

## Lab 5: Observations of the Moon's Phases

Most people are aware that the Moon takes about a month to cycle through the phases, as it orbits the Earth. Our goal is to calculate the exact period of the phases of the Moon. To do this, *you will be taking data* outside of class, over the course of the next month or so. Afterwards, we will analyze the data together in lab to come up with a final value.

### Instructions:

Over the next month or so, you'll be going and taking naked eye observations of the moon. You may do so any time the moon is up. Be sure to do the following:

1. Note the date as well as the time to the nearest minute.
2. What phase is the moon in?
  - New, crescent, half, gibbous, or full?
  - Is it waxing or waning?
3. Estimate the fraction of the Moon's face which appears illuminated.
  - Rounding to the nearest 5% or 10% is a good idea.
4. Note Which Side is Illuminated -- the East or West.
5. Record your data in the table on the reverse side, or another table of your own devising.
  - You will be handing in the data table along with the lab worksheet, so keep it safe.

NOTE: the Moon is not always up at night-time; there will be days when you need to look for it in the morning or afternoon.

### Minimum Observation Requirements:

1. Between you and your partner, you must make at least five measurements.
  - More data is better! Try to get at least two measurements each week.
2. At least one observation of the Moon must be during the day.
3. Your final observation must be at least one full cycle of phases after the initial observation.
  - So get started as soon as you can!

