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Have You Been Mooned?

The purpose of this project is to find out if Jupiter and its four Galilean moons follow Johannes Kepler's Third Law of Planetary motion, which states that the orbital period squared is directly proportional to the semi-major axis cubed. My testable question is Does Jupiter and its four Galilean moons follow Kepler's Third Law of Planetary Motion? My hypothesis is "I hypothesize that Jupiter and its four Galilean moons follow Kepler's third law. To do this project I observed and recorded Jupiter and moons through a telescope twice a day for 25 days, and graphed my data. From the graphs, I determined the orbital period and semi-major axis for each moon. Then, I came up with maximum and minimum values for both the orbital period and semi-major axis for each moon, and then best values. Finally, I came up with a range for best, max, and min for each moon and drew a small range that we used to show experimental error, which, in turn, answered my question. By doing this experiment, I discovered that Jupiter's moons ellipses are very circular and that the moons do indeed follow Kepler's Third Law of Planetary Motion. As a final point, my hypothesis was correct. I learned that Jupiter and its four Galilean moons follow Johannes Kepler's Third Law of Planetary Motion, which is very cool to know. This founding might be useful to others because it proves that something doesn't have to be a planet to apply to the laws of planetary motion.