Minutes of the 32nd FOM meeting held on 24.08.2010

Agenda:

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

1. Follow-up of the last meeting

The minutes of the 31st FOM meeting were approved.

Follow-up from the last FOM:

a) Status of the PS B-field fluctuations.
S. Gilardoni reported that the analysis of the magnetic data done by the TE/MSC colleagues is progressing. After a suggestion of R. Brown, investigations on the effect of the screws installed to stabilize the lamination near the magnet junction are ongoing.

b) Status of AD bunch length.
T. Eriksson reported that the bunch length is still longer than nominal. Some further attempts to reduce it during different MDs improved the situation.

c) Send activities to superintendents for next technical stop. See Special topics.

d) Schedule beam stop for next technical stop. See Schedule.

The beam statistics can be found here.

2. Status of the machines

Linac2 (M. O'NEIL):
The Linac was running without any particular problem.
There was a problem with the software which computes the PS stray field compensation. CO is following up the issue.

PSB (G. RUMOLO):
The PSB had a good week.

On Thursday, the BI2.KSW was frequently tripping. The specialist changed a chassis to fix the problem.

On Sunday, ring2 C16 had an un-resettable fault. The specialist had to intervene to fix the problem.

On Sunday and Monday, losses were observed at injection for the LHCINDIV beam and for the NORMHRS. This issue was caused by the wrong pulsing of LTB.DHZ40. The current of the magnet was set to a wrong polarity by the program which compensates for the PS magnet stray field. CO and OP are following up the issue. As temporary solution, the compensation is disabled during the LHC filling to avoid any intensity modulation due to the bad stray field compensation.

On Monday, the values from the transformers were not available, neither in the Vistar nor in the working sets or in the Operation Display. The front-end cs-ccr-cmw3 could not be restarted and the control piquet could not be reached during the night. The problem was under investigation during the FOM.
K. Hanke added that the correct transformer reading is a necessary condition for ISOLDE to run.

K. Hanke asked if the ISOLDE watchdog problem has been solved. G. Rumolo replied that the watchdog did not cause any problems during the week. B. Mikulec added that the problem was not solved yet, and it could come up again once the STAGISO beam will be requested. BI is following up the issue.

ISOLDE (P. FERNIER):
HRS: the run was with the target 433 UC_2. REX was setup for the run of Miniball. The beam was available for physics since Tuesday.
There were three series of measurements for three isotope collections: Rb, Pb and Na
The Na run was not successful due to the low yield of the requested isotope.
The run stopped the 23/08.

GPS: after the target change and the target heating, the beam has been set up for the line GLM.
Starting from Friday, HV sparking was observed even with an increase of the target heating and a good vacuum. The problem seems to be related to the pollution of one of the electrodes. This caused unstable beam for GLM during the weekend.
On Monday, the stable beam was setup at 30 kV, instead of 50 kV. During the night, there was an attempt to clean the electrodes by decreasing the distance from the target to burn the impurities. Unfortunately, the voltage had to be limited in any case to 30 kV.

During the week, some water was dripping from the roof on electronic racks in the experimental hall. The infiltrations were caused by cracks produced by the roots of the trees growing on the roof. Moreover, it seems that the slope of the roof and the existing gutters are not sufficient for evacuating the water efficiently. K. Hanke will inform the responsible of the building renovations about this problem.

ISOLDE users (M. KOWALSKA):
There were three users for HRS. All users could conclude the REX run. The beam intensity as the quality was good.
Concerning the aforementioned problem with the Na run, the concerned user could profit from the other isotopes. It was known the Na production was risky since the isotope requested was very difficult to produce.

For GPS, the run started on Monday. After the numerous HV trips, the situation improved once it was decided to run at 30 kV. It is important, however, to find a solution to the limited voltage, since the next users will demand for 50 kV.

PS (S. GILARDONI):
The PS had a pretty calm week, with only minor issues.

As mentioned last week, on Monday the control rack of the ion stripper in TT2 was found powered off. Probably the rack was never powered after the Xmas flood. The rack was found in a pretty poor state, with cables covered with dust. The EN/STI piquet intervened to power it and A. Masi will check who is responsible for the rack and a possible consolidation.
On Tuesday: the transverse ion emittances have been measured in TT2 and within the 1 mum.
The ion user has to be re-built in INCA due to a faulty declaration during the first INCA deployment.

On Friday morning one-hour access was needed to change a relay gap of a 10 MHz cavity.

Between Monday and Thursday the MTE setting up continued with measurements with different settings of the transverse damper.

On Friday, Saturday and Sunday the MTE beam was sent to the SPS. The MD4 user had to be re-declared in INCA due to faulty declaration during the first INCA deployment.
The first tests were delayed due to SPS problems.
A new TT2-TT10 optics has been implemented. The transverse setting up in the SPS was done for the low energy part and a first attempt to correct the beam trajectories was done but more work is needed by the SPS experts for TT10.

Concerning INCA: some problems with the PPM copy are now becoming an issue in new beam setting-up. Moreover the programming of new users seems to be cumbersome. CO will follow the problem with OP.
During the ion and MTE setting up it turned out that the TT2 initialisation of the momentum and optics was not correctly done in INCA. This problem is followed-up with CO.

EAST AREA (L. GATIGNON):
The run was smooth for the entire week.

In T9, NA62 was running with a muon beam. This is a pretty unusual beam.
In T7, IRRAD was running fine.
DIRAC asked for the nominal intensity since Wednesday.
In T11 there was a test beam.

EAST AREA USERS (H. BREUKER):
The run was smooth. Unfortunately a colleague collapsed in the T7 control room most possibly due to too many people being present in the small room. Thanks to the prompt intervention of M. Glaser and the intervention of the Fire Brigade, the incident

did not have any consequence. S. Hutchins added that investigations will be done to limit the number of person that can be present at the same time in that room.

TOF (H. BREUKER):
H. Breuker said that there are no particular news.

R. Steerenberg added that the integrated intensity delivered exceeds the scheduled one by about 20%.

L. Bruno asked if any action was taken to check the water flow rate of the nTOF target. K. Hanke replied that the FOM was not informed that there was a problem with the target cooling.

J. Hansen added that the intervention on the nTOF transformer will be more difficult due to the lack of the drawing of the line in that zone. K. Hanke will bring up the problem of the missing layout of the transfer lines at the IEFC.

AD (K. MIKLUHA):
The AD had a good week with only minor problems and 80% efficiency.

The injection kicker has been tripping few times, but few resets were enough to solve the problem.

On Sunday evening the target cooling failed due to a temperature interlock. The CV piquet intervened to replace a broken relay and to increase the water level in an expansion tank.

L. Bruno asked if any follow-up was done for the target temperature.
B. Mikulec added that the faults of the target cooling system seemed to be related to the faulty relay.
S. Deleval added that more investigations will be done during the next technical stop.

AD USERS (H. BREUKER):
There are no particular news from ALPHA and ATRAP.
Concerning ASACUSA, the experiment will move to the next experimental campaign to measure antiproton annihilation cross section.

SPS (D. MANGLUNKI):
The SPS had a good week.

The LHC150 was taken on the LHCFAST3 cycle for the setting up.

Concerning the NA, a lot of changing had to be done for the sharing according to the requests of AMS. The AMS run finished on Saturday morning.

The MTE beam was taken for the setting up as mentioned in the PS report.

The CNGS integrated intensity reached the 2.5 10^{19} pot one week in advanced with respect to the schedule intensity.

An MD was done during which the tune was lowered by 6 units. The first tests were done on the operational LHC user, but it turned out that a dedicated user is needed. During these tests, it was possible to understand the source of the problem with the early dump. J. Wenninger will be contacted to solve the problem. In the meanwhile, the dump on the flat bottom is used instead.
A second MD with a coastable cycle took place during the FOM.

On Tuesday-Wednesday, the beam could not be easily delivered to the LHC due to a problem with the beam quality monitor. The problem was solved by the specialist and by CO.

On Thursday, there were problems with the MPS, the RF, the cooling of the extraction septum and the safety chain.
The MST and the access chassis had communication problems, solved by the specialists but the source of this issue not fully understood.

On Friday night there was a problem with the injection and the extraction kickers that were solved by the BT specialist. There was also a resettable fault with the mains.

K. Hanke asked about the frequent problems with the access system. K. Cornelis replied that the problem mentioned more frequently are related to the NA access system, and not the one of the machine. The kind of fault mentioned for the ring occurs at maximum once or twice a year.

CNGS:
No news.

NORTH AREA (L. GATIGNON):
The week was practically dominated by the AMS run, which was very successful. The other H6 users, however, suffered a lot from the continued changes of the beam sharing and requests triggered by AMS. Also the summer student sessions were delayed.

There were two technical problems solved by FirstLine. A problem with the control of a TAX was solved by the piquet.

NORTH AREA USERS (H. BREUKER):
S. Ting, AMS spokesman, wanted to thank everyone for the successful AMS run. The experiment could have more beam than planned and with all the requested very different conditions.

S. Gilardoni reported that the first UA9 paper has been accepted for publication.

H. Vincke reported that people not authorised were seen in the AMS experimental area, which is a supervised radiation one. Barriers should be installed to avoid the public to visit such places. L. Bruno will follow-up the problem.
H. Vincke added that there is also a coffee machine installed in the supervised area that should be removed. A project to install a small cafeteria was proposed in the past.

Another problem concerns the radiation levels at the cooling station. Recently the radiation level went down significantly. K. Cornelis said that the reduction is due to the change of the cooling water. In this case, the water could be the carrier of the radioactivity produced in another place. H. Vincke, however, said that according to his data the radiation decreased before the changing of the water. L. Bruno asked if some metal or impurity was found in the water. H. Vincke replied in the negative. K. Cornelis added that typically a black dust is found in the filters. K. Cornelis added that the station should be monitored, and in case that the radiation would increase again, the water should be exchanged.

CTF3 (D. MANGLUNKI for F. TECKER):
Last Tuesday early morning, the cathode of the gun broke. It was immediately replaced, but pumping, activation and high voltage conditioning took until Thursday afternoon before beam could be produced.
The drive beam could be set up quickly afterwards and the generated RF power in the TBTS allowed to accelerate the probe beam for the first time, by about 4 MeV (still very low power compared to nominal).
Friday morning was lost again due to gun HV reconditioning and the afternoon was used for bunch length studies with the streak camera and the RF deflector.
Monday, beam down TBL was established and optics measurements performed.

LINAC3 (M. O'NEIL):
The Linac delivered about 20-22 muA in stable conditions. D. Manglunki added that last year the intensity was about 28 muA, and that the Early beam can be produced with 25 muA.
D. Kuchler will be back next Monday to work on increasing the intensity.

LEIR (D. MANGLUNKI):
Studies are progressing to compensate for the missing intensity delivered from the Linac. In particular, the injection time has been advanced to try to take two Linac pulses on a short magnetic cycle.

RP took some measurement on the passerelle to check if it would be possible to leave it open to the public with the machine running. RP will communicate the results as soon as possible. M. Widorski added that the radiation levels measured are in good agreement with the predictions done in 2004.

PS-IONS:
See PS report.

SPS-IONS (D. MANGLUNKI):
The first ion beam will be injected on Thursday without acceleration.

TI (P. SOLLANDER):
There were no particular problems except the cooling of the AD target.

LHC interface with injectors (R. STEERENBERG):
Collisions were done with 48x48 bunches. The program foresees the use of the LHC150 beam but probably only with one PSB ring.

3. Schedule / Supercycle / MD planning

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

The MD block of week 42 has been moved to week 44 as the technical stop. The LHC ion run will start immediately after the MD.
The MD of week 44 has been advanced to week 43.
The UA9 run has been delayed from week 45 to week 46.

Concerning the technical stop starting on Monday 30/08:
- all the CT extracted beams and MTE beams as well as beam for nTOF will be stopped on Sunday 29 August at 24:00;
- all other beams will be stopped on Monday 30 August at 05:00. Access will be given on Monday 30 August as from 08:00;
- the technical stop will end for the PS complex on Tuesday 31 August at 20:00;
- the technical stop will end for the SPS on Wednesday 1 September at 08:00, followed by the MD.

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: updated list of activities for the next technical stop.

R. Brown presented the activities for the PS and PSB. The list of the activities can be found here for the PSB and here for the PS.
S. Gilardoni and R. Steerenberg asked to inform BI about the fact that the replacement of the BWS phototubes should not take place until the results from the PSB will be understood.
S. Gilardoni confirmed that the request to change the polarity of the KFA21 has been declined.
Concerning the numerous “note de coupure” announced during the last FOM, F. Tarita said that those are general service interventions whose impact on the work during the technical stop is difficult to evaluate. In any case, in case of problems, the responsible of the zone should be contacted. R. Brown stressed that this kind of interventions should be discussed and coordinated well in advance.
B. Mikulec added that one of the responsible for the interventions should be present to the FOM two weeks in advance with respect to the technical stops to coordinate the interventions.

A number of servers will be rebooted during the technical stop. The complete list can be found in the slides.

D. Hay presented the list of interventions for the SPS. The list can be found here. D. Hay, together with D. Macfarlane and F. Bais will coordinate the technical activities

for the SPS in the future. They should be contacted via the mail address: SPS.Technical-Coordination@cern.ch

5. AOB

6. Next meeting

The next meeting will be held on Tuesday, 31 August at 10:00 in 874-1-011.

Preliminary Agenda:

1) Follow-up of the last meeting
2) Status of the machines
3) Schedule
4) AOB
5) Next agenda

Minutes edited by S. Gilardoni