

Effect of obliqueness and intensity of the external magnetic field on the wave propagation and density profile of an under-dense non-isothermal collisional magnetized plasma

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The electric and magnetic fields profile of laser pulse and electron density and temperature distributions are investigated in under-dense non-isothermal collisional plasma which is immersed obliquely in the static magnetic field. It is found that the magnitude and direction of the external magnetic field can modify the electromagnetic field and plasma density and temperature effectively. It is shown that with increasing the external magnetic field strength or the angle between external magnetic field and wave vector, the wavelength of oscillations of electric and magnetic fields increases. The amplitude of the oscillations of electron density and temperature remain constant while their wavelengths increase.