Summary of the 17th FOM Meeting

Held on Tuesday 19th June 2018

Agenda https://indico.cern.ch/event/737208/

1. *Follow up the last FOM*
2. *Schedule updates*
3. *AOB*

1. Follow up the last FOM

B. Mikulec chaired the meeting.

The list of presence can be found in Annex 0.

The minutes of the 16th FOM were approved.

No follow-ups were reported.

Linac2 & Linac3

F. Di Lorenzo reported on the status of the linacs (Annex 1).

Linac2

Linac2 had a good week with 100% availability. On Tuesday, the power converter specialist replaced the interlock board of LT.BHZ30, putting the old interlock card into the spare converter.

B. Mikulec asked why this beam stop didn't show up in the Linac2 downtime.

G.P. Di Giovanni replied that the fault was not entered in the Linac2 elogbook and that he would make sure this happens.

Linac3

Linac3 had a good week with 99.8% availability.

LEIR

V. Kain reported on LEIR (Annex 2).

The NOMINAL cycle was set up from scratch last week, which took the whole week. The current and the following weeks were foreseen to increase the intensity to values, which are comparable to 2016 (LIU). The EARLY cycle was in good shape.

PSB

G. P. Di Giovanni reported on the PSB (Annex 3).

It was an average week for the PSB with 90% availability. The AUG alarm caused most of the downtime on Tuesday. The cause was an accidentally activated button. It took ~14.5 h to return to operation. The consequences of the event are listed in Annex 3. Also, problems with the TOF beam were noticed, but not understood yet. The production of the TOF beam was moved from R2 to R3 until ITS1.

ISOLDE

J.A. Rodriguez reported on ISOLDE (Annex 4).

A good week was reported for ISOLDE. HRS had no significant issues other than postponed MEDICIS target irradiation due to problems at the PSB.

GPS sent Magnesium to LA1 (Thu-Mon) after setting-up and optimization. Some minor issues were reported. After the commissioning, REX/HIE-ISOLDE sent the highest energy per nucleon beam reached in the facility to the ISS experimental station. 19 cavities were working.

B. Mikulec asked if the full set of cavities was used.

J.A. Rodriguez answered that 19 out of 20 cavities were currently used. During the HW commissioning, it was found that the copper was not of good quality for one cavity and consequently not used. There is still a bit of margin in energy.

ISOLDE Users

K. Johnston sent a summary from the users side last week at ISOLDE:

A very good week in terms of operation and also physics. IS614 were measuring the decay properties – half life and branching ratio - of 22Mg a nucleus which can be used to determine the unitary of the CKM matrix via superallowed beta decay. This is a challenging experiment as 22Na – which is very easily produced at ISOLDE – has to be suppressed using a special ion source. This was the first time since 2012 that this ion source was used and it performed very well, no Na was seen at the experiment and the users are very satisfied: they should have enough statistics to determine the decay properties of 22Mg to the desired precision.

PS

A. Guerrero Ollacarizqueta reported on the status of the PS (Annex 5).

The PS had an availability of 88% this week mainly due to the issue in the booster on Tuesday. Regarding the PS, two accesses on Tuesday and Friday for cavities C51 and C76 were needed, with 2 h and 1 h beam stop, respectively. Some time was also lost on several occasions due to an issue affecting the 10MHz cavity return sum signal thus all RF beam controls. More or less critical losses appeared and were cured without any intervention. Finally, the issue was traced back to a lemo with bad contact. This week it is also worth mentioning the change of injection ring for the TOF beam from R2 to R3 to relax the usage of R2 that is having an issue with the TFB. After the change, an error in the sequence program left nTOF with only the parasitic beam around 2h.

Operational beams together with LHC MD beams have been delivered as requested. The beams for the LHC 90m special run are now prepared: LHC 50ns and LHC100#18b and 12b.

East Area

B. Rae said that there was nothing special to report. The CLOUD experiment started on Friday.

East Area Users

H. Wilkens reported on the status of the East Area Users.

The number of cycles was increased to the north branch for the CLOUD experiment.

nToF

There was nothing special to report.

AD-ELENA

AD

P. Freyermuth reported on the status of AD and ELENA (Annex 7).

The AD performance was shadowed by the booster problems in the first half of the week. After bad shots and strange signals of the magnetic horn, the beam was turned off in the second half of the week. Signs of a short-circuit were found. Investigations are ongoing along the power path and target area.

ELENA

ELENA had a good week.

A circulating beam was decelerated to the lowest energy of ELENA for the first time. To achieve this, a new transfer optic was made. Work on the RF and coupling corrections was ongoing. The first measurements with the SEM grids were done.

F.-X. Nuiry added that the EN-STI team was investigating on site. They check the cables, the strip line etc. to understand the flash-over, which occurs every 20 pulses.

AD/ELENA Users

There was no report from the AD/ELENA users.

SPS

F. Velotti reported on the status of the SPS (Annex 8).

The SPS is back to normal operation with an availability of 83%. The main problems in the SPS were a trigger module MKDH issue and a sequence manager - telegram issue. It is still not understood completely. The NA physics is back since Friday 8th of June. LHC MDs characterized the week. Frequent SC variations perturbed the spill quality. The ZS4 vacuum was always under control, and the spark activity has got a new SIS interlock. The beams requested by the LHC MDs were delivered as expected. The 100 ns and 50 ns beam for LHC special runs were taken. The LHC ion beam is under preparation and at the moment accelerated up to FT.

H. Vincke asked if the ZS4 was still not running.

F. Velotti answered that ZS4 was not running and the slow extraction was done without the septum.

It was asked if the new bump had already been installed.

F. Velotti answered affirmatively.

North Area

B. Rae reported on the North Area.

Nothing special to report.

North Area Users

H. Wilkens reported on the North Area Users.

NA62 was complaining about the spill structure. There were large spikes at the beginning of the spills on Friday due to the ongoing LHC MD.

AWAKE

There was no report on AWAKE.

CLEAR

There was no report on CLEAR.

LHC

E. Bravin reported on the status of the LHC.

There was the MD week for LHC. Now, the beam has to be re-established, and the machine has to be revalidated. This will be followed by the VdM scan and the high beta run. On Tuesday, the VdM cycles should be started. The details were presented at the last FOM (Annex 9).

B. Mikulec asked about the parameters for the Calibration Transfer Fill. The intensity was 1.2e11 ppb and the emittance was 2-3µm.

E. Bravin replied that these parameters were for stable beams and not at injection, probably a standard LHCINDIV beam.

To be followed up.

TI

J. Nielsen reported for TI (Annex 10).

The AUG alert on Tuesday could not be tracked down. Several companies were working nearby at the same time. EDF confirmed an electric perturbation on Thursday. A small water leak (a ruptured pipe) in EHN1 on Thursday was reported.

2. Schedule updates

B. Mikulec presented the injector schedule (version 1.6).

This week (25) was the technical stop for the injectors and the LHC.

An EN-EL summary was sent by **J. Devine**:

Here's a short EL summary of the results from our tests this morning in 355 and 361:

*355 – We cut the power to EBD20*6 at 6:30 AM as planned. I understand there was an issue with the beam in the PS due to a trip on an injection kicker. It remains to be established if the two events are*

related. The test was repeated at 6:44 AM, but it is my understanding that beam had not been restored to the PS. I would welcome any input from BE/OP that might clarify the timings and events observed.

*361 – Power cuts to EBD16*25A and EBD17*25A were executed at 6:45 and I understand they passed off without incident.*

The test in 151 at 8AM was also successful. We confirmed that all equipment supplies in 151-R-011 (200Mhz equipment) are currently powered from the general services network, along with a star point (single supply) that serves all the RF equipment in R-011 and R-005. We will look at moving these over to the machine network and dual supplies (UPS) for the star point. However, the supply for the lighting in 151 was only partially identified, we will conduct some more localised investigation into this later on today.

*Work on ESD1*25/ESD2*25 is ongoing and the switchboard will be re-energised as soon as possible.*

It should be clarified if the 355 tests have to be repeated..

B. Mikulec said that the IT interventions were still carrying on. There will be a follow up on this.

Beam officially should be back around midday (June, 20th), followed by the COLDEX run in the SPS.

3. AOB

There were no AOBs.

Minutes reported by S. Hirlaender on 22nd June.