

Accelerator complex status

End week 13 (Sunday 29th March 2015)

TI (Jesper Nielsen)

TI summary:

<https://wikis/display/TIOP/2015/03/27/TI+summary+week+13%2C+2015>

LEIR (Django Manglunki)

A quiet week for LEIR.

Apart from the odd RF cavity trips on a quickly resettable fault, there were no breakdowns no report.

The PS stray field compensation system does a good job correcting the trajectory of the incoming Linac3 beam depending on the preceding PS cycle. However, for yet unknown reasons, the correction coefficients have to be re-tuned and optimized on a daily basis. Investigations are ongoing to identify the cause of this drift.

On Thursday and Friday, a 3.6 second cycle with a long flat bottom has been designed to try and accumulate several injections and investigate intensity limitations with argon for future comparison with the lead beam expected in June.

Booster (Jose-Luis Sanchez)

A very good week for the PSB with no major issues to report.

Wednesday a dedicated MD confirmed the ripples injected in the QFE power supply by the trim1+4. No ripple when the TRIM1+4 were disconnected.

EPC control specialist had to deploy an old version of the FESA class for Pow1553 in the FEC cfc-361-rpsbej. The PPM did not work correctly with the multi-threaded version. The problem is with the FESA framework.

We had a sporadic problem on the C16 blowup on ring 3. RF specialists have finally moved the DSP C board (that takes care of the C16 blowup) from the unused ring 0 to ring 3. In doing that they found a bad SMC cable driving the C16 cavity. After restarting the Ring 3 LLRF crate, with the blowup DSP from Ring 0.

This week the emittance of the doublet beam has been optimized E_h and $E_v = 3,5 \sigma_N$ with $250E10$ per ring. The MD XL emittance beam has been set up.

PS (Guido Sterbini)

It was an overall good week for the PS.

The ions production was quite smooth all along the week. The SPS took the doublet beam at the beginning of the week.

Concerning the beam setup a lot of progress was done on LHC50 (36 and 6 bunches) and polishing of the LHC25 continued. The nToF beam is now operational at 750×10^9 ppp while SFTPRO can deliver up to 1300 ppp.

Efforts were devoted on the standardisation of the multi-bunch LHC beams emittance measurement in the PS. The PS wire scanners were intensely used without significant problems.

A Monday morning the 20 MHz cavity C20-80 was replaced by the C20-92 (there is not an operational spare of the 20 MHz at the moment).

The major issue of the week was the downtime of 1 h on Monday afternoon when the PS went in fallback mode due to an accidental disconnection of an EIS device signal during an intervention close by an access door.

On Wednesday afternoon, there was a minor downtime (10 min) caused by the closure of the vacuum valve in the sector 1 (it was due to a 220 breaker that switched off the four vacuum pumps of that sector).

SPS (Karel Cornelis)

SPS had a very productive week for the north area experiments taking Ar-ions. The LHC not taking beam, they could profit from an optimum duty cycle and a week without major technical problems. Due to a broken cryogenic pump, reducing the cooling power on a magnet of the NA61 detector, the energy change (40 AGeV to 80 GeV AGeV) was postponed to next Monday, adding to a very efficient operation this week.

On Monday and Tuesday progress was made with the setting up of the damper on the doublet beam. The new dipole magnet, installed the week before, showed an intense vacuum activity due to scrubbing, but it conditioned pretty fast.