

## End Week 10 (March 11<sup>th</sup> 2012) – Status of Accelerators

### TI (Peter Sollander)

<http://wikis/display/TIOP/2012/03/05/TI+summary+week+10,+2012>

day	events
Tuesday, March 6	Evacuation of P2 due to a smoke detection on the SNIFFER system. The detection was most likely real, however very brief. It's being investigated where it came from (Welding, smoke, dust..) Major event for more details: <a href="#">Evacuation P2</a> The trends for the detection can be seen here:
Wednesday, March 7	AUG in building 165. Apparently because of the vibrations while dismantling a crane. <a href="#">Minor event</a>
Saturday, March 10	ATLAS DSS system receives bad data from detector cooling system. In TI we only have a level 0 alarm. DC piquet onsite to make sure everything is OK, and in reality there's an electrical problem with a pump. Access organized for Monday 11AM with DC and EL. <a href="#">Minor event</a>
Sunday, March 11	ATLAS in bad luck again, this time CRYO is down for the experiment, causing the slow ramp down of the solenoid.

### Booster (Klaus Hanke)

Setting up of beams in the PSB continued.

Throughout the week multiple resets of the Franck-James amplifier of Tank 1 of Linac2, and multiple INCA issues.

Tuesday 6 March a couple of multipoles down, EPC piquet fixed the problem.

Wednesday 7 March first MD with new Finemet cavities. Conclusion so far is that MDs can be done parasitically without affecting other users. This is an important conclusion, as it will allow us to perform parallel MDs throughout the year.

During the night from Sunday to Monday 1,5 h stop when the Linac RFQ voltage dropped to half of its value, the operators managed to ramp it up again but the Linac specialists should check.

Beams: all LHC-type beams ready; LHC 25ns beam was finalised during the week and passed on to the PS. Otherwise SFTPRO ready, TOF being finalised, ISOLDE essentially ready. We have also set up a high intensity version of the LHCINDIV for the CNGS calibration run.

## SPS (Karel Cornelis)

Setting up continued with different beams in the SPS during the whole week. The longitudinal and transverse feedbacks were commissioned for the 50nsec, 25nsec beam and CT beams. A lot of measurements were performed in order to calibrate the wire scanners and on the 50nsec beam we start to have some reasonable results.

The probe and individual bunch beams were set up for extraction and the beam could be send down to the TED in T18 and T12 during the weekend. The 25nsec beam was used for scrubbing and by the end of the weekend we could accelerate four batches with reasonable vacuum conditions.

The CNGS beam is ready with a low intensity CT beam to set up the extraction, once the DSO tests are finished.

The main technical problems encountered during the week were the following: a thyatron had to be changed on MKE4 and water leak and a together with a short to earth on the MSE6 power supply.

We also had some difficulties with the use of the spare cycle with 12 bunches, since it has a different cycle length in the PS. The problem could be solved by using so called "operations compound cycles", but during the weekend we managed to screw up the timing sequencer. We certainly need a bit more study and understanding of this new feature.

Since Friday morning the vacuum in LSS1 (119,) on the camber housing a SEM grid and split foil, is rising again. A leak was detected there two weeks ago and repaired with varnish. We stopped putting beam in the SPS at 20:00 on Sunday evening so that the vacuum people can access on Monday morning, during the CNGS DSO test, to attempt to seal the leak.

## PS (Alexej Grudiev)

Setting up operational beams: LHC50ns12bunch, LHC25ns, CNGS up to higher intensity, which are now ready together with the beams which were prepared last week: LHCINDIV, LHCPROBE LHC50ns36bunch, SFTPRO.

Energy matching between PSB and PS was performed.

Tuesday: there was an access at 15:00-16:30 in the radiation area near Route govard. In parallel the was an intervention on the ventilation.

Wednesday many resettable faults on KFA45 module1 resolved by the specialist intervention. POPS had two fault with IGBT control resolved by the specialist.

Thesday night many resets of Reset C80-89. In the morning specialist had an intervention on the cavity power supply. But on Saturday it reappears. Specialist had to came in and switch to power supply of the C40-77 cavity.

Friday night many resets of the Reset KSU4 KFA45. In the morning specialist solved the problem exchanging a chassis.

## LHC

Hardware commissioning finished on schedule last Wednesday after a smooth and efficient re-commissioning of all circuits. Machine check-out has progressed well with the usual full series of

tests including beam dump and injection systems. Beam down the lines over the weekend. Looking good for first beam on afternoon Tuesday 13<sup>th</sup> March.

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