

Problem Set #1

1.14 How does the daily path of the Sun across the sky change with the seasons?

2.11 In what ways did the astronomical observations of Galileo support a heliocentric cosmology?

3.15 What is Wien's Law? How would you use it to determine the temperature of a star's surface?

8.10 Why do thermonuclear reactions in the Sun only take place in its core?

Problem Set #2

9.6 What is the difference between apparent magnitude and absolute magnitude??

9.13 Draw an H-R diagram and sketch the regions for main sequence stars, giants, supergiants, and white dwarfs. Discuss the different ways you can label the axes?

10.10 What will happen inside the Sun 5 billion years from now when it begins to evolve into a Red Giant?

11.9 Compare a white dwarf and a neutron star? Which of these stellar corpses is most common? Why?

Problem Set #3

4.5 Describe 4 methods for discovering exoplanets

12.10 Why are there no massive O and B stars in globular clusters?

12.24 What is the Hubble Law?

13.3 What does it mean when astronomers say we live in an expanding universe?