

# Accelerator Complex Status

## End week 24 (Monday 08 June 2015)

### TI (Peter Sollander)

No major event to report for last week.

Overview: <https://wikis/display/TIOP/2015/06/15/TI+summary+week+24%2C+2015>

### LINAC2 (Michael O'Neil):

Good week up until Friday evening when the RF tripped and was not resettable. A PLC in the tank 3 controls indicated a profibus fault. Initially the RF/PLC specialist was not contactable. He later called back, then came in to replace the tank 3 filament regulator. Beam was back after 4 hours downtime.

### LINAC3 (Michael O'Neil):

The source is now running and beam is up to the exit of the RFQ. The Linac3 RF requires repairs to a damaged capacitor, which is scheduled for Tuesday/Wednesday after which the beam should be sent through.

### PSB (Klaus Hanke):

A week without major problems, besides the usual resets and reboots.

Some losses on Ring 4, initially observed for high-intensity beams appeared also for low-intensity beams and the TFB expert did a lot of tests, so far not conclusive.

Dedicated MD time has been requested.

Other than that a lot of optimisation work was done on SFTPRO and other beams.

Sunday at 08:00 the high-intensity beams were stopped in preparation for the technical stop and Monday at 05:00 all other beams. RP access as from 08:00.

### ISOLDE (Pascal Fernier):

No problem on both machines.

#### **HRS : target #533**

No physic this week, machine used to make studies for Isocooler and setting-up of the new experimental line Vito.

- Carla Babcook changed the He injection system on the RFQ.
- CO changed the CPU card on the HT front-end
- Yield measurement made Thursday to know if we can use HRS target next week for the GPS run.

#### **GPS : target #514**

run @50kV - protons cycle STAGISO - experiments IS481 IS487 IS514 IS515 IS585  
Proton scan and yield check Thursday, then beam for physic

This week :

- protons stop on Monday @05H00
- GPS target change on Monday and HRS target change on Wednesday.

### **PS (Gabriel Metral):**

Semaine sans problème majeur.

Amélioration du CT après fermeture du Gap du septum électrostatique 31 (anode a 67mm au lieu de 60). Puis reprise des timings des fast bumpers. (plus de 2000 possible à l'éjection)

Faisceau AD mis sur la cible pour premiers tests de la ligne FTA

Faisceau LHC avec un magnétique arrivée sur palier haute énergie différent du RUN 2013, les point de fonctionnement des cycles devront être repris (ou le cycle remis conforme)

### **AD (Tommy Eriksson):**

10/6: DSO tests completed, beam permit ok.

11/6: Beam on target with reduced intensity in view of Target area & FTA-line access this afternoon. Fast timing PS to AD is ~ 60 us off, due to new longitudinal scheme in PS. Not sufficiently adjustable in PS.

12/6: Ring access in the morning for ccc Cryo-problem investigation and He top up. Beam through injection line and seen on one of the ring pickups in the afternoon.

Continue this week with timing new injection set-up etc.

Access both to ring and target today.

### **SPS (Benoit Salvant):**

It was a good week for the SPS with good beam availability, successful extraction of single doublets to LHC – albeit quite lossy on beam 1 at LHC injection – and successful extraction of hybrid beam with both doublets and nominal bunches to the TT60 TED.

Progress with beams:

Adjusting the delay on one injection kicker PFN allowed generating LHC 25 ns with 225 ns batch spacing. Following checks and tuning of the single doublet, single doublets could be injected into the LHC. High losses on the TDI for beam 1 led the LHC to increase the BLM threshold and the potential presence of satellites will be investigated. The HiRadMat cycle for the next run was also worked on. Injections of 6, 12 and 36 bunches of 50 ns spacing was performed at the request of LHC. The LHC25 with shorter flat bottom to comply with the new TDI limitations was created and tested in view of the LHC scrubbing run.

There are very few issues to report (2 vacuum pumps in LSS2 were down on Monday:

On Tuesday, COLDEX reported a cryogenic issue that could jeopardize their participation to the scrubbing run if it is not solved before the technical stop. An access could be organized in the shadow of an intervention to repair the switch for the BQM attenuators that same afternoon and the problem could be solved on the spot. During that access flooding could be observed near the rabbit system on a QD busbar in BA3. The situation was deemed to be able to hang until the next technical stop (~2h without beam).

On Wednesday the video signal to allow use of the Material door in ECN3 was cut by neighbouring works in building 911. It could only be restored by GS/ASE 5h later. The

kicker specialist also had to be called for a clipper switch issue (1h downtime).  
On Thursday, the server on which the SIS is running could not be restarted. The BE-CO specialist temporarily moved SIS to another server (1h downtime).  
Several interventions occurred on BEND10(NR31\_003) in line M2 and its maximum current was reduced until it is looked at during the technical stop.  
On Sunday, all SPS wire scanners were disabled in view of releasing the new firmware and testing during the technical stop (as announced at the FOM). As requested at the FOM, the Fixed Target beam was stopped at 8am on Sunday and all beams at 5am on Monday.

### **LHC (From the 8:30 meeting):**

Last week was a week with special runs with excellent machine availability especially over the weekend.  
The LHCf runs was successful with about  $8 \text{ pb}^{-1}$  during 6 fills with about 34 hours of stable beams in total. The peak luminosity was just above  $10^{32} \text{ cm}^{-2}\text{s}^{-1}$ .  
When injecting 36 bunch trains the MKI vacuum interlock was activated, indicating that scrubbing is required.

The doublet scrubbing beam was tested with nominal bunch in the machine too. The interlock BPMs fire during injection, but then for circulating doublet beam things looked fine.

No 8:30 meetings until Friday morning, due to technical stop.

For more details: <https://indico.cern.ch/event/394167/>