Minutes of the 30th FOM meeting held on 23.08.2011

Agenda:

1) Follow-up of the last meeting (K. Hanke)
2) Beam request for the next LHC MD (G. Papotti)
3) Status of the machines (Supervisors)
4) Schedule (K. Hanke)
5) Final list of interventions for the next technical stop (machine superintendents)
6) AOB
7) Next agenda

1 Follow-up of the last meeting

The minutes of the 29th FOM meeting were approved.

Follow-up from the last FOM:

Pending actions:

Status of the PS-Bfield fluctuations with POPS.

The fluctuations are still under study. Action not closed.

2 Beam request for the next LHC MD

G. Papotti presented the beam requests for the next LHC MD. Slides can be found here.

3 Status of the machines

Linac2 (D. Kuechler):

It was a good week for Linac2. Linac2 was affected by the power cut on Thursday. The Linac2 team had difficulties reaching the CCC. Nevertheless the linac was back in operation by 14h30 (2.5 hours down time). D. Kuechler remarked that the RP piquet could only be directly reached during working hours or otherwise via the fire brigade. J. Vollaire replied that they would see if this situation could be changed.

PSB (K. Hanke):

It was a quiet week for the PSB. The only big event was the power cut. There were some problems restarting some equipment, but all beams were back by 16h10. There was a problem with a pulse repeater affecting the injection. On Friday afternoon there was a planned interruption to go back to the French network. In the night from Sunday to Monday there were a few trips of the C02 cavities of rings 2 and 4. The cycles for the coming MD were mapped yesterday.

ISOLDE (D. Voulot):

A failure of the RF amplifier for the 9-gap cavity on the REX linac prevented an HRS run for Miniball. Thanks to the efforts of the RF team and despite the power cut the amplifier could be

restarted on Thursday evening and 72Kr at 2.85 MeV/u could be delivered to Miniball. Unfortunately the amplifier failed again on Friday morning and could not be restarted. The run had to be cancelled. The supplier of the amplifier (Bertronix) was called in for an emergency repair, and the amplifier was operational again on Tuesday morning.

ISOLDE was affected by the power cut, but this time all system could be restarted within a few hours and none of the targets were damaged. It is to be noted that most of the ISOLDE vacuum restarted automatically within minutes of the power cut, a clear improvement brought by the recent upgrade of the ISOLDE vacuum control.

Work is ongoing for the next GPS/REX run starting Wednesday.

ISOLDE users (M. Kowalska):

The failure of the 72Kr run was of course disappointing for the users especially since this run had failed already twice in the past, but the one night of beam was sufficient to establish the good yields and quality of the beam delivered. The efforts of the ISOLDE team and RF team to try to save the run were very much appreciated by the users.

ISOLTRAP tried to make use of the available Kr beams during the weekend, but with limited success.

There was no report from the ISOLDE users last week. ISOLTRAP had a very successful run on GPS. Several isotopes could be measured for the first time and a new isotope was discovered (233Fr). This is exceptional for an ISOL facility which is in principle not optimized to produce very exotic nuclei.

PS (G. Metral):

The main problem for the PS was the power cut on Thursday following the incident on the 18 kV line. All the equipments were down, nevertheless the beam was back at 16h30 after only 5h downtime. There was a second interruption on Friday to switch back to the French network after the repair of the damaged line. In parallel an intervention on the POPS capacitor banks took place to raise the alarm temperature level from 30 to 40 degrees, which required a consignation. The overall downtime was 2h.

This week several CNGS cycles have again been lost at extraction. The problem seems to come from a loss of communication between the DSC and ejection equipment.

Tuesday afternoon the timings for the BSW16-12 and BSW16-14 had to be readjusted. However the precise setting of the synchronism of the four bumps from the CCC is made difficult by the poor quality of the signals. It is also difficult to do it locally as some timing signals are missing. Several other equipments cannot be observed from the CCC. CO is looking for a solution.

The two ion cycles (early and nominal) have been injected, accelerated and extracted to the D3 dump this week.

Air conditioning problems in building 359 led to over-temperature problems with RF equipment, which perturbed operation.

A frequency synthesizer card (PENTEK 1420) is malfunctioning. CO had only one spare available, which was also faulty. The RF team came up with a temporarily solution.

SEMFIL 277 on TT2 is out of order. ABS on this extraction line is no longer possible due to this equipment failure.

Reply / comments:

- EN/CV will check the air conditioning for building 359.
- The poor signal transmission will be followed up by CO.
- Spare PENTEK 1420 cards: this problem is critical as it is also used in other machines and this will be followed up by CO.

Complementary information sent after the meeting by K. Sigerud: the shipping request has been done for the unit to be repaired and a quote for new modules has been requested.

East Area (L. Gatignon):

The East Area is running with DIRAC, IRRAD and the T9 (DIRAC-T10) + T10 (ASACUSA) test beams. CLOUD will only come back in October.

DIRAC went back to four 400 ms spills (instead of 3*600 ms) to improve spill structure and beam stability.

The East Area came back rather well after the power cut on Thursday.

East Area Users (H. Breuker)

Happy users (in particular DIRAC and AD3).

TOF (H. Breuker):

TOF is running fine.

AD (T. Eriksson):

There were a few incidents this week at AD. There was a water leak inside the AD hall due to an air conditioning failure. Thanks to the fast intervention of the fire brigade the damage was limited and operation of the machine was not interrupted. AD was affected by the power loss. The machine was back in operation by 15h and the beam was back for users by 19h.

On Saturday evening there was a problem with the stochastic cooling. The piquet RF could not be reached. The problem disappeared by itself after some time.

On Monday one DSC got stuck. CO was contacted.

There was stable beam condition when the beam was running. Several hours were lost due to the different problems.

AD Users (H. Breuker):

No discussion of extension anymore for the end of 2011.

Otherwise happy users.

SPS (K. Cornelis):

It was a good week for SPS.

A 24h floating MD on Friday was lost due to problems. Could not find better settings.

Curiously the power cut did not affect the SPS.

On Sunday there was an intervention on the RF power. A tube was replaced by the piquet RF.

Since Sunday LHC-MD beams have been prepared. The SPS had a quick look at the 25 ns beam, which did not look ok. K. Hanke mentioned that at that time the beam was not yet set up in the injectors, but that it was available by now. There is still a lot of setup work to be done in the SPS.

North Area (L. Gatignon)

In general stable operation of all North Area beam lines whenever the machine was up.

It came back reasonably well after the power cut on Thursday, but there were some issues with ECN3 access. The problem was solved by the access team. Once again there was some confusion when several people found themselves locked inside the 138 zone. There was no real danger, but the problem should be fixed by the access team.

In the night from Sunday to Monday there were some difficulties to move T6 and later other obstacles. The EN/STI piquet was called several times. The problem was finally solved in the early morning after rebooting the DSC for the access safety.

K. Hanke commented that the access issue would be brought to the IEFC meeting.

North Area users (H. Breuker)

Switch users as scheduled. Thanks to E. Gschwendtner for solving the conflict of the counting room for UA9 and LHCb.

CNGS (E. Gschwendtner)

CNGS is running very well.

CTF3 (J.Barranco, reported by D.Manglunki):

Monday, there was an intervention in MKS13 as the high voltage charging power supply had to be changed. The third traveling wave tube has been received back, so it is foreseen to use the three of them to provide the factor 8 of combination. Another intervention happened, this time in CALIFES to put back the preamplifier in the laser chain. There was beam only in the linac.

Tuesday in the morning radio protection checked detectors in CTF2 and the klystron gallery. CALIFES was retuned after last week's problems and back to nominal energy of 200 MeV. In the afternoon the beam was sent to TBL for measuring power production against horizontal and vertical position. A clear linear dependence was found in the horizontal one.

Wednesday a factor 4 beam was recombined in TBTS for breakdown kick measurements. The recirculated power was increased to produce more breakdowns in the accelerating structure so the Uppsala people could record events for further studies. In the afternoon, the amplifier of MKS07 had to be taken to the lab to be repaired so there was no beam until late. Finally a low breakdown measurement regime was set up for the night.

Thursday the result of the previous night measurements showed a breakdown rate of ~1e-4 in consistency with previous measurements. Most of the afternoon was spent to recover from the sudden power cut just before midday.

Friday a factor 4 combination could be recovered after the power cut, but again there were problems with the phase of MKS30 in CALIFES, so it was not possible to do two beam acceleration until late Friday. And just afterwards the pulser of the gun stopped pulsing, which will require an access on Monday morning so RP has been informed. No beam over the weekend.

K. Hanke asked if CTF3 would be running during the technical stop, which D. Manglunki affirmed.

TI (F. Hebert):

There were three electrical perturbations on Thursday at 6h30, 8h49 and 11h45. The first two were due to stormy conditions according to EDF. The last one was due to an incident on an 18 kV power line. There is no detailed report yet on this incident. A report will be presented at the next FOM meeting.

LHC interface with injectors:

No report.

Linac3 (D. Kuechler):

It was a difficult week for Linac3. On Tuesday afternoon there was a cooling problem. On Wednesday the planned refill of the ion source took place. The beam was back Thursday morning, but Linac3 was affected by the power cut on Thursday afternoon. The linac was restarted in the late afternoon then tripped again with an RF problem. A cathode switch was found broken most likely due to the power cut. The spare did not work (not very surprising since it was in stock for many years). The RF team made a temporary solution. The linac was back in operation on Monday, but the source is currently not performing very well.

LEIR (D. Manglunki):

Not much beam in LEIR this week.
On Tuesday the Trim Editor LSA problem was fixed by G. Kruk; it was then possible to change the tune and start optimising the transmission through the EARLY and NOMINAL cycles. The NOMINAL beam was transferred to the PS in the afternoon.
On Thursday by the time the beam was back after the source refill, a power cut affected the whole site, and the afternoon was spent restarting LEIR with the help of the CO and PO piquets. Some elements (ITE.BHN40, ER.QDN2040...) appeared to be OFF as seen from the control system while they were actually pulsing. The last element was restarted by E. Carlier at 18:30. On Friday the RF problem on Linac3 prevented LEIR from taking any beam. This was only repaired on Monday morning, but then problems with the RF cavities appeared, which were finally solved on Tuesday morning.

4 Schedule / Supercycle / MD planning

The 2011 schedule (V3.2) is available at:
https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/injector_schedule.pdf

The planning for the upcoming MD is available at:

https://ab-mgt-md-users.web.cern.ch/ab-mgt-md-users/2011/

5 Final list of interventions for the next technical stop

All planned interventions for the injector complex are available at:
https://espace.cern.ch/rpps/wdp/Lists/Interventionlist/Active.aspx

The planning for the upcoming 2-day technical stop for the injectors starting on Tuesday 30/08 has been confirmed and is summarized below:

- TOF, CNGS and SFTPRO beams have to be stopped on Monday 29/08 at 8:00.

- All other beams will be stopped on Tuesday 30/08 at 5:00.

- Access for RP from 8:00 on Tuesday, after which the interventions can start (after 9:00 depending on RP progress in the different machines and conform to the planning agreed with the machine superintendents).

The technical stop lasts in principle until Thursday 1/9 8:00, but in case all the interventions would be finished by Wednesday evening, the machines will attempt to start up earlier.

List of interventions planned by CO for the next TS (sent by mail after the meeting by K. Sigerud):

- An intervention is planned on the logging service during the technical stop:
    - Server replacement and attribution of new storage, performed by the IT/DB support, will take place on the 30th August, starting at 9:00, duration 1h.
    - During this time direct logging to the DB and TIMBER access will not be possible.
- 40 POW devices (device_name like 'OBR.DIP%') will be removed from the booster on the 30th August. Z. Zaharieva will perform the removal and ask piquet to regenerate affected FEC.
- Deploy the new mil1553 driver from J. Lewis on dleipow1, cfc-2010-rpow1, cfc-193-rpow1.
- Release LSA for LHC/SPS with changes to allow publication of Trims i.e. every time some trims a parameter, a notification about that will be sent via JMS. This is so that applications can subscribe to it and avoids pulling settings with high frequency just to verify whether they have changed or not.
- The OASIS team will use this technical stop to try to find the origin of a recurring problem which is somewhere between oasis server, JMS broker and oasis clients. It is easy to reproduce by restarting oasis-server.
- A new version of the Linac2 Watchdog will be released.
- japc-monitoring will move version 3.x.x as PRO.
- The timing team will introduce a new rule in the Sequence Manager to avoid to send new hardware settings in the CBCM if all CPS cycles are not mapped on LSA cycles.
- There will be changes to routers during the technical stop:
    - Monday IP1 -> New CCC/CCR Router, no perturbations except to IP1 (PS Access System only) if done correctly.
    - Tuesday IP50 -> New CCC/CCR Router, no perturbations except to IP50 for 1 minute (Vistars, Wall Screens, LHC/TI2/TI8 Beam Cameras, upper fixed display consoles in CCC) if done correctly.
    - Date to be chosen “OSPF reconfiguration on TN to GPN link”, 15 to 30 second cut in TN <-> GPN traffic
- New PRO release of cmw-rda v.2.9.x Java library RDA

- Upgrade of all Proxies (LHC & Injectors)
- Upgrade of RBAC A1 servers

6 AOB

No AOB.

7 Next meeting

The next meeting will be held on Tuesday, 30th 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 D. Voulot