Abstracts

An Experimental X-band Electron-Cyclotron-Resonance Plasma Accelerator (Correspondence)

D.B. Miller. "An Experimental X-band Electron-Cyclotron-Resonance Plasma Accelerator (Correspondence)." 1966 Transactions on Microwave Theory and Techniques 14.3 (Mar. 1966 [T-MTT]): 162-164.

The electron-cyclotron-resonance plasma accelerator represents a new and potentially important application of microwave power. Uses in space propulsion engines and thermonuclear energy generators are currently under investigation. In this type of accelerator, the plasma is generated and accelerated to high velocities by RF power. The high-frequency nature of the electrical energy allows efficient, electrodeless coupling to the plasma. Conduction and control of the power is also relatively easy. Finally, for the space application, a combined communication and propulsion system can reduce total system weight and complexity.

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