

Amplification of electromagnetic pulse by conducting cone

Authors : E. S. Manuylovich, V. A. Astapenko, P. A. Golovinsky

Abstract : The dispersion relation binding the constant of propagation and frequency is calculated for silver cone. The evolution of the electric field of ultrashort pulse during its propagation in conical structure is considered. Increasing of electric field during pulse propagation to the top of the cone is observed. Reduction of the pulse duration at a certain distance is observed. The dependence of minimum pulse duration on initial chirp and cone angle is investigated.

Keywords : ultrashort pulses, surface plasmon polariton, dispersion, silver cone

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