## PHYS 391, Homework #4

## **Key Concepts**

- Correlation and Covariance
- Binomial Distribution
- ullet Poisson Distribution

Reading: Taylor Chapters 9-11

Homework Problems (taken from Taylor):

- 1. Problem 9.14
- 2. Problem 9.15
- 3. Problem 10.11
- 4. Problem 10.15
- 5. Problem 10.18
- 6. Problem 11.3
- 7. Problem 11.10
- 8. Problem 11.20 Answer the question "significant evidence" quantitatively both in terms of a number of standard deviations, as well as the probability that this was simply a statistical fluctuation in the background rate.