Minutes of the 29th FOM meeting held on 16.08.2011

Agenda:

1) Follow-up of the last meeting (K. Hanke)
2) Status of the machines
3) Preliminary list of interventions for the next technical stop (machine superintendents)
4) Schedule (K. Hanke)
5) AOB
6) Next agenda

1 Follow-up of the last meeting

The minutes of the 28th FOM meeting were approved.

Follow-up from the last FOM:

Pending actions:

Status of the PS-Bfield fluctuation with POPS

S. Gilardoni said that the fluctuation is still under study. Action not closed.

Send the list of activities for the next technical stop to the machine superintendents

Activities should have been sent. Action closed.

2 Status of the machines

Linac2 (M. O'Neil):

It was a quiet week for Linac2.

On Wednesday the power supply of a quadrupole required to call the piquet EPC for reset.

A thunderstorm brought down Linac2 for 20min.

PSB (J. Tan):

It was a busy week for the PSB.

On Tuesday, an issue with the auxiliary power supply of the extraction line septum BT.SMV20 lead to missteered beams and losses. The piquet replaced the power supply in the shadow of the planned PS RF access. There have been also erratic issues with the beam stopper in ejection line. The piquet CO was called but the problem disappeared before the piquet arrived. This problem has not come back since Wednesday. The cavity BR4.C04 tripped, could be reset but tripped again so that the specialist had to be called. He had to access to replace a broken 100W driver (downtime 4h).

On Wednesday, an InCA release was successful.

On Sunday some equipment could not be restarted (BR2.C02 and MPS) after the thunderstorm. The RF specialist and the piquet EPC came and fixed the issue after a total downtime of 3h.

InCA related issues are being followed up.

ISOLDE (E. Siesling):

GPS

Isoltrap finished a successful run on Saturday, with excellent results (5 new masses and a new isotope).

Then GPS was in radioactive cool down until the target change yesterday.

Turbo pump GPS22 goes down from time to time. Nobody was called as they can do without it and the vacuum specialist was on holiday.

HRS

Setting up on HRS was successful last week. Proton scans and yield tests were done on Friday.

Both GPS and HRS small roughing pumps were broken. A DSC was causing all valves to open when the pumps would start to run. Another pump was borrowed from the experiments, while the broken pumps are checked. These issues are followed up.

There were difficulties to find stable beams for REX due to a large amount of contaminants.

On Friday the REX 9 gap cavity power supply died and was replaced on Monday, but it tripped again yesterday.

E. Siesling thanked the PSB OP team for communicating the stops.

He added that no nitrogen bottles are available for venting the beamlines.

ISOLDE users (M. Kowalska):

No report.

PS (A. Grudiev):

It was a smooth week with a few issues.

There were in total 3 1.5 hour stops for the 40 MHz cavity repair in 77 (Monday, Tuesday and Thursday). Since then the cavity is tuned and operational.

On Sunday morning all beams extracted to TT2 were stopped due to a problem with a timing card for ejection. The piquet EPC fixed the problem by replacing the card.

Following the thunderstorm on Sunday, there was a problem restarting POPS (3.5h downtime). The piquet and specialists for other equipments had to be called.

M. Widorski warned that there has been a lot radiation alarms this week (3 times higher than the usual week). Two thirds of these alarms were caused by injection and ejection. A. Grudiev mentioned that this was correlated to the ejection timing card issue. Upon a question from H. Breuker, M. Widorski confirmed that it the same alarm threshold as last year. He added that we have already had twice the number of alarms in 2011 as in the full year 2010. He advised that the OP

team should have a closer look at the non audible alarms, as several of these alarms stay for a while before being noticed.

East Area ():

No report.

East Area Users (H. Breuker):

IRRAD is running with single spills.

Beam was given to DIRAC as no one was there. Users for T9 and T10 are coming this week

DIRAC complained that spills are 10% less than last year. R. Steerenberg answered that he thinks spills are actually longer. This will be checked after the meeting

TOF (H. Breuker):

Smooth running.

AD (T. Eriksson):

A number of stops occurred.

On Wednesday and Thursday, there were 7 hours downtimes due to longitudinal issues.

A Stochastic cooling issue caused 12h downtime as the expert was on holiday. K. Hanke said that this is the price for not having a piquet.

After the power glitch, 4h were needed to get back production beam.

AD Users (H. Breuker):

ALPHA is running in excellent conditions and ATRAP is also in good shape.

SPS (D. Manglunki):

It has not been a great week (75% availability for physics).

There were a lot of perturbations on SFTPRO cycles during LHC fillings due to more and more ZS trips. The voltage had to be decreased to -30 kV and the SFTPRO beam was cut during LHC filling. It was however not enough as it turned out the ion traps are sparking, and the girders should also be moved out. It was decided to inject smaller intensity per bunch and do less scraping, which improved the situation.

An MD will be done this Wednesday to use a negative extraction bump during LHC cycles to prevent moving the girder out (as it does not come back exactly in the same place afterwards). This involves modifying the interlocks, which means a dedicated MD.

It will also be tried to condition the ZS and ion traps with increasing intensity on LHC cycle (1.4e11p/b right now).

As mentioned in the minutes of the last FOM, there was a vacuum leak and another leak detection was performed on Tuesday, which identified the magnet that needed to be changed. It was agreed to organise the intervention on Thursday at 7am after LHC filling. The vacuum conditions came back earlier than anticipated and the beam was usable shortly after midnight.

During the week, T. Bohl worked on the longitudinal blow up for LHC cycles.

On Saturday evening, there was a 5h breakdown due to injection kickers. The piquet kicker, and both PS and SPS LLRF piquets found a missing prepulse from RF was not coming from the PS, even if though was generated. The PS CO piquet repaired a fuse. D. Manglunki thanked the PS piquet but regretted that there is no SPS CO piquet.

On Saturday, COMPASS suffered 8h downtime due to a quadrupole power supply. The EPC piquet restored partially the power supply, and it had to run at limited current until it was replaced by a spare on Monday.

On Sunday, MDs on high bandwidth feedback and on extraction of the Q20 LHC beam were planned as the LHC was down.

After the power glitch on Sunday night, the beam was back as soon as it was delivered.

On CNGS there have been a lot of trips of the reflector.

North Area ():

No report.

North Area users (H. Breuker):

On H2 NA61 is doing very well and they have already accumulated 50 % of what they need.

A conflict between UA9 and LHCb is being addressed.

CNGS (E. Gschwendtner):

CNGS is doing fine apart from the trips of the reflector.

As mentioned, a quadrupole has to be exchanged for COMPASS, and they currently suffer from many trips.

CTF3 (D. Manglunki):

The drive beam is now using the delay loop and the combiner ring but with only 1 sub-harmonic buncher, which causes quite a lot of satellites. Measurements and corrections of the trajectories and transfer matrices were performed. On CALIFE, the loss of synchronisation was understood and a spare cable is needed.

TI (P. Sollander):

Two thunderstorms occurred (Saturday: only a few minutes, Sunday: bad one).

LHC interface with injectors (J. Uythoven):

LHC achieved five fills with stable beams, using small emittance (2 mm.mrad in collision). Intensity per bunch was pushed on Friday to 1.35e11p/b. It will be slightly down to 1.2e11 p/b when beam comes back.

On Thursday, it is unfortunate that LHC lost beam 30 min after the start of the long intervention to exchange a magnet in the SPS.

Cryo compressor in P8 tripped. The electronics were changed and they hope to restart around 2 to 3pm.

They do not have the list of LHC beams yet and G. Rumolo will extract what is needed after the LSWG meeting and he will send it to the FOM list.

For the floating MD, G. Rumolo asked if LHC could be filled before 8am as last time. J. Uythoven said they will do what they can.

IONS

Linac3 (D. Küchler):

Last week, there was stable and intense beam. The source tripped twice during the weekend. There has been lower intensity since then.

D. Küchler would like to refill the oven and asked for the less inconvenient date to do it. D. Manglunki suggested Wednesday morning and it was agreed. D. Küchler added that this refill has no impact for proton beams and that ion beam should be back around midday.

LEIR (S. Pasinelli)

It is the second week of setup. 25 µA were reliably injected from Linac3. A lot of LLRF tuning of the 2nd cavity was needed. On Friday, the beam was nominal for EARLY.

On Monday, the nominal beam could not be tuned. Unusual tune functions were found in LSA. This is being followed up. The nominal beam is at 50% of the 5e10p goal.

Set up continues next week.

PS (A. Grudiev)

Ion cycles were played without beam. Ion beam was injected on Friday afternoon to debug problems. Everything went fine and set up is ongoing.

R. Steerenberg warned that the PS will need to retune one 80 MHz cavity for ions. This means there is no spare for protons. 30 min are needed to switch (without access).

3 Schedule / Supercycle / MD planning

The 2011 schedule (V3.2) 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

H. Breuker said that the pointer in the schedule should move from W44 to W45 after the MD.

4 Preliminary list of interventions

LINAC2 (M. O'Neil, slides):

For Tank2, Jan Hansen mentioned a new tool will be installed in case of new leak.

PSB (R. Brown, link to list):

PS (R. Brown, link to general list, list of CV interventions):

There may be a conflict as there is a need to pulse POPS, which means no electrical or cooling water stop.

SPS (D. Mc Fairlane, slides):

BA2: D. McFairlane will check the impact of false floor intervention on RF.

BA4: J.-M. Foray asked when it was the least inconvenient time to cut the electricity in BA4. Since there could be an impact on the MD, it was decided to do it on Tuesday evening.

R. Brown reminded that jobs have to be declared, otherwise people do not get in.

RP will give a time for stop of each beam at the next FOM.

5 AOB

6 Next meeting

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

Preliminary Agenda:

1) Follow-up of the last meeting
2) Status of the machines
3) Final list of interventions for the next technical stop
4) Schedule
5) AOB
6) Next agenda

Minutes edited by B. Salvant