

End Week 48 (December 5th 2010) – Status of Accelerators

Beam operation finishes for 2010 at 18:00 Monday 6th December.

Week 48 - ions only in the complex.

Source re-fill was required Friday to Saturday.

LEIR (Christian Carli)

LEIR has again worked well during last week ... at least when beam was available from Linac3. On Monday, accumulation of two Linac3 shots on a 2.4s "EARLY" cycle has been implemented to compensate for the lower intensities from the Linac.

In addition to operation for the LHC, high intensity beams have been delivered for SPS MDs during most of the week. I have the impression that the beam life-time has dropped somewhat (not worrying for the moment, but to be watched at). A hypothesis to explain that could be a higher rest gas pressures due to the presence of high intensity beams.

PS (Rende Steerenberg)

The PS has been running very well for the ions. There were however many resets on the different RF cavities 10 MHz and 80 MHz and a power converter (F16.QDE217) in the TT2 line.

On Friday the ions source was re-filled and ions were back in the PS on Saturday morning around 09:00.

During the ions stop the new protection system for the 1st magnetic septum was tested and adjusted using a many East Area cycles in the super cycle.

SPS (Django Manglunki)

During the last week of the run, the SPS supplied heavy ions at 177GeV/u to: the LHC; to the North Area at 13 GeV/u for fragmentation tests; and in coast at 106 GeV/u to UA9 during 24h for crystal collimation studies, with no major problems.

The coastable cycle at 106GeV/u for UA9 was prepared Wednesday at 8:00 and as ready before 16:00 as foreseen.

On Thursday while the LHC was down, the preparation of the 8 bunch beam for faster filling of the LHC was finalised, and the beam sent to TI2 and TI8. Friday the SPS was not running as the source had to be refilled, and it restarted on Saturday, filling the LHC with the 8 bunch beam. The SPS also delivered the 13GeV/u beam in slow extraction to NA61 for the whole week-end, with lots of variations in order to complete the fragmentation MD programme, and get answers in view of the physics run in 2011.

On Saturday it was found that the first line service had already stopped during the week-end, so the TE/EPC piquet was called to fix a power supply.

This morning we switched back to 80GeV/u for NA61 and we are preparing to fill the LHC for the last time at the end of the morning.

TI (Peter Sollander)

- **Wednesday December 1st:** Patrol lost in PM25 during an access. This is a recurring problem. GS/ASE has already made several interventions on the PAD before. The problem was thought to be fixed. Pending information from GS/ASE on major event report.

- **Sunday December 5th,** several smaller incidents with no effect on physics.

Fire detection in SH1, a cryo compressor is smoking. Fire brigade, CV and Cryo piquets on site.

Compressed air problem on EHT5, one of the two major 400/66 transformers. EL piquets on site judge that it can hold until end of run.

Electronics board fails on access control system in P8.

LHC

Ion running. Rocky week with long cryogenics stop (cold compressor electronics – point 4) and an unforeseen source re-fill. Pushing an integrated total of 10 inverse microbarn for the ion run. Full details under “coordination” at:

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