

Abstract Submitted
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Effect of nonlinear circularly polarized waves on linear instabilities LUIS GOMBEROFF — It is shown that nonlinear left-hand polarized waves can either stabilize or destabilize linear right-hand polarized instabilities triggered by an alpha-particle beam in a magnetized electron proton plasma. The stabilization or destabilization depends upon the plasma $\beta_i = v_{th,i}/v_A$, where $v_{th,i}$ is the temperature of the 'i' plasma component, and v_A is the Alfvén velocity. It is also shown that the presence of the large amplitude wave can trigger purely electrostatic ion-acoustic instabilities. The unstable waves are supported either by the proton core or by the alpha-particle beam.

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