

Title: Measuring Skew in Average Surface Roughness as a Function of Surface Preparation

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Characterizing surface roughness is important for predicting optical performance. Better measurement of surface roughness reduces grinding saving both time and money and allows the science requirements to be better defined. In this study various materials are polished from a fine grind to a fine polish. Each sample's RMS surface roughness is measured at 81 locations in a 9x9 square grid using a Zygo white light interferometer at regular intervals during the polishing process. Each data set is fit with various standard distributions and tested for goodness of fit. We show that the skew in the RMS data changes as a function of polishing time.