

CBHS Hon Astronomy Individual Project #3

Sunset Pictures

To follow the seasonal motion of the Sun, it is necessary that you pick a good observational site -- one that gives a fairly clear view to the West in the evening. Parking lot structures and rooftops are usually good locations. Use a camera to photograph the sunset position with respect to ground features (wait until the Sun is low enough to do this accurately and safely). Your observations are of the Sun setting in different places along the horizon as the weeks go by. Print or develop 10 shots, starting with a shot with your name on a piece of paper in the corner of the frame. The pictures must be at least 3" x 5" and should be mounted or taped onto paper with the dates they were taken written underneath them. Use the pictures to answer these questions, and attach the picture set to your answers.

- 1) Which way was the Sun moving along the horizon? Was its motion uniform or did the rate of motion change with time? Explain.

- 2) From your observations what can you say about where the Sun sets?

- 3) What did you notice about the sunset times as the weeks went by, and what can you say about the length of the day?

- 4) The Sun makes an angle of about 0.5° in the sky. Using this information, estimate how many degrees the sunset position moved from your first picture to your last. Then, divide the angle by the number of days between pictures to figure out the rate (angle/day) that the sunset location moved. Show all of your work.

- 5) What surprised or impressed you the most as you performed this observational project?

Due Date: Wednesday, October 22, 2014