

DIELECTRIC CHARACTERISTICS
OF A MIRROR-TRAPPED PLASMA
WITH ANISOTROPIC TEMPERATURE

N.I. Grishanov, N.A. Azarenkov

V.N. Karazin Kharkiv National University
(4, Svobody Sq., Kharkiv 61077, Ukraine)

S u m m a r y

Analytical expressions for the wave permittivity tensor are derived for a two-dimensional axisymmetric mirror-trapped plasma model with anisotropic temperature. The dielectric characteristics are found by solving the Vlasov equations for trapped particles in the zero-order of a magnetization parameter taking the cyclotron and bounce resonances into account. The dispersion equations are derived for left-hand and right-hand polarized field-aligned cyclotron waves in the mirror-trapped plasmas.