**Quiz 1 Study Guide**

Here is the study guide for the quiz on Monday, February 10. It will consist of several problems taken from chapters 1, 3, 5, and 6 of BOB. There was some material, especially from chapter 6 of **Foundations of Astrophysics** from **Ryden and Peterson**, but these were in your powerpoint notes. Notice that I rearranged the powerpoint files and titled them according to the respective chapters.

You can bring a double-sided sheet with equations and constants on it. Be sure to look at the homework problems and examples. Here are the areas to study.

**Chapter 1 Celestial Sphere**

Study **1.3 Positions on the Celestial Sphere** We primarily looked at **The Altitude-Azimuth Coordinate System** and the **Effects of Motion Through the Heavens**, with an emphasis on radial and tangential velocity.

**Chapter 3 The Continuous Spectrum of Light**

Study **3.1 Stellar Parallax**, and **3.2 Magnitude Scale**. We covered this section extensively - apparent and absolute magnitudes and distance modulus. **3.5 Quantization of Energy** – Here we studied the Planck Function, as well as Wien’s Law and Stefan-Boltzmann’s Law. **3.6 The Color Index** – We covered this in detail, especially UBV filters, bolometric magnitudes and the bolometric correction. You can skip the **Color-Color Diagram** section, since we didn’t talk about it.

**Chapter 5 The Interaction of Light and Matter**

We only covered **5.1 Spectral Lines** – We studied Kirchhoff’s Laws and, although we didn’t cover it, read and understand the **Application of Stellar Spectral Data**. We covered **Spectrographs** extensively. We skipped the rest of the chapter.

**Chapter 6 Telescopes**

Most of the material from this chapter was from **Foundations of Astrophysics,** so read the powerpoints. Types of telescopes, their aberrations, CSM’s telescopes, plate scale and CCDs were covered extensively. The corresponding sections in BOB were, in **6.1 Basic Optics Resolution**, the **Rayleigh Criterion**, and **Seeing**. Study also **6.2 Optical Telescopes**, including reflecting, refracting and Cassegrain telescopes. We also covered **Adaptive Optics**. Lastly, we covered section **6.3 Radio Telescopes.** One term to note is interferometry and its application to getting high resolution using multiple radio telescopes. Also **Spectral Flux Density** and **Observing Above the Atmosphere.**