MS44.O05

Fast Neutron Laue Diffraction with CCD Detectors

B. Ouladdiaf[1], M. Lemée-Cailleau[1], J. Allibon[1], J. Rodriguez-Carvajal[1], L. Chapon[1]
[1]*Institut Laue Langevin, Grenoble, France*

The large area neutron Laue diffractometer based on CCD detectors (CYCLOPS [1]) has been developed and recently completed at the ILL. High-quality Laue patterns covering an angular range of 360° horizontally and 92° vertically, can be obtained in only few seconds. The diffractometer excels for fast survey of reciprocal space and fast data collections through phase transitions as well as in-situ experiments on single crystals with time resolution similar to that obtained with powder diffraction. The detector is being upgraded with new faster CCD cameras having a larger dynamic range. A protocol for detector corrections from spatial distortions and uniformity response has been established which allows to obtain accurate integrated intensities leading to good structural refinements. Examples of results of phase transitions and structural investigations will be presented.

[1] *B. Ouladdiaf, J. Archer, J.R. Allibon, et al. McIntyre Journal of Applied Crystallography, 2011, 44,392-397*

Keywords: Neutron Laue Diffraction, CCD-detector