

Physics 136c, Week 1: Particle Kinetics of Plasma

(Dated: April 4, 2012; due April 11, 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 discussed some basics of plasma physics, covering Chapter 19 of Blandford and Thorne (BT).

1. **Boundary of degeneracy.** Exercise 19.1 of BT [15 Points]
2. **Parameters of Various Plasmas.** Exercise 19.6 of BT [15 Points]
3. **Equilibration Time for a Globular Star Cluster.** Exercise 19.7 of BT [15 Points]
4. **Adiabatic Indices for Rapid Compression of a Magnetized Plasma.** Exercise 19.11 of BT [15 Points]
5. **Mirror Machine.** Exercise 19.12 of BT [15 Points]