

PHY517 / AST443: Observational Techniques

Homework 2

1. Orion culminates at 1am in September; at what time does it culminate 3 months later? Describe how you arrived at your answer.
2. Look up the focal length of our telescope, and the size of the STL-1001E CCD. You can find both in the manuals linked from the *Observing Equipment* tab on the class wiki. What is the field-of-view of the camera when attached to the telescope?
3. Looking up references and compiling L^AT_EX (see the wiki page):
 - Download the `example.tex` file, and **read** and compile it.
 - Look up 3 references for your “birthday object”, and read their abstracts.
 - Write a short paragraph about this object, briefly summarizing the conclusions from these 3 papers.
 - Include the references via BibTeX. Use “\citep” and “\citet” at least once each. If you don’t understand what I’m talking about, go back and read `example.tex`.
 - Also include your finding charts and StarAlt chart as floating figures in the document.
 - Submit the compiled pdf and the source code.
4. Work with your lab partners to request 3 exoplanet transit observing dates. Follow the instructions on the wiki to do so. For the homework, submit the following:
 - (As a group:) For each transit, the mid-transit time, the transit duration, and the magnitude dip, as well as the StarAlt plot with these times marked. State when you should arrive at the telescope.
 - (Individually:) A plot of transit depth vs. host star brightness. Which systems are the best targets?