Name: _____ **NetID:** _____

Date of Session: _____

Astronomy 150: Solar Observing Session Report

Purpose: To observe the surface features of the Sun using a telescope.

What NOT to do when you go:

Do *not* look at the Sun with your eyes directly! You can damage your eyes if you look at the Sun directly.

What to do when you go:

Attend a daytime observing session and complete this worksheet. The sessions schedule is listed on the website[1], which you should check to see if the solar observations will be held or not. When you arrive, enter the observatory through the north door facing Smith Music Hall. Observing will take place upstairs in the Observatory Dome using specially-designed filters that block 99.999% of the sunlight and make it safe to observe the Sun. Astronomy Department personnel will be present to operate and explain the telescope and the solar phenomena being viewed. Freely ask questions and sketch what you see.

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.**

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

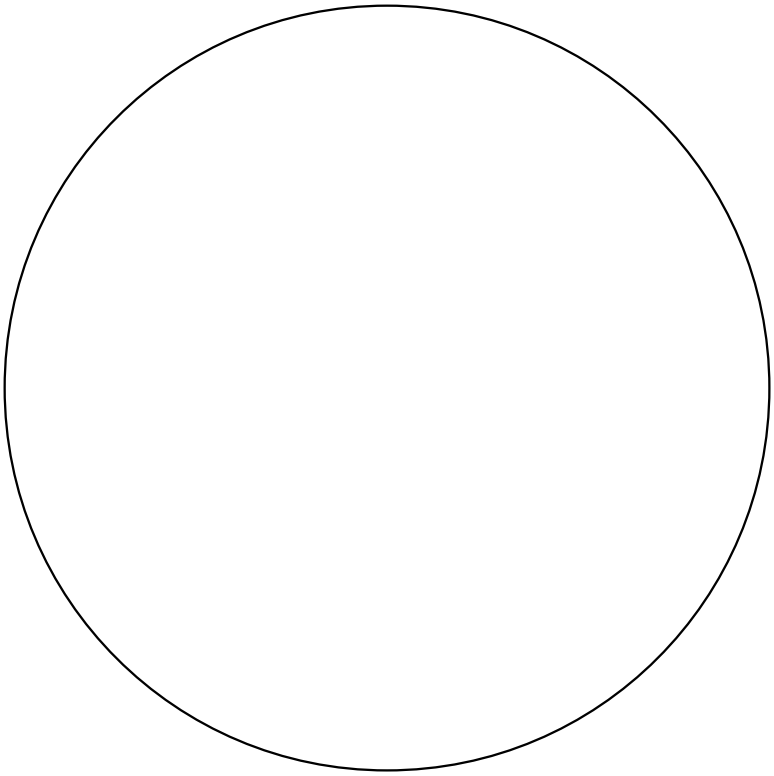
   (b) What are the sky conditions (e.g., clear, partly cloudy)?

2. What is the Sun's location (e.g., N, S, E, W) relative to the zenith, the point directly overhead?

3. How high is the Sun in the sky from the horizon? Measure in degrees where a fist at arm's length is about 10 degrees?

[1] http://www.astro.illinois.edu/academics/courses/solarobs/

4. On the circle below draw and label the surface features that you observe on the Sun.



5. Briefly explain the causes of the surface features you observed. What is happening on the Sun to create these features?

6. As you look at the outermost part ("limb") of the Sun, do you see a relatively sharp edge, or a relatively diffuse and gradual transition to darkness? Briefly explain why.

7. Is the brightness uniform across the solar disk? Why or why not?