Minutes of the 21st FOM meeting held on 21.06.2011

Agenda:

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

1 Follow-up of the last meeting

The minutes of the 20th FOM meeting were approved.

Follow-up from the last FOM:

Pending actions:

Technical stop in week 27

Send list of activities and persons needing access to the superintendant. Action not closed.

Problems with POPS (3 actions)

Studies will be resumed when POPS is back. Actions not closed.

Clarify responsibility for the PS splitter at the IEFC

The ABT group accepted the responsibility for the PS splitter. This equipment is planned to be replaced so that documentation for the new splitter will be made available. Action closed.

Trips of Booster cavities and steerers due to water interlocks

Work is ongoing and an intervention is planned for the technical stop. Action not closed.

2 Status of the machines

LINAC2 (D. Küchler):

On Tuesday a tube of the Franck James amplifier for tank 3 had to be changed.

On Wednesday the source dips problems of last year came back and inspection of the source was performed on Thursday to investigate but nothing was seen.

That night, LA1.QDN and the watchdog needed a reset, but unfortunately the reset of the watchdog did not work for the EASTC user and this was realized only after 3 hours. Work is ongoing to prevent this from happening again.

On Friday the source dips disappeared without any obvious reason.

During the weekend, the source flashover rate was very high (18 in 3 days when it is normally 1 or 2 per day).

On Monday another source inspection took place and it was observed that some cooling water was missing, but it is not clear where the water went. This water leak was the reason for the problems last year.

LINAC3 (D. Kuechler):

LINAC3 started last week. It was found out that there is no need for a beam permit for the whole machine. S. Hutchins confirmed that there is no risk.

Setting up is progressing as planned.

PSB (K. Hanke):

It was a very good week.

The only problem worth mentioning was the repeated trips of C16, steerers and quads with water flow problem. These problems can be reset but it is very frequent and is disturbing operation. Work is ongoing to investigate the source of the problem.

Studies to reduce noise on wideband pickups have been performed.

Other resets and reboots had to be done here and there.

On Sunday a trip of BE1.KFA14L1 required the intervention of the specialist (1h30 were needed to extract all 4 rings again).

The STAGISO beam is being prepared.

ISOLDE (M. Lozano Benito):

It was a difficult week with many problems.

On GPS a problem with the robot occurred during a target change. Manual reconnection to the robot succeeded in leaving the target on the shelf. The manufacturer of the robot was contacted. As there is no spare for the mechanical part, it will take 6 weeks to get it. After the meeting, the manufacturer informed that the part could be obtained in 2 weeks instead of 6 weeks.

The robot was left in parking position, which means nothing can be moved and hence no beam can be sent onto GPS before the repair.

On Friday, an intervention was done following ALARA procedure (23 microSv). M. Lozano Benito thanked radioprotection colleagues for their quick response.

The GPS target was moved to HRS.

On HRS, the RFQ had been opened on Tuesday to install a new flange and insulator. However, the RF voltage could not be applied as the impedance had changed. The amplifier impedance was adapted to the cavity impedance and connectors were cleaned as traces of sparking had been observed. This enabled the RFQ to work. The target, which was previously on GPS was installed on HRS to try and give beam to users, but it died after 4 hours of tuning.

The spare target was installed on Friday morning and by 4PM, HRS was ready to tuning stable beam to users. A proton scan and yield measurements were performed and no further problem occurred during the weekend. The experiment was stopped on Monday morning.

An additional problem was seen with the water cooling of target stations. The cause is thought to be understood and is being followed up.

Thanks were expressed to all the ISOLDE team for having succeeded in getting beam to users on Saturday morning.

ISOLDE users (M. Kowalska):

Following the GPS target robot issue the users had to be reshuffled and experiments with GPS were moved.

The users thank for the proton scan and yield measurements done on Saturday.

It has to be noted that the yield was low as the target had already been used.

It has been a rather successful run.

Solid State Physics experiments have been moved to HRS, and a new chamber will be ready to perform these experiments. 6 experiments could be squeezed thanks to other users who agreed to reduce their beam time. In total, 4 days of operation are cancelled.

M. Lamont asked about the status of the robots. M. Kowalska answered that these are old robots for which there is no spare parts. M. Kowalska argued that the prize for spare parts is up to 20,000 € and the last problem had occurred in 1995, therefore no stock of spares is kept.

PS (S. Gilardoni):

It was a very good week for the PS. All requested beams could be produced with only minor problems.

On Monday and Tuesday, the magnetic extraction septum 57 for EAST tripped very often. It was found the problem was related to the maximum rms current in the supercycle. Reducing the current enabled to prevent further trips.

Ghost bunches after the batch for LHC beams were investigated to reduce losses at extraction.

Investigations on wire scanners continue and S. Gilardoni thanked the BI group. Now that the measurements are more consistent between machines, the precision of the system is now analyzed. For the orbit measurement, 3 pickups are not working and require an access during the technical stop and another pickup is perturbed by the pulsing of a kicker. BI experts are investigating.

B field fluctuations at injection are also worked on. They are less critical than last year but still there.

For MTE, trajectory oscillations tests continued to take place. An MD at 2 GeV is being prepared to see low energy effects.

East Area (E. Gschwendtner):

Stable conditions but the spill from DIRAC is not completely flat.

IRRAD had an access to install new equipment and they are now stopped until August.

CLOUD has started and is working well. North branch users profit now from the absence of DIRAC.

A water leak was found in quadrupole F61.QDE02 and needs to be replaced during the technical stop. A short inspection (30 min) is needed before to check that the vacuum chambers of the spare magnet is the same as the vacuum chamber of the leaking magnet. This means the PS needs to be stopped for this inspection. This has to be arranged with machine supervisors. The definitive repair is on the PS list for the technical stop.

East Area Users (H. Breuker)

Users are fine.

CLOUD need to recondition the chamber. When CLOUD runs, they ask for 3 spills.

TOF (H. Breuker):

TOF is now running at reduced flux (-20/25%) because of the new supercycle. R. Steerenberg mentioned that this was planned.

AD (C. Oliveira):

It was a quiet week. On Sunday morning there was a problem on the injection line.

T. Eriksson added there was a safety problem with the target area. A cable fault was repaired yesterday and a temporary procedure was put in place in the mean time.

Following a call to TI to renew the helium for ALPHA, E. Liénard said that experiments are now aware they should call directly the expert for this kind of request. H. Breuker will remind the users they need to call directly the expert for Helium change at the users meeting.

AD Users (H. Breuker):

Users are doing fine.

SPS (K. Cornelis):

Interventions on 18 kV cable to BA5 stopped all beams for a couple of hours (1h on Thursday and 1h yesterday). F. Tarita confirmed the cable is now repaired and that there will be no more interventions for that problem.

On Wednesday, beams were stopped for a repair of SMD13 (main station for dipoles). Now the SPS is running with one spare for the main dipoles power supply station.

The main problem of the week was a vacuum leak in the TT20 line to the North Area, which happened on Wednesday evening. The repair took until Friday noon as the leak is in a very hot area between the two splitters. The water leak was due to acid drops which drilled a hole through the shield. The leak was fixed and it has been running again since Friday noon.

Investigations were also performed on satellites but not much was seen.

There are a few occasions when injections are bad in LHC but they look good on the SPS side.

On Sunday there was a problem with the extraction of the CNGS beam. No spare power supply was available for RBIH.400107, and it needed to be repaired by the EPC piquet.

North Area (E. Gshwendtner)

H6, H8 and M2 beams have been rather good.

In H2 and H4, there was no beam on Wednesday because of installation work in H4 IRRAD.

There have been occasional problems with the access system (with one particular door PPE172 in the H2 beam line).

Besides these interruptions, H2 has been running. On Saturday, low beam intensities was reported and corrected by OP.

North Area users (H. Breuker)

H4 cabling work was done for IRRAD on Wednesday.

H8 suffered a bit from downtime. After discussions, they got more beam from another users.

CNGS (E. Gschwendtner)

CNGS is above the line.

CTF3 (S. Pasinelli):

14A could be obtained out of the combiner ring.

On Thursday, a flow meter was installed to check the temperature variation of a klystron.

The probe beam was injected to 17 MeV

As usual, CTF3 will run during the technical stop.

TI (E. Liénard):

No further reports.

LHC interface with injectors (M. Lamont):

A cryo stop occurred over the weekend. Injection oscillations are still causing problems. M. Lamont asked if anything could be done from the injectors' side. K. Cornelis said that oscillations are seen on the septum and the vertical injection kicker, and that there is a problem with the injection kick at the end of the batch.

M. Lamont added occasional shifts are seen in TI2.

LHC plans to step up by 144 bunches.

HIRADMAT:

Beam will be taken tomorrow. There is 0.5 day of commissioning.

3 Schedule / Supercycle / MD planning

The 2011 schedule (V3.0) 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

Work stoppage on Wednesday:

All beams will be stopped from 08:30 – 12:30 and there will be no access. The machines will be in standby mode (MPS off and beam stoppers in). The Linac2 source will be pulsing. The SPS power supplies will be switched off.

TI operators will have to be on duty. There will be no surveillance of the machines.

There was a request by Simon Baird to extend the technical stop in W35 from 36 to 48 hours. EN/CV and EN/EL are pressed to finish all the needed interventions. The extension was agreed and will be included in the next version of the injector schedule.

A request for the PSB would be a dedicated MD for BLMs with very low intensity. This could maybe be placed in the cool down time (and not MD or TS time); to be confirmed by RP and the MD coordinator.

4 Preliminary lists of interventions for the technical stop

LINAC2 (list of interventions):

D. Küchler sent the list was sent by email and said there should be no critical intervention.

PSB (website and list extracted on June 25 from the interventions website if access problems):

N. Gilbert is in touch with M. Widorski and will keep the website updated.

PS (R. Brown, slides):

On Saturday June 11th there was an: access for a vacuum leak out of a magnet. Water was dripping from the coil, which is quite unusual. The magnet needs to be replaced. A spare is at the workshop but it is radioactive (which means longer preparation time). The vacuum chamber must be cut and flanges must be adapted. Certification is being done.

There is an extended intervention on that magnet. RP will tell when beam to EAST has to be stopped.

SPS (D. McFarlane, slides)

The list is not yet complete (in particular for lift maintenance).

The water will be cut in BA2.

TE/EPC would need to pulse the main dipoles in TT60 and in the ring. K. Cornelis said that in this case no access can be granted. This needs to be discussed and LHC has to be off (due to QPS). In BA6, there is also a need for 2 full days of consignation. These interventions do not seem compatible.

In BA5, EN/EL indicated 4 days when the technical stop is only 2 days. This needs to be clarified. K. Cornelis said that this intervention is normally not transparent.

5 AOB

6 Next meeting

The next meeting will be held on Tuesday, 28th June at 10:00 in 874-1-011.

Preliminary Agenda:

1) Follow-up of the last meeting
2) Beams required for the LHC MDs (G. Rumolo)
3) Status of the machines
4) Schedule
5) Final list of activities during technical stop
6) AOB
7) Next agenda

Minutes edited by B. Salvant