

Physics 136c, Week 8: Gravitational Waves and Experimental Tests of General Relativity

(Dated: May 25, 2012; due May 30, 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 26 of Blandford and Thorne (BT).

1. **Perihelion Advance.** Exercise 26.2 of BT [20 Points]
2. **Fermat's Principle for Photon Path in a Static Spacetime.** Exercise 26.4 of BT [20 Points]
3. **TT gauge.** Exercise 26.5 of of BT [20 Points]
4. **Quadrupolar wave generation in linearized theory.** Exercise 26.10 of BT [20 Points]
5. **Geodesic motion in TT coordinates.** Exercise 26.15 [15 Points]