



Experiment title: FOCUSING PROPERTIES GRAPHITE MOSAIC CRYSTALS	Experiment number: MI -221	
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Report: ,

The main results of this experiment have been reported in a paper to be published in: SPIE Conf. Proceedings, Vol. 3448, Crystal and Multilayer Optics, A. T. Macrander, D. M. Mills, A. K. Freund, T. Ishikawa eds., SPIE PRESS (Bellingham, Washington, USA), 1998 (in press).

A copy of the paper has been also deposited at the ESRF library to be included in the ESRF Preprint Series.

Copy of the paper can be requested to: *M. Sanchez del Rio, ESRF, BP 220 Grenoble- Cedex, France - Telephone: +33 476 882 513; FM: +33 476 882 160; e-mail: srio@esrf.fr.*

Title and abstract of the paper:

Focusing Properties of mosaic crystals

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and A. K. Freund

ABSTRACT

X-ray instruments with mosaic crystals are proposed and used for many applications in synchrotron radiation, medical physics and astrophysics. These crystals present a pseudo-focusing of the x-ray beam in the diffraction plane, which is thoroughly analyzed in this paper. We studied the evolution of the beam cross section of the diffracted beam, using several samples of Highly Oriented Pyrolythic Graphite crystals coming from different suppliers.

The experiment has been performed at the European Synchrotron Radiation Facility (beamline D5). The results clearly show a pseudo-focusing effect in the 1:1 magnification ratio along the diffraction plane and a defocusing effect along the perpendicular plane.

The secondary extinction coefficient was also measured.