

Algorithms of calculation of light propagation in the free space without using FFT algorithm

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Abstract

This article discusses some aspects of the practical implementation of algorithms for the numerical calculation of Fresnel and Kirchhoff transforms, as well as modeling the propagation of a light field in free space. Accurate simulation is performed without using the Fast Fourier Transform (FFT). An efficient algorithm for solving this problem is proposed.

Keywords: Fresnel transform, Kirchhoff transform, approximation by spherical waves, light field, algorithm, numerical computation, Fast Fourier transform.

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[Access full text \(in Russian\)](#)

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