

(Staple Observation Sketch Sheet Here)

# SAMPLE COVER PAGE

Student's Name

Index Code

Unit XX

Date and Time of Unit

"In accordance with the USC Honor Code, this is my own work."

*X Student's Signature*

Your report begins here and should be formatted as you see here in this sample report. You should type your report using a 12-point font size, 1-inch margins and double spacing throughout your report. Do not add extra spaces between paragraphs, and do not use oversized fonts. Your report should be a minimum of 3 pages (per unit) in length (2 <sup>3</sup>/<sub>4</sub> pages will not be accepted). When using information from external sources (avoid Wikipedia), please properly cite the information in your report (i.e. Safko 234), and then properly list all your sources on a separate sheet after your report. Do not use footnotes for citations. Copying and pasting entire paragraphs from external sources and then putting the whole paragraph in quotations is not acceptable. Images are not to be included in your report as part of your 3 pages. If you would like to include images in your report, they should be printed on a separate sheet of paper and labeled, then referred to in your report. Proper grammar and spelling should be used. If there are excessive grammatical and/or spelling errors, your report will not be accepted. Also, excessive factual errors will not be accepted. A large amount of information will be covered in class. It is your responsibility to take proper notes and use quality sources to look up information to include in your report.

All reports should be turned in at the Astronomy Center's EV Desk in room 008 by the due date listed on the unit sign-up sheet (typically 7 days). Reports not received by this due date will not be accepted. In this event, the student must retake the unit and resubmit their report. Also, reports not meeting the above guidelines will not be accepted. In this event, the student will be notified by their university email (student@email.sc.edu) that their report was unsatisfactory and will need to make the noted corrections and resubmit their report by the new due date (typically 3 additional days). If the report is not acceptable after the second grading, the student will forfeit the credit and will need to retake the unit and rewrite their report. All reports are graded pass/fail. In order to receive credit for the unit, the report should be written to the

same level as passing a unit evaluation (a grade of approximately a B). Reports are graded after the due date, so the students should expect credit to show up on their progress report 1-3 days after the due date. If credit is not listed under "Available for Credit" within 7 days after the due date, and you have not received an email, please contact Alex Mowery at [mowery@physics.sc.edu](mailto:mowery@physics.sc.edu) to resolve this issue.

Now, onto your report's content. For units 50 and 55, you should use your observations as a basis for writing your report. For example, if you observed sunspots during your Unit 55 observations, describe the telescope configuration that allowed you to observe the sunspots (telescope type such as white light, hydrogen-alpha, calcium-K), describe what you saw through the telescope using your observation sketch sheet to help you remember any specific details. Then using the information you learned during the unit as well as external sources, such as the textbook, astronomy magazines, or quality websites such as [solarsystem.nasa.gov](http://solarsystem.nasa.gov), elaborate in more depth on what a sunspot is, how they are formed, the sunspot cycle, the properties of sunspots, etc.

For unit 50, you may write your report on all 8 observations made during the course of the unit, or you may write your report on a subset of those observations with the instructor's permission. It is our goal to have the students observe and learn about a variety of different objects during unit 50, so the students will get a diverse experience observing different types of objects, such as the moon and planets, stars, multiple star systems, open and globular star clusters, nebulae and possibly other galaxies. Again, your observations should be the basis of your report with further research done on each object observed.

For unit 49, you should discuss the three main types of telescopes: refractors, reflectors and catadioptric telescopes. For each type, discuss the lens or mirror systems used and how that system allows light to be focused, properties (objective size, focal length, resolving power, etc.),

key parts of the telescopes (objective, focus mechanism, eyepiece, etc.), advantages and disadvantages and inherent problems with each model (e.g. chromatic aberration). You may also compare the different mount setups (equatorial versus “Alt-Az”) and discuss when and why it would be appropriate to use each setup. Unit 4 in your study guide would be a good starting point for gathering information on telescopes. Remember, Unit 49 is on the properties of telescopes and their uses to give you a better understanding of how they work and how astronomers learn from them, not on the history of telescopes. You may include some history, but if half of your report is on Galileo, for example, then you will be asked to rewrite your report.

Remember that this is an observational report, so you may write in the first person and include your reactions to what you see. For example, if you observed the rings of Saturn you may write, “For the first observation, we viewed Saturn, and I was able to see the rings very clearly. It was one of the coolest things I’ve ever seen.” But then get down to business. Do not continue to “fluff” up your report by adding more information about how you’re going to call your mom and tell her that you saw the rings of Saturn and that ever since you were a little kid you wanted to observe the rings. That’s great and all, but this is a scientific report. We like to read about your reactions, but then get to the point about the science and astronomy of what you’re observing. Excess "fluff" will count against the 3-page length requirement.

Keep the conclusion of your report simple and to the point. Please do not write half a page on how you thought your visit to the observatory was exciting and interesting. While we do enjoy hearing that you enjoyed your visit, keep information like that limited to the last sentence. The conclusion should sum up your overall thoughts about your observations in 3-4 sentences. Briefly sum up what you learned during the class that you didn’t know or had never even thought of before attending the observatory unit. If you do all of this, you will get credit for the unit(s). Your report should end here (3 full pages!).

**Sources** (These do not need to be in MLA or ALA format. Simply list them here as shown.)

**YOU MUST CITE YOUR SOURCES WITHIN YOUR REPORT!!!**

Source examples (please include the full URL to any article from online sources):

Study Guide and Textbook (include page numbers in the citations)

Spaceweather.com

Solarsystem.nasa.gov

Astronomy Magazine (Issue and page number)

## Images and Diagrams

Images can go here if there is room, or they can be placed on the next page. Make sure all images are labeled so that it is easy to reference them in your report.