

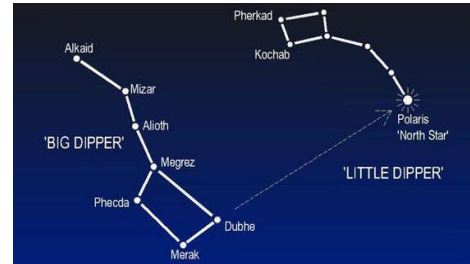
Observing Assignment #1

Due on Wednesday, September 19 in class

Please review the "Top 10 Tips for Observing Assignments" BEFORE attempting this assignment.

Part I – The Northern Sky

Go outside on a clear night in the early evening and find somewhere where you have a good view of the Northern horizon. Set your planisphere (handed out in class on Friday 9/14) to the date and time you are out and use it to locate the stars of the Big Dipper. Using the two stars at the end of the cup of the big dipper to "point" you in the right direction, locate the North star (recall that the North star is represented by the rivet in your planisphere).



1. Sketch the orientation of the Big Dipper and Little Dipper relative to the Northern horizon and the North Star in the space below. You do not need to mark the individual stars, but should represent the shape, size and relative orientation of the two constellations relative to the horizon and to one another as accurately as you can.



North star

Northern Horizon

Exoplanet Name _____

2. Measure the altitude (distance straight up from the horizon) of the North star using “fist and finger” measurements, as you practiced in class. Record your measurement below (see Tip #3 for how to do this properly).

Part II – The Southern Sky

Using the North Star to locate North along your horizon, turn 180 degrees and face due south. Using your planisphere, locate the constellation of Sagittarius, which looks like a teapot. Move around until you have a clear view of the whole constellation and ~15-20 degrees on either side of it.

1. Sketch your horizon and any obstructions along it along the bottom of the piece of paper provided at the end of this lab.
2. Sketch the stars of Sagittarius on the drawing, using larger dots to indicate brighter stars and smaller dots to indicate fainter stars. Do not “connect the dots” of the constellation.
3. After sketching Sagittarius, compare the stars around the constellation to those on your planisphere. There should be two bright stars that are NOT on your planisphere. Sketch their locations relative to the stars in Sagittarius carefully.

Measure the distance between the brightest star in Sagittarius and each of the two mystery objects with fist and finger measurements and record these distances in your sketch. Make sure to mark which star you used as a reference.