

Poster Presentation

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Mail-In Crystallography at the Canadian Light Source

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The Canadian Macromolecular Crystallography Facility (CMCF) operates two crystallography beamlines, 08ID-1 and 08B1-1 (<http://cmcf.lightsource.ca>), at the Canadian Light Source (CLS). Normal access is through a traditional peer review process but commercial access is also welcome. Users apply for beamtime against their active proposals and may collect data in person or via remote access (Remote Control or Mail-In). Remote Control allows users to control the beamlines remotely from home institutions. Additionally, users with the highest peer review scores have the option of Mail-In beamtime, where data are collected by CMCF staff according to investigators' instructions. This method has proven very effective for several reasons. Data are collected by trained personnel experienced with the beamlines, resulting in high quality data. Travel expenses are eliminated. Data are collected around regular user shifts using the most appropriate beamline, reducing wasted beamtime and providing flexibility. The process is made extremely efficient when integrated with MxLIVE, the CMCF Laboratory Information Management System, since images can be viewed and output files downloaded almost immediately after data have been collected for the user. Four Mail-In shifts per week are typically supported during normal operations. In 2013 alone, over 430 datasets were collected for more than 20 investigators across Canada. At least 12 peer-reviewed articles appeared in 2013 containing Mail-In data, many in high-impact journals. Several of these results will be discussed.

[1] Y. Abbas, A. Pichlmair, M. Gorna, et al, *Nature* 494(7435), 60-64, [2] N. Safaee, A. Noronha, D. Rodionov, et al, *Angew. Chem. Int. Ed. Engl.* 52(39), 10370-10373, [3] P. van Kasteren, B. Bailey-Elkin, T. James, et al, *Proc. Natl. Acad. Sci. U.S.A.* 110(9), E838-847

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