

C29

The APS Metrology Laboratory

Cyndy Bresloff and Dennis M. Mills

*Advanced Photon Source, Argonne National Laboratory, Building 431, 9700 S. Cass Avenue,
Argonne, IL 60439*

The APS Metrology Laboratory is now operational in a cleanroom environment on the Experiment Hall floor of the APS site. The Metrology Laboratory will provide characterization of the figure and finish of X-ray optical surfaces for the user community using visible light instrumentation. Three noncontact instruments are now available for measuring surface features with lateral resolution from less than a micron to lengths to 1.5 meters and with a vertical resolution as small as an Ångstrom. This paper will briefly describe the current layout and environment of the laboratory, and the three major instruments needed to cover the desired range of spatial frequency shall be discussed, in particular, the Long Trace Profiler, the newest and most impressive addition to the Metrology Laboratory.

This work is supported by the U.S. Department of Energy, BES-Materials Sciences, under contract No. W-31-109-ENG-38.