

ASTR 121 – Spring 2016

Lab 4 – Cluster H-R Diagrams: Prelab Questions

Due Monday, [Date TBA]

Answer the following questions on a separate sheet of paper.

1. The star Rigel has a B magnitude of 0.09 and a V magnitude of 0.12. What is the (B-V) color index of Rigel?
2. Based on the (B-V) color index you calculated, what is the surface temperature of Rigel? What is the surface temperature of a star with a (B-V) color index of 0.58? 0.81?
3. We are using data taken through B and V filters. What wavelength is the B filter centered on? The V filter? What are the ranges of these filters?
4. Look up the article 'How Old is the Hyades?' on Astrobits. The technique of isochrone fitting is very similar to what we will do in this lab. What limitations of the technique does the article discuss?