Minutes of the 26th FOM meeting held on 15.09.2009

Agenda:

1) Follow-up of the last meeting (K. Hanke)
2) Status of the machines (Supervisors)
3) Schedule (K. Hanke)
4) Special topic: Planned PS bus bar intervention in week 41 (R. Brown)
5) AOB
6) Next agenda

1. Follow-up of the last meeting

The minutes of the 25th FOM meeting were approved.

Open actions from last FOM:

a) Status of SPS BWS 414: L. Soby will follow the issue. He will replace U. Raich as BI representative in the FOM.

b) Send information to S. Hutchins to complete the list of EIS elements: S. Hutchins mentioned that some information is still missing. A review of the EIS elements will be presented shortly at the next FOM, and the final table will be presented at the IEFC on 25th September. Everybody is reminded to send the missing information to S. Hutchins.

2. Status of the machines

LINAC2 (R. SCRIVENS, mail):

"On Wednesday, access was made to consolidate the RF power coupler cloche. In addition, diodes for the source HT bouncer were changed (noise from them was causing error on the CAN bus source controller).

On Friday the beam intensity was increased.

Monday, the power supply for LTB.QFN20 was changed by the power piquet."

PSB (B. MIKULEC):

The PSB had a good week. Following the problems with a recombination septum last week, a regulation card had to be adjusted. The steering of the extraction line had to be re-adjusted.

On Monday morning the power piquet had to change the power supply of an LTB quadrupole. The repair caused one hour down time.

On Monday, a non-PPM magnet for ISOLDE had to be readjusted.

On Friday, an extraction kicker required a reset.

During the week, the MDs on the transverse emittance blow up using the transverse damper continued. There are still doubts about the BWS measurements at low energy. BI will follow up the issue.

ISOLDE (P. Fernier):

HRS: the run was with target #410 Uc2C at 30.34 kV for the Miniball experiment via Rex. The run was successful.

GPS: The preparation for the run during week 38 was done. The target used will be target #411 Lac at 30.2 kV. Setting up with stable beam (133Cs) has been completed, as well as a proton scan and yield measurement. The beam should be available by Tuesday evening for REX.

During the week the converter of the DISOHRS crate had to be changed without perturbing operation.

K. Hanke mentioned that a special request from the ISOLDE users concerning the supercycle composition will be discussed after the FOM.

ISOLDE users (M. KOWALSKA):

The users were happy.

PS (A. GRUDIEV):

The PS had a busy week. On Wednesday evening, the fast kickers used for the CT extraction of the CNGS and SFTPRO beams stopped working. One phase of the power converters was missing. A temporary fix was found. As the equipment specialists were absent, the repair took longer than foreseen. About three and a half hours were lost. On Friday, the C80-08 cavity used for ions had a problem. Also in this case the specialist was absent. The problem was fixed by changing a 24 kV power converter which was taken from the spare 40 MHz cavity used for protons. Two and a half hours were lost for the ion run. Even after this intervention, the cavity was not stable. On Monday the specialist identified a problem with the final pre-amplifier in the tunnel.

On Saturday at 10:00 am the BFA21s stopped pulsing. Up to five non-specialists tried to solve the problem, since as early in the week the specialists were absent. At 18:30 the problem could be solved. There is some suspicion that the problem on Wednesday could have caused an overvoltage on some components that finally caused the breakdown on Saturday. A. Grudiev thanked all colleagues involved in fixing the problem.

On Sunday, a gap relay of a 10 MHz cavity could not be controlled any more. This caused an increase of the machine impedance, i.e. beam instabilities and losses on the high intensity beams. An access of 1h was necessary on Monday morning to fix the problem. Later, another access of 5h was necessary to fix the problem with the 80 MHz cavity for the ions.

H. Breuker asked how it was possible to correlate the BFA fault of Wednesday with the one on Saturday. J. Borburgh replied that the problem on Wednesday was solved only by a temporary fix, and that the two incidents could be related

K. Hanke added that for some equipment no piquet service exists, but experts are intervening on a best-effort basis.

PS East Area:

No news.

East Area Users (H. BREUKER):

DIRAC had a good run. IRRAD needed a short intervention. On T10, the ATLAS users started with a non-justified delay of one week. On T11, the installation of CLOUD continued.

AD (C. OLIVEIRA):

There were few RF problems during the week. The extraction transformer was not showing correct intensity. BI is investigating the issue. FirstLine had to intervene few times.

AD users (H. BREUKER):

ATRAP was not running during the weekend. The physics time was shared between ALPHA and ASACUSA. ASACUSA was trying for the first time to produce anti-hydrogen during a dedicated run. A new positron source, with a factor of three more intensity, should improve the production rate.

ACE arrived for a 7 day long dedicated run. Unfortunately, the electrical plugs installed near their temporary counting room were taken by another experiment. A new series of plugs will be installed during the next shutdown.

NTOF (H. BREUKER):

The intensity is increasing and approaching the expected intensity. The experiment was running on Iron, and now will move to Nickel. The physics program is progressing well.

SPS (D. MANGLUNKI):

On Wednesday, an intervention was required to fix the beam dump kicker. After this, an overload of the extraction elements caused an electrical problem in BA4. On Friday, an intervention was required on the TRX3 and 4 to change high voltage resistors. Then, on Saturday, the SFTPRO and CNGS beams were perturbed by the BFA problem in the PS.

Up to 2 10^{19} POT have been delivered so far to CNGS, with the intensity delivered being ahead of the predicted one by about eleven days.

On Monday, during the PS MD access was given to fix the water leak on two magnets, whereas a third one will be fixed during the next technical stop.

During the intervention, the water-cooling was stopped, but the interlock of the MKP did not work. A power converter continued to pulse without cooling and eventually broke. The Fire Brigade had to intervene and the piquet could fix the power converter.

During the night, the MD on collimation had to be cancelled due to a problem with the collimator controls. Only the RF MD could be done and a part of the time could be used for the setting up of the ion coast cycle.

It was requested to increase the intensity on the SFTPRO at the restart of the normal operation on Thursday.

H. Vincke added that during the RP survey for the mentioned water leak intervention, a large dose was measured on one of the magnets. D. Manglunki replied that the reason of the large dose will be investigated. P. Sollander asked if the BA4 problem has been understood. D. Manglunki replied that the source of the problem was a too long extraction flat top.

CNGS:

No news.

SPS North Area:

No news.

North Area users (H. Breuker):

On Monday, an intervention was done on H2-NA61 to fix a problem with the water-cooling for some of the racks. Since this was not sufficient, a second intervention was necessary. The physics run is continuing successfully with a Hydrogen target.

On H4, CMS-ECAL performed irradiation studies. The next user will be NA63.

On H6 everything was fine. On H8, the drift tube program could not be completed and some data will be taken in parasitic mode during the UA9 run.

COMPASS was fine.

LINAC3 (R. SCRIVENS, mail):

"With much tuning, an intensity of ~23uA of Pb54+ could be produced from Linac3.

The rest of the machine ran smoothly, and managed to run over the full weekend without adjustment.

The ovens were refilled on Monday (14/09), and it is hoped to be in a stable situation with beam for lunchtime today (Tuesday)."

D. Manglunki added that the first beam after the source refilling was taken already on Monday evening to test that the injector chain was ready for the week.

LEIR (C. CARLI):

The machine was very stable. The Linac still delivered less intensity than foreseen. The mentioned 23 μA were not seen at LEIR injection. The NOMINAL beam is still not ready due to the low intensity from the Linac but also due to losses at the beginning of the acceleration.

PS WITH IONS (A. GRUDIEV):

The ion beam was regularly delivered to the SPS, except during the problems with the 80 MHz cavity.

SPS WITH IONS (D. MANGLUNKI):

The beam was injected until Friday. A lot of progress has been made, with the goal of extracting beam for the TI tests the 28th of September.

The ions will be requested during the maximum amount of time, i.e. also during week 38 until Thursday and the first two days of week 41. The schedule will be discussed with the MD coordinator.

CTF3 (D. MANGLUNKI for S.BETTONI):

For the status of the combination in the combiner ring: 15 A flat pulses could be done, which is the maximum achieved up to now.

For the beam in PETS: a maximum of 10 A could be reached, to be improved with a better closure of the orbit.

For the PETS power production: the maximum power ever produced, 166 MW, could be reached, with the beam better bunched than last year.

About 9 A were sent to TBL, which confirmed the correct bunching of the beam.

The debugging of TL2 revealed some discrepancies between the model and the machine. In particular, the analysis of the kick measurements identified an error of 23% in one of the quadrupole used to do the quadrupolar scan.

For the Lapp BPM status: the Lapp colleagues are debugging the system. One of them should come on Thursday and all of them will come from next week to take advantage of the fact that CLEX will be open and they can easily access the system.

There were two problems with the access system: one intervention was needed in the combiner ring/delay loop to repair a camera and then the system for the accesses in the combiner ring was broken but it could be quickly repaired.

TI (P. SOLLANDER):

No problems.

3. Schedule / Supercycle / MD planning

Version 3.6 of the schedule is available at:

https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/Schedule2009.pdf

The supercycle composition is available at this web page.

In the view of the future TI tests, the LHC beams mentioned during the last FOM should be checked.

The technical stop in November has been cancelled and advanced to the Wednesday of week 41 in order to permanently repair the PS bus bars. The stop for the PS will be of three days, but the technical stop activities will be possible only on Wednesday. The other two days will be used only for the bus-bars interventions, and the Booster will be able to deliver beam to ISOLDE whenever there is no access to the PS ring.

The interventions in the SPS could be done on Wednesday and Thursday.

4. Special topic: Planned PS bus bar intervention in week 41 (R. Brown)

R. Brown presented the activities related to the replacement of the PS MB bus-bar. A detailed list of the interventions can be found here.

Before the intervention, tests of the installation will be done outside the tunnel to train the transport colleagues.
During the MD before the stop, the PS will only run with low-intensity beams to allow for radiation cool-down. Beam operation is foreseen to stop at 6:00 AM, but RP will communicate the exact time as soon as the list of the technical stop activities will be finalised and the beams executed during the MD are known.

During the same intervention, and if everything goes according to plan, XCT in SS07 will be also exchanged.

G. Vandoni mentioned that a lot of interventions are planned also in the SPS.

K. Hanke added that the beam will be possible for ISOLDE for during night time when there is no access.

M. Rettig mentioned that the work has to be well organised to avoid having too many people intervening at the same place.

Everybody is asked to send the planned activities for the technical stop to the corresponding machine superintendents as soon as possible.

5. AOB

6. Next meeting

The next meeting will be held on Tuesday, September 22nd at 10:00 in 874-1-011.

Preliminary Agenda:

1. Follow-up of the last meeting
2. Status of the machines
3. Schedule
4. List of technical stop interventions for 7 October (R. Brown)
5. EIS inventory (S. Hutchins, t.b.c.)
6. AOB

Minutes edited by S. Gilardoni