

Name \_\_\_\_\_ Netid \_\_\_\_\_

## Astronomy 100: Day Time Observations of the Sun

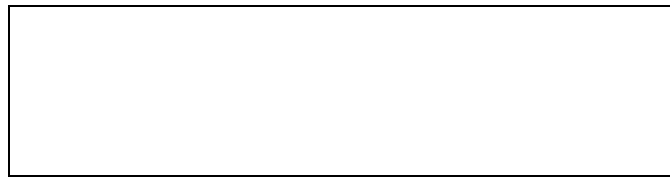
**Purpose:** To observe the surface features of the Sun using a telescope.

**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 directly at the Sun.

**What to do when you go:**

- (1) Attend a daytime observing session and complete this lab worksheet.
- (2) Answer the questions on page 1 before entering the Observatory.
- (3) Answer the questions on pages 2 & 3 as the observing session progresses.
- (4) Get an instructor's autograph at the end of the session before you leave.



(Instructor's Signature)

**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 two questions before entering the Observatory.**

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 relative to the zenith (e.g., N, S, E, W)?

Now you are inside the Observatory, and the session is about to start.

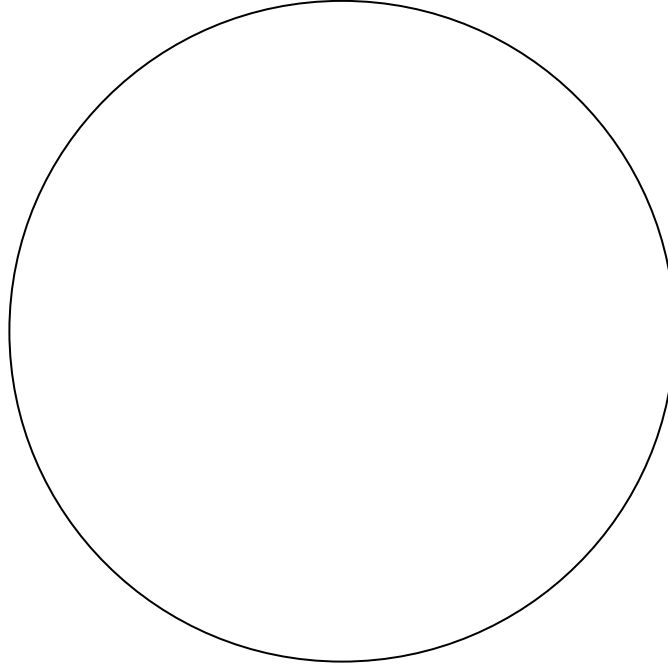
3. Look at your telescope. This telescope is often described as a **12 inch refractor**.

(a) Does a **refractor** use a lens or a mirror to collect light?

(b) What is **12 inch**?

4. A special telescope setup is used to view the Sun so that your eyes will not be damaged. Below sketch and label the setup used to view the Sun.

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



6. **Checklist.** Did you see the following features? If yes, make sure the feature is drawn above. If not, explain why it was not observable.

(a) Limb-darkening?

(b) Sunspots?

(c) Granules?

7. **After you go:** Write a brief paragraph about the Sun as seen through a telescope. For each surface feature that you observed on the Sun describe the physical mechanism causing that feature—that is, explain what is happening in the Sun to cause each feature you saw. *For this question only*, your answer should be typed on a separate page. This part of the report is not collaborative and should be written *in your own words*.

**Get the instructor's autograph before you leave the Observatory!**