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## Detector needs for x-ray diffraction experiments at synchrotron sources

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X-ray diffraction is characterized by a rapidly decaying signal in reciprocal space which requires a large dynamical range for its detection. Besides this common feature, the ideal detector features may differ depending on the nature of different experiments, like for example Small Angle X-ray Scattering, Protein Crystallography, and Coherent Diffraction Imaging. Additionally, scanning schemes over large samples, radiation damage, and time-resolved experiments impose further constraints in the required time resolution and readout speed. Here we present a summary of the required characteristics of X-ray detectors for diffraction measurements in synchrotron sources, with an especial focus on the research performed at the Swiss Light Source.

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