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Terahertz generation by an amplitude modulated Gaussian laser beam in a plasma[1] DEEPAK TRIPATHI, R. UMA, VIPIN KUMAR TRIPATHI, IIT Delhi, India — A theoretical model of an analytical formalism of magnetic field generation due to an amplitude modulated intense laser beam in a plasma is developed. At plasma resonance, where modulation frequency equals the plasma frequency, significant enhancement in the magnetic field is seen. The magnetic field is found to scale directly with laser intensity and plasma frequency, while scaling inversely with laser spot size.

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