



Topical Workshop on 'Longitudinal Beam Profile Measurements'

The Cockcroft Institute, UK – July 12th/13th 2010

The exact determination of the time structure of ever shorter bunches in accelerators and light sources like the X-FEL, the ILC or CLIC is of high importance for the successful operation of these next-generation machines. It is also a key to the optimization of existing scientific infrastructures.

The exact measurement of the time structure poses a number of challenges to the beam diagnostics system: The monitors should be non-destructive, easy to maintain and provide time resolutions down to the femtosecond regime!

Within DITANET CERN, DESY, GSI, LBNL, PSI, Royal Holloway, STFC, U Dundee and U Liverpool are active in this research area. These partners have led many of the developments during the last decade and are helping to pave the way for future facilities.

This two day workshop will bring together experts from the beam diagnostics community to provide a forum for knowledge exchange, a review of the state of the art, and discuss future developments and challenges. The following topics will be covered:

- RF deflecting structures for bunch length monitoring;
- Beam profile monitoring using Electro-Optics techniques;
- Exploitation of diffraction and synchrotron radiation for non-invasive diagnostics;
- Bunch shape monitoring in hadron accelerators.

All contributions will be made available via the CERN Indico server and will be linked from the Network's web site.

The workshop will take place on July 12th and 13th, 2010 at the Cockcroft Institute, near Liverpool (UK). Participants should plan to arrive on Sunday, July 11th and leave on Tuesday evening or Wednesday morning. Further information will be circulated in due time.

Contact and further detail:

Carsten P. Welsch
Department of Physics
University of Liverpool
Liverpool L69 7ZE UK
c.p.welsch@liverpool.ac.uk

