

Astronomy on the Internet

This lab is to be done individually. You are to write a Lab Report based on what you learned in this activity. **Do Not Turn In This Form With Your Report!** The format for the report is outlined below.

1) Format For Lab Reports

The paper should be neatly typed and should include the following

- a) Cover page: Name of the Lab, Your name, Meeting time and Date
- b) Introduction: A brief summary of the objectives of the lab.
- c) Body of the report: Each activity (telescopes, Hubble Images, Space missions) should be in a separate section describing what you did, how you did it and what you found as well as answering the specific points outlined in the instructions.
- d) List of references. Cite any papers, books or websites you used to find the information for your report. The reference style is not important but **YOU MUST CITE ALL RESOURCES YOU USED.**

2) Things to Find on the Internet

- a) Information about telescopes on the World Wide Web. Look for a site that has detailed information about a particular telescope. There are literally tens of thousands of telescopes in the US alone so if you just search for telescopes you will get thousands of sites. You can start by searching for telescopes or observatories sited in your textbook (especially Chapter 6). Look in the captions to some of the pictures in the text and see if you can find the name of the telescope or observatory that took them. Then you can do a search for that name.
Select any professional telescope/observatory except the Hubble Space Telescope.
Answer the following questions about your telescope

⇒ What is the name of the observatory?

⇒ What is the name of the telescope?

⇒ Where is the telescope located?

⇒ Who operates the telescope (name of the institution(s), not names of individual people)?

⇒ Describe the telescope.

* How large is it?

* What kind(s) of light (visible, X-ray, ultraviolet, infrared, radio, etc.) does the telescope pick up?

⇒ What are two other interesting things that you learned about the telescope or observatory?

- b) Astronomical images on the World Wide Web. There are thousands of sites with images from the Hubble Space Telescope. Unfortunately, many don't explain what their pictures are of or the explanation is so technical only a professional astronomer can understand it. The best site to find HST images with comprehensible captions is the Space Telescope Science Institute. STSI is the group that operates the HST and they have all the images taken by the telescope archived. They also have press releases with some of the more interesting images. Got to <http://www.stsci.edu/top.html>. From this site you can find images directly or links to other sites with images. Be sure to read the caption or press release that goes with an image so that you can understand what you are viewing (read first then look at the image). **WARNING:** many of the images taken by the HST require large amounts of memory and can take several minutes to transfer off the Web. You don't need to view the highest resolution images unless you are a professional astronomer making measurements. There is always a low-resolution version that is sufficient for this activity.

Find a Hubble image of something interesting. Since this is Planetary Astronomy, try to find images of things in the solar system.

Describe the first astronomical image that interested you. It will help if you read the caption or press release that goes with the image you are looking at.

- ⇒ What was the image a picture of (e.g. a planet, a star, nebula, galaxy, etc.)
- ⇒ Describe what you see in the image that you found. What made it interesting to you?

Go back to your Hubble Telescope Web page. Select another image something that looks interesting.

Describe the second astronomical image that you found.

- ⇒ What was the image a picture of? (comet, galaxy, asteroid, nebula, ...)
- ⇒ Describe what you see in the image that you found. What made it interesting to you? Information About Space Missions. Go to the NASA Jet Propulsion Laboratory Home page (type <http://www.jpl.nasa.gov> in the location window). Link over to the JPL Missions page and select a **current or past** space mission that interests you. **No future missions or manned missions. You may do an Apollo moon landing if you wish.** There are several good Apollo sites maintained by NASA. One of the better historical sites is the Kennedy Space Center's Apollo Missions site at <http://www-pao.ksc.nasa.gov/kscpao/history/apollo/apollo.htm>

Answer the following questions about the mission:

- ⇒ What is (was) the target of the mission?
- ⇒ What is the current status of the mission?
- ⇒ What instruments does (did) the spacecraft carry? What are (were) they intended to do? What results have been (were) achieved?
- ⇒ What are two other interesting things that you learned about the mission?