
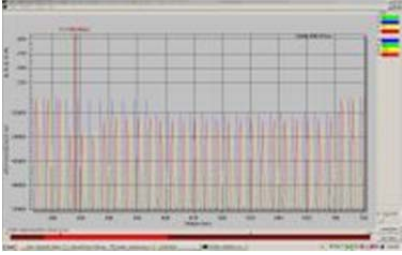
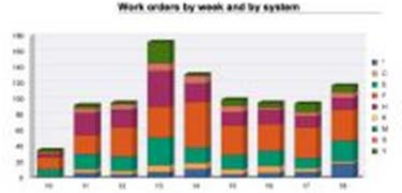


End of Week 18 (May 8th 2011) status of Accelerators

TI (Peter Sollander)

Date	Events
Tuesday, May 3	<p>UPS problem in UJ56: Fault on the UPS created some smoke and the fire alarm in UJ56 triggered. After first intervention by firemen, the EN/EL piquet went in to try to fix the UPS. It turned out that it was a difficult task and EL + contractor gave up attempts at 4am the following day when they still had not managed to fix the UPS. Spare UPS was put in later in the afternoon on Wednesday 4/5. The LHC beams were back at 16:00, 26 hours after the stop. This event is followed up in TIOC with a major event report and Marc Tavlet has asked that an accident declaration (A2) is filled also.</p> 
Friday, May 6	<p>Electrical perturbation stops the LHC for an hour in the morning. Major event report edited, pending information from EN/EL.</p>
Monday, May 9	<p>Another electrical perturbation on the 400kV supply stops all the accelerators at 05:41. First information from EN/EL indicate a 13% dip on 2 phases.</p> 
ODMs	

This week TI will run with 2 persons on shift in order to deal with the work load.

LINAC2 (Mike O'Neil)

During the week there were 4 separate failures of auxiliary power supplies (trivolt +/-15V 5V) that are used to power the control chassis of the tank 1 quadrupoles. The piquet power replaced them. A replacement of all of this type of supply used in Linac 2 tank 1 quadrupoles is already foreseen for the technical stop tomorrow.

A reset of the RF power supplies was also required after a mains glitch on Monday morning.

PS Booster (Alan Findlay)

Rather a good week for the PSB, at least regarding the LHC beams, with very little down time.

The week was spent preparing the beams required for the LHC MD program, with adjustments and modifications required on some of our regular users to meet the MD specifications. Thanks to good planning by Giovanni et al, we had enough time to set-up and modify the required users, even with the regularly changing specifications, and get them to the PS. MD users are at a premium though, and it took some jiggery-pokery to try to make sure everyone got what was required.

The non-LHC users were reasonably well treated too, with no major problems to report for them. ISOLDE have been a touch inconvenienced by the regular failure of BTY.BVT101, requiring Firstline intervention in most cases.

The season is upon us for the exchange of PS & PSB operators, as we've done over the past couple of years. One has to ensure that the guys on the machine have sufficient training on the PSB however, as they will often find themselves with an entire PS crew on shift, and this can be the case for 2 consecutive shifts. We had to spend time together working on the beams required for the week and weekend, in the hope that they had enough knowledge to get them through what was asked of them. This is far from trivial when one considers the range of beams requested of us and the subtle differences between them. Thanks to their enthusiasm, I think we got them up to speed, although we've still a long way to go.

ISOLDE (Didier Voulot)

First week of beam for ISOLDE with many problems:

- Tuesday failure of the target cooling system (ironically this was caused by the installation of a new PLC to monitor the cooling system). Difficult to restart. Some modifications of the system are necessary to make it more reliable. Already discussed with EN-CV. It should be done partly during the year and partly next shut down.
- Wednesday a short circuit appeared inside the RFQ-cooler. Open-up on Thursday to fix it but the problem reappeared, on Friday and during the weekend. The cooler is working anyway but we will have to address the problem to avoid damaging equipment.
- Friday short circuit inside the merging switchyard. One plate of the electrostatic bender HRS.BE750 is shorted to ground. Decide to open-up on Monday as the beam can go through anyway (poor transmission).

Despite the problems target ion source development took place on GPS (laser ionized Sm beams) and Ga beams delivered to COLLAPS during the weekend.

PS (Alexej Grudiev)

Week of good running with several minor problem. Steady providing nominal LHC beams: LHC_INDIV LHC50ns 36 and 12 bunches, at nominal parameters. Beams for LHC MD were provided from Wednesday to Sunday. TOF and CNGS operation continued at nominal intensities. AD beam provided during working hours for AD setting up. EASTA is taking beam. EASTC is not taking the beam due to the problem with septum F61.SMH01.

Several issues to report:

The position of the Septum blades of the F61.SMH01 which separates beams going to T7 from T9-T10 experimental areas is not correct. This results in no beam to T7 irradiation zone could be send despite all the effort on Friday afternoon and Saturday. This problem will be fixed during technical stop on 10 May. As a result no beam for EASTC is available till then.

On Wednesday it was observed that several low energy quadrupoles do not pulse and stays at 0 in AQN. (Confirmed by Oasis as well). This causes vertical instability on the flat bottom of the LHC_50ns_DB(double batch) which is in setting up mode in the PS. Finally, as a temporal solution, beam was stabilized by increasing the current in the remaining quads from -4.22A to -4.52A to compensate missing quads. Specialists will fix the problem during technical stop on the 10th of May. On Thursday evening, No beam could be injected due to KFA45 timing problem, PICO had to intervene and change a TG8 module on DSCK45. Problem seemed to be solved. But the problem had reappeared during the weekend several times always solved by rebooting the DSC.

On Friday, the startup of the EAST users was hampered by the problem with the septum SMH57 related to the temperature interlock. Specialist had to adjust the temperature threshold in order to resume the operation of the septum.

Several problems with 10 MHz cavities during week end. Specialist M. Haase had to come 3 times over the week end to fix 10 MHz cavities C75, C91, C96, C51. The reason is not clear. He will investigate it on Monday.

SPS (Elias Metral)

It was a good week for the SPS, with a lot of beam sent to CNGS, except mainly on Monday afternoon (and night), when we had a problem with the MKP (KFMD1 PFN2 magnet spark). It was found that the problem was coming from the terminating resistance, which needed an intervention of about one hour. It was then decided to have no beam during the whole night and we planned the intervention for Tuesday morning at 07:30. The beam was back at ~ 09:00. Jeremie took this opportunity to make a (visual) magnet patrol. Some water leaks were found, which will be looked at in more detail during the next Technical Stop. The week was also punctuated by frequent trips of RF transmitters, which necessitated several interventions of the experts. During the week, in parallel to the CNGS operation and to the numerous beams sent to LHC, the setting-up of the LHCMD2 beam (with Q20 optics) continued: matching, impact of the magnetic cycle in the PS played before etc.

On Tuesday, looking at the beam sent to the LHC, Yannis & team found a kind of "LHC hump" during the ramp (a frequency is clearly observed to cross the tune line, which generates some beam perturbations). Karel was aware of this since the beginning of this year. One should/will try and learn more about its origin, but it does not seem to be too harmful.

On Thursday, the beam was stopped for about two hours due to the MKP Generator 1 TMR2A (oil flow too low fault). The TMR2A oil flow fault was masked because water is free flowing in the system. This should allow reaching the next Technical Stop. In the evening, an RF alarm

(Meas800MHz_Locked) was found in Laser (when we added the LHC2 cycle in the supercycle). The reason was that the 200 MHz injection RF frequency was wrong due to the playback Enabled on the LHC2 user (the 800 MHz free running was actually fine).

On Sunday, we had some problems with a BIC interlock on BPM LSS6 old and new, which prevented us to send 12 bunches to the LHC. Jorg updated the reference on the BPH.62008. That solved the problem with the old interlock BPM LSS6 but not the new. After that, Jorg found a bad response of a BPM monitor.

LHC

Mainly running for MD, which are going very well.

Latest new to be found at:

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