**ASTR 530: Homework 1 : Stellarium activity (6 pts)**

Due: Feb 8

Note: use this (<http://mst.rice.edu/ASTR530/HW/Stellarium_controls.pdf>) shortcut list for Stellarium controls

1. (1 pt) First, install Stellarium from <http://www.stellarium.org/> stellarium.org

- there are downloads for both Mac and PC (and Linux).

Write here the version you installed (e.g. 0.10.6) : \_\_\_\_\_\_\_\_\_.

Notice the popouts at the left and at the bottom (they show up when you move

your cursor over them)... The top one on the left sets your location.

**Set your location (use the popout or function 6):**

Many locations can be set by typing in the name of your city in the Question box (to the

right of the magnifying glass icon).

Or select on the map. Or type in the lat and long: for Houston, use -93 degrees longitude, and 30N latitude,

or use your own GPS to set it more accurately. Check the box to "use as default", so the

next time it knows where you are.

(it should use your computer's clock to give it the time of day). If you are in daylight,

select "A" to get rid of the atmosphere.

Move the time forwards by pressing "L". Each time you press it goes faster, then "K" to return to sidereal time.

To go backwards, press "J" repeatedly and then again K to stop.)

To move forward one day at a time, press "=". To move backwards one day, press "-".

2. (1 pt) Which days (if any) are the best to observe Mercury this semester?

Note: to "find" use the magnifying glass icon with the star on the left popout menu, or hit F3.

(be sure to check both the evening skies in the west and the pre-dawn skies in the east).

State which day(s) if any are best for evening views: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(hint – maximize the elongation)

State which day(s) if any are best for morning views: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. (1 pt) Which weeks (if any) are the best to observe Venus this semester?

(be sure to check both the evening skies in the west and the pre-dawn skies in the east).

State which day(s) if any are best for evening views: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(hint – maximize the elongation)

State which day(s) if any are best for morning views: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. (1 pt) State which of these are evening or morning objects: [ Jupiter, Saturn, Uranus, Neptune ].

Evening planets: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Morning planets:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(if both, when does it switch?)

5. (1 pt) Will any planet be at (or near) opposition this semester (in the south at midnight?)

If so, which object(s) and what day? (if no planet, maybe a dwarf planet?)

Object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ day:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ day:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. (1 pt) Pick at least three deep sky objects (nebulas, galaxies etc) that will be

near the zenith at 8 pm this semester that could be observed with the 16 inch telescope.

(not too dim!). Put down the name and the Right Ascension and Declination of each.

Object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ RA:\_\_\_\_\_\_\_\_\_\_\_\_\_ Dec:\_\_\_\_\_\_\_\_\_\_

Object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ RA:\_\_\_\_\_\_\_\_\_\_\_\_\_ Dec:\_\_\_\_\_\_\_\_\_\_

Object:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ RA:\_\_\_\_\_\_\_\_\_\_\_\_\_ Dec:\_\_\_\_\_\_\_\_\_\_

Last updated 2/5/2023