

Poster Presentation

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Facilities for Macromolecular Crystallography at the HZB

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The Macromolecular Crystallography (MX) group at the Helmholtz-Zentrum Berlin (HZB) has been in operation since 2003. Since then, three state-of-the-art synchrotron beam lines (BL14.1-3) for MX have been built up on a 7T-wavelength shifter source [1,2]. Currently, the three beam lines represent the most productive MX-stations in Germany, with more than 1100 PDB depositions (Status 02/2014). BLs14.1 and 14.2 are energy tuneable in the range 5.5-15.5 keV, while beam line 14.3 is a fixed-energy side station operated at 13.8 keV. All three beam lines are equipped with state-of-the-art detectors: BL14.1 with a PILATUS 6M detector and BLs14.2 and 14.3 with large CCD-detectors. BL14.1 and BL14.2 are in regular user operation providing about 200 beam days per year and about 600 user shifts to approximately 70 research groups across Europe. BL14.3 has been equipped with a HC1 crystal dehydration device in 2011. In addition to serving the user community mainly as a screening and test beam line, it is currently the only MX beamline in Europe with a HC1 device permanently installed. Additional user facilities include office space adjacent to the beam lines, a sample preparation laboratory, a biology laboratory (safety level 1) and high-end computing resources. On the poster, a summary on the experimental possibilities of the beam lines and the ancillary equipment provided to the user community will be given.

[1] Heinemann U., Büssow K., Mueller, U. & Umbach, P. (2003). *Acc. Chem. Res.* 36, 157-163., [2] U. Mueller, N. Darowski, M. R. Fuchs, R. Förster, M. Hellmig, K. S. Paithankar, S. Pühringer, M. Steffien, G. Zocher & M. S. Weiss (2012). *J. Synchr. Rad.* 19, 442-449.

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