

CONFERENCE PROCEEDING

INTERACTION BETWEEN VERSES 38–40 OF YASEEN AND KEPLER'S LAW

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ABSTRACT

This research examines the correspondence between Kepler's Second Law and Yaseen verses 38–40 and demonstrates how the discovery of Kepler's Law verifies the veracity of the Qur'an. Islamic scholars have revealed the astronomical understanding behind the Qur'anic verses throughout the history of humanity's astronomy-related Qur'anic study. Moving west, the German scholar Johannes Kepler organised his comprehensive perspective of heliocentric astronomy. Yaseen verses 38–40 explain how the astronomical objects orbit the galaxy's centre point in accordance with the accepted principles. On the other hand, Kepler's laws of planetary motion offer the first quantifiable relationship between the planets, including earth. Kepler's Law, which was established around four hundred years ago, had been mentioned in the holy Qur'an more than fourteen centuries ago, and it has been confirmed by scientific discoveries. Therefore, this research corresponds to the relation between Kepler's law and Qur'anic studies to be a guidance for Qur'an memorizers on how to comprehend astronomy better. This research illustrates the relationship between western knowledge and astronomy-related Qur'anic study by incorporating evidence from Islamic scholars' interpretation and document studies of Kepler's Law. We discuss library research as a methodology for conducting research and offer an analyzation of two main sources, which are Kepler's Second Law and verses from Qur'an 36:38-40, as well as some guidelines on how to both conduct and evaluate this paper. Our analysis reveals a significant correlation between Kepler's Law and the holy Qur'an. We concluded that Kepler's Law does corroborate Qur'anic veracity.

Keywords: *Astronomy, Yaseen, Kepler's Law, Al-Qur'an, Qur'an Interpretation*

INTRODUCTION

Throughout the last fourteen centuries, no book has been read widely nor has shaped the human mind as the Qur'an when in reality, the Qur'an contains verses that describes scientific discoveries (U Jazila, 2020). The Qur'an is full with knowledge, including understanding of the universe specifically about the motions of the celestial bodies (Z Ahsan, 2012). Scientists from the Muslim world's mediaeval era, such Ibn al-Haytham, made contributions to recent scientific discoveries. In addition, a German scientist Johannes Kepler played a significant role in the Scientific Revolution of the 17th century (YM Faruqi, 2006). Best known for his laws of planetary motion, Kepler lived at a time when astronomy and astrology were not clearly separated from one another, but astronomy and physics were (DA Di Liscia, 2011). This paper begins by

discussing the interpretation of Yaseen verses 38-40 and Kepler's Law. It then describes the interaction of the pointed verses from the Holy Qur'an and Kepler's Law on planetary motion. Subsequently, the accuracy of the passages from the Qur'an that discuss planetary motion, alongside the contemporary scientific discoveries from Johannes Kepler.

METHODOLOGY

In this paper, content analysis was used to do both library research and qualitative method. The three verses of Surah Yaseen, 38-40 made up the study sample. This paper uses the method of analysing words related to astronomy found in the verses of Surah Yaseen. Hence, a method for obtaining and analysing text's content is called content analysis. The content refers to any communication that may be conveyed by words, meaning, and concepts. Generally, this research used a qualitative method since the information was gathered through the analysis of information from the tafsir of the Qur'an, a chapter in books, journals, and an interview. Information validity was also determined through research and guidance.

RESULTS AND DISCUSSION

In this study, researchers only focus on the orbits of the moon and sun that are stated in the Holy Qur'an 36:38-40 and Kepler's Second Law.

Heliocentric was stated in the Al-Quran

Based on Tafsir al-Azhar, Prof Dr. Hamka (1983), the progress of the research shows that the sun also rotates or walks as well, walking straight in one direction only, never turning at a speed which according to the calculations of astronomers is 12 miles a second. The last part of verse 40 concludes that the sun goes through its own path and the moon does the same. Imam Ibnu Kathir in Tafsir al-Quran Al-Azim (2000) stated that as for the moon, God has determined for it the destinations for its journey. This fact is in line with the main heliocentric principle which states that all celestial bodies move and do not all orbit around a particular point.

Kepler's Law and the Heliocentric Theory

The heliocentric theory created by Nicolaus Copernicus and published in 1543 is known as Copernican heliocentrism. Johannes Kepler enhanced the heliocentric theory by proposing that the planets travel in elliptical orbits rather than circular orbits, and that their motions in these orbits are guided by a set of rules known as Kepler's laws of planetary motion (H Riebeek, 2009). It claimed that the Earth and the other planets orbited the sun in a circular orbit at constant speeds, modified by epicycles, at the model's position in the centre of the universe. Kepler eventually discovered that an imaginary line drawn from a planet to the sun would cover the same amount of space in an identical amount of time, regardless of where the planet was in its orbit.

This discovery (which became Kepler's second law of orbital motion) led to the realization of what became Kepler's first law: that the planets move in an ellipse (a squashed circle) with the Sun at one focus point, offset from the centre (H Riebeek, 2009).

CONCLUSION

As the conclusion, the Holy Qur'an, 36:38-0 and Kepler's Second Law can be related by Heliocentric Theory. This conclusion has proven the validity of science brought by the Al-Qur'an.

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