Mars for Earthlings

LESSON 21: Kepler
Homework 1
Detecting Planets_MFE
Light Grapher

Directions

1. Go to: http://kepler.nasa.gov/education/ModelsandSimulations/lightgrapher/

2. Read over the webpage for context.

3. Briefly describe the principle(s) being used in order to locate planets.

4. Read through the directions and hints.

5. Run the program at least 3 different times. For each iteration, change the parameters by trying different methods of interaction with the camera, objects, sizes of objects, spacing of objects from camera, light source, etc. Report each iteration as follows as in the example below.

    Ex:
    Iteration #1
    Parameters Used:
    Outcomes (describe the graph and cut/paste images you capture)**:**

6. From your different iterations, what did you learn about the objects? Did the size, color, transparency, or opacity matter?

7. Consider the planet Mars (typically red-tones) and a planet like Neptune (lighter blue colors). If you were to pass it in front of the webcam which planet would yield a greater change in light? Explain your reasoning.