**Review Sheet for First Exam #1**

ASTR 1200

This sheet is to help you prepare for the first exam. It is not a “sample” of the exam. Instead it is designed to help you focus on the most important aspects of a large body of material.

1. Be able to evaluate complicated expressions involving scientific notation. There will be calculations on the exam. Calculators are permitted.

2. Know a little about the scales of the universe. In particular, know the smallest and largest scales studied by humans.

3. Know Newton's 3 laws and the law of gravity.

4. Know the four forces of nature: their relative strengths and where they are important.

5. Be able to calculate orbital periods.

6. Know definitions of position, velocity and acceleration.

7. Know the temperature scales (Kelvin and Celsius).

8. Understand wavelengths and frequencies. Know their units and be able to convert from one to the other. Know the six major parts of the electromagnetic spectrum.

9. What is spectroscopy?

10. Know the origin of the solar system. When, why and how.

11. Understand the basic structure of the Sun. What holds it up? How old? how long? etc.

12. Know fusion, fission, the composition of the Sun.

14. What is the solar activity cycle what causes it? What are sunspots, the corona?