

## End Week 21 (June 13<sup>th</sup> 2010) – Status of Accelerators

Steady week all around.

### Booster (Alan Findlay)

It was a good week for the PSB, with no significant problems to report.

An ongoing problem with the display of a beam transformer for ISOLDE was finally resolved this week, when the specialist swapped back 2 cables that had been crossed in the technical stop the previous week. The ISOLDE watchdog was also checked and confirmed to be working correctly by the same specialists.

The setting up of LHC75 for the 150ns bunch spacing MD beam continued with the PS, with good results for the PSB, stable beam within the specifications requested by the PS and happy users. This is based on a LHC75 single batch user, but with 50% of the intensity and 0.6eVs in place of the 0.9eVs.

### ISOLDE (Pascal Fernier)

Good week for the machine, GPS, HRS and Rex worked fine with no technical problem.

HRS stopped Wednesday morning after a successful run.

GPS setting-up was fast and GLM line experiment get the beam until Thursday morning.

The target could not provided 9C (carbon) which was the only one wanted by Collaps experiment, so GPS + REX was not used from Friday until Monday.

### SPS (Elias Metral)

This was a rather quiet week with neither Technical stops nor MDs. The required beams were sent to the NA, CNGS (4 or 5 cycles with extraction intensities around  $4.2 \times 10^{13}$  p/p) and LHC (LHC PROBE and LHC INDIV with or without longitudinal emittance blow-up on request from the LHC).

On Monday the RF piquet was called for trips of the TRX5 and TRX6. Some scraper studies, with the new control system, were performed by Eric (some delays still to be investigated).

On Tuesday it was confirmed by Stephane Burger that the cameras 102454 and 102642 are no longer working and that he will change them at the next technical stop. Furthermore, a very strong damping on SFTLONG2 was observed, which made it difficult to measure the tunes. Also it appeared that the tune shifted when one of the dampers was switched off (this was observed in both planes). The settings for the FB phase had to be changed and the gains for both transverse planes had to be reduced on the flat bottom. Note that the gain must be increased before the second injection otherwise we loose the beam (in particular with low gain in V plane after 1200 ms).

On Wednesday some strange vacuum data from the MKE6 were observed and the gauge was suspected to be damaged. The vacuum experts (G. Girardot & J. Kortessmaa) solved the problem by changing the TPG Module. The pressure was then back to normal. Between 10:40 and 12:13 there was no beam due to an access by C. Tromel for TT10 RP check. Previous losses decreased from

16mSv/h to 4mSv/h but the BCPL.102402 was at 20mSv/h. Note that during this access a water leak was found in BA1 between Q11510 and the door. The beam was then stopped due to a problem with the mains. Finally, during the afternoon the LOD tripped with an internal interlock. The PO piquet was called to check if there was an easy fix. At the end of the afternoon, a CNGS2 (MTE) cycle was put after the SFTLONG2 cycle and it was removed few hours later.

On Thursday, it was decided to stop the beam for the RF team to make an intervention on TRX5 and TRX8 (C. Renaud) and for the EPC team to make some measurements on the power converter LOD in m1sba3 (J.L. Blanc). The LOD problem was due to a thyristor pulse transformer.

On Saturday, there was no CNGS beam between 00:11 and 03:21. Many magnets tripped in BB4 with internal and external interlocks. We tried to restart them without success. A water problem was suspected by the piquet. After having restarted a water pump in BA4 (the faulty pump was 8101 located in building 930 opposite entry to CNGS), the beam could be sent back to CNGS.

On Sunday the TI8 downstream BIC server, cfv-sr8-cibti8, had its CPU card replaced by the BE-CO expert.

## PS (Gabriel Metral)

User en opération: AD, EASTA, EASTB, EASTC, LHCINDIV, LHCPROBE, SFTPRO, CNGS, TOF, LHC75

### Lundi

Transverse feedback: Câble du reconnecté (on n'a pas réussi à savoir par qui il a été déconnecté)

FTN.TRA468 :

- le timing n'est pas toujours généré (le piquet intervient mais tout fonctionne correctement) - le signal du transfo est très perturbé (bruit après le passage faisceau qui perturbe l'intégration)

KFA45 et KFA71 : Tache real time modifiée (comme au PSB) pour palier à la perte faisceau au moment des changements de séquence (passage par un SC d'1BP)

Dump 48 : plusieurs dysfonctionnements non expliqués (A Masi et J Lendaro ont suivi le problème [pas d'explication pour le moment+)

KFA71 : thyatron du module 3 change trigger amplifieur du module 5 changé module 6 détecté comme défectueux (claquage dans la résistance de terminaison). Ce module a été arrêté par les spécialistes. Une inspection dans le tunnel doit avoir lieu avant sa remise en route)

All beam OFF 15mn (D48)

### Mardi

FTN.TRA468 :

-Le timing FTNX.AMEASTRA pose à nouveau problème. - programme 'fast BCT Display' modifié par Stephane pour display du signal de la carte Trig \*le timing pour l'acquisition du trafo par la carte trig est FTNX.WEJTOF ??]

New Orbit measurement: modification du programme par Stephane pour acquisition d'une instance d'un User [par sélection de la BP sur laquelle on souhaite la mesure].

T11 : 4 alimentations changées

EASTB : extraction repoussée de 100ms pour laisser plus de temps au debunching

Beam T11 OFF 30mn (4 alims)

MPS OFF (2X)

### **Mercredi**

TRA468 :

-Faisceau TOF coupe à 7H pour acces zone A TOF (pour vérification de l'équipement) -Changement de canal TG8 pour le timing FTNX.Ameastra + changement de pulse repetater

FMR :

-Changement prévu du firmware du Vd80 (scope de la FMR) -plus de générateur de fréquence pour exciter la sonde !!!

Detecteur incendie du secteur 3-4 du PS : Détecteur de fonctionnement du moteur de l'aspirateur de la prise d'air dans tunnel HS (une mesure de débit d'air extrait fonctionne et nous informe que le système est en marche.)

Beam TT2 OFF 1H (acces TRA468)

### **Jeudi**

TOF : beam off a 9H pour prevoir acces zone A (changement du cable du TRA468)

SMH57 : trouve a 80mm (normalement regle a 71mm). Cette position est la depuis la semaine 17 (semaine du premier long MD)

EASTB : Le cycle avait été allongé en vue d'avoir un spill plus long. La charge de ce cycle générant un glissement supérieur a 3%. On remet le cycle standart

BLM : Probleme resolu par NMN

Beam TT2 OFF 40mn (acces TRA468)

All Beam OFF (45mn OFF pour analyse MPS)

Beam T11 OFF 20mn (3 alims)

### **Vendredi**

LHCINDIV : problème de synchro a l'extraction

RF MEAS : les mesures des tensions des cavités 10 mhz ne marchent plus (OK après reboot du DSC par Heiko) \*changement du gain d'une boucle du a un bruit important => pas compris !]

CNGS, SFTPRO : disfonctionnement du Blow up 2

LHC PROBE : changement du placing pour que la synchro marche correctement [B at eject ?]

TRA468 : mesure faite en vue d'un remplacement de l'équipement. ()

All Beam OFF (15mn KFA71pbl, plusieurs module en faute)

Samedi

Water cooling condition TOF : fait tomber les EIS TOF (intervention piquet EN/CV) [problème débitmètre]

1/2H de perte des faisceau EAST (effet TOF).

Beam TOF OFF 4H (accès station de refroidissement)

### Dimanche

BFA9P : changement du DUAL TRIGGER Amplifier

Beam CT OFF 2H (BFA)

Linac2 (20mn)

### Other

LHC : un faisceau LHC 150ns a été préparé sur le User LHC75 pour le MD de cette semaine (ok jusqu'à  $8e10$ /bunch)

SMH42: le semgrid ne fonctionne plus (ouverture nécessaire du SMH42 pour analyse). Le mouvement se fait par rotation

TRA468 : changement a prévoir

Detection incendie : acces a prévoir

FMR : instalation du nouveau generateur prévu ce lundi

F16.TRA372 : la calibration va se faire ce Lundi AP (Franco

## TI - Peter Sollander reports a quiet week

### LHC - full details under coordination at:

Pushing for collisions with around nominal intensities.

<http://lhc-commissioning.web.cern.ch/lhc-commissioning/>



