End Week 23 (June 10th 2012) – Status of Accelerators

TI (Jesper Nielsen)

http://wikis/display/TIOP/2012/06/11/TI+summary%2C+week+23+2012

Day	Event
Wednesday, June 6	Waterflow problem in RR17, stops the LHC. Problem was on the Detector cooling circuit. See ME Glitch stops all the machines, see ME. It was confirmed by EDF (Shor circuit on 225kV line), but unknown why.
Thursday, June 7th	BA2 water circuit trips on high temperature, see ME Being investigated why! BA2 trips again, this time all circuits. See ME Glitch again, confirmed by EDF (show circuit) see ME
Friday, June 8th	Glitch, confirmed by EDF, reason was thunderstorms. See ME
Sunday, June 10th	UX45 electrical problem with a klystron. EL piquet on site to re power the circuit. See ME
Monday, June 11th	Small perturbation, confirmed by EDF but no accelerators stopped! See ME

ISOLDE (Miguel Luis Lozano Benito)

It has been a very good week at Isolde. All the experiments got beam according to the schedule in time. No major issues to report.

New target prototype (NaF) installed on GPS. It will be tested during Monday, Tuesday and Wednesday.

Booster (Jocelyn Tan)

Tuesday

An 15mn access in the PS was required by the specialist for replacing a PU in the BTP line. Down time including the radiation cool down was 45mn. The re-start was smooth.

Wednesday

MD day.

In agreement with RP, Isolde had shared the pulses between GPS and HRS with a total 2.5microA.

At 8H15, the BE4.KFA14L4, the C04 and C16 cavities went off there was a power glitch (EDF). The RF specialist was called for the BR2 .C16 cavity : security trip on tuning power supply. The kicker specialist had to replace a cable. The down time was 1hour.

After the restart the BR2.C04 cavity could not follow the RF function.

At 1PM it was decided to reset the cavity, but not better result. The specialist was called and after investigation went into the machine for replacing the driver for the 100W amplifier. This fixed the problem. The beam was back at 4:10PM.

Thursday

There was no beam for 30mn due to LA1.QDN23S. The PIPO was called and fixed the problem.

At 7:50PM, there was a power glitch, but with limited impact : the cavities and BTY.QFO210. The beam was back after 10mn.

The operator noted that the Isolde watchdog needed a reset from time to time, without any obvious reason.

Sunday

The PIVAC was called at 8:10AM for an power supply connection issue with LA3.VRPA1B. The operator noticed also that the application PVSS was not available. The PIVAC has restarted the power supply.

BEAMS

The LHC low emittance beam "LHC_lowemt_H9_A and B" for the PS has been prepared by our RF expert.

PS (Rende Steerenberg)

The PS had a rather good week, with an accumulated beam availability out of the PS of more than 90%. However, the week started with problems on the CT extracted beam, which were producing fluctuating and too high beam losses at extraction, causing too high levels of dose rate on top of the PS tunnel at the level of SMH16. The intensity was reduced from 2E13 to 1.5E13. After careful investigation adjustments have been made and issues due to the fact that the fast bumpers are not fully ppm have been circumvented. The intensity is back to 2E13 ppp and one less TOF cycle allowed the SPS to go back to the super cycles containing 5 CNGS cycles.

However, last weekend again problems reappeared and diagnostics seem to indicate that not all elements do pulse with the correct values, but with values of another user. This problem seems to have periods when this happens often and periods where this seems to happen less.

Otherwise there were only minor problems that were quickly solved.

SPS (Karel Cornelis)

On Tuesday afternoon the SPS was stopped for several hours because of an intervention on the proton inflector. The pulse time of switch 5 started to drift (kicking on the last/first bunch of the LHC batches) and on Tuesday afternoon the switch was changed.

Wednesday there was a 24 hour MD, with a single bunch in coast for crab cavity studies.

Q20 extraction studies were resumed on Thursday in order to study the trajectory in TT40, which was still not satisfactory. The studies will resume today.

After discussion with the CPS, the duty cycle of the CNGS was increased from 4 to 5 cycles in the super cycle, and this on the expense of n-TOF is well ahead of schedule according to statistics. The intensity on the CNGS cycles is still 'lowish' but the weekend turned out to be productive and since a long time, we had to pay attention again to the temperature in the target area.

LHC

Good – some nice long fills. 1.1 fb-1 delivered, now over 5 fb-1 in CMS & ATLAS for the year.

More details:

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