

Semester Project

Visual Observing

Observing Plan

An observing plan helps astronomers efficiently plan their time during an observing run. You must factor in the position of the object in the sky, the time of year and the availability of the equipment that you need to complete an observation. Create an observing plan for the following visual observing projects and submit it on **February 12**. You need to include the object's name, the date of planned observation, the equipment you will need and the coordinates of the object. Obviously you need to plan your observation so that the object is well positioned for viewing. You can use your Miller Planisphere or any other resource to help plan your observations.

The remaining exercises are **due the last day of class**. You should turn in a detailed journal of observations that include at least the date and time of the observation, the object name, weather conditions, equipment used, sketches or images taken and a detailed written description of the object.

When sketching an object, be sure to label directions (N,S,E,W) and to include the scale of the drawing (Can be estimated once you know the field of view). Label the primary target and any other identifiable object in the field.

You will also need to include a brief discussion of the observations. Be sure to answer all of the discussion questions!

Lunar Observation

During the two weeks of the month when the moon is visible during the evening, go outside and observe the moon each night at roughly the same time. Note the position relative to the constellations, the phase and estimate the altitude and azimuth. Using the position of the moon relative to surrounding bright stars, estimate its right ascension and declination.

In what direction does the moon appear to move in relation to the stars? How much later/earlier does the moon rise each night? How far does the moon move across the sky each night (in degrees, or minutes of RA)?

Telescopic observations

Throughout the semester try to observe the following objects after you have finished your assigned lab for the day. You will need to start early in the year and design an observing plan! (Not all objects are visible the entire semester!) Record the observations in your journal and write a brief discussion of each observation. Be sure to answer the questions associated with each object.