

September 2010 Alba mini newsletter

Beamlines:

<http://www.cells.es/Beamlines>

* Core Level Absorption & Emission Spectroscopies (CLÆSS)

- Integration of various control subsystems into SARDANA control framework is in progress.
- The assembly of CLEAR spectrometer by NTE-Sener in progress.
- The sample support stage with 4 degrees of freedom is in production.

* Materials Science and Powder Diffraction (MSPD)

- Installation of beam conditioning table for station 1 (High pressure) (Fig. 1).

* Macromolecular Crystallography (XALOC)

- The photon shutter in the optics hutch has been aligned and baked out.
- The Preliminary Design Review (PDR) of the main data collection detector (PILATUS 6M) has been passed.
- Procurement/manufacturing of the support/vessels of the beam-conditioning elements of the end-station has started.

* Non-Crystalline Diffraction (NCD)

- IDT has completed the installation of the white beam slits upstream the monochromator. Likewise, they have installed the thin foils into the XBPM located between the double-crystal monochromator (DCM) and the mirror systems. The beamline had already taken reception of the fluorescent screen monitor in July.
- Cable trays have been installed in optics hutch (OH) and experimental hutch (EH). Cables will be laid at the end of September.
- All services of nitrogen gas and compressed air supplies have been installed and are working without leaks.
- The first vacuum section of the beam line connecting the exit flange of the triggering unit with the entrance flange of the DCM in the OH is being validated by Alba staff right now. This means that in due course, if vacuum allows, the beamline can soon be connected to the storage ring via the Front End.
- The monochromatic photon shutter has been delivered for NCD and is now undergoing bake-out after which it will be installed later in September into the layout of the OH.

* Photoemission Spectroscopy and Microscopy (CIRCE)

- The PDR of the near-ambient pressure photoemission (NAPP) experimental station have been approved.
- The DiagOn diagnostic units have been received.
- The beam reference monitors have been mounted.

* Resonant Absorption and Scattering (BOREAS)

- The contract for the sample cryomanipulator of the resonant soft X-ray scattering (RSXS) end-station (MARES) has been awarded to VG (Konik).
- The UHV vessel for the MARES diffractometer is approaching its final design stage.
- The design of the sample preparation chambers for the magnetic dichroism (XMCD) end-station is finished. These chambers will be provided by CVT/Scientific Magnetics together with the 3-axis cryomagnet.
- The design of the high-Tc superconducting magnet for the MARES diffractometer is advancing.
- All the beamline, apart from the monochromator, is currently under UHV ($p < 10^{-9}$ mbar).
- The installation of the last cable trays and the purchase of the cables for the beamline is about to start.

* X-Ray Microscopy (MISTRAL)

- The cabling of the full beamline is progressing and will be finished by mid-Sept.
- The Transmission X-ray Microscope will be installed from Sept 13th to 27th.

IDs:

http://www.cells.es/Divisions/Accelerators/Insertion_Devices/Ids/

* Apple II undulators have already been placed into the tunnel, in a parking position. Final cabling of these devices will take place in the following weeks.

* The first in-vacuum undulator (IVU) was received at CELLS the first week of August. Unfortunately, the ID could not be accepted and it has been sent back to BRUKER (former ACCEL). We are now evaluating the real impact of this incidence into the general time schedule.

Accelerators:

<http://www.cells.es/Divisions/Accelerators>

* During the two weeks of booster (BO) commissioning in July good progress was made on the characterization of a DC beam at injection. However the LINAC was not running reliably enough and we were not able to advance on the planned activities.

* In addition one of the two BO dipole power supplies broke down during the first week of commissioning and the beam could not be brought to high energy.

* Works in the storage ring installation are in the final phase and additional hours to complete the commissioning of the BO are being scheduled for September/October.

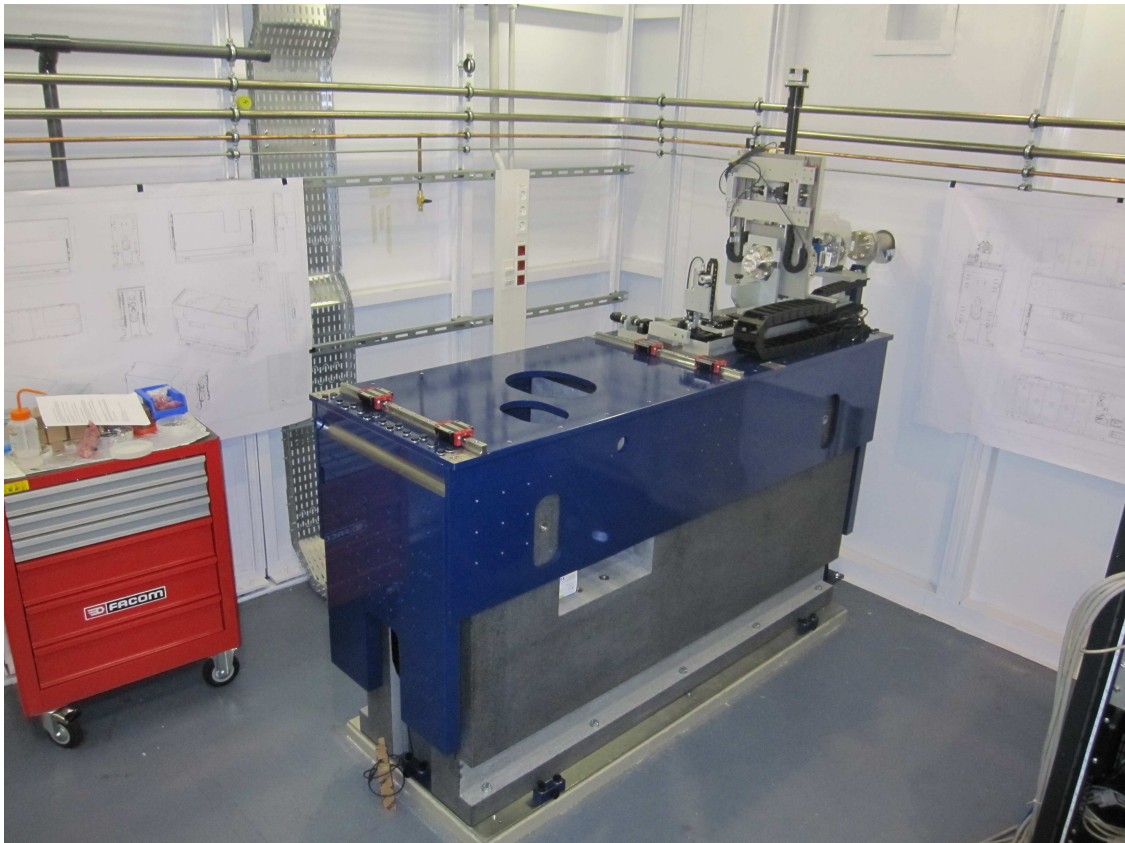


Figure 1. BL04-MSPD: Table for the beam-conditioning elements of the high-pressure end station.