Minutes of the 41st FOM meeting held on 08.11.2011

Agenda:

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

1 Follow-up of the last meeting

The minutes of the 40th FOM meeting were approved.

Follow-up from the last FOM:

Pending actions:

Status of the PS-Bfield fluctuation with POPS

The action is on hold since POPS is not operating. Action not closed.

Find a way to know if screens are in the beam (in AD and PS)

After the meeting L. Soby contacted S. Burger about the AD screen and his reply was:

"The MTV problem in the AD is probably due to the fact that the VME crate was down. The screen of the device MTV5303 was probably IN before that because it is a EIS device ("Element Important pour la Securite") and is by default IN (acts as a beam stopper) and is in the interlock chain for accessing or in the other way running the machine. Since the crate was down, the operator couldn't take the screen out (or get the status), and fill the machine."

Action not closed.

2 Status of the machines

LINAC2 (D. Küchler):

No problems.

PSB (B. Mikulec for K. Hanke):

The machine availability was very good, and besides two INCA related issues, there are no problems worth mentioning.

All EAST cycles have been modified in the PSB such that only 2 turns are injected into the PSB instead of 3. The stability stays the same, but there will be reduced losses in the machine.

ISOLDE (E. Siesling):

It was a very good week with few technical problems.

GPS: beams were stopped on Tuesday and the target was changed yesterday morning. Proton scan and few tests ran until 5am this morning.

HRS has been running with a Uranium Carbide target delivering beam to the CRIS. Stable beam tuning occurred in COLLAPS.

A Penning gauge was intermittently switching off and would need to be changed. This issue will be addressed to the Vacuum group. Besides, a circuit breaker went off due to excessive load, and the TI piquet fixed it.

REX: stable beam from EBIS. There was a problem with the RFQ on Thursday and a tube was changed on Friday.

ISOLDE users (M. Kowalska):

It was a good week with many activities. There was a new experiment on HRS which could even not swallow the provided intensity, so it was lowered.

So far, it looks promising for next year from the users point of view.

“The WITCH experiment seems to be cursed.” Hopefully the upcoming run will be successful.

PS (S. Gilardoni for R. Steerenberg):

It was a very good week.

The 50 ns double batch LHC beam with small emittance and 1.5e10 p/b was produced for tests.

The problem with the transition crossing GFAs was solved. Indeed sometimes settings on the preceding cycle affected the current cycle.

On Wednesday, new optics to increase the beta on the location of the SEM grid was implemented. It is however not matched to the SPS optics.

On Friday, there was a problem on the ARCON system for TOF, and beam was cut during 1.5h for an RP intervention.

On Monday during MDs there were intermittent radiation alarms on PAXS35 due to sudden losses. The problem disappeared without understanding the cause.

East Area (L. Gatignon):

It was smooth running despite a trip on Sunday and a broken compressor on CLOUD.

DIRAC is asking for a cross-calibration.

East Area Users (L. Gatignon):

Users were happy and the last user changes occurred.

TOF ():

No report.

AD (T. Eriksson):

There was no hardware failure. Some time was spent tuning the machine and the main power supplies.

There was a misunderstanding for the beam stop times before the technical stop, leading to the AD beam being stopped 24 h before the technical stop instead of 3 h. J. Vollaire confirmed that there is no need to stop AD earlier if there is no access to sensitive areas (e.g. target area) as AD is working on a very low duty cycle.

AD Users (T. Eriksson):

Users were upset due to the unforeseen loss of 21h of beam time.

AEGIS has reduced its beam time requirements.

SPS ():

Y. Papaphilippou sent a mail before the meeting.

“SPS operation this week was dominated by the dump kicker fault which stopped the machine for almost 48h. More specifically, on Wednesday evening, there was a failure of the vertical dump kicker MKDV2. The problem was traced to a burned ceramic high-voltage feed-through which had to be replaced by the ABT team by late next morning. In order to avoid a possible vacuum contamination from an old local vacuum group, a group further away was used, putting in atmospheric pressure not only the vertical but also the horizontal dump kickers. This slowed down the pressure reduction and delayed significantly the conditioning of the equipment. In addition, the voltage rise had to be stopped during Thursday night due to sparking and restarted at reduced voltage with much lower speed. During Friday morning, we tried to accelerate the conditioning by using the beam (LHC 50ns with short bunches) and indeed observed some vacuum activity, but there was no significant increase of the pressure slope. Conditioning continued during the afternoon and resumed when the voltage reached around 40kV, i.e. 15% lower of the nominal value, which is considered by the ABT experts sufficient for safe beam dumping. Beam was back at 7pm, initially testing the positioning of the dumped beam with low intensity, at different energies. Gradually beam was made available for the SPS users, CNGS (4 single bunches) and LHC beams (mostly single, 12 bunches and ions on Saturday and Sunday). Conditioning with beam (50 and 25ns with up to 4 batches) was performed during Saturday, always controlling not to exceed a pressure threshold of 10e-7mbar.

L. Ducimetière presented slides, in which he showed the damaged MKDV2 feedthrough. Vacuum recovery was long because the MKDH sector had to be vented to connect a primary pumping group. A spark happened during conditioning and caused additional delay. L. Ducimetière pointed out that this spark could have had catastrophic consequences on the magnet.

MKDV2 had been changed and there is unfortunately no spare for this magnet (there is one for MKDV1). L. Ducimetiere said that there were no plans to construct a spare for MKDV2. The kicker group will however study how the MKDV1 spare can be used in both MKDV1 and MKDV2 positions (smaller aperture).

Following this incident, the following actions are now planned:

- More conditioning of MKDV2 during the winter stop.
- To accelerate the test and conditioning of the MKDV1 spare.
- Refurbish the MKDV2 magnet during LS1.
- Enable to pump directly on the MKDV to avoid venting the MKDH.

Other events worth mentioning:

- On Monday morning, the mains tripped due to a failure of SMD4 (broken thyristor to be changed) and operation resumed after switching to SMD14 (1h without beam).
- On Tuesday afternoon and with the agreement of the CNGS coordinator, the CNGS beam was stopped for around 1.5h for checking the wave form of the MKE4 extraction kicker. On Tuesday evening, a delay in the SPS RF clock was discovered explaining the low muon yield of the CNGS 4-bunch beam.
- On Wednesday midday, the beam was cut for 3h for an intervention on the vertical transverse damper 2, due to a damaged amplifier.

North Area (L. Gatignon):

DREAM is now present. Some problems occurred during the weekend. EPC first line was called to fix problems with COMPASS. On H8 a magnet was not at the beam reference. Putting it in DC mode solved the problem.

North Area users ():

No report.

CNGS (E. Gschwendtner):

All the muon equipment is being installed and the experiment will restart on Friday. After the meeting, E. Gschwendtner confirmed that the management agreed to use the nominal CNGS beam.

CTF3 ():

J. Barranco sent an email before the meeting:

“Monday, almost all day was spent in recovering from the power cut of Friday 28th October. Among the issues fixed were:

- Several crates were down (BPMs in TBTS) due to a burnt fuse, and we contacted TCR who sent experts.

- Some magnets with a variety of problems that were solved by the Piquet First Line.

- Reflattening of all compressed pulses of the klystrons after restarting them.

Late on Monday beam was back in the TBTS for the conditioning of the PETS ON/OFF mechanism. Beam left during night operation informing CCC, for 6 hours.

On Tuesday, works in MKS02 to saturated in order to improve stability. Beam to TBL for dispersion measurements and optimization. CALIFES operation resumed, energy brought up to 201 MeV. TBTS check for noise-signal ratio in the BPMs modified to improved signal.

On Wednesday, water flow for klystron cooling in CALIFES now more stable after N. Roget adjusted it. All day dispersion measurement and correction from TL1 to TBTS in view of factor 8 combination. Night operation with beam to TBTS adding a new interlock system for the klystrons.

On Thursday, some issues occurred with a quadrupole in the Linac, and First line solved it. Calibration of TBL screens by BI people. Beam over night operation informing CCC.

On Friday, CLEX access to fix the screen at the end of the CALIFES line. Several magnets were found OFF, and we called First Line to check the power supplies. Factor 3 operation for conditioning of the TBTS PETS ON/OFF mechanism.

On Saturday, the CCC pointed out that the beam was stopped due to the PEI interlock in MKS07.

On Sunday, the supervisor passed by to reset the interlock and restart several magnets that were OFF. Resume conditioning of the PETS ON/OFF informing again CCC.

On Monday, optimization of factor 4 for factor 8 operation from Wednesday likely."

J. Barranco mentioned a special request from the CTF3 Vacuum expert Esa Pajun (169328) who would like to be informed (SMS or phone call) when a power cut occurs outside the normal operation schedule, i.e. weekends, in order not to leave the ion pumps off for a few days, which leads to more difficult restart.

TI and PS operation were contacted to find a solution.

TI (P. Sollander):

It was a quiet week. There was a false alarm on Saturday and the technical stop was a busy time.

LHC interface with injectors (M. Lamont):

LHC MDs were decimated by the cryo problem and the MKDV trip. Ions are ready for stable beams, and intensity will be cranked up. The p-Pb trial is planned for Wednesday next week. S. Hancock added that it should start with the ion INTERMEDIATE beam.

IONS

LINAC3 (D. Küchler):

It is running very well and it is a pity that no one used the beam. The oven is refilled during the meeting.

LEIR (C. Carli)

It was a very nice week, and beam was always available.

PS (S. Gilardoni)

In his email before the meeting, R. Steerenberg mentioned that the F16.QDE217 quadrupole in the TT2 line trips very often during ion operation. The power converter specialist plans to solve this during the technical stop of 08/11.

SPS ()

Nothing special.

3 Schedule / Supercycle / MD planning

The 2011 schedule (V3.7) is available at:
https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/injector_schedule.pdf

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 AOB

Regarding the LEIR issue with OASIS from last week, it is clear that the information regarding the validation of the new OASIS server had not been communicated to all persons concerned. K. Sigerud will discuss with the OASIS team and ask that such announcements in the future are sent to the OASIS user group mailing list.

As already mentioned, A. Bland said that an upgrade of all CCC consoles to SLC6 64 bit will occur in 2012. Four prototype consoles have already been switched to SLC6 and are marked with red stickers on the screen and keyboard, warning that development should not be done on these consoles. After the meeting A. Bland sent the list of prototype consoles:

- CWO-CCC-B2LC (Booster)
- CWO-CCC-A4LC (SPS)
- CWO-CCC-D9LC (LHC)
- CWO-193-AD2 (AD Control Room)

There is more info at http://wikis/display/COIN/SLC6.

5 Next meeting

The next meeting will be held on Tuesday, 15th November 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 B. Salvant