Astronomy 115 Spring 2015
Midterm #2 Review Sheet

The exam will take place in class on Friday, April 3rd. It will be closed book and closed notes. Any equations or constants needed will be provided on the test. You may bring a calculator that is not part of a cell phone.

You will need to bring a Scantron form 882-E (teal green half-sheet) and a #2 pencil. It is highly recommended that you bring extras, and a good eraser. Remember to be on time! If you arrive late, you will not get any extra time to complete the exam.

Relevant Lecture-Tutorials: Electromagnetic (EM) Spectrum; Telescopes and Earth's Atmosphere; Blackbody Radiation; Light and Atoms; Types of Spectra; Analyzing Spectra; Doppler Shift; Temperature and Formation of the Solar System

Relevant Homework Assignments: #6-8 (Start homework early!)

Topics/vocabulary to be covered:

Chapter 5:
• Properties of light
• The electromagnetic spectrum
• Atoms & electron energy levels
• Wavelength, frequency & energy of light/photons (λ x f = c)
• Three types of spectra
• Relationship between color and temperature
• Thermal radiation
• Doppler effect
• Telescopes:
  o Reflecting vs. refracting
  o Light gathering power, angular resolution, & magnification
  o The need for different types of telescopes to observe different kinds of light
  o Considerations when designing a telescope project

Chapter 6:
• Sizes and distances of solar system objects
• General properties of the solar system
• Terrestrial planet properties
• Jovian planet properties
• Formation of the solar system & Nebular theory

Chapter 7:
• General properties of terrestrial planets

Chapter 8:
• General properties of jovian planets
Chapter 9:
• General properties of dwarf planets

Chapter 10:
• Extrasolar planets
• Extrasolar planet detection methods