

**CHAPTER 26**

**Reading:** Chapter 26, *Gravitational Waves and Experimental Tests of General Relativity*.

**Problems**

Work four of the following eight problems. Pick problems that are appropriate for *you*—not too easy; not too hard.

- A. Exercise 26.4 Behavior of  $h_+$  and  $h_\times$  under Rotations and Boosts
- B. Exercise 26.5 Energy-momentum conservation in geometric optics limit
- C. Exercise 26.6 Transformation to TT gauge
- D. Exercise 26.9 Energy removed by gravitational radiation reaction
- E. Exercise 26.10 Propagation of waves through an expanding universe
- F. Exercise 26.11 Gravitational waves emitted by a linear oscillator
- G. Exercise 26.12 Gravitational waves from waving arms
- H. Exercise 26.14 Light in an interferometric gravitational wave detector in TT gauge