Ast 1 – D. Carico **OBSERVING LOG** **NAME:** _____

[Due: The last day of class before the Final Exam]

Instructions: To receive credit for any answer, you must include a description of observations that you have done that provide evidence for that answer. *An answer without an observation, including a date and time, will receive no credit.*

For all questions that involve a change in the location of something in the sky, give your answer in terms of fingers held at arms length—e.g., "2 fingers", or "8 fingers", or whatever it is. Such answers need only be approximate.

Please write your answers to all questions directly on this sheet; and note that *this sheet does not have to be neat!*

NOTE: You are welcome to do your observations with a friend, but make sure that what you write down is *in your own words*. If your Log is identical to someone else's, I will assume that only one of you did the assignment and the other one copied. *This will be considered a violation of the Academic Honesty Policy (cheating), and will result in a "0" on the assignment.*

1) Is the Moon ever visible in the daytime?

   Date & time: _____ Answer: YES NO

   Description of observation:

2) By how much does the Moon's location in the sky *at a given time of night* change from one night to the next?

   1st night Date & time: _____ Answer: _____

   2nd night Date & time: _____

   Description of observation:

3) How long does the Moon take to go through one complete cycle of phases? (Note: Your answer must be based on your observations. Just quoting the "right answer" is not the point.)

   Date, time, and description of observations: Answer: _____

4) *Do this observation as soon as possible—ideally during the first week of class*. Using a compass, or the North Star, or whatever method you have available, stand so you are facing *south*. Then, when you are sure you are facing *south*, find a bright star that is not too far to the right (the west). Record below the location of your star in reference to something that will not move—a tree, a distant hilltop, whatever—as well as the date and time of the observation.

   Date & time: _____ Location of star: _____

   Now, wait one hour and observe the star a second time. How far has it moved? _____

5) Wait at least 4 weeks from when you made the observations in Question 4, and then *at the same time of night as your first observation* (what you wrote down for the time above) find the same star again. How far has it moved?

   Date & time: _____ How far has it moved? _____

(*OVER* →)

6) Find a fence post, or a telephone pole, or something that casts a well defined shadow of a definite length for at least some part of the day. Use the space below to record two observations of the length of the shadow. The observations must be done *at the same time of day*, during the time frame indicated. { Note that because of Daylight Savings Time your second observation will have to be made *one hour later, on the clock*, than your first observation. In other words, if your first observation (in Jan or Feb) is made at 2:00 PM, your second observation (in Apr or May) should be at 3:00 PM, since you have set your clock ahead one hour since making your first observation. Get it? }

TIME FRAME	DATE	TIME	LENGTH OF SHADOW
January – February →			
April – May →			

Why has the length of the shadow changed?

7) Observe the Big Dipper sometime during the first three weeks of class.

Date & time of observation: _____ Draw a picture of what it looked like below:

Where was it, in relation to the North Star?

8) Observe the Big Dipper during the last three weeks of class *at the same time of night that you observed it before*.

Date & time of observation: _____ Draw a picture of what it looked like below:

Where was it this time, in relation to the North Star?

9) Observe one of the "official" constellations (*your choice*) any time during the class.

Date & time of observation: _____ Draw a picture of what it looked like below:

Which constellation was it, and where was it in the sky?
(north, south, east, west, high in the sky, near the horizon, etc.)

10) Invent your own constellation based on the stars you see at night. Tell me where it is in the sky on a given date and time, describe briefly what it is, and draw a picture of it, including both the pattern of stars and what your imagination sees in those stars.

Date & time of observation: _____ Draw a picture of what it looked like below:

Where was it in the sky?

Description of your constellation: