

## 11 – Field Work: Motion of the Sun II

Purpose: To observe the change in the Sun's rise or set position over a long period of time.

Materials:

- paper
- writing/drawing utensil(s)
- view of Sun's rise or set position (and clear conditions)
- your Lab 2 sketch of sunrise/sunset (instructor has it)

Instructions:

On your own, completely address the following three questions. Yes, we really want you to draw.

Due: in one week, at start of class.

### Procedure:

**Q1)** Return to the same location where you observed a sunrise or sunset for Lab 2. Observe the same Solar activity—sunrise or sunset—at this location. Again describe the location and draw a figure; provide the following in words and/or in the figure:

- a. name of the place;
- b. horizon;
- c. an outline of any feature that blocks your view of the horizon such as buildings, trees, or mountains;
- d. labels of major features in your sketch;
- e. label the location of three cardinal directions on your horizon; and
- f. look up the longitude and latitude of your location and label your drawing.

**Q2)** From your choice location (Q1), observe a sunrise or sunset and record the following information in an observing “log” at least once this week:

- a. Mark in your drawing the direction of the sunrise or sunset. The only safe time to look directly at the Sun with your naked eye is when most of its light is scattered or obscured by clouds, the horizon, or other objects. Do not look directly at the Sun unless you are 100% certain that it's safe. It's your responsibility to be cautious and let your body's instinctive aversion to bright light guide you in your observations. Enjoy a beautiful sunrise or sunset, sensibly.
- b. Record the exact time and date of your observation.
- c. Record comments: If there were any pertinent factors that may have affected your observation, note them in your “log.”
- d. Identify the observer; i.e., make sure your name is on your piece of paper.

**Q3)** Compare to your Lab 2 Field Work sketch. Consider the motion of the Sun over the time period separating your earlier and current observations. Discuss what you *observe* and what is *expected*.