



**THEORETICAL ANALYSIS OF ELECTRON - ACOUSTIC SHOCK WAVES  
IN MAGNETIZED SUPERHERMAL PLASMA WITH ELECTRON BEAM**

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Small amplitude electron acoustic shock waves in magnetized four component plasma system consisting of cold electrons, superthermal hot electrons, electron beam and stationary ions are studied using reductive perturbation technique. Two types of shock waves, namely, Slow mode and fast mode electron acoustic shock waves are formed. Interesting features are obtained for the study of shock wave structure depending

upon the mode structures. Numerical analysis show that amplitude is positive for slow shock structure and negative for fast shock structures. Beam density, beam temperature, beam velocity, kinematic viscosity has significant effect on the profile of shock waves. The present study may be helpful to explain some features of localized structures in the plasma sheet boundary.