

## CHAPTER 27

**Reading:** Chapter 27, *Cosmology*.

### Problems

Please put your solutions in the box beside Kip's office door, room 154 West Bridge, before 1PM Wednesday 30 May.

**Work any four of the following problems:**

Exercise 27.2 The 3-Sphere Geometry of a Closed Universe

Exercise 27.3 Energy Conservation for a Perfect Fluid

Exercise 27.5 Einstein's Static Universe

Exercise 27.6 Cosmological Redshift

Exercise 27.7 Cosmic Microwave Radiation in an Anisotropic Cosmological Model

Exercise 27.8 Angular-Diameter Distance

Exercise 27.9 Magnitude-Redshift Relation

Exercise 27.11 Inflationary Explanation for the Isotropy of the CMB