

Automation For Data Collection, Processing, And Analysis at The Lix Beamline

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The Life Science X-ray Scattering (LiX) beamline at NSLS2 primarily supports biology-themed research. Our experiments deal with a variety of samples and require different beam characteristics and sample environments. Over the last few years, we have implemented automation in various aspects of our experimental workflow, to maximize the productivity during user experiments and reduce the workload by beamline staff during change-overs between different types of measurements. These efforts helped us quickly transitioning into remote and mail-in measurements during the COVID pandemic and is paying off again with the increased user demand during the APS dark period. I will describe automated sample handling for different types of samples, and the software tools we use to facilitate data collection, and assemble workflows to process and analyze data.