A periodic object image self-restoration in Talbot's planes

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Abstract

The effect of the periodic object image self-restoration in Talbot's planes was studied experimentally. A comparative investigation of the image parameters in paraxial area and in side lobes of diffraction was performed. It was proved that the images in side lobes are more resistant to damage to the initial object. On the basis of these studies, mechanisms were analyzed that influence deterioration of images in paraxial area and in side lobes.

Keywords: image self-restoration, Talbot plane, paraxial area, side lobe.

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Access full text (in Russian)

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