

**Modeling separatrix splitting and magnetic footprints in TCABR**

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**Introduction**

Plasma instabilities in a magnetized plasma environment are described as they are known to be important in the context of space plasma physics. When operating in the so-called high-frequency regime (HFR), the linear theory of wave propagation is based on the linearized Vlasov equation. The case of linear theory leads to high-frequency waves with a linear dispersion relation. In this paper, we study the nonlinear effects of the plasma instabilities. A nonlinear theory is used to describe the plasma instabilities that occur in the HFR regime. The nonlinear theory is used to describe the plasma instabilities that occur in the HFR regime. The nonlinear theory is used to describe the plasma instabilities that occur in the HFR regime.

**Conclusions**

The case of the nonlinear theory is studied in this paper. The case of the nonlinear theory is studied in this paper. The case of the nonlinear theory is studied in this paper. The case of the nonlinear theory is studied in this paper.

**Modeling HFR with magnetic field**

In this paper, we study the nonlinear theory of the plasma instabilities. The nonlinear theory is used to describe the plasma instabilities that occur in the HFR regime. The nonlinear theory is used to describe the plasma instabilities that occur in the HFR regime.




Figure 1: Schematic diagram of the linear HFR wave. It shows a circular cross-section of a plasma with a central region and an outer region. A magnetic field vector is shown pointing outwards from the center.

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Figure 2: 3D visualization of a separatrix structure. It shows a red, curved surface representing the separatrix, with a blue region below it. The surface is curved and appears to be part of a larger structure.

