Accelerator complex status

End week 41 (Sunday 16th October 2016)

TI (Jesper Nielsen)

Summary for the last week:

https://wikis.cern.ch/display/TIOP/2016/10/12/TI+summary+Week+41%2C+2016

LEIR (Sergio Pasinelli)

As usual in LEIR, intensive studies during the week.

- Resonance compensation (sextupoles scans)
- 10Hz injection (12e10 charges injected with 14 injections)

Normal operation:

1) Access in the machine for an air pressure check on the beam stopper ETL.STP20
2) New TFB is now operational.
3) EARLY cycle > 1.6 e10 charges
4) NOMINAL cycle > 7.0 e10 charges
5) Beams delivered to PS

Faults:

1) 1xRF cavity down
2) 2xLinac 3 RF Thomson amplifier

AD (Lajos Bojtar)

Very good week for AD, nothing bad worth to mention happened. The good news is that we got a new orbit measurement system which works also on the ramps. We are testing it and looks good.

Booster (Alan Findlay)

A decent sort of week for the PSB, although Saturday made a mess of that.

PiPO was called Tuesday for BTP.DHZ30, as it developed an offset compared to the CCV. It took 1 h 45 mins to get the supply repaired and the beams to the PS were unavailable during this time.

Saturday morning while Yu was checking the BCMS beam and the distributor, he noted that the BI2.DIS was pulsing 4kV lower than expected at 18kV, so he called in the kicker piquet. At 10H00 the piquet asked to cut the beam for tests, but it turned out to be rather more complicated. After a number of things were tested and changed (including a thyratron), it wasn't entirely clear what had fixed the generator, but it was back up and running. It took 5 hours for the problems to be resolved and the distributor was back in action just before 16H00.

We also used the Finemet cavity to replace the C04 cavity for R4 on GPS & HRS as part of the reliability run, and this is how we'll run for as long as we can. There's a simple method to switch back to the C04 system if required.

PS (Denis Cotte)

Une assez bonne semaine pour le PS avec une disponibilité de 92%.

Un correcteur entre PS et PSB, BTP.DHZ30 à privé le PS de protons pendant près de 2 heures Mardi après midi.

A deux reprises pendant les nuits de Mardi et Mercredi, des perturbations électriques ont fait tomber une série de cavités 10MHZ. Environ 10 minutes sans faisceau dans les deux cas.

La principale panne de la semaine s'est produite Samedi. Le distributeur 2 du Booster s'est mis a dis-fonctionner. Sa réparation a privé le PS de proton pendant près de 5H30. A la suite de cette intervention, une carte électronique sur le septum d'injection du PS a dû être changée par le piquet Power ce qui a causé 1H30 sans proton. Enfin, un mauvais setting sur ce même septum a empêché la production des faisceaux 3BP pendant un peu plus d'un heure.

Autrement, le PS a fournit ses utilisateurs habituels AD, TOF, EAST1&2, MTE sans problème. Différents types de faisceaux "LHC High Intensity" ont été produits (LHCINDIV, LHC_BCMS, LHC_8b4e) pour des MD au SPS et LHC.

Le transverse feedback à l'injection du PS a été mise en opération sur les faisceaux IONs et LHC_BCMS.

Tout les faisceaux multi-bunches LHC sont maintenant migrés vers un nouveau schéma d'injection sans synchronisation.

Plusieurs visites ont eu lieu dans la zone CLEX du CTF cette semaine. Des tests DSO ont été effectués Jeudi et le beam permit est de nouveau valide.

SPS (Django Manglunki)

A hectic week for the SPS, with only 67% fixed target availability

Problems started on Tuesday 11/10 at 13:00 with a fault on MBE2103. It quickly turned out an electrical cell had to be repaired, and for that the SPS had to be stopped for the rest of the afternoon as power needed to be turned off in the whole of BA2. The LHC beam was available at 18:30, after a problem on the MKD had to be solved by the ABT standby person. For the fixed target beam the repair took about 48 hours. The beam was only back on Thursday 13/10 at 14:20 after another breakdown, this time on MDSH2112, which lasted for 1 hour.

During the time without FT beam, the opportunity was taken to continue the ion setting up, and to perform several interventions: the cable for the BCT in BA3 was fixed, and the ion interlock was reinstated and tested on MSE217. The DSO tests for primary ions are now planned for Monday 31/10 in the afternoon. Unfortunately the probes which have to be installed to investigate the QF ripple were not ready at the time the SPS was stopped.

On Thursday 13/10 both high pile up beams (BCMS 1.3e11/p/b & INDIV 1.8e11p/b) were prepared; they were delivered to the LHC on Friday 14/10.

On Friday 14/10 the nominal ion beam was extracted on TT40 & TT60 TEDs, completing the setting-up for the LHC p-Pb run. The 3 fixed target ion cycles are ready but have not been pulsing with beam yet.

Due to an intervention on the UPS, underground access was forbidden in BA4, BB4, BA5 & BB5 from Friday 14/10 12:00 to Saturday 15/10 18:00.

On Saturday 15/10 morning the CPS proton beam was unavailable for 5h30' because of a problem on the PSB distributor.

On Sunday 16/10 in the afternoon the MKP sparked several times and eventually tripped, needing the ABT standby to reset it.