Observatory Notebook

(Check Lab Syllabus for Due Dates)

Introduction

Observations are the fundamental tool of the astronomer. Astronomers cannot go out and collect objects of study as a biologist, chemist, or geologist might. They must sit on Earth and study images or pictures of astronomical objects and learn what they can from these images.

This may seem like a difficult task, trying to learn from pictures, but light holds a vast amount of information. By studying objects in the sky at different wavelengths, we may learn a great deal about what is happening at great distances.

Before the invention of photographic film, astronomers made images of the sky by sitting in front of a telescope and carefully drawing what they saw. Many fantastic discoveries were made this way. The discovery that the Horsehead Nebula changed shape over several years was made by comparing two accurate drawings made over a span of a few decades. Galileo observed the motions of Jupiter's moons which confirmed the Copernican model of the solar system. Galileo also observed and drew sunspots proving that the Sun was not a pristine perfect object, but was in fact active and changing all of the time.

Your task over the course of the semester will be to keep an Observatory Notebook. In this notebook you will draw pictures and give descriptions of many different types of objects you will see in the sky with the help of the telescopes at the campus observatory.

Instructions

Attend the campus observatory several times throughout each month until you have seen the required number of objects. Your observations will be due at the end of every month. Because the skies change over the course of the semester, objects which are visible one month may not be visible the next month. For this reason, if you miss an object one month, you may not make up that observation. If you observe less than the required number of objects for one month, you cannot make up the missed points the following month. Please keep this in mind when you attend the observatory sessions. It is usually possible to obtain all of your observations in one night, if it is not too crowded, and the weather is clear. **Hint:** GO TO THE CAMPUS OBSERVATORY NEAR THE BEGINNING OF EACH MONTH TO AVOID THE LAST WEEK RUSH!! Also remember that *even if it is cloudy the entire last week of the month*, you are still responsible for the required number of observations!

The following few sheets are the observation notebook sheets; you should fill out one of these sheets for each object you observe. When you attend the observatory sessions, a TA will be present to assist you with the telescope and give you some important information about the objects you will be viewing. After you look at the object through the telescope, take some time to draw a sketch of what you saw. Include the date, time, description of the object, observing conditions, which of the telescopes was used, and any other details you think are important. Have the TA initial each sheet as proof of your attendance to the observatory session that night. Before turning in your notebook each month, you should also look up some information about each of the objects and write it down under the description section of the corresponding notebook page.

Campus Observatory Observation Sheet

Date: ______________________________ T.A: ______________________________

Time: ______________________________ Telescope: ______________________

Type of object: ______________________ Object name: ____________________

Object Description: ____

____

____

____

Campus Observatory Observation Sheet

Date: ______________________________ T.A: ______________________________

Time: ______________________________ Telescope: ______________________

Type of object: ______________________ Object name: ____________________

Object Description: ____

____

____

____

Campus Observatory Observation Sheet

Date: ______________________________ T.A:________________________

Time: ______________________________ Telescope: __________________

Type of object: ______________________ Object name: ________________

Object Description:____

____

____

____

Campus Observatory Observation Sheet

Date: ______________________________ T.A: ______________________________

Time: ______________________________ Telescope: ______________________________

Type of object: ______________________________ Object name: ______________________________

Object Description: ____

____

____

____

Campus Observatory Observation Sheet

Date: ____________________ T.A: ____________________

Time: ____________________ Telescope: ____________________

Type of object: ____________________ Object name: ____________________

Object Description: ____

____

____

____

Campus Observatory Observation Sheet

Date: ______________________________ T.A:______________________________

Time: ______________________________ Telescope: ______________________________

Type of object: ______________________________ Object name: ______________________________

Object Description:____

____

____

____

Campus Observatory Observation Sheet

Date: ______________________________ T.A: ______________________________

Time: ______________________________ Telescope: ______________________

Type of object: ______________________ Object name: ____________________

Object Description: ____

____

____

____

Campus Observatory Observation Sheet

Date: ______________________________ T.A: ______________________________

Time: ______________________________ Telescope: ______________________

Type of object: ______________________ Object name: ____________________

Object Description: ____

____

____

____

Campus Observatory Observation Sheet

Date: ______________________________ T.A: ______________________________

Time: ______________________________ Telescope: ______________________

Type of object: ______________________ Object name: ____________________

Object Description: ____

____

____

____

Campus Observatory Observation Sheet

Date: ______________________________ T.A: ______________________________

Time: ______________________________ Telescope: ______________________

Type of object: ______________________ Object name: ____________________

Object Description: ____

____

____

____

Campus Observatory Observation Sheet

Date: ______________________________ T.A: ______________________________

Time: ______________________________ Telescope: ______________________________

Type of object: ______________________________ Object name: ______________________________

Object Description: ____

____

____

____

Date: ______________________________ T.A: ______________________________

Time: ____________________ Telescope: ____________________

Type of object: ____________________ Object name: ____________________

Object Description: ____

____

____

____