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Three dimensional study of harmonic operation at the Shanghai deep ultraviolet free electron laser

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摘要

With the right choice of parameters in the free electron laser (FEL) scheme, the undulator can be primarily operated at high order harmonic modes and the harmonic radiation is expected to be significantly enhanced. Recently, the possibility of proof-of-principle harmonic operation experiments on the basis of the Shanghai deep ultraviolet (SDUV) FEL test facility has been studied. In this paper, the principle of harmonic operation, three dimensional numerical approaches, and detailed performances of proposed harmonic operation at SDUV FEL are presented.

关键词

[harmonic operation, linear harmonic, superradiant](#)

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