

## **Astro 105 Exam I Study Guide**

*Topics (not exhaustive, but covers the most important material)*

Absorption Spectra

Astronomy

AU

Blackbody Radiator

Blueshift

Chromosphere

Corona

Distance-Luminosity Relation

Doppler Effect

Duality of Light

Electromagnetic (EM) Spectrum

Energy (per atom) of Chemical Reactions

Energy (per atom) of Nuclear Reactions

Galileo

Giants

Hertzsprung and Russell and the H-R Diagrams

Isaac Newton

James Maxwell

Kelvin and Helmholtz

Kepler's Third Law (used to find mass sum of binary)

Luminosity (Absolute Magnitude)

Magnitude (Absolute and Apparent)

Main-Sequence Star

Max Planck and his Constant

Multiplying Large Numbers

Neutrino Flavors/Types

Niels Bohr (and using Bohr's Formula)

Orders of Magnitude

Photometry

Photosphere

Prefix Names (common ones)

Prominences

Proton-Proton Chain (know all the details)

Quarks

Radiation Zone and Convection Zone

Ray Davis

Redshift

Rule for Like/Unlike Electrical Charges

Scientific Notation

Solar Intensity at Earth

Solar Neutrino Problem  
Special Relativity  
Spectra (emission)  
Spectral Classes of Stars  
Spectroscopy  
Speed of Light  
Stefan-Boltzmann  
Stellar Evolution  
Stellar Parallax (and the formula)  
Stellar Spectroscopy  
Supergiants  
Temperature of Sun (core and surface)  
Temperature Scales  
The Four Forces (gravity, EM, strong, and weak)  
Water Molecule  
Wavelength and Frequency (inversely related)  
White Dwarfs  
Wien's Law