**STUDY GUIDE FOR QUIZ 2**

**Here is the study guide for Quiz 2, Friday, March 14. It will cover Chapters 5 ( 14, and part of 15. As before, study the PPT handouts, clicker questions, and the HW problems that you did on the Mastering site.**

**Chapter 5 Light and Matter**: Study **5.4 Learning from Light-** three types of spectra (absorption or dark line, emission or bright line, and continuous spectra), Look at and understand **fig. 5.15** energy level diagram of hydrogen and **fig. 5.20** Mars spectrum. Study **5.5** **Doppler Effect** (red shift & blue shift) & understand that it is the optical analog of the Doppler effect we hear with sirens. Also, look at **cosmic context** **fig. 5.21** interpreting a spectrum.

**Chapter 14 Our Star**: **14.1 Closer look at the sun- Why Does Our Sun Shine**? - Study gravitational or hydrostatic equilibrium, photosphere, chromosphere, corona, radiative & convective zones. **14.2 Cosmic Crucible** - Nuclear fusion, strong force, **proton-proton chain**, as we studied it in class (**very important! There will definitely be from 5 to 10 questions on the exam from the p-p chain. 14.3 Sun-Earth Connection** – What causes solar activity? Sunspots, prominences, coronal holes, sunspot cycle.

**Chapter 15 Surveying the Stars** – **15.1 Properties of Stars** Remember the luminosity-distance formula, apparent brightness =L/4D2, which is an inverse square-law equation, parallax d=1/p, spectral type and spectral sequence (O, B, A, F, G, K, and M). Table 15.1 (Study this table as we covered it in class) Measuring Stellar Masses Three types of binary stars: visual, eclipsing and spectroscopic. **15.2 Patterns Among Stars** –. HR diagram, study all in this section. Study **fig. 15.10 (very important!)** as well as luminosity classes table 15.2. Know about giants, supergiants and white dwarfs and their positions on the HR diagram. **There will be from 5 to 10 questions on the HR diagram alone.**