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The XFM beamline: Status, upgrades and directions, enabling user science across a range of disciplines

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The X-Ray Fluorescence Microscopy beamline has hosted around 250 user groups since it started user operations in 2008, and sustains high levels of oversubscription. Armed with the world-leading Maia detector, and ongoing collaboration with CSIRO, almost 100,000 scans have been performed, representing an estimated 100 Gpixels of data and a stage transit of around 200 km with a positioning accuracy of 2 m.
In order to harness the power of the Maia detector, we have undertaken an ambitious series of upgrades. This presentation describes the beamline instrumentation with reference to applications, and recent upgrades to the table, scanning stages, tomography, large-area scanning, cryogenics, and configurable specimen mounting stages, as well as beamline ancillaries including equipment for specimen pre-alignment and cryogenic specimen preparation. It will then close with a short exploration of the future directions for the beamline's evolution.

This session will include an extended open discussion for XFM users.

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Summary

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