

## Fundamentals of Stargazing – Month 8 Worksheet

**Project #1:** Find the ice-giant planets Uranus and Neptune. Look for a blue-green color in the disks. With a telescope, try different magnifications to see the apparent size of the disk of the planets change.

**Project #2:** As mentioned in the solar-system section, as many as four of the moons of Uranus are visible with a 6-inch to 8-inch telescope. Use the link to the Javascript tool at *Sky and Telescope* (provided in the course notes) to try to see and identify the moons. (Note: This is a challenging project).

**Project #3:** Using the information in the “Observing” section, estimate the Bortle scale for your regular observing location (eg. your home, your astronomy club observatory, etc).

**Project #4:** Use the dark-sky finder from the International Dark Sky Association to find dark-sky locations near your location:

<http://darksky.org/idsp/finder/>

**Project #5:** Find the variable stars Delta Cephei and Beta Persei (Algol). Try to follow their change in brightness over the course of a few days. Delta Cep changes its brightness continuously over 5.4 days. Algol’s brightness drops rather suddenly, though predictably, every 2.8 days. This planning tool will help you see the expected variability of a number of well-known variable stars:

<http://lackawannaastronomicalsociety.org/varstar.htm>

**Project #6:** See as many deep-sky sights on this month’s tour as possible. Some of the most appealing objects on this month’s tour are:

- The globular cluster M15, just of the ‘nose’ of Pegasus
- The galaxy NGC 7331 in Pegasus
- The Helix Nebula, the closest and apparently largest planetary nebula to our solar system
- The nearby galaxies NGC 253, NGC 55, and NGC 300 in and around the constellation Sculptor
- The “Saturn Nebula”, NGC 7009, a planetary nebula in Aquarius