

Telescope Observation & Report

ASTR 1010L

To prepare for your observing session, read the *Observing Session* section of your lab manual and review section 1, *Celestial Coordinates*. Also, refer to your text or other reference about these subjects:

- **Stellar Magnitudes.** In observing, we informally estimate the brightness of stars on a scale of 1 to 6, with magnitude 1 being the brightest and magnitude 6 referring to the dimmest stars it is possible to see with the naked eye. In practice, at our location, magnitude 3 or 4 is the best we can do even when the seeing is excellent.
- **Stellar Colors.** The color of a star indicates its temperature. Colors range from blue (hottest) to white, yellow, orange and red (coolest). Do not expect the colors to jump out at you; they become evident as you observe for a few minutes and by comparing the appearance of one star with another.

The purpose of the observation report is to make a record of what you observed and how you observed it, and to identify what you saw. During your session, you should record all relevant data about each object (as listed below) and anything you observe about it (brightness, color, shape, distinguishing features), including general or even vague impressions. ("The markings seemed to be in the shape of a bird's wing....")

You should do at least one sketch of the telescope view of the Moon, a planet, a nebula, or a galaxy. You can use the Observing Session Worksheets to record your data/descriptions during the session, or you can use a notebook.

After the session, calculate the magnifications that were used in observing and record these. Identify any planetary or lunar Moon features that you can and indicate these on a separate drawing (do not draw on your sketch) with an explanation. Also indicate the compass directions (N, S, E, W) on this drawing.

Your report should include:

General Info for The Session: Date & Time, Location, Sky Conditions, Moon Phase

For Each Object:

- Object & Type of object
- Where in sky did you observe it? (NE, NW, SE, SW, near Zenith)
- Telescope type and focal length; eyepiece; magnification
- Verbal description
- Telescope sketch for the Moon, planets, nebulae, or galaxies, including compass directions *in the eyepiece view*
- Feature identification (if possible)