## Beam Plasma Instabilities and Nonlinear Electric Field Structures in a Multi-component Space Plasma

## R. V. REDDY

Indian Institute of Geomagnetism, New Panvel (w), Navi Mumbai-410218, India

Numerical simulations are performed to study the nonlinear electric field structures in a multi-species beam plasma system. The model consists of cold, hot and beam electrons and ions. The linear dispersion relation is used to study for the growing modes for the parameters considered in the model. The time evolution of solitary electric field structures and modulated coherent wave packets are studied and the model results are compared with satellite observations.