

Physics 136c, Week 4: Nonlinear Dynamics of Plasma

(Dated: April 26, 2012; due May 2, 2012)

The maximum number of points you can get for this assignment is **50**, although you could choose to do problems that worth more than 50 points.

This week we covered Chapter 22 of Blandford and Thorne (BT).

1. **Non-resonant Particle Energy in Wave** Exercise 22.1. [20 Points]
2. **Electron Fokker-Planck Equation** Exercise 22.4 [20 Points]
3. **Stability of isotropic distribution function** Exercise 22.7 [20 Points]
4. **Critical Mach number for an Ion-acoustic shock wave** Exercise 22.9 [20 Points]