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The new ALBA diffractometer for microfocus beam macromolecular crystallography experiments at XAIRA beamline

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XAIRA, the new microfocus MX beamline at ALBA aims to deliver optimal diffraction images by enclosing the entire end-station in He atmosphere, including the diffractometer and the detector, while keeping the compatibility with standard cryo-crystallography tools and robot. The sub-100 nm SoC diffractometer, based on a unique helium bearing goniometer also compatible with air, has been designed to deliver high quality data from micron sized crystals from fast oscillation and fixed-target MX experiments while allowing a tight sample to detector distance of 70mm. The diffractometer also includes a double on-axis visualization system for sample imaging at sub-micron resolutions, a quick retractile collimator and beamstop assembly, a front- and backlight illumination system and a fast in/out YAG:Ce screen system for beam positioning. Here, the overall system design and performance results are presented.

Footnotes

Funding Agency

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