

# LONGITUDINAL ELECTROSTATIC UNDULATOR AS SCW AMPLIFICATION SECTION OF MULTIHARMONIC FEL. CUBIC-NONLINEAR THEORY

## Contact Phone

## Abstract

Amplifier section of superheterodyne free electron laser (FEL), which uses the undulator with longitudinal electrostatic field has been analysed. Cubic-nonlinear theory of space charge waves (SCW) multiharmonic interactions in that amplifier section has been constructed. Two types of multiharmonic resonance interactions of SCW waves have been considered. Saturation levels have been determined. The conditions of multiharmonic SCW amplification without deformation of its spectrum have been found.

## Type of Book of Abstracts

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