

# Characterization and Calibration of Slope Measuring Instruments

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Transferring and manipulating Synchrotron light from the highly brilliant source to the experimental station without significantly loss of brilliance and coherence is a challenging task in X-ray optics and needs optical elements of utmost accuracy. Thus optical elements, either fix focus or adaptive, require the characterization and optimization of shape by use of ultra-precise metrology instruments. Without accurate calibration an absolute exactness allowing for the determination of slope deviations of significantly curved surfaces smaller than 0.25  $\mu\text{rad}$  rms will be doomed. Results obtained with a suitable calibration tool for slope measuring profilers, the Vertical Angle Comparator (VAC) developed at the BESSY optical metrology laboratory will be presented.

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