

# Abstracts

## Study of a Noise Amplification Mechanism in Gyrotrons

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*K.R. Chen and K.R. Chu. "Study of a Noise Amplification Mechanism in Gyrotrons." 1986 Transactions on Microwave Theory and Techniques 34.1 (Jan. 1986 [T-MTT]): 72-79.*

The electrostatic cyclotron instability driven by a relativistic mechanism is analyzed with a small-signal theory and is shown to be a significant noise amplification mechanism in gyrotrons. The mode is localized in the electrotron beam, with a growth rate strongly dependent on the wavelength and electron density but insensitive to the velocity spread.

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