

ASTR 121 – Spring 2016

Lab 3 – Blackbody and Stellar Spectra: Prelab Questions

Due Monday, [Date TBA]

Answer the following questions on a separate sheet of paper.

1. What is the surface temperature of an A0 star? Of the Sun? An M0 star?
2. You will make four separate plots in this lab. What will each one show?
3. Write Planck's law (in terms of wavelength, not frequency,) and define all relevant variables and constants, giving their units in SI. For the physical constants, give their values.
4. Look up the article 'A Star That Should Not Exist' on Astrobites. In this article, they analyze the spectra of a star SDSS J102915+172927. In this lab, you will also be analyzing stellar spectra, but looking at different characteristics of stars. What are you trying to determine from the spectra, and how is this different from what they tried to determine?