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Serial Crystallography ready for XALOC users: from SMX @ALBA to SFX @EuXFEL

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In the new Alphafold2 era, the interest of structural biologists on macromolecular dynamics has increased. Synchrotron Serial Crystallography (SSX) may still be not so known among crystallographers as single-crystal MX, however, the serial data collection of multiple non cryocooled microcrystals opens the door not only to projects including radiation sensitive targets (as metalloproteins) or membrane proteins crystallized in viscous matrices as LCP but also to dynamic pump-probe studies or time resolved measurements. In fact, some of the SSX experiments may also further be completed at FELs using Serial Femtosecond Crystallography (SFX) -where initial SSX information is compulsory- showing the complementarity between both methodologies.

The purpose of this talk is to introduce ALBA users to the current Jet-based SSX implementation at XALOC beamline which mainly comprises an HVE injector, an automated platform for proper jet positioning and a dedicated pump for fine tuning of sample extrusion -controlled with an inhouse developed algorithm-. Several examples collected at the beamline will be presented and general guidelines to perform SSX experiments at ALBA, provided. Actually, a specific call for Jet SSX proposals have been launched since this last July to better fulfill the needs of the MX community first, at XALOC, but expect to complement it even further with the chance to perform fixed-target SSX at XAIRA soon.

Would you like to participate in the Poster Prize competition?

No

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