Name: _____ **NetID:** _____

Date of Session: _____

Astronomy Night Observing Session Worksheet

Purpose: (1) To observe the broad features of the night sky and identify bright stars and constellations; and (2) to observe in more detail specific night sky objects – such as the moon, planets, star clusters, nebulae and galaxies – with a telescope.

What to do at the observatory:

There will be three stations, each tended by an instructor or TA:

1. One telescope inside the Observatory dome
2. Two small outdoor telescopes (behind the Observatory)
3. A naked-eye tour of the sky (also behind the Observatory)

The sessions will begin at 7:30pm. When you arrive, either go behind the observatory (near Morrow plots) or enter the Observatory through the door facing Smith Music Hall, you may need to wait while the instructor prepares for the session

At each station, the instructor will review information about the object that you will be observing, and will assist you in observing the object with a telescope or with your eyes. Read the questions below before you start observing and you may answer them as you go through the session.

Rule: *You may ask the instructor for assistance with answering questions or discuss the questions with your classmates, but you must write your own responses in your own words.*

Answer the first question before you start.

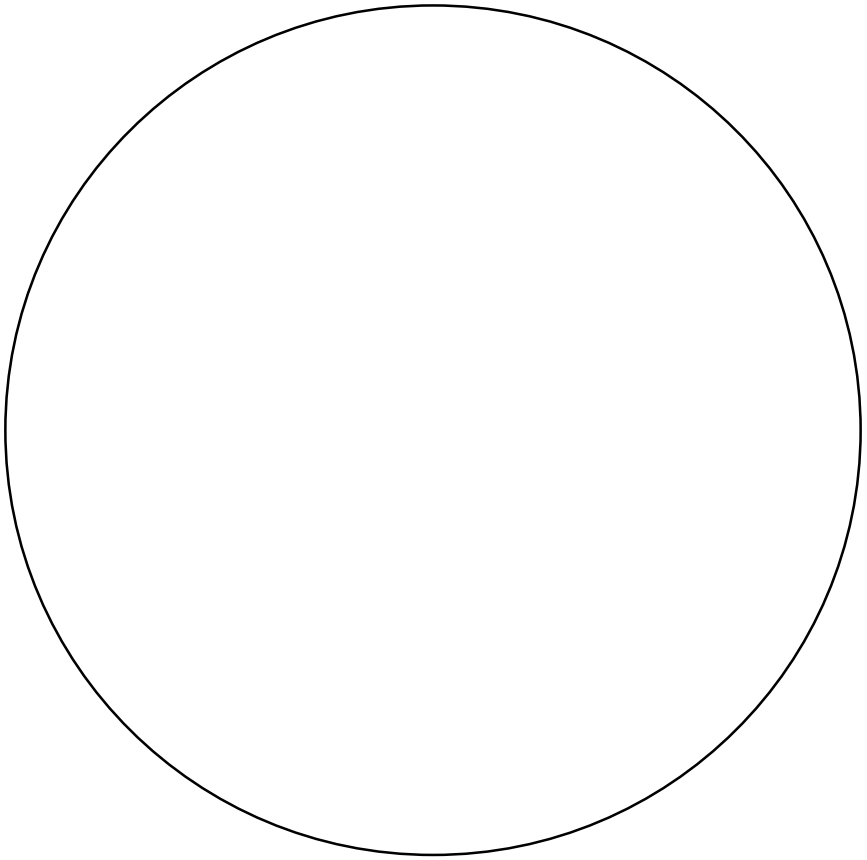
1. (a) What is the date and local time of your observations?

   (b) What are the sky conditions (e.g., clear, partly cloudy)?

Observations with the Telescope inside the Dome

2. Describe the telescope. Does it use a mirror or a lens to collect light? What is the diameter of the biggest mirror or lens in the telescope?

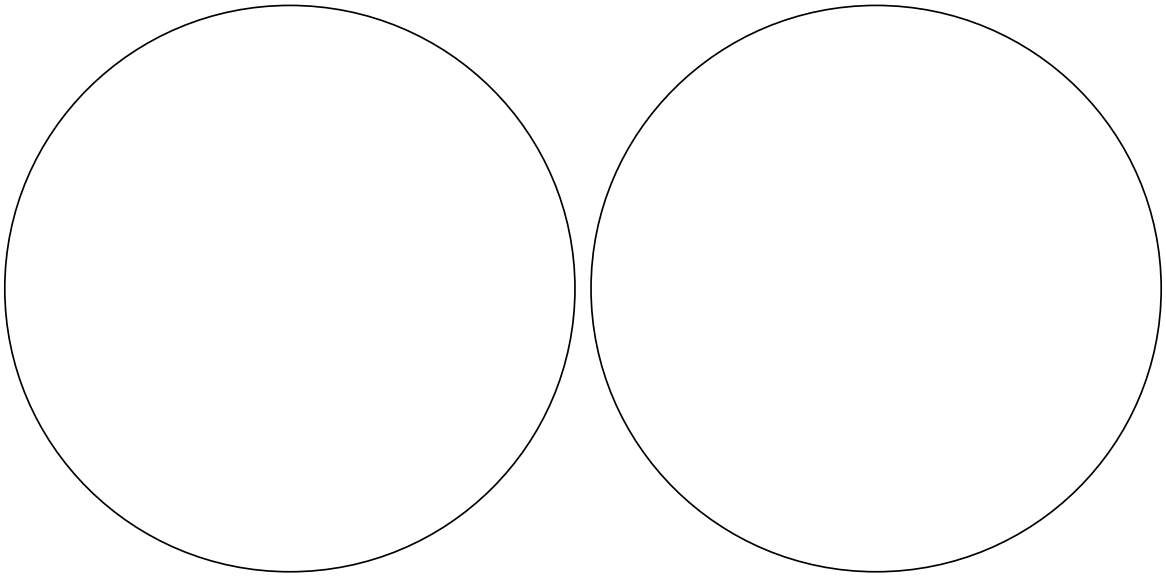
3. What object(s) did you see through the telescope? Sketch the object(s) and label its features in the circle below.



Observations with the Small Outdoor Telescopes

4. Describe the telescopes. Do they use mirrors or lenses to collect light? What is the diameter of the biggest mirrors or lenses in the telescopes?

5. What objects did you see through the telescopes? Sketch the objects and label their features in the circles below. Give the names and brief descriptions of the objects.



6. What effect does the difference in the design between the outside and dome telescopes have on the images that you see?

Naked Eye Tour of the Sky

7. Give the name of one constellation that you heard and sketch it. What kind of animal/object/person is this constellation supposed to represent?

8. Identify Polaris in the sky. Why is Polaris a noteworthy star? Is it the brightest star in the sky?

9. What planet(s) did you see in the sky? What constellation(s) did they appear in?