

Recent Experiences of Remote Access Crystallography at the SSRL

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A workshop on remote access to the macromolecular crystallography beamlines of the Stanford Synchrotron Radiation Laboratory (SSRL) was recently held in Melbourne (http://mmsn.net.au/SSRL_workshop_2007_Feb9.htm). During the course of the workshop it was possible to screen some crystals previously sent cryo-cooled in a dry shipper to the SSRL.

The crystals were mounted via a specialised robotic system known as SAM (Stanford Automatic Mounting system). The robot placed the screened crystals back under liquid nitrogen and later in the day, after the workshop when sensible participants were enjoying a well earned beer, I was able to collect a full dataset in two resolution passes to obtain a 1.25 Å dataset from the bioremedial enzyme, opda, via a laptop in my hotel room.

We plan to use this high resolution data to investigate anisotropic temperature factors and correlated TLS displacements for this protein.

I will share some of my experiences and contrast it to normal synchrotron data collection. An update on the progress of the structural study will also be given.