

THE THEORY OF FORMATION OF OPTICAL  
VORTICES BY THE TECHNIQUE OF A PHASE  
WEDGE

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We advance a two-dimensional model for investigation of the spatial dynamics of stationary light fields with disruption of a wave front including optical vortices or with a pronounced amplitude inhomogeneity. The theory of synthesis of optical vortices in a Gaussian beam by an optical wedge is developed. With the help of computer simulation, optimum wedge parameters for a high-efficient generation of the light beam with a perfect optical vortex are found.