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Ansto



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## The MX2 goniometer story: the old, the current and the new one

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Sample positioning and rotation on the X-ray beam are critical experimental parameters for a successfully experiment . This becomes exacerbated when handling small crystals on a micro-focus beam like the one provided by the MX2 beamline at the Australian Synchrotron. Here it is paramount that the centre of rotation is on the same location as the X-ray beam. For one hand, any procession, particularly if asymmetric, around the X-ray beam will have an effect on data quality. On another hand parameters like temperature have a huge effect in changing the centre of rotation over a period of time meaning that regular check of its alignment as well as good control of temperature on the beamline hutch is required over the course of an experiment. We present here the challenges presented with wear and tear of the old MX2 goniometer, the setup we had after deployment of an emergency repair and what we have now as the final solution after installing an XFEL like goniometer in September 2016

### Keywords or phrases (comma separated)

mx, sphere, confusion, alignment, crystallography, diffraction, calibration

### Are you a student?

No

### Do you wish to take part in the Student Poster Slam?

No

### Are you an ECR? (<5 yrs since PhD/Masters)

No

### What is your gender?

Male

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