

TALBOT SENSOR WITH DIFFRACTION
GRATING ADAPTATION TO WAVEFRONT
ABERRATIONS

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S u m m a r y

The results obtained at simulating the functioning of an adaptive sensor based on the Talbot effect are reported. The input grating period was varied depending on the examined wavefront shape and provided the constant observation plane corresponding to the Talbot plane for a plane wave. Using the spherical and astigmatic wavefronts as an example, it is shown that this method can make the sensor measurement range several times wider, by retaining the original angular sensitivity.