

Accelerator complex status

End week 30 (Sunday 27th July 2014)

TI (Peter Sollander)

Not much on the list from last week. A perturbation on the French network tripped the PSB RF for about 30 minutes last Thursday

<https://wikis/display/TIOP/2014/07/28/TI+Summary+week+29,+2014>

LEIR (Maria Elena Angoletta)

A very intense week in LEIR, as the ones before, with lots of debugging.

The B-train was not correctly received by the BCT MTR12 owing to a faulty distribution module. The 8 channel repeater has been changed and after that the scaling of the measured charge seems to be more meaningful.

The PowPLC_Deploy_M FESA class crashed several times thus bringing down the ecooler. Daniel Calcoen then downgraded the FESA class version, from PowPLC 3.3.1 (FESA3 fwm 2.0.0 RDA3) to PLC 3.2.7 (FESA3 fwm 1.3.3 RDA2), and the problem did not happen again (well, at least so far).

We have problems with other elements, on Friday afternoon for instance the element ETL-BHN20 would work on less than 50% of the cycles and the corresponding Oasis signals seems to be dead. An issue was raised, we'll see if it gets solved on Monday.

Greg implemented the desired changes in the trim editor correction, target and value issue. These were deployed and validated in the CCC, so far so good.

The tune measurement does not work and no BI people knowledgeable about it could be found on Friday – let's hope this coming week we get luckier.

Problems with the Tomoscope application program and with the charge-over-mass ratio as read by the LLRF were solved. On Friday afternoon we tried to capture and accelerate the beam but so far without success. This will be our highest priority this week.

Booster (Bettina Mikulec)

Last week was mainly dedicated preparing the beam to be sent to GPS.

- The orbit correction and resonance compensation helped increasing the intensity, but there is still some way to go to reach $900E10$ per ring.
- On ring 4 we are limited by losses in the ring, which trigger the BLM in section 8 where the main PSB aperture restriction is installed (the beamscope window). This should be followed up this week.

- The SIS algorithm for ISOLDE was corrected by J. Wozniak.
- Beam permit for ISOLDE signed Wednesday at lunchtime. The SEM grid target was installed on GPS. When trying to send beam to GPS, the tail clipper engaged due to some bad External Conditions: BY.VV (BTY.VVS181 won't open; the vacuum piquet was sent to solve this problem), BY.VENTIL and BTY.BVT101. Difficult to diagnose as the MTG Diagnostics was dead...
- On Thursday morning we tried to solve the remaining 2 bad External Conditions concerning the ISOLDE ventilation and the vertical bending magnet BTY.BVT101. The specialist put back the connections for the EC of BVT101 that had been removed during LS1 (in the belief that it was replaced by the BIS) and adjusted the window thresholds. Concerning the ISOLDE ventilation, it was finally removed from the EC after agreement with M. Tavlet, as this condition is already taken into account in the PASS of the new access system. Beam could finally being sent towards GPS in the afternoon.
- At 15:15 also on Thursday TI reported a lower voltage for a short time, but it was sufficient to bring down a lot of equipment in the PSB and the Linac2 tank 3 RF. Beam was back again after 35 min.
- ISOGPS was sent down the line to GPS, but the beam was completely lost somewhere at the separation wall between the PSB tunnel end and the start of the ISOLDE tunnel. All the elements have been checked, but no fault could be identified. Friday morning we have asked A. Newborough to check the polarity of the BTY quadrupoles (PSB side). He found the issue for our beam loss: the polarity for BTY.QDE151 was inverted. This happened most probably after the installation of the new pickup BTY.BPM152, for which the magnet had to be removed.
- Finally we started steering the beam to GPS for the SEM grid measurements, but there was an acquisition problem with the BTY SEM grids: only every 6th shot an acquisition was done. A. Guerrero solved this problem in the evening. In addition the last pickup in the line showed only acquisitions for ring 1; solved by A. Topaloudis.
- At 15:38 on Friday we had a radiation alarm as the PSB extraction kickers were not firing for NORMGPS. It was observed that the acquisition of BTY.BHZ301 was showing the value for pulsing towards HRS, which triggered the extraction BIC. The whole evening was spent investigating the problem (D. Calcoen), but he couldn't solve the problem. We decided to put BTY.BHZ301 in standby during the weekend and a meeting is organized with some specialists Monday morning to try to come up with a solution.
- Saturday we couldn't send the beam to GPS because the watchdog was always triggered. Finally it was found that we needed to switch BTY.BHZ301 off instead of putting it to standby...
- It was also observed that the tail clipper had a timing problem; it doesn't cut the beam when the SIS triggers. To be followed up urgently.
- Horizontal beam position fluctuations are observed at extraction. To be followed up as well...
- Finally on Sunday afternoon beam steering to GPS could be finalised and the SEM grid measurements done. Ready for SEM grid target change to HRS.

PS (Gabriel Metral)

Faisceau EAST délivré aux utilisateurs toute la semaine sans problème particulier

Semaine d'opération dédiée a la mise en place des faisceaux TOF et AD. Ces faisceaux ont été préparés avec le Dummy Septum en place et extrait selon le nouveau schema.

- Quelques difficultés avec le Kicker d'extraction KFA21 (plusieurs interventions des spécialistes pour remettre cet équipement en fonction)
- Pas de possible mesure de trajectoire et d'orbite pendant la batch compression du faisceau AD.
- Le TMS ne fonctionne plus après le 1er changement d'harmonique. (spécialiste en conge...)
- Le nouveau schéma d'extraction a dû être réglé sans la batch compression.
- Problème très pénalisant pour le setting up de cette opération.

Malgré ces problèmes de mesure, le faisceau AD a été préparé ce WE, il est extrait sur D3.

Le faisceau TOF a été envoyé sur la cible Vendredi après-midi comme prévu.