TRANSITIONAL RADIATION
OF A MODULATED ELECTRON FLUX
ON THE SHARP BORDER BETWEEN
VACUUM AND ANISOTROPIC PLASMA

I.O. Anisimov, O.P. Vygovska, O.I. Kelnyk

Taras Shevchenko Kyiv National University (64, Volodymyrska Str., Kyiv 03027, Ukraine)

Summary

Transitional radiation of a modulated electron flux that moves along a constant magnetic field normally to the sharp plane border of the plasma semispace is considered. Radioemission energy flows to vacuum (s- and p-polarized waves) and plasma (ordinary and extraordinary waves) are calculated. Such a radiation increases near the Cherenkov resonance regime in vacuum (for relativistic electron fluxes) and plasma, and in the case of excitation of quasi-natural modes on the vacuum-plasma border.