

Advanced Photon Source

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Report on Optical Substrate Measurements

Date: 05/27/05	Reference #: M05075A (1)	Page # 1/1
Component: Flat KB mirror Manufacturer: Waveprecision	Requester: E. Dufresne Affiliation: MHATT-CAT Beamline: 07-ID	Date in/out: May 26, 05/May 27, 05
Lab coordinator: L. Assoufid	Measurement by: J. Qian	Report by: J. Qian

Description of the measured component:

Flat KB mirror:

The mirror was measured before coating on May 17, 2005 (ref. M05075A). Now the mirror is coated. The purpose of the measurement is to try to know the surface roughness of the mirror after the coating.

Size: 23.8 – 46 mm x 200 mm x 7 mm

Performed measurements:

Surface roughness

Instruments used for measuring:

TOPO2D, objective 5X

Surface roughness measurement with the TOPO2D, objective 5X

- The separation of adjacent measured spots was about 10 mm.
- Table 1 summarizes the roughness measurement results of the mirror.

Table 1. Results of the roughness measurements. (Profile length: 2.66 mm)

Meas. (#)	RMS (A°)	P-V (A°)	Radius (km)
1	0.82	5.1	-1.9
2	1.06	6.4	-4.6
3	0.79	4.8	-8.9
4	0.99	5.4	-4.3
5	0.94	5.9	-2.8
Mean	0.92	5.5	