**ASTR 530 : Homework 7: Observing the Sky : 12 points**

1. (3 pts). Set up and align one of the "C8's" (Celestron 8 inch) telescopes, using the North Star and the reticle.

Use the Go-To to use three objects to align. Which three?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_ Initials of instructor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. (1 pt). Use the "GoTo" on the 8 and slew to another astronomical object. Which: Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ RA: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dec: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Date: \_\_\_\_\_\_\_\_\_\_\_ Initials of instructor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. (4 pt) Observe at least 4 more objects. Draw a sketch using the

<http://mst.rice.edu/ASTR530/HW/observingform.jpg> JPG

or <http://mst.rice.edu/ASTR530/HW/observingform.pdf> PDF

observing form (Save it and print it from a print program, or print at 50% from your browser).

Be sure to note the location, telescope used, etc.

Use a different page for each observing session, no more than 3 objects per page.

One of your objects should be the Sun, in white light or H-alpha (use safe techniques!).

4. (4 pt) Be able to point out six stars and four constellations in the sky to the labbie!

Objects correctly identified:

Stars: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Stars: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Constellations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_ Initials of instructor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Notes:*** **Limiting magnitude:** The "limiting magnitude" is the magnitude of the

dimmest star you can see with your naked eye, looking near the zenith.

**Field of View:** Given the Moon's size in your field of view, you can

estimate the field of view of the eyepiece by seeing how many Moons fit across the field of view.

**Magnification:** Equals the focal length of the objective divided by the

focal length of the eyepiece. The Focal Length of the observatory 16 inch telescope is 4 m;

of the 8 inch, 2032 mm. Eyepiece focal lengths vary from 4mm to 35mm (notice which one you used!!).

There will be at least two evening sessions, but we get clouded out a lot, so be sure

to come to the first possible session you can! Or, you can go the "George Observatory"

(in Brazos Bend State Park) any clear Saturday evening. (or if you have access to a telescope, get a volunteer to sign for you)

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