

October 2010 Alba mini newsletter

Beamlines:

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

* BL04-MSPD: Materials Science and Powder Diffraction.

- Tests of the Personal Safety System (PSS) are ongoing.
- Design and integration of several subcomponents (as sample table) of the powder diffraction station is being carried out.
- The design/manufacturer of the alignment stage for the high-pressure station will be decided in a few days.

* BL09-MISTRAL: X-Ray Microscopy.

- The transmission X-ray microscope was delivered on Sept 9th. During 2 weeks (from Sept 13th to 24th) it has been installed in collaboration with Xradia. All motors have been checked and they work as expected. The system has been cooled to 100K, the working conditions for biological samples (See Figure 1).

* BL11-NCD: Non-Crystalline Diffraction.

- Procon has verified that the logic of the PSS is programmed and working as expected. This effort has taken almost two weeks and therefore it prevented us from working with the beamline.
- Cable length calculations are being carried out this week for the optics hutch including the last vacuum section of the beamline.
- Cabling of the beamline components is due to start this week (4.10.10).
- We have bought all material needed for the manifolds that will be used to distribute cooling water to all water-cooled items in the beamline layout.

* BL13-XALOC: Macromolecular Crystallography.

- The monochromator is ready for commissioning without beam at cryogenic conditions.
- The Cr foils of 3 of the x-ray beam positioning monitors of the optics hutch have been installed.
- The installation of the support of the beam-conditioning elements has started.
- The diamond crystal of the Laue monochromator has been installed inside its vacuum vessel.
- The metrology of the vertical focusing mirror has been performed and the mirror has been installed inside its vacuum vessel.

* BL22-CLÆSS: Core Level Absorption & Emission Spectroscopies.

- CLEAR's spectrometer has arrived.
- Liquid N₂, vibrational, and control tests of the monochromator have started.

* BL24-CIRCE: Photoemission Spectroscopy and Microscopy.

- Four mirrors have been installed in their respective vacuum vessels.

* BL29-BOREAS: Resonant Absorption and Scattering.

- Detailed metrology of the optics is ongoing.
- The installation of the last cable trays and the purchase of the cables are advancing.

IDs:

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

Accelerators:

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

- The linear accelerator (Linac) and the Booster Ring main dipole power supply have undergone extensive testing in August to have them ready for commissioning following the solving of the problems faced in July with these two components.
- The Booster Ring has been restarted on Monday 27.09.10. The main objective will be to accelerate an electron beam up to 3.0 GeV in the coming days.
- In parallel the cabling of the Storage Ring is being completed. After installing more than 12.000 cables for the SR and Front Ends, only about 20 are left for installation. The next step will then be the functional test of the Machine Protection System. Once this is finished the Storage Ring will be ready for commissioning. The expected starting date is the 02.11.10.



Figure 1. Beamline 09 (MISTRAL) with the recently installed transmission X-ray microscope.