

# **HOMEWORK #11** (due start of class February 17) (copyright D. McCarthy)

## **LEARNING GOALS:**

1. Continue recording observations in your journal.
2. Use the tools you either built, or were provided, to observe environment.
3. Reading preparation for Monday's class: Belt of Venus, telescope optics.

## **TO RECEIVE FULL CREDIT:**

1. If you submit multiple pages, staple them together.
  2. To receive any credit on these problems, you must **show how** you derived your answer by writing all the logical steps that led you to it.
  3. All sentence responses must be **typewritten and in complete sentences**. You may handwrite any arithmetic. Use good English grammar.
  4. **If you work more than three hours on this assignment, you should stop, record your work here, and contact Dr. McCarthy.**
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**1. Keep observing the sky (day & night)** and record notes, pictures, and measurements in your journal. Dr. McCarthy has posted a new link, describing journal content and requirements, on our Web site. Stay up-to-date!

**2. Bring your paper spectrometer kit to Monday's class.**

We will assemble the device during class.

**3. Background reading for Monday's class:**

*"Belt of Venus"*

<https://www.atoptics.co.uk/fz973.htm>

<https://www.atoptics.co.uk/atoptics/earshad.htm>

Telescope Optics (first 20 slides)

<http://physics.gmu.edu/~hgeller/TeacherWorkshop/ch06a.pdf>

**4. Based on slide #8 in the reading about telescope optics, how much more light would be collected from a 2-meter diameter telescope than a 1-meter telescope? Be sure to show all details of your work.**