Astronomy 115-02 and 115-06 Fall 2016
Midterm #3 Review Sheet

The exam will take place in class on Monday, November 28th. 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: The Parsec; Parallax and Distance; Luminosity, Temperature, and Size; The H-R Diagram; Apparent and Absolute Magnitude; Star Formation and Lifetimes; Stellar Evolution

Relevant Homework Assignments: #9-11 (Start homework early!)

Topics/vocabulary to be covered:

Chapter 10:
• Extrasolar planets
• Extrasolar planet detection methods

Chapter 11:
• Size, mass, and composition of the sun
• Basic structure of the sun,
• Layers of the Sun’s atmosphere
• Convection and granules
• The sunspot cycle
• Forms of solar activity
• Nuclear fusion
• The proton-proton chain and E=mc²

Chapter 12:
• Parallax and distance
• Absolute and apparent magnitude
• Sizes, temperatures, and luminosities of stars
• The HR diagram
• Masses of stars
• Spectral types (OBAGFKM)
• Stellar lifetimes on the main sequence

Chapter 13:
• Star formation
• The interstellar medium
• Protostars
• Life stages of different stars by mass
• Red giants
• Shell fusion
• Planetary nebulae
• Supernova explosions

Chapter 14:
• White dwarfs
• Neutron stars
• Pulsars
• Electron and neutron degeneracy pressure

Not on exam: The Ideal Gas law, solar neutrinos, ages of star clusters