MS01-P03 | MicroMAX - New Possibilities for Serial Crystallography

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The beamline MicroMAX that will be in user operation in 2022 will provide unique possibilities to use serial crystallography methods to study macromolecular structures. The foreseen main applications are studies of microcrystals, structures at room temperature and with time-resolved techniques. This will in most cases imply using multicrystal data collections with different serial approaches. The X-ray beam will be variable in size from 1 micrometer and up and will have 10^{13} photons/second in monochromatic mode and up to 10^{15} photons/second using a wider energy bandpass mode. The beamline will cover the energy range 5 - 20 keV with a more limited energy range for the wider energy bandpass. The experiment setup will be flexible offering different sample delivery methods. The beamline will have two experiment hutches of which one can be used independently for preparing experiments while the other is used for data collections. Initially one hutch will be commissioned. The beamline will also include instrumentation for oscillation data collection of single crystals with automatic sample exchange. There will be an additional laboratory for working with different sample environments and a laboratory for sample preparation. Additional infrastructures including a bio-laboratory and resources for data handling and analysis are shared with other beamlines. The MAX IV Laboratory 3 GeV storage ring is the first multi-bend achromat ring in operation with already one macromolecular crystallography beamline, BioMAX, in operation. Different serial crystallography methods are already used at BioMAX.