

# Outdoor Lab 4 - Jupiter

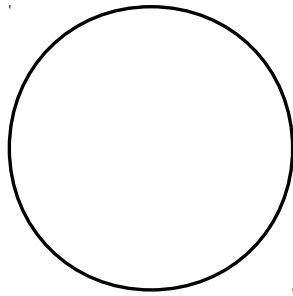
Objective: To observe the characteristics of the planet Jupiter and its moons.

## 1 Jupiter

Jupiter is a treat in a small telescope. As the largest of the planets, it always shows a clear disk. The diameter of the disk ranges from about 30"-50", depending on the distance to the Earth. The cloud belt structure is clearly visible, and usually one can discern the polar flattening caused by its rapid rotation. In addition, the four Galilean satellites, Io, Europa, Ganymede, and Callisto perform a constant dance so that their appearance is always changing. All four may not be visible on any given night, since one or more may be behind the planet (eclipsed) or in front of the planet (transiting).

## 2 Observations

1. Record the time and date.
2. Identify the naked eye stars around Jupiter and locate its position in the atlas. Estimate and record the RA and Dec, and identify the constellation.
3. Find Jupiter with the telescope. We will likely use the 10" Alt-Az telescopes for this. Determine the directions N, S, E, W and label the figures on the observing sheet accordingly.
4. Examine Jupiter and its moons and sketch the result on the large circle on the observing sheet. Examine the shape of the disk - is it exactly circular? Record any cloud patterns that you see. Finally record the location of the visible moons. Can you see changes in the positions of the moons during the observing period? Can you determine which moon is which? The finder chart on the last page of this lab should help.
5. If you have a camera, try taking a photograph of Jupiter. Can you see more or less detail in the photograph than with the naked eye?
6. Try using eyepieces of different focal length. What is the trade-off of magnification vs field of view? Which eyepiece gives the best view, in your opinion?
7. Try watching Jupiter for several minutes. You should see brief times intervals where the turbulence in the atmosphere steadies down and you get a clearer view for a short time.
8. If there are any nearby stars in the field of view, record these as well.



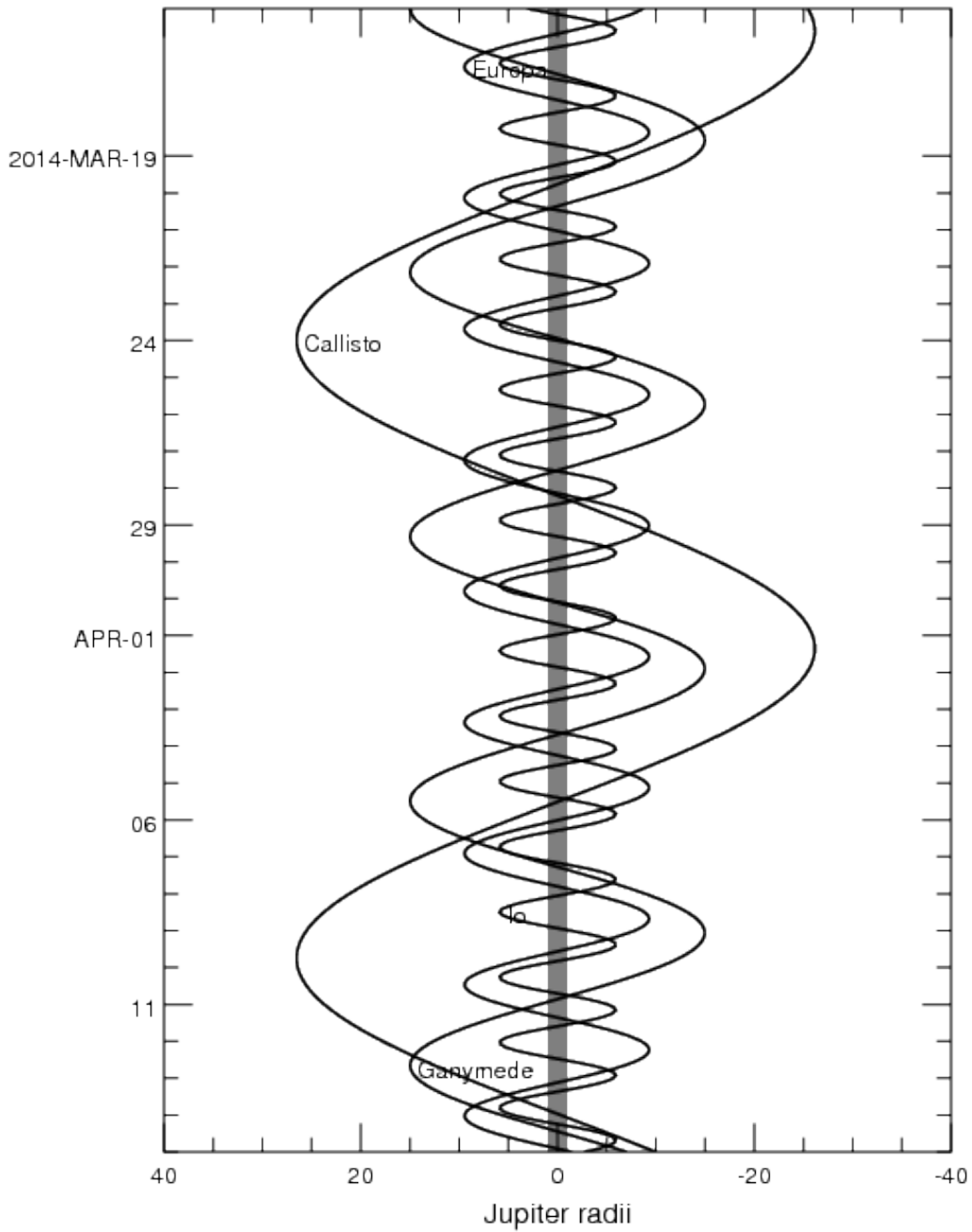
Date = \_\_\_\_\_

Time = \_\_\_\_\_

RA/Dec = \_\_\_\_\_

Constellation = \_\_\_\_\_

# Jupiter Moon Tracker Results



Ephemeris: 011 JUP300 + JUP310 + DE430

Generated by the Jupiter Tracker Tool, PDS Rings Node, Thu Mar 6 12:24:38 2014

This tracker was downloaded from [http://pds-rings.seti.org/tools/tracker2\\_jup.html](http://pds-rings.seti.org/tools/tracker2_jup.html)