Contribution ID : **108**   Type : **Poster**

The Technologies That Drive the MX Beamlines.

Thursday, 20 November 2014 17:30 (90)

The MX1 and MX2 beamlines at the Australian Synchrotron are sophisticated machines for the collection of single crystal X-ray diffraction data. The two stations serve a diverse community of researchers in the structural sciences, from mineralogy to virology.

Here we look 'under the hood' at the technologies that bind the individual beamline components together into a highly automated data collection system.

In the last few years a full re-write of several key software components has delivered new code and capabilities for beam attenuation, data collection and energy change and also beamline setup, diffraction rastering and autoprocessing resulting in a more reliable and easier beamline to support.

We are now starting to work on the software that runs our robots to apply a similar improvement. These upgrades together with the hardware changes will keep both beamlines useful for the most complex biological and chemical questions our researchers need to address

Keywords or phrases (comma separated)

MX1, MX2, Crystallography, Automation, Beamline,

Summary

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Session Classification : Welcome Function, Poster Session, Exhibition

Track Classification : Beamlines, Instrumentation and Techniques