pollution of the target. The run continued at 30 kV after a re-steering of the machine. Unfortunately this HV was not adapted to the physics program.

On Monday at 7:00, the vacuum systems stopped working except for HRS and Rex.

This could be traced to a communication fault between the balloons used to store the radioactive air, causing the triggering of the interlock system.

G. Vandoni added that the interlock appeared during the automatic switch of the system from the filled balloon to the empty one. Since the pressure on the empty balloon was not correctly measured, the system stopped. A bypass of the interlock will be done to force an automatic switch.

K. Hanke asked about the reason of the FE sparking. P. Fernier replied that most probably is due to pollution of the electrodes.

ISOLDE users (A. HERLERT):

REX stopped for technical problems. The users could have some beam to conclude a minimal program. The users running with reduced front-end HV could also take some data but not much.

PS (Y. PAPAPHILIPPOU):

The PS had a good week. On Wednesday, a dedicated MD was done to measure the injection optics. A lot of work was done and it is ongoing to set up the ions.

On Thursday morning, the F16 line was cut due to a sudden closure of two vacuum valves. Since the valve knobs in the control system were not available, the expert was called in. The expert rebooted the control rack and the valves could be open.

The same day, an access in the tunnel was necessary to search for a water leak diagnosed by unusual water consumption. The leak was found on a T9 quadrupole located in the EAST primary zone. The magnet will be repaired during the next technical stop. In total the search for the leak caused 5 ½ hours to be lost. The users of the T9 line should not take any beam until 10 August. The users anyhow asked for beam on Saturday, and were therefore moved to T10. Unfortunately, a T10 dipole tripped and the magnet specialist had to intervene to fix the problem. The problem could be solved only late in the night. Beam could be sent but immediately afterwards a quadrupole tripped. The quadrupole was fixed on Sunday morning.

On Monday, a power glitch caused about 20 minutes to be lost.

An electronic module of the frequency program had to be changed.

East Area ():

No report.

East Area Users (H. BREUKER):

The T7 line will start to take beam on the 14th of August, as planned. A short test done last week was not 100% successful. On T8 Dirac is running without any problems. On T9, the users assumed to arrive later, finally wanted to have beam on Saturday. They were moved to T10.

On T11, the CLOUD experiment is setting up the large beam with the new hodoscope.

AD (T. ERIKSSON):

The AD had a very good week.

On Wednesday it was not possible to reboot the DSC from DIAMOND.

On Monday, 12 hours were taken by an MD to study deceleration to very low energies. The recovery from the MD took some time. On Monday night, the ejection kicker stopped working and losses were observed between 2 GeV and 300 MeV. The losses disappeared by themselves, whereas the kicker behaviour was due to bad extraction timing.

The transformer TFA9012 is not giving correct values, and TFA7092 is not always working.

AD users (H. BREUKER):

ALPHA had a good run. ASACUSA is setting up the next experiment.

NTOF ():

No report.

SPS (D. MANGLUNKI for K. CORNELIS):

The North Area had to be stopped on Tuesday for a few hours for an intervention on micro collimators.

The main event last week was a technical stop on Wednesday during the PS MD. The CNGS was stopped during 18 hours in order to empty a water sump which was contaminated with tritium. This water sump is supposed to collect uncontaminated water coming from TT40. It was found that there is probably condensation water, originating from the ventilation system in the target area, coming into this sump. During the long MD starting on August 10th this problem will hopefully be fixed. The rest of the SPS was stopped for 8 hours. The MKDH could be repaired and it works again for 450 GeV cycles. A water leak on the bus bar in BA5 was repaired and a new tube was exchanged on the damper amplifier.

The SPS has been performing very well for the rest of the week apart from:

- On the night from Friday to Saturday, the north extraction was off for about 8 hours due to a 'faulty' temperature interlock on the MSE.
- a problem with a key rack of the access system in BA4 on Friday morning (2 hours lost)
- 3 hours lost BA6 cooling in the night from Sunday to Monday

So far 1.29E19 POT were delivered for the CNGS, ahead of curve of foreseen intensity to be delivered.

CNGS (E. GSCHWENDTNER):

So far 1.29E19 protons have been sent to the target. Last Wednesday, about 10 m^3 of radioactive water have been removed from the sump mentioned in the SPS report. The cause of the radioactive water has been traced back to the de-humidifier unit of the target area installed on the floor above the sump. The suspect is that the pipes of the de-humidifier and the ones of the mentioned sump are passing too close. The configuration will be changed during the technical stop.

SPS North Area ():

No report.

North Area users (H. Breuker):

The NA61 run started at 30 GeV. The physics program foresees the measurement of particle production generated by a carbon copy of the T2K target. On H4, E. Gschwendtner prepared the beam for the users. On H6 there were 3 different users. Last Friday, new wobbling settings were implemented for the UA9 experiment at 400 GeV. COMPASS is running without problem.

LINAC3 (D. KÜCHLER):

The Linac intensity improved by about 10%, going up to about 20-22 μA. On Thursday and on Monday, the knobs left open from the previous night did not give any acquisition. A reboot of the workstation solved the problem, which seems related to the Middle-ware from GM. On Friday non of the workings could be opened. The workstation needed to be rebooted again. A. Bland said that this could be related to the database upgrade.

The run was on the 2nd oven, with the goal of re-filling the two ovens during the technical stop. Since the LEIR water station will be cut during that day, also the source will be off. The source could be back to operation between Monday and Wednesday. Beam can be delivered to the SPS for the MD but it remains to be seen at which intensity. Due to this, the program of the MD will be re-discussed.

K. Hanke asked if again radiation alarm were triggered in the zone. D. Küchler replied that only one radiation alarm appeared. I. Floret mentioned that the radiation levels in the past could be checked in the logging.

LEIR (D. MANGLUNKI):

The intensity delivered by the Linac is still pretty low. The EARLY beam is fine, and it is delivered to PS routinely. The machine is stable and worked all night without problem. Work on the NOMINAL beam is still ongoing by M. Chanel, in particular for the longitudinal plane which causes large intensity losses.
The line BCT are still not giving an acquisition, apart the signal from OASIS which is manually integrated to obtain the intensities.

PS WITH IONS (D. MANGLUNKI):

The ion lifetime is now just below 5 seconds. About 1E10 are injected with 8-9E9 ions extracted. 20% of the required intensity is still missing.

The horizontal emittance measured in TT2 is too large (2.3 μm) while it is fine in the vertical plane (0.9 μm).

The OP team tried to work on the transverse settings Monday night but the setting up was hampered by the fact that the MRP and the tune could not be measured.

S. Gilardoni mentioned that a high sensitivity BBQ card has been installed in the tunnel specifically for ions. BI will follow up this issue.

The LEIR-PS energy matching will take place tomorrow at 14:00.

The vacuum group is satisfied by the lifetime measurements: the MDION cycle can be allocated to the RF group to start studying NOMINAL ion beam.

CTF3 (S. BETTONI):

A good recombination factor, up to a factor of 3-4 could be reached. The transmission has been improved, with more than 10 A delivered to the PETS in CLEX. Beam could be delivered to the experiment measuring the bunch length. A lot of background has been related to the beam and a new shielding will be installed.

A patrol was needed because of a failure of the access system.

On Friday the beam was very unstable due to an oscillation on the klystron phase in the Linac. There was an attempt to set up the delay loop, but the beam was not stable enough.

K. Hanke pointed out that the technical stop on Monday will affect also CTF3.

TI (P. LIENARD):

The power glitch on Monday was due to an EDF problem of.

On Monday a BA6 problem caused the stop of the SPS.

Also on Monday again there was an electrical problem between BA9-LHC1.

3. Schedule / Supercycle / MD planning

The 2009 schedule (V3.4) is available at:

https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/Schedule2009.pdf
The supercycle composition is available at this web page.

Beam stop for the technical of next Monday between 8:00-16:00:

- the SFTPRO beam will be stopped on Sunday (9 August) at 24:00
- the CNGS beams will be stopped on Sunday (9 August) at 24:00
- all the other beams will be stopped on Monday (10 August) at 6:00
- access will be given as from 08:00.

There will be a network upgrade the 10th of August before the accesses in the machines, i.e. between 7:00 and 8:00 AM.

There will be a long MD from the end of the technical stop until Wednesday.

4. AOB

5. Special topics

V. Chohan presented the activities in the CPS-SPS complex for the next technical stop the 10th of August.

The presentation with the detailed list of activities can be found here.

A. Bland added that there will be a change also of the layout of the control database that will affect the working sets. The router upgrade between 7:00 and 8:00 will cause a loss of the network for about 10 minutes.

CV will do a series of intervention cutting the water in the entire complex. There will also no air conditioning in the PS central building.

R. Steerenberg asked at what time the water will be cut. S. Deleval replied at about 8:00. OP will take care of switching off all the equipments before the cut.

6. Next meeting

The next meeting will be held on Tuesday, August 11th at 10:00 in 874-1-011.

Preliminary Agenda:

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Minutes edited by S. Gilardoni