Physics 492 Homework XIII, due Fri Apr 30

Reading: Chapter 12

Problems:

1. Experiments in high-energy physics observe collisions between elementary particles which have been accelerated in a charged-particle accelerator to relativistic speeds. The products of the collisions are observed and measured in particle detectors.

Read about particle detectors in Perkins, *Introduction to High Energy Physics*, or Frauenfelder and Henley, *Subatomic Physics*, and write a one-page explanation of one kind of particle detector. Your explanation should include how the detector is constructed, how it is used, and the physical principles of how it works. (The books are on reserve in Physics Library.)

2. Williams, Problem 12.14.

3. Williams, Problem 12.16.

Note: Your term paper is due on Monday, April 26.