

Physics 136b, Week 2: Elastostatics and Elastodynamics

(Dated: due January 18, 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 elastostatics and elastodynamics covering Secs. 11.5 – 11.9 and 12.1–12.3 of Blandford and Thorne (BT). [See versions 1111.1.K of Chapter 11 and version 1112.1.K of Chapter 12.]

1. **Green Function for Half-Infinite Body** Exercise 11.15 of BT [15 Points]
2. **Elastica** Exercise 11.17 of BT [20 Points]
3. **Stressed Plate** Exercise 11.22 of BT [15 Points]
4. **Lagrangian and Energy for Elastodynamic Waves** Exercise 12.4 of BT. [15 Points]
5. **Free-Energy Analysis of Buckling Instability** Exercise 12.8 of BT. [20 Points]