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**Remote Access Modes for Data Collection at IMCA-CAT.** Lisa J. Keefe, Kevin Battaile, J. Lewis Muir, Anne Mulichak, IMCA-CAT, Univ. of Chicago, Sector 17, Advanced Photon Source, Argonne National Laboratory, Argonne, IL 60439 USA.

The Industrial Macromolecular Crystallography Association Collaborative Access Team (IMCA-CAT), located at sector 17 of the Advanced Photon Source, operates two beamlines for high-throughput macromolecular crystallography data collection. The two beamlines, an insertion device beamline and a bending magnet beamline, each are equipped with a Rigaku ACTOR robot. Integrated with the robotics are automation protocols for several modes of user access. The ACTOR robotics system, with a sample capacity of 60 crystals on the ID beamline and 180 crystals on the BM beamline, enables rapid sample mounting, auto-centering, screening, tracking, sorting and ranking, immediately followed by data collection. Alert notification mechanisms provide for status communication to the user during unattended data collection. Experiments can be performed either via the conventional on-site access to the beamlines or via secure remote modes for unattended mail-in data collection, including remote monitoring and remote access. The automated procedures can be tailored to readily accommodate the spectrum of demands of pharmaceutical and structural genomics researchers.