Accelerator Complex Status

End week 46 (Monday 22 November 2021)

The weekly OP reports will be discontinued during the YETS

Technical Infrastructure (*Ronan Ledru*):
Statistics:
- About 7'000 alarms.
- 920 phone calls (671 incoming, 249 outgoing).
- 100 ODM created.

Events worth mentioning:
- Wed. 17.11, Fire alarms in UX15. No real fire, there was a lot of works in the area.
- Thu. 18.11, LHC4 stable filter switched ON
- Fri. 19.11, Evacuation of the UX45. A wrong action during the maintenance of the system has sent an order for evacuation.

Details: https://wikis.cern.ch/display/TIOP/2021/11/22/TI+week+summary%2C+Week+46

LINAC 4 ()
Source/RFQ MD last week.

PS Booster ():
Stopped for YETS.

ISOLDE (*Simon Mataguez*):
For ISOLDE it has been a good week, all has been running smoothly.

GPS
Target (#734 UC VD7) installed on Monday. Since, Collections of Xe isotopes for IS691 on GLM.
Stopped Friday evening.

HRS
Target (#740 UC W) installed on Tuesday. Setting loaded from week 43, 40kV in bunched mode. RaF beams to CRIS.
As at 40kV, HV supply tripped too many time (not understood, coming from the CF4 gas injected for the plasma?). Thursday, we set the beam at 30kV. Since, still few trips (5 per day), but CRIS can work and happy!

PS ():
Stopped for YETS..

PS - East Area ():
Stopped for YETS..

AD - ELENA ():
Stopped for YETS..

SPS ():

Stopped for YETS..

SPS North Area ():
Stopped for YETS..

AWAKE (*Edda Gschwendtner*):
CV and Access System work

- **RP** survey on Monday morning for access after proton beam
- **CV** venting in preparation of 3 weeks of work to move vacuum SPS/AWAKE window
- **Laser** completely shut down
- **Access System** tests (patrol lost including in CNGS are and TZ80)
- **Streak camera** optics alignment tests
- **Pump down and patrol planned for January**. Until then, laser and electron beams will remain off.

Plan for week 47: CV puisard pump change in TAG41, start of vacuum work on SPS/AWAKE window.

LINAC 3 (*Richard Scrivens*):
Linac3 continued with a week of MDs:

- Tests with the moveable puller could lead to some higher intensity at the end of the week.
- Reference measurements were made with the RF cavities.
- Transverse beam reconstruction data was taken in the transfer lines.
- Oxygen4+ settings were tested for stability (without beam).
- Several software tests could be made, including delivering a optimizer for the low energy transport.
- After the beam stop, the magnets were inspected.

Thanks to everyone for a very productive 2021 !

LEIR ():
Stopped for YETS.

CLEAR (*Wilfrid Farabolini*):
This week was mainly dedicated to Cherenkov BPM tests, and parasitically for checking a new BLM after the installation of 2 optic fibers along the beam line, both activities in collaboration with BI colleagues.
The beam requirements for Cherenkov BPM data recording were very challenging: 4 different energies from 60 to 200 MeV, strict single bunch of 200 pC, short and well controlled bunch length from 2 to 4 ps, small beam size and stable beam position at the final test stand, operation at 10 Hz repetition rate, data records of all these parameters in real time when possible or with frequent measurements (energy, bunch length) generating difficulties in beam transport. The whole CLEAR team participation was required to ensure these beam characteristics and operation, meanwhile a BI team was also participating for the RF signal acquisitions and frequent changes of set-up. The laser team provided also a noticeable effort for ensuring the single bunch operations and to try to stabilize the laser parameters. Parasitically the optic fiber amplifiers were debugged by the BLM group and signals well correlated with beam losses observed, ensuring their availability for their tests scheduled next week. The CLEAR team also prepared another test for next week: the PRL radiation sensors irradiation with the construction of new sample holders and the procurement of radiochromic films fitted for high doses.
(Wilfrid Farabolini, CLEAR Weekly Supervisor)

Full reports can be found as usual here: https://indico.cern.ch/category/10682/

LHC (Jörg Wenninger & LHC Coordination webpage):

S12	S23	S34	S45	S56	S67	S78	S81
Completed	Warm up	Completed	Completed	Completed	Completed	Trained	Completed
77 / 11950 A	0 / 0 A	71 / 11950 A	87 / 11950 A	76 / 11600 A	62 / 11600 A	21 / 11600 A	55 / 11600

At the 21st training cycle, S78 reached the target of 11'600A (but quenched at FT), but this turned out to be teh only FT quench.