

NAME: \_\_\_\_\_

## AST 195 PROJECT COVER SHEET

### Visit an Observatory and Compare Telescopes

*Turn in*

**NOTE – if you are also taking AST 101 with Prof. Graney, and using the same observatory to cover the observatory visit requirement in AST 101, you must turn in a separate AST 101 assignment paper, because what is asked for in the two classes is different (AST 101 is less focused on telescopes).**

- Photos of Observatory Telescope (including one with you and the telescope in it)*
- Photos of Your Telescope (including one with you and the telescope in it)*
- Answers to the 10 questions for this project.*

1. Is the observatory telescope a refractor (uses a lens to gather light) or a reflector (uses a mirror to gather light) or a hybrid (uses both lenses and mirrors)? Is your telescope a refractor, reflector, or hybrid?
2. What is the focal length of the observatory telescope? Of your telescope? Use the same units (mm, inches, etc.) for both.
3. What is the focal length of the eyepiece used at the observatory telescope? Of your telescope's eyepieces? (There may be more than one eyepiece used.) Use the same units (mm, inches, etc.) for both.
4. What is the magnification of the observatory telescope? Of your telescope?
5. What is the diameter of the lens or mirror of the observatory telescope (its aperture)? What is the aperture of your telescope? Use the same units (mm, inches, etc.) for both.

*To answer the next two questions you should label different features in your photographs with a "Sharpie" or other marker, and then to refer to the photographs when answering the questions.*

6. What similarities did you notice between your telescope and the observatory telescope? Discuss in a short paragraph.
7. Were there any similarities that struck you as particularly surprising? In other words, were you surprised to find that your little telescope and the observatory's larger telescope had a certain thing or things in common?
8. What were the most notable differences between your telescope and the observatory telescope? Discuss in a short paragraph.
9. If weather permitted you to observe through the observatory telescope, how did its performance compare to your telescope? Were you impressed by its power? Or did you expect more?
10. In two paragraphs, discuss what you learned from this project.