Minutes of the 18th FOM meeting held on 18.05.2010

Agenda:

1) Follow-up of the last meeting (B. Mikulec)
2) Status of the machines (Supervisors)
3) Schedule (B. Mikulec)
4) Special topic: Draft list of interventions during upcoming technical stop
5) AOB
6) Next agenda

1. Follow-up of the last meeting

The minutes of the 17th FOM meeting were approved.

Follow-up from the last FOM:

a) Status of the PS-Bfield fluctuations.
Analysis and measurements are ongoing.

b) List of interventions during upcoming technical stop. See special topics.

c) EAST Area magnet repair. See EAST hall section.

d) Linac2 source intensity fluctuation. The fluctuation is still present.

The weekly statistics of the operational beams is presented in the following table:

10 May - 17 May

	CPS		SPS
	rel	abs	abs
NORMHRS	No Data	No Data	
NORMGPS	96.36	27.29	
AD	Not available	Not available	
TOF	No Data	No Data	
EASTA	No Data	No Data	
EASTB	No Data	No Data	
EASTC	No Data	No Data	
SFTPRO	95.69	89.14	88.00
CNGS	96.55	90.76	88.00

2. Status of the machines

Linac2 (G. BELLODI):
The Linac2 had a quiet week.
On Friday, a problem with the tank1 vacuum required the intervention of the Piquet. This caused a down time of about 15 minutes.

There were 2 RFQ trips on Saturday morning.

PSB (G. RUMOLO):
The PSB had a good week, with only minor faults.

On Tuesday there was a problem with the synchronisation between PSB and PS. The problem could be solved after 2 hours.

On Sunday and Monday, the C02 RF cavity of ring4 was tripping. After a last trip on Monday night, the problem disappeared.

Concerning the operational beams, the last missing was TOF, which has been delivered to the PS in nominal conditions.

ISOLDE (E. PISELLI):
HRS: the tuning with stable beam was done on Wednesday. Unfortunately, in the evening the separator magnet was not working correctly. The B regulation had to be done manually directly on the hardware.
During the weekend, ISOTRAP received stable beam. At the same time, the problem with the magnet separator was solved by recabling a Tesla-meter.

GPS: the users received the beam between Wednesday and Friday morning. Then the magnet separator had a problem with the B-field control loop. Firstline and the piquet control had to intervene. At first, a general reset seemed to solve the issue. On Sunday morning, however, the problem reappeared. Since no solution could be found, it was decided to wait until Monday for the expert to come. G. Simonet finally found a power supply broken in the control module.

ISOLDE Users (A. HERLERT):
The run was fine even with the problems with the two magnet separators.
The largest part of the physics program could be concluded. Seen also that the target exchange has been delayed by one day, the run could be extended.

B. Mikulec asked if the target exchange delay might cause a problem with the user schedule. A. Herlert replied that there is some contingency. E. Piselli added that this will leave only one day for the beam setting up.

PS (Y. PAPAPHILIPPOU):
Tuesday afternoon the synchronisation between the PSB and PS had a problem. The beam was injected with a jitter of 1-2 turns with respect to the injection kicker. After few investigations in collaboration with the RF experts, the problem was solved by changing the synchronisation timing. However, it is not clear if this was the real source of the problem.

On Wednesday morning, the extraction kicker KFA71 went off. It was not possible to reset it or to reset the DSC. The specialist had to change a control rack of the power converter.
The same day, at the IEFC the MTE operation was discussed. It was decided to switch back to the CT extraction for all the fixed target beams except for one CNGS-SPS cycle until the situation with the SMH16 activation will be clarified. At the beginning the switch was foreseen for Monday, but it was delayed due to a problem with a CT extraction kicker.

The setting-up of the EAST area beams continued during the week. The DSO tests will be done on Wednesday.

On Saturday morning the octupoles used to correct the non-linear coupling for the MTE extraction tripped regularly. The piquet power changed a DCCT.

On Sunday night the OP crew realised that the ARCON system of the SUD branch was not transmitting the alarms to the CCC. According to the safety rules, the crew decided to stop all the beams while the piquet RP and the equipment specialist were trying to solve the problem. In total, one hour and a half was lost. In agreement with the RP piquet, the LHC could be filled during the un-availability of the ARCON system.
It was then found out that the transmission of the alarms was un-available since Thursday.
M. Widorski reported that this un-noticed failure was due to a bad coincidence with the long weekend. The ARCON system is daily checked (manually) since it is known to be prone to different problems. This is the reason of the foreseen renovation with RAMSES. Unfortunately, Thursday was holiday, and no one realised the SW issue causing the stop of the alarm transmission.
RAMSES will be deployed gradually starting from this autumn, but it will not cover the experimental areas.
B. Mikulec asked if an automatic check or procedure could be put in place to regularly test the availability of the system. M. Widorski answered that this is difficult to implement, since the system is pretty obsolete. However, investigations will be done to find a possible solution. → action M. Widorski
R. Steerenberg reminded that the operators followed strictly the safety instructions, once they realised that the system was not reacting correctly. However, a clear indication of the system failure should be put in place as soon as possible.
K. Sigerud asked if it would be possible to install a watchdog based on the typical number of alarms expected per day. The watchdog could react to the missing number of expected alarms. M. Widorski replied that this is not possible and, in any case, the new RAMSES system should allow soon running the injectors for the LHC in a much safer way. M. Widorski added that a number of watchdogs have been already installed and it would be delicate to add another one without risking system stability.
A. Bland proposed to test regularly the system inducing controlled losses at the monitor locations. M. Widorski replied that this is not an acceptable solution.

Later in the week, two 10 MHz cavities dropped and the intervention of the specialist was necessary.

On Monday, the security tests for TOF were done, with perturbation to the physics due to the dropping out of the Linac2 and TT2 while checking the safety elements and interlocks.

The safety tests for the EAST area will be done on Wednesday.

EAST AREA (L. GATIGNON, mail):

“The magnet is on place and tested [MNCP23, Simone], there is just a small issue with an interlock on the magnet, which Dominique wants to solve on Tuesday morning with help from the first line team.
The roof has been completed. We have now to make a few changes following the RSO visit (move a search box in T11 on Tuesday, add a few fences before CLOUD starts, ...) and then have the search tomorrow and the access system tests on Wednesday. Once we have all the signatures we can start.”

EAST Users (H. BREUKER):
The experiments are ready to take beam.
DIRAC could change the read-out electronics cards, profiting of the delay for testing them.
CLOUD will start the 10th of June.

TOF (H. BREUKER):
The experiment is finishing the commissioning. The run will start with Borated water in the target cooling to reduce the flux of the thermal neutron. After few tests, the water could be replaced by normal one. The duration of this operation is not clear yet.

AD (T. ERIKSSON):
The AD concluded the first week of physics. The run was pretty smooth without any particular problem.
On Tuesday, the C10 cavity dropped. In the afternoon, suddenly the pbar production decreased by 50%. A re-steering of the beam on the target solved the problem.

A quadrupole in the injection line was tripping quite often. The problem was solved by Firstline by changing a CPU card on the power converter.

On Sunday, large losses were observed at low energy. The CCC crew could solve the problem by changing the cathode voltage of the electron cooler. However, the change of 70 kV was considered to be too large for normal operation. The supervisors came to CERN and found that the voltage was finally back to the canonical value. The suspect is that the simple re-load of the GFA fixed the problem.

The users complained on Monday since they were surprised about the perturbation due to the TOF safety tests.

On Thursday there will be the test of the alarms with an evacuation exercise.

AD Users (H. BREUKER):
ALPHA users are very happy, thanks to the very good and stable beam. On Monday they had a temporary problem with the positron source.
ASACUSA installed the new tracker system. They will start soon H^- trapping.
No news from ATRAP.

SPS (K. CORNELIS):
Last Wednesday the SPS stop to put back in service the QD power converter. This took about 4 hours, with still some remaining problems.
CNGS was stopped for a 14 hour-long access. During the weekend, the MTE was taken regularly, with the usual spill fluctuation.

On Monday, the setting up of the SFTPRO with the CT extraction was perturbed by the DSO tests for TOF. The setting up will be concluded once the CT kicker will be repaired. In the meanwhile, the MTE beam was used for the fixed target physics until there was also a problem with an MTE kicker.
During this period there were longitudinal blow-up tests for the LHC beams.

It was observed during the week that, depending of the way the Supercycle is changed, TT20 might suddenly drop. This will be investigated.

B. Mikulec asked if G. Vandoni could be informed in case of longer SPS stops for works concerning HiRadMat.
K. Cornelis replied that the policy is to call the people on the access list in case of a stop longer than 1 hour.

North Area (L. GATIGNON, mail):
"Good start of those beam lines that started. Some machine instabilities (from MTE) were also visible e.g. in the COMPASS line as intensity fluctuations (stronger than the variations of the proton flux) and also in the fine steering (few mm vertical shifts form spill to spill at the end of the COMPASS experiment). As the experiment is still in setting up phase, this did not really matter. […]"

North Area Users (H. BREUKER):
COMPASS is ready for physics.
NA61 will do a test run next week.
On H6, the tests for the Si detector for the linear collider were concluded.
The installation for Medipix finished.
On H8, Totem will run for 1 more week.

CNGS (E. GSCHWENDTNER):
The facility is in good condition as is the run.

CTF3:
No report.

TI (P. SOLLANDER):
There was an electrical network perturbation, which stopped the LHC and the SPS. The voltage dropped by 25% for more than 40 ms.

LHC interface with injectors (M. LAMONT):
The run is progressing well. The record luminosity was reached. The programme foresees to have the nominal bunch intensity at the ramp. The Landau octupoles had to be used in this case and some emittance blow-up was observed.
To damp the instabilities, the longitudinal emittance will be increased at the SPS.

3. Schedule / Supercycle / MD planning

The current 2010 official schedule (V1.6) is available at:

https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/2010-injector-schedule_v1.6.pdf

A. Bland asked if the LHC will stop on Thursday. M. Lamont replied that this was not decided yet. A. Bland added that there is a request from IT/CS to install new sockets in BA5 for the access team, at the first floor. This would then be postponed to the next technical stop.

The final list of the activities for the next technical stop, as the time at which the beam will stop and resume, will be discussed at the next FOM.

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: draft list of interventions during upcoming technical stop

R. Brown presented the draft list of the interventions for the next technical stop concerning the Linac2 and the PS. The presentation can be found here.

The AUG tests concern the POPS area. The “note de coupure” is available here. All the colleagues are invited to check all their equipments before 16:00 on Tuesday, preferably by Monday evening, to be sure that the AUG tests did not turn off anything unforeseen. In such a case, the colleagues on the “note de coupure” should be contacted. All the elements not consigned should be checked as soon as the cooling water will be available.
F. Tarita mentioned that during the tests, the emergency buttons will be triggered and a patrol will be done to check if and which elements will go off.

S. Deleval mentioned that during the CV interventions there will be only minor perturbations to the Linac3 MD, i.e., there will be a short stop of 10 minutes of the cooling system to switch for the chilled water circuit to the raw water circuit. This perturbation was already discussed with E. Mahner (Remark: After the meeting it was decided to do this switch already on Friday 28th at 10am. Switching back will cause the mentioned ~10 min perturbation.).

D. McFarlane presented the list of interventions for the PSB and the SPS, available here. Concerning the PSB, there are a few conflicts to be solved concerning the magnet and RF tests (water needed) and the CV interventions.

S. Deleval mentioned that some water circuits will be cut for the SPS.

R. Brown and F. Chapuis will coordinate the PSB interventions.
R. Brown will coordinate the interventions of the PS.
J. Axensalva will coordinate the interventions in the SPS.

5. AOB

6. Next meeting

The next meeting will be held on Tuesday, 25 May at 10:00 in 874-1-011.

Preliminary Agenda:

1) Follow-up of the last meeting
2) Status of the machines
3) Special topics: Final list of interventions during upcoming technical stop (D. McFarlane)
4) Schedule
5) AOB
6) Next agenda

Minutes edited by S. Gilardoni