**The Moon s of Jupiter**

Most science investigations usually begin when a person sees something that causes them to ask one or more questions such as: Why did that happen? Does it happen over and over? What is that? Will this happen again and if so when? To answer these questions a scientist begins to collect more observations and other data. In this activity you will look at some pictures of Jupiter and its moons. These will be the observations from which you will attempt to answer questions. Some questions will be given to you and some new questions may come to your mind as you attempt to get data to answer the given questions.

**Starting Question**

1. How many moons of Jupiter are visible in each of these pictures?
2. How can I find the name of each moon seen on these photographs of Jupiter?
3. Is it possible see any of the moons move in its orbit in a single night?
4. Which moon takes the shortest time to orbit Jupiter?
5. About how long does it take this moon to make one orbit around Jupiter?

**How to get information from the pictures**

1. Open the picture with your favorite viewer. The links for each night’s images are listed in a time ordered sequence. Each image link includes the local date and time the picture was taken. It is probably best to open the images in a time sequence to observe the motion of Jupiter’s moons.
2. You can also right click on the picture to get information more information that includes the date, time, etc. The dates and times are all local for Atlanta, GA. Thus they are Eastern Standard Time (EST) or Eastern Daylight Time (EDT).
3. To identify each moon by name use the *Sky & Telescope* web site listed below:

[http://www.skyandtelescope.com/observing/objects/javascript/jupiter#](http://www.skyandtelescope.com/observing/objects/javascript/jupiter)

Be careful the times needed by this web site are Universal Time (UT) and the times on the pictures are Eastern Standard Time (EST) or Eastern Daylight Time (EDT). Georgia is 5 time zones west of Greenwich, England were UT clock are maintained. Therefore, you will need to add 5 hours to all of your local EST’s and 4 hours to all of your local EDT’s. Note this will likely cause a one day change in the calendar date for most images. For example 7:30 pm EST on October 29th will become 00:30 UT on October 30th. Notice that UT is a 24 hour clock with no am or pm. So Midnight is 00:00 not 12:00am. It is the UT date and time that must be entered into the web site listed above. The web site calculator also wants you to enter your time zone off set, which has already been described above, and will be -5 for EST or -4 for EDT.