

CHAPTER 6: GEOMETRIC OPTICS**Reading:**

Chapter 6 of Blandford and Thorne.

Problems — CORRECTED. PROBLEM D.1 WAS WRONG IN PREVIOUS VERSION

- A. If you have never explored wave-packet spreading, Do
 - 1. Exercise 6.2 Gaussian wave packet and its spreading. Otherwise, do:
 - 2. Exercise 6.4 Gravitational waves from a spinning neutron star.
- B. Do: Exercise 6.8 Geometric optics for the Schroedinger equation
- C. Do:
 - 1. Exercise 6.10 Matrix optics for a refracting telescope, or
 - 2. Exercise 6.11 Rays bouncing between two mirrors
- D. If you did not do Exercise 6.4, then do
 - 1. Exercise 6.3 Quasi-spherical solution to vacuum scalar wave equation. Otherwise do:
 - 2. Exercise 6.6 Sound waves in a wind, or
 - 3. Exercise 6.14 Stellar gravitational lens