

# Poster Presentations

**[MS10-P27] Evolving Facilities for Macromolecular Crystallography at Diamond Light Source** David R. Hall<sup>a</sup> on behalf of the Macromolecular Crystallography Group, Diamond Light Source<sup>a</sup>

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Diamond Light Source [1] is the UK's third generation synchrotron source providing five operational macromolecular crystallography (MX) beamlines with a further one in construction and two in design phase. The MX group [2] has a range of facilities from tunable (I02, I03 and I04) and fixed energy (I04-1) high throughput beamlines to a tunable microfocus beamline (I24). To this suite will soon be added long wavelength capabilities (I23) and in the longer term versatile micron focus and in-situ beamlines (VMX $\mu$  and VMXi). Since opening, the beamlines have constantly undertaken improvements to provide the latest facilities in hardware and software. All beamlines are equipped with high throughput robots and fast photon counting detectors which when coupled with auto-centering, strategy calculation, automatic data processing, phasing, molecular replacement and difference map pipelines enhance user throughput and experience. The beamlines offer flexibility of beam size and focal lengths as well as sample environments which can handle cryo-cooled, room temperature and humidity controlled samples. More recently one beamline (I03 – Crystal) has developed systems and working practices allowing it to be used for collecting data from category III samples, one of two such beamlines in the world.

These beamlines can be experienced both on-site or remotely at all times and are coupled with flexible, rapid beamtime access with scheduled

periods starting from as short as five hours. The beamlines and their access modes continue to be developed and adapted to the changing demands of the MX user community. The current status and future developments of the MX beamlines at Diamond Light Source will be presented here.

[1] <http://www.diamond.ac.uk>

[2] <http://www.diamond.ac.uk/mx-home/>

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