
Name (Last, first)

Astronomy 110 Homework 4: Phases of the Moon

Write the answers to the questions on the back of this sheet.
Homework due by 11.20 am on Friday February 18th 2004

The Moon will be visible every evening between February 10th and February 17th. You need to observe the position and apparent shape of the Moon as it changes over the next week.

Data for **at least five** different evenings are needed for full credit. Aim to observe the moon at 8 pm each night, but any time between 7 pm and 9 pm will do, so long as you use the same time each night (to within about 20 minutes)

On each evening do the following:

Write the time that you make the observation in the table on the next page, and sketch the shape of the moon as you observe it. If the moon is crescent, gibbous or half-full make sure your sketch shows the direction the bright part is facing (East, West etc). Draw the unilluminated part of the moon *dark* with your pen, and leave the illuminated part of the moon white.)

Mark the approximate position of the moon on the map of the sky using each day's date as a symbol. The map represents the whole sky, with the circle representing the horizon and the center representing the Zenith, straight above your head. If the Moon is 45° above the horizon you should plot it half way between the center and the edge of the circle.

To compare the map with the sky it should be held upside down above your head. Note that East and West are opposite from the way you see them on a map of the Earth; this is because you look *up* at the sky, as opposed to *down* at the Earth.

You will need to know which directions are north, south, east and west from where you observe. If you do not know which direction is which you should either

- Consult a street map
- Look up a map of Honolulu on the website <http://maps.yahoo.com/>
- Remember that Dole Street runs from West to East with the Law School to the South.
- Use Polaris
- Remember that the Sun sets in the West.

Date of observation	Time	Moon's Shape
		E W
		E W
		E W
		E W
		E W
		E W
		E W

