

# **Updates on the APS Metrology Laboratory and Results of the 3-Way Round-Robin Measurements**

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## **ABSTRACT**

This talk will focus on two topics. The first topic is an update on the status of the APS metrology laboratory. Various aspects will be discussed including mirror measurements, instrumentation upgrades and R&D.

The second topic is a series of round-robin measurements performed at the APS metrology laboratory. This metrology round-robin measurement was organized among the metrology facilities at the APS, ESRF, and SPring-8, as part of the 2004 3-Way meeting. The measurements were on three different optics: a 1-m-long cylinder (supplied by ESRF), a 100 mm flat Si produce by a PCV-EEM process (provided by SPring-8/OSAKA University), and a 300 mm superpolished flat Si (provided by APS). Both surface slope error and roughness were measured following common measurement procedure and data analysis guidelines. The goal was to compare metrology instrumentations at these three different facilities.

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