PHY517 / AST443: Observational Techniques

Tutorial 1: uhura, bash, awk and sed, topcat, LaTeX

1. Log into uhura or vulcan.
2. Edit your .bashrc file as described under the "bash" tab on the class wiki page. (Remember to source your .bashrc file afterwards.)
3. Confirm that your window-forwarding set-up works by launching `ds9`.
4. Write a `bash` script that prints "Hello, world!". The command to print to standard out is "echo".
5. Go through the examples on the "awk and sed" tab on the wiki page. Use `awk` and `sed` to print out the objects that are observable from Stony Brook, and change their name to "Obj" instead of "Object".

The following can be done on the lab computers, or on your laptop (it will likely be faster on the latter):

6. Download the exoplanet catalog (see Lab 1 / HW 2), in the VOTable format. Open it in `topcat`. Familiarize yourself with `topcat`'s buttons by hovering your cursor over them. Make a log-log plot of planet mass vs. the orbit's semi-major axis.

LaTeXcan be run on the lab computers, or your laptop, but the most convenient way (if you have a reliable internet connection) might be an online editor like `overleaf.com`:

7. Download the `example.tex` file linked from the LaTeXwiki tab, along with the references file and example image. Compile the example LaTeXfile.
8. Sign up for a github account if you don't have one. Start "watching" the class github repo.