



Interferometry by a transparent wedge

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Abstract

In this article we show that a single transparent wedge or a plate with a wedge part can be used as a very simple and useful interferometer with numerous applications. This interferometer permits to modulate phase distribution on interference fringes to evaluate quantitatively the parallelism of a light beam and aberration of a wavefront, to specify the spectral line shape in a wide range, to measure the light wavelength and refractive indices of solids and liquids. In addition, it provides suitable beams for holographic study of phase objects and fabrication of diffraction gratings.

Keywords: interferometry, metrology, beam splitting, fringe modulation, Moiré technique

For full article, refer to the Persian section