

On Landau Resonance of Transverse Waves

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There are two types of particle resonance mechanisms, Landau (Cherenkov) and Cyclotron resonance, namely, in collisionless plasmas.

Little attention has been paid for Landau resonance of transverse waves, because the wave speed is usually faster than the speed of light. However, particles can be in resonance with transverse waves considerably long time when their speed is very close to the speed of light. Mechanisms such as parametric resonance can also resonate particles with transverse waves. Consequences of the transverse resonance process will be discussed.