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An Analytical Study on Terahertz Radiation In Magnetized Plasma

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Abstract: *This paper presents a comprehensive analytical investigation into the generation and propagation of terahertz radiation within magnetized plasma environments. Terahertz radiation is a region of the electromagnetic spectrum that has gained increasing attention for its potential applications in various fields, including astrophysics, plasma diagnostics, and advanced communication systems. The presence of a magnetic field in a plasma medium introduces unique phenomena that can significantly influence the generation and behavior of THz radiation. This study explores the underlying physics, mathematical models, and practical implications of THz radiation in magnetized plasma, providing valuable insights for both fundamental research and technological advancements.*

Keywords: Terahertz, Radiation, Magnetized, Plasma

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