

Title

X-ray Detectors for Synchrotrons

Speaker

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Abstract

Following an introduction to some of the basic physics of X-ray detection, we review some of the wide range of photon detectors currently in use at 3rd generation X-ray synchrotron sources. These include the various spatially resolved, two dimensional detectors needed for elastic scattering measurements (e.g. X-ray diffraction, protein crystallography...) on the one hand, and on the other, various X-ray 'imaging' techniques that make quite different demands on the detector performance. We will conclude with a discussion of inelastic X-ray interactions, which involve the energy analysis of sample emitted X-ray photons, e.g. X-ray fluorescence, which usually requires entirely different detector technologies.