XSCAN x-ray data acquisition and analysis software for the MATRIX X-18A x-ray scattering beamline at the NSLS

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A versatile and easy-to-use computer software package has been developed for equipment control and data acquisition and analysis at the MATRIX X-18A x-ray scattering beamline at the National Synchrotron Light Source. The software runs on any IBM compatible personal computer running under MS-DOS and makes use of the GPIB and AT-Bus interfaces. The menu driven program is easy to learn and use and can run and analyze a wide range of x-ray experiments as well as control all aspects of the x-ray beamline. Equipment interfaces include counter-timer, stepping motor controllers, multi-channel analyzer, temperature controller and digital multimeter. Real space and reciprocal space scans are possible, as well as an external file scan, which allows control of up to six diffractometer motions plus the energy simultaneously. Orientation matrix calculations, peak fitting routines and an extensive help file system are included. Plans are presently underway to rewrite the software to run under Windows NT.