Lab

Science, Physics

Experiment #3 — observing the Moon’s Phases Objective To determine the relationship of the Earth, Moon and Sun as the Moon orbits the Earth.

Introduction

In astronomy, determining the relative position of the moon, the sun and the Earth requires the study of phases of the moon at different days of observation. In which case, complete cycle through the phases called lunar month gives the synodic month, always around 29 days. The lab report studied these phenomena to realize moon’s position in relation to the other two.

Procedure

The moon was observed and a dark part was shaded to show how the moon would look like at each point from the Earth. Each phases of the moon was labeled and presented in diagram forms as shown in the result section.

Results

Figure 1: my position, moon’s position in relation to the Earth and the sun

The arrow in the diagram shows my movement as I focused on the moon at each position. From the diagram above, shape of the moon were focused in each phase:

Figure 2: diagram showing the different phases of the moon at each position

Table 1

Day

No.

Day

Date

Time

Comments/ Weather Conditions

1

1

23rd sept 2014

2030hrs

Full moon

2

25th sept

2130hrs

Gibbous

3

27th sept

2030hrs

Half moon

4

29th sept

2045hrs

Crescent

5

1st oct

2056hrs

New moon

6

3rd oct

2045hrs

Crescent

7

4th oct

2050hrs

half moon

8

6th oct

2040hrs

gibbous

Conclusion

The experiment was successful in meeting the previously stated objective. Different phases of the moon were realized from each day of observation thereby insinuating the position of the moon in relation to the sun and the Earth. In which case, during the full moon the Earth was observed to be in the middle while during the new moon, the moon was observed to be between the two.