

## November 2010 Alba mini newsletter

### Beamlines:

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

\* BL04-MSPD: Materials Science and Powder Diffraction.

- Commissioning of the cryosystem and monochromator has started.

\* BL09-MISTRAL: X-Ray Microscopy.

- The cabling campaign is being finalized in preparation for the commissioning of the beamline in December.

\* BL11-NCD: Non-Crystalline Diffraction.

- The monochromatic photon shutter located at the very end of the optics hutch has been installed, aligned, integrated with the personal safety system (PSS) and shown to have no vacuum leaks. It is now connected with the upstream and downstream beamline vacuum components.

- The first vacuum section of the beamline located between the triggering unit and the double crystal monochromator (DCM) that contains a vacuum control section and two sets of fixed apertures that serve as vacuum protection as well as white beam slits is under ultra high vacuum (UHV). This means, in principle that the UHV section from the front end is continuing inside the optics hutch until the exit flange of the DCM.

- Modifications to mechanical supports for beam pipes are in progress.

- All bellows in the vacuum layout have been fixed in length by use of bolts and fixation plates.

- A cable campaign is due to start early November.

- The local cooling water system is ready to be installed for the fixed apertures and the in-vacuum motors and crystal assembly in the DCM.

\* BL13-XALOC: Macromolecular Crystallography.

- The second cabling campaign is in progress: diffractometer, diffractometer table, and automated sample changer.

- The installation of the support of the beam-conditioning elements is in progress.

- The metrology of the horizontal focusing mirror (HFM) has been finished and the mirror/bender is ready to be installed in its vacuum vessel in the optics hutch.

- Undergoing PSS tests.

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

- Long-term complex tests of vacuum isolated cryo-pipes and the cryo-cooler have been performed with simultaneous vibration measurements as a function of the flow rate of liquid nitrogen.

- The installation of the experimental station granite table has started.

\* BL24-CIRCE: Photoemission Spectroscopy and Microscopy.

- Two mirror vacuum vessels have been baked out.

- Water manifold installation has started.

- Undergoing PSS tests.

\* BL29-BOREAS: Resonant Absorption and Scattering.

- The call for tender for the superconducting magnet at high critical temperature ( $T_c$ ) for the scattering station has been published.

- The detailed design of the double rotary feedthrough has been approved.

- The design of the common platform of the sample transfer system at ultra high vacuum for the two experimental stations is about to be finalized.

**IDs:**

[http://www.cells.es/Divisions/Accelerators/Insertion\\_Devices/Ids/](http://www.cells.es/Divisions/Accelerators/Insertion_Devices/Ids/)

**Accelerators:**

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

- After restarting the booster ring (BO) on the 27/9/10, the electron beam was accelerated to 3 GeV on the 4/10/10. After some beam characterization the beam was extracted on the evening of the 28/10/10. Figure 1 shows the electron beam during the last turn in the BO (red) and the electron beam already on the Booster to Storage Ring Transfer Line (BT) (yellow).

- Testing of the machine protection system for the storage ring (SR) is in the final stages and we aim to start the SR commissioning on November 20th.

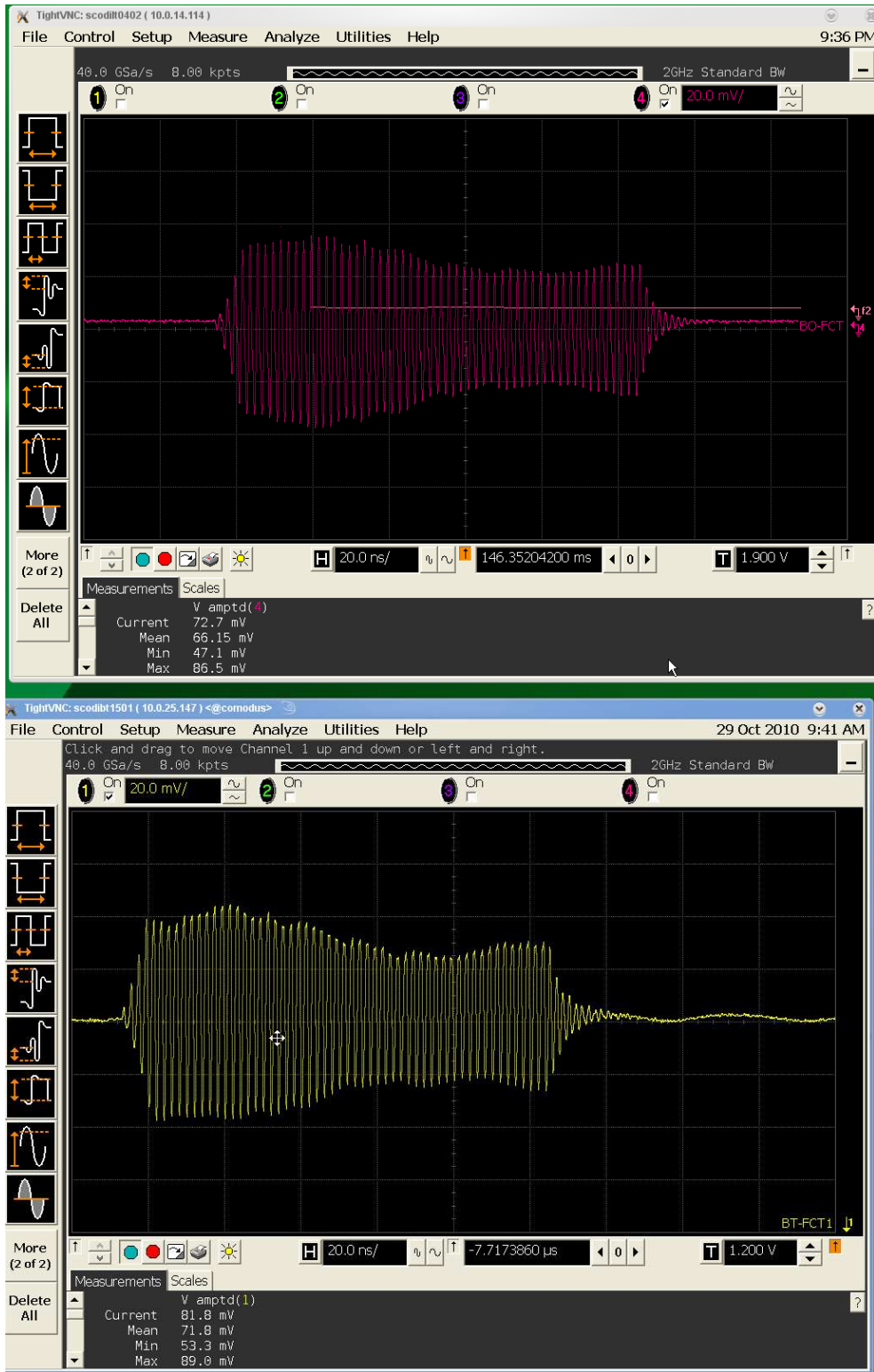


Figure 1. The electron beam during the last turn in the BO (red) and BT (yellow).