

Minutes of the 4th FOM meeting held on 29.01.2013

Agenda:

- 1) Follow-up of the last meeting
- 2) Status of the machines
- 3) Schedule
- 4) Piquet requests during powering tests period (S. Baird)
- 5) AOB
- 6) Next agenda

1 Follow-up of the last meeting

The minutes of the 3rd FOM meeting were approved.

Pending actions:

SPS interlock malfunctioning after the electric glitch of the 22nd January. M. Zerlauth informed before the meeting that during the LS1 the magnet interlock system of the SPS will be completely revised and renovated. The action is closed.

Regarding the MD request by RP at the end of the run, K. Hanke asked to report briefly the MD proposal during the next FOM in order to approve and schedule it.

Linac2 (G. Bellodi):

Linac2 had a good week. There was no problem to report.

Linac3 (D. Kuchler):

Operation of Linac3 went rather smoothly, apart from the daily retuning of the source.

On Tuesday new electronics cards for the BCT were installed and BI is currently testing the performance of the new system.

On the weekend two interventions were needed. The first one was to reset Tank1 after a pre-amplifier fault (Saturday night). The machine supervisor was called but finally the reset was done by the SPS operator. The second problem occurred on Sunday morning when the source needed to be retuned after an HT glitch.

During the WE some frozen equipments were found, the controls specialist (J. David) reset them and on Monday the beam was lost in LEIR. Several magnets (ITF.BHZ[11-14]) had to be powered down and up again to recover their nominal magnetic field and only afterwards LEIR could have beam (LEIR is very sensitive to the hysteresis of these magnets).

Tomorrow (30th January) the source will be refilled. D. Manglunki informed that depending of the LHC requirements the start of the intervention may be rescheduled from early morning to late morning. This will impact the dedicated MD (SPS coasts) program too.

D. Manglunki informed that the quench test with ions, initially planned for Monday 11th February morning, might be moved to a later time. He stressed that the later this will take place the less probable it is to have ions available for the test. He reported that the final schedule will be defined after the LMC on 30th January.

L. Soby asked to schedule 1 h time for an intervention of Linac3 SEM grids. K. Hanke proposed to schedule it during the quench test period. The FOM endorsed the proposal.

L. Soby asked if it is possible to change the electronics of the SEM grids during the operations. D. Küchler answered that this not possible because these devices are needed for operations.

PSB (J.-L. Sanchez Alvarez):

The PSB operation during the week was perturbed by three issues.

On Tuesday night the power supply of BT.QNO10 was replaced by a spare (downtime 1 h 30).

On Wednesday night and Monday morning the PSB water station tripped and afterwards an electro-vane of the magnet BE.SMH has to be changed. The total downtime was 5 h 30 + 2 h.

During the weekend, it was impossible to restart the ejection bump. An intervention of the specialist was required (downtime 1 h 30). The same problem came back yesterday evening. C. Mugnier explained that the problem consists in the impossibility to set the desired value of current on the power supply with the standard procedure. Even if the card used to control these devices have no jumper, a hard reset is needed to set power supply. S. Joffe, D. Calcoen and BE-CO are investigating on the problem.

J.-L. Sanchez Alvarez mentioned that the PSB lift is out of order. J. Nielsen informed that TI is intervening on the problem.¹

S. Deval asked for 1 h for an intervention on the PSB cooling station (no beam in PSB) and R. Steerenberg asked for 1 h for PS interventions (on a cavity, BPM, KFA) and tests on a new version of the GFAs control system (during the actual 2 h test of the GFA there could be perturbations of the operations). After the proposal to schedule it in the shadow of the oven refill (30th January, exact time not yet decided), K. Cornelis pointed out that this would impact on the SPS MD program. G. Rumolo reported that the MD will be dedicated to BI test during the first hour and after it will be devoted to coasting beams for the collimator test. It

¹ The problem was fixed on the Thursday 30th January.

was proposed to combine the intervention in the PSB cooling station and PS in the shadow of the SPS coast. The FOM endorsed it.

LEIR (M. Bodendorfer):

LEIR had a good week.

The EARLY and the NOMINAL beam performed routinely at 1E10 and 5E10 charges per cycle respectively.

On Wednesday morning (23rd January), the improved MDOPTICS cycle was applied to the NOMINAL user. Since then, the cycle provides consistently lower longitudinal emittance (<10 eVs) at the beam intensity of 5E10 charges per cycle.

The rest of the week, LEIR provided EARLY and NOMINAL beam of the above-mentioned intensity and longitudinal emittance.

Noticeable glitches through the week were limited to the regular tripping of the power supply of the main bending magnets of LEIR (ER.BHN). This power supply tripped between one and four times per day for the whole week. The source of the problem has not yet been investigated. The ER.BHN main power supply of LEIR may turn “faulty” when zero cycles are integrated in the LEIR super cycle.

As reported by D. Kuchler, on Monday 28th January, the control problem on the Linac3 magnets had a severe impact on LEIR operations.

PS (R. Steerenberg on behalf of A. Grudiev):

It was a calm week for the PS with only little down time during the second half of the week.

On Monday evening the 80 MHz cavity for ions (C80-08) tripped due to a wrong synchro-frequency related to extraction energy modification on one of the ion users.

On Tuesday there was a problem with the transition crossing power supply.

On Thursday evening there were 3 h down time in TT2 due to a problem in the cooling circuit. The TI piquet fixed it. Afterwards it was impossible to reset the TT2 line. The EPC and CO piquets had to come in and to replace a TG8 card.

On Friday afternoon there were 2 h 20 min with no beam in the PS due to a POPS fault (related to a temperature interlock caused by the water leak in IGBT unit). J. Nielsen asked if this caused a stop of POPS. R. Steerenberg answered positively.

On Monday there were 2 h of down time due to problems with one of the cooling stations. PSB and TT2 went down between 04h50 and 06h50.

The PS is at the moment delivering beam also to many MD users.

Additional time has to be reserved for testing the SFTPRO beam and the H9 50 ns beam for the LHC (using only pole-face windings). This should be transparent for the LHC and the North Area. K. Cornelis commented that it will impact the SPS MD program. Due to the current uncertainty concerning the beam types needed for the quench tests and its precise schedule, the FOM postponed the decision to the next FOM (on the 5th February after the LMC of the 30th January).

SPS (K. Cornelis on behalf of E. Gschwendtner):

It was a good week for the SPS dedicated to LHC filling, delivering ions to the North Area and some parallel MDs.

The quality of the LHC proton beam was very good during the week but the situation degraded on the weekend. B. Mikulec asked if this was due to the SPS itself or to its injectors. K. Cornelis answered that it is not clear yet. B. Mikulec and K. Hanke suggested informing the operators of the upstream machines as soon as anomalies are noted so that beam characterization can take place along the complete accelerator chain.

The setting up of the ion beam to the North Area at a higher energy (80 GeV/c), planned for Thursday morning, was completed only at 23h00 due to LHC beam optimization, LHC filling and cooling problems on the injector side.

The new SPS tune kicker is not working and therefore the tune measurements are presently done using the BBQ, nevertheless this limits the flexibility during the MD.

The weekend was rather quiet with smooth LHC filling periods.

North Area (H. Breuker and A. Fabich):

The NA61 experiment is ahead its schedule for the 30 AGeV/c run and it will switch to 13 AGeV/c next Monday (4th February).

The Calet experiment completed its installation on H8. All equipment is working as expected.

The last four days of H8 run will be devoted to a different experiment on nucleon physics.

LHC interface with injectors ():

There was no report.

CTF3 ():

There was no report.

TI (J. Nielsen):

On Thursday 24th January the PSB demineralized water station stopped (3 h downtime, LHC

was not affected).

On Monday 28th January the PSB water station stopped again. TI intervened on site to restart the equipment. There was a down time of ~2 h for the PSB (the LHC filling had to be delayed).

2 Schedule / Supercycle / MD planning

On Wednesday 30th January the oven will be refilled (last scheduled refilling before LS1).

After the suggestion of N. Gilbert, K. Hanke proposed to add on the 2013 and 2014 preliminary injector schedule the schedule of all the machines operated or commissioned during the LS1 (Linac3 Argon run, CTF3, ISOLDE, Linac4 tests). Information will be collected for the next FOM (5th February).

The 2013 schedule (V1.3) is available at:

https://espace.cern.ch/be-dep/BEDepartmentalDocuments/BE/LHC_Schedule_2013.pdf

All planned interventions for the injector complex are available via IMPACT at:

<http://impact.cern.ch>

3 Piquet requests during powering tests period (S. Baird)

S. Baird presented the piquet requests during the powering tests period.

The slides can be found at:

https://espace.cern.ch/be-dep/FOM/Presentations_2013/Forms/AllItems.aspx

The powering tests are scheduled as following:

- LEIR: from 13th February to 18th February (magnet tests),
- PSB: from 13th February to 21st February (magnet tests),
- PS: from 13th February to 22nd February (POPS and MPS tests),
- PS: from 1st to 8th March (magnet tests, PFW tests),
- SPS: from 25th February to 22nd March (magnet tests).

Therefore from 13th February to 22nd March, the following piquets and services are needed during working hours and working days (08h30 to 17h30, Monday to Friday):

- 1) EPC (power converters),

- 2) MSC (magnets),
- 3) MPE (magnet interlocks),
- 4) CV (cooling systems),
- 5) OP (operators in CCC),
- 6) CO (controls),
- 7) EL (electrical distribution), HE (lifts etc...) and ASE (access systems).

Regarding point 5 (operators in CCC), K. Cornelis informed that the SPS operators would be available in CCC (08h30 to 17h30, Monday to Friday) until the 25th March. R. Steerenberg informed that the PS operators would be available in CCC (08h30 to 17h30, Monday to Friday) until the 8th of March.

K. Hanke asked if the requested were approved by IEFEC. S. Baird answered positively. The FOM endorsed the request.

4 AOB

A. Bland informed that from March 25th in all the CCC machines the default Java version will pass from 1.6 to 1.7. After discussion, it was decided to change the operators and database passwords on the same day (March 25th).

D. Manglunki and R. Steerenberg informed that with the introduction of more targeted safety courses (SIR-Level4) the access zones in the PS complex have been differentiated. In this process the AD and LEIR are now separate zone and all persons requiring access to these should apply for it. Until the start of LS1 the old access privileges will be still valid, but from the 13th February (to be confirmed at CSAP) the new permissions list will be used.

5 Next agenda

The next meeting (5th FOM) will be held on Tuesday, 5th February at 10:00 in 874-1-011.

Preliminary Agenda:

- 1) Follow-up of the last meeting
- 2) Status of the machines
- 3) Schedule and quick look at the machines running during LS1
- 4) AOB
- 5) Next agenda

Minutes edited by G. Sterbini.