MxDC, MxLIVE, and AutoProcess: Integrated User-friendly software for Synchrotron MX Beamlines.

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An integrated computer software system for on-site and remote collection of macromolecular crystallography (MX) data is described. It consists of a graphical user interface for experiment-focused data collection and beamline control MxDC, a laboratory information management system for remote planning, experiment monitoring and data access MxLIVE, and an automated pipeline for data reduction and strategy determination, AutoProcess. The system has been deployed at both MX beamlines at the Canadian Light Source since 2011 and has recently been updated with more features, modern user interfaces, and support for new beamline hardware.