“NONLINEAR THEORY OF ELECTROMAGNETIC WAVE GENERATION AND AMPLIFICATION BASED ON THE ANOMOLOUS DOPPLER EFFECT” N. S. Ginzburg

1. If the wave phase velocity is then less than the longitudinal velocity of the electrons moving in the homogeneous magnetic field, induced radiation can develop even when the electrons have no initial transverse velocity.
2. We will consider the interaction between a beam of electrons entering the system with velocity vii parallel to the magnetic field H = H0z, and a circularly polarized TEM wave of variable amplitude, propagating in a homogeneous dielectric with index of refraction n > 1.

Questions: Electromagnetic Acceleration[1]

[1] Liu H, He X, Chen S and Zhang W 2004 Particle acceleration through the resonance of high magnetic field and high frequency electromagnetic wave *arXiv preprint physics/0411183*