



Science in the Qur'an and its Impact on the Study of Astronomy

Alya Fathi Muhammad Hasibuan¹, Hizami Sabil², Abu Yazid Raisal³

¹ Universitas Muhammadiyah Sumatera Utara, Bandar Setia, Medan Tembung dan 20371, Indonesia

² Universitas Muhammadiyah Sumatera Utara dan ³ Universitas Muhammadiyah Sumatera Utara, Medan Tuntungan, Medan dan 20134, Indonesia

¹hasibuanfathi@gmail.com; ²hizamisabil@gmail.com; ³abuyazidraisalumsu.ac.id@gmail.com

* Alya Fathi Muhammad Hasibuan

Abstract: *Science in the Qur'an is a field of study that explores and analyzes Qur'anic verses related to knowledge and natural phenomena. The Qur'an as a holy book in Islam, not only serves as a spiritual guide, but also contains knowledge that is relevant to various aspects of life. There are so many verses of the Qur'an that contain information about the universe, astronomy, geography, biology, physics, and many other Qur'anic verses. The Qur'an gives an overview of the creation of the universe, the laws of nature, and the relationship between man and nature. In addition, the Qur'an also contains information about moral, psychological, and social ethics. The Qur'an is also a guide for humans in creating harmonious relationships in everyday life. The study of science in the Qur'an can provide a deeper understanding of the relationship between religion and science in Islam. This can help in developing a holistic and comprehensive perspective in understanding the universe and the role of humans in it. However, it is important to remember that the interpretation and understanding of Qur'anic verses needs to be done carefully taking into account the historical, linguistic, and cultural context. Science in the Qur'an must be seen as an ever-evolving field of research that requires an objective scientific approach. By studying science in the Qur'an, we can extract valuable and profound information about the universe from life as well as enrich our understanding of the relationship between religion and science*

Keywords: *Qur'an, Astronomical, scientific.*

Abstrak: *Science in the Qur'an is a field of study that expounds and analyses Qur'anic verses related to knowledge and natural phenomena. The Qur'an, as the holy book of Islam, not only serves as a spiritual guide, but also contains knowledge that is relevant to various aspects of life. Many verses of the Qur'an contain information about the universe, astronomy, geography, biology, physics, and many other contents of the Qur'an. The Qur'an provides an overview of the creation of the universe, the laws of nature, and the relationship between humans and nature. In addition, the Qur'an also contains information about moral, psychological, and social ethics. The Qur'an is also a human guide in creating harmonious relationships in everyday life. The study of science in the Qur'an can provide a deeper understanding of the relationship between religion and science in Islam. It can help in developing a holistic and comprehensive perspective in understanding the universe and humanity's role in it. However, it is important to remember that interpretation and understanding of Qur'anic verses needs to be done carefully, taking into account historical, linguistic and cultural contexts. Science in the Qur'an should be seen as an evolving field of research that requires an objective scientific approach. By studying science in the Qur'an, we can extract valuable and profound information about the universe from life and enrich our understanding of the relationship between religion and science.*

Kata kunci: *Qur'an, Astronomical, scientific.*

A. Introduction

Science in the Qur'an refers to the knowledge and understanding contained in the Qur'anic text relating to various aspects of the life of the universe. The Qur'an is considered a divine source of knowledge, which provides guidance and direction for human beings in the conduct of their lives. Science in the Qur'an covers a wide range of areas including natural sciences, ethics, morality and spirituality. The Qur'an contains verses inviting humans to notice and study the signs of God's greatness in the universe, as well as develop knowledge and understanding of his creation. In addition, science in the Qur'an also includes knowledge of God's laws, moral teachings, and guidance for living a good and beneficial life for individuals and society. The



importance of science in the Qur'an is to expand human knowledge, understand life and the universe better, and apply the values and teachings contained in the Qur'an in everyday life. There are many verses in the Qur'an that contain knowledge and understanding of the universe and natural phenomena. The Qur'an teaches that Allah is the creator of everything in this universe. The verses of the Qur'an also contain knowledge about Islamic astronomy, geology, biology, and many more. The Qur'an mentions the creation of the heavens and the earth, the circulation of the sun and the moon, and natural phenomena such as rain, wind, and earthquakes. The verses in the Qur'an provide an understanding of Allah's patience and power in creating and regulating the universe.¹

The Qur'an emphasises that science is a means to get closer to Allah, inviting humans to pay attention to the universe, study phenomena, and think about the wonders of creation. The Qur'anic verse invites humans to think, reflect, and gain useful knowledge. The Qur'an also emphasises the importance of seeking knowledge in various fields such as natural science, medicine, physics, chemistry, biology, mathematics, etc. The Qur'an encourages humans to be a knowledgeable, intelligent people, striving to continuously improve human understanding. The Qur'an provides a strong moral and ethical foundation in knowledge. The knowledge gained should be used for the good of mankind, and to strengthen faith and devotion to Allah. The Qur'an recognises the importance of science and encourages man to expand his knowledge of the world or universe.² There are several values found in the Qur'an that are relevant to the application of science, namely³ :

Knowledge as a means of blessing, it is considered a means to a meaningful, productive, and fulfilling life. Knowledge can help humans understand the world around them and pursue greater goals in their lives. This knowledge is not just theoretical knowledge but about practical knowledge in daily life by using it wisely and responsibly can bring blessings to all humans. The application of science should be done with due regard to the values of justice and balance.

In addition, the Qur'an also teaches scientific values such as the importance of seeking knowledge, observing nature, and thinking about the signs of God's greatness around us. The Qur'an encourages humans to study and understand the universe as a form of worship to Allah. The scientific approach in the Qur'an can also be found in verses that invite humans to think and use common sense in the search for truth. The Qur'an teaches that science and religion cannot be separated, but rather complement each other in gaining a fuller understanding of the universe and its creator.⁴

¹Supriatna, E. (2019). Islam dan Ilmu Pengetahuan. *Jurnal Soshum Insentif*, 128–135. <https://doi.org/10.36787/jsi.v2i1.106>

²Adhiguna, B., & Bramastia, B. (2021). Pandangan Al-Qur'an Terhadap Ilmu Pengetahuan Dan Implikasinya Dalam Pembelajaran Sains. *INKUIRI: Jurnal Pendidikan IPA*, 10(2), 138. <https://doi.org/10.20961/inkuiri.v10i2.57257>

³Dawi, M. N. (2021). Alam Semesta Dalam Perspektif Filsafat Islam. *Hibrul Ulama*, 3(1), 1–10. <https://doi.org/10.47662/hibrululama.v3i1.147>

⁴Jaedi, M. (2019). Pentingnya Memahami Al-Qur'an dan Ilmu Pengetahuan. *Jurnal Pendidikan Dan Studi Islam*, 5(1), 62–70. <https://doi.org/10.5281/zenodo.2618950>



The Qur'an is the word of God, revealed for no practical purpose. Therefore, objectively speaking, the Qur'ān is not an encyclopaedia of science in the Qur'ān, it strongly emphasises the importance of reading and observing natural phenomena and thinking about them. The Qur'ān takes examples of phenomena related to physics, biology, the origin of man and other fields that recognise the power of God and human thought. There are 750 verses in approximately 1/6 of the Qur'an that encourage believers to look at the phenomena of the universe, reflect and explore the senses of human creation, and try to incorporate knowledge and understanding of nature into human life. Muslims in the classical era were inspired by scientific research under guidance that was in accordance with the teachings of the universe in these Qur'anic verses.⁵

B. Method

The research method used in this study is the Qur'anic text analysis research method that can help interpret verses related to astronomical phenomena. Comprehensive study with science in the Qur'an with astronomical knowledge to find similarities or relevansi. The writing of this journal also uses the literacy method. The literacy method is an extensive literature review and for use in various fields on the discussion of a theory that departs from objective knowledge assumptions and is then written in various sources of information. The sources of information we write about are sourced from journals, books, papers, and internet social media.

C. Result and Discussion

Natural science is a branch of science that studies natural phenomena and processes that occur in the universe. Science is the basic principles that govern the universe including the laws of nature, the processes of nature, and the interactions between the various components of nature. This natural science includes various disciplines namely physics, biology, natural astronomy. Natural science has a very important role in the development of technology, understanding of the universe, and solving everyday life problems. The Qur'an can provide motivation and inspiration to humans to study and understand the universe. Verses of the Qur'an that invite humans to think about the signs of God's greatness in the universe can encourage interest in researching astronomy. The Qur'an also provides a framework and worldview that influences the approach to the study of astronomy.⁶

The Qur'an has significant content for learning astronomy. The Qur'an contains verses that invite humans to pay attention and study the signs of Allah's greatness in creation, including the phenomena of the universe such as the sky, stars, planets, etc. The Qur'an is a source of inspiration and motivation to learn more about the universe. The Qur'an is a source of inspiration and motivation to learn more about the universe. Qur'anic verses related to astronomy encourage humans to conduct more in-depth scientific research and exploration of the phenomena of the universe. Qur'anic verses that call for protecting the environment and

⁵Fakhri, J. (2010). Dan Implikasinya Dalam Pembelajaran. *Ta'dib*, 15(1), 122–142. <https://journal.iaingorontalo.ac.id/index.php/tjmpi/article/view/1137>.

⁶Setiawan, D. (2018). Ilmu Pengetahuan Dalam Al-Qur'an. *Al Hadi*, 3(2), 641–656.



respecting God's creation can stimulate awareness of ethical responsibilities in carrying out astronomical research and development. The Qur'an emphasises that truth and accuracy can create an understanding that in learning this science it is important to seek truth, respect facts, and maintain objectivity in the knowledge and development of the universe.⁷

Science in astronomy involves the exploration of concepts related to astronomical phenomena and their interpretation can be found or studied in the Qur'ān. There are a number of scientific concepts relevant to astronomy that can be analysed in the Qur'an⁸ :

1. Concept of creation of heaven and earth in cosmological models and stellar evolution

Cosmology is a branch of physics that studies the origin, evolution, structure, dynamics and end of the universe. In the context of cosmology, "sky" refers to the universe as a whole including galaxies, stars, planets and everything in outer space. At the cosmological level, the creation of the heavens and earth can reflect an appreciation and awe of the complexity and beauty of the universe. Stellar evolution is the process by which a star progresses from formation to the end of its life cycle. Stars are clouds of gas and dust that undergo nuclear fusion in their cores and can eventually end up as a type of object, such as a white dwarf, neutron star, or black hole. In stellar evolution. "Earth" has no special role as it is just one of the planets in our solar system.

The concept can be interpreted metaphorically or philosophically to describe the complex relationship between the various elements in the universe. The concept can be found in various religious, philosophical and literary traditions, and often has a deep meaning.⁹ The love of heaven and earth in the physical aspect: The sky: in cosmology, "the sky" often refers to space or the universe in general. Love of the sky can reflect awe at the complexity, beauty and mystery of the universe. Earth: love for the earth can refer to love for our own planet or life on earth. Love for the earth can also refer to love for our planet can refer to an understanding and appreciation of the evolutionary process of planetary life.

The physical creation of heaven and earth often refers to cosmological beliefs or narratives about how the universe, including the heavens (space) and earth, was created or came into existence. This view may differ depending on religious tradition, mythology or philosophical outlook. Creation of heaven and earth in the cosmological model: The big bang and the creation of the universe: The big bang is a cosmological model that describes the beginning of the universe. It states that the universe began as a tiny, dense, hot singularity about 13.8 billion years ago. The big bang was not an explosion in empty space, but an explosion itself. The universe has been expanding ever since. The evidence includes an examination of the redshift of galaxies which shows

⁷Adhiguna, B., & Bramastia, B. (2021). Pandangan Al-Qur'an Terhadap Ilmu Pengetahuan Dan Implikasinya Dalam Pembelajaran Sains. *INKUIRI: Jurnal Pendidikan IPA*, 10(2), 138. <https://doi.org/10.20961/inkuiri.v10i2.57257>

⁸Heru Juabdin Sada. (2016). Alam Semesta Dalam Perspektif Al-Quran. *Al-Tadkiyah: Jurnal Pendidikan Islam*, 7(1), 102–119.

⁹Lailiyah, S. (2020). 1412-Article Text-2897-1-10-20200906. *Prosiding Seminar Nasional Pendidikan Islam*, 2(1).



that galaxies are moving away from each other, supporting the idea of the expansion of the universe.¹⁰ Creation of the universe: the creation of the universe refers to the phase in which the universe began to exist. In the context of the big bang, this is the moment of the initial explosion or expansion. The creation of the universe is explained as the exit of space, time and energy from a very small and dense state into an ever-expanding universe. Referring to the concept of the initial occurrence of the universe, where Allah is regarded in the Islamic tradition as the almighty creator who created the heavens (universe) and the earth, the creation of the heavens and the earth is one of the fundamental aspects of Islamic theology described in the Qur'an. There are many verses in the Qur'an that discuss the creation of the heavens and the earth, and many of them use metaphorical language and strong descriptions. Examples of verses that reflect the concept of the creation of the heavens and the earth.

In Qs. Al-Furqan: 59

الَّذِي خَلَقَ السَّمُوتِ وَالْأَرْضَ وَمَا بَيْنَهُمَا فِي سِتَّةِ أَيَّامٍ ثُمَّ اسْتَوَىٰ عَلَى الْعَرْشِ الرَّحْمَنُ فَسَلِّ بِهِ
خَبِيرًا

Meaning: "Who created the heavens and the earth and all that is between them in six lifetimes, then He dwells on the Throne. There is no partner for you, nor is there for you a mighty intercessor."

This understanding of "six periods" is often interpreted in a metaphorical context and not in a literal sense as six calendar days as applied to the concept of creation in these religious beliefs. The concept of the creation of the heavens and the earth demonstrates the power and wisdom of God as an infinite and glorious creator.

In Qs. Al-An'am: 73

وَهُوَ الَّذِي خَلَقَ السَّمُوتِ وَالْأَرْضَ بِالْحَقِّ وَيَوْمَ يَقُولُ كُنْ فَيَكُونُ قَوْلُهُ الْحَقُّ وَلَهُ الْمُلْكُ يَوْمَ يُنفَخُ فِي
الصُّورِ عِلْمُ الْغَيْبِ وَالشَّهَادَةُ وَهُوَ الْحَكِيمُ الْخَبِيرُ

Meaning: He is the One who created the heavens and the earth in truth, and on that day He said, "Be", and it was so, and to Him you shall return.

This verse asserts that God created the heavens and the earth with truth. it emphasises the aspect of God's power and wisdom in creating this universe. the phrase "On the day that he said kun (be), it was so" refers to God's infinite power in creating things by simply saying "be". it shows that every creation and event in the universe occurs with the direct permission and power of God. this verse states that we will all be returned to God.

2. The concept of time and the speed of light as a measure of distance in the universe

The concepts of time and the speed of light play an important role in measuring distances in the universe, especially in the context of physics and cosmology. Speed of

¹⁰Rasyid, A. N. (2020). Astronomi dan Kosmologi dalam perspektif Al-Qur'an. *VEKTOR: Jurnal Pendidikan IPA*, 1(1), 39–49. <https://doi.org/10.35719/vektor.v1i1.3>



light: refers to the speed at which light propagates through a vacuum. In a common definition, the speed of light in a vacuum is about 299,792 kilometres per second (km/s). This value is often denoted by the letter "c" in physics formulas. The speed of light is high, and for many centuries, humans have realised that light has a certain speed. But the exact value of the speed of light in vacuum was only precisely measured in the 17th and 18th centuries, mainly through experiments by Danish scientist Ole Romer and later by British scientist James Bradley. The speed of light plays an important role in the understanding of modern physics, especially after the special theory of relativity proposed by Albert Einstein in 1905. In the theory of relativity, the speed of light is considered the maximum speed limit that energy or information can reach in the universe. Objects with masses close to the speed of light will experience relativity effects such as time dilation and length contraction.¹¹

The concept of time: refers to a dimension used to measure the sequence of events, changes, or continuity of events. Time is a parameter that helps us understand how a state or event changes from one state or event to another. In the framework of the general theory of special relativity, time is relative and flexible, depending on velocity and gravity.

Distance measurement in the Universe: Distance measurement in the Universe refers to human endeavours to determine the distances between astronomical objects such as stars, galaxies, or other cosmic objects. These distance measurements are a key part of astronomical and cosmological research as they help scientists understand the scale and structure of the Universe.

The Qur'anic verses for the concept of time and speed of light as in Al-Qur'an surah Al-Hajj: 47

وَيَسْتَعْجِلُونَكَ بِالْعَذَابِ وَلَنْ يُخْلِفَ اللَّهُ وَعْدَهُ وَإِنَّ يَوْمًا عِنْدَ رَبِّكَ كَأَلْفِ سَنَةٍ مِّمَّا تَعُدُّونَ

Meaning: "A day in the sight of your Lord is like a thousand years by your reckoning".

In this case, the meaning of time and the speed of light at universal distances can be the object of varied interpretations. As for the concept in this context, there are various interpretations of modern physics, metaphorical or spiritual interpretations.

a. Interpretation of modern physics

Some modern Islamic scholars have tried to relate this kind of verse to the concept of physics, particularly Einstein's theory of relativity. In this context, the "time" mentioned in the verse can be interpreted in terms of the relativity of time, where time can feel relatively different depending on the observer's frame of reference. The "thousand years" can be considered as a symbol or comparison to highlight that time on God's side has a different dimension or concept from the human experience of time.

b. Metaphorical or spiritual interpretation

¹¹Belajar, E., & Dan, E. (2020). *Jurnal Islam dan Sains* (Vol. 7, Issue 1, pp. 55–60).



There are also approaches that are more inclined to metaphorical or spiritual interpretations. In this context, the verse may be meant to emphasise that the concept of time on God's side is not related to human calculations or time dimensions. "A thousand years" may be interpreted as a length of time that cannot be measured or understood by humans, thus showing the majesty and eternity of God.

3. Stars and Galaxies in the Universe

Stars are astronomical objects that shine on their own due to nuclear reactions in their cores. Nuclear processes produce energy in the form of light and heat. The Sun is an example that is very close to us. Stars vary in size, mass, colour and age. Stars are sources of energy and light that is vital to the universe. They produce chemical elements through nuclear reactions and when these stars explode as supernovae, they can release these elements into interstellar space where they can be used to form planets, stars and life.¹²

Galaxies are large ensembles of stars, dust, gas, planets, matter, dark matter and other related celestial bodies bound together by gravity. Galaxies can contain billions or even trillions of stars and their associated solar systems. Galaxies are the basic entities in the structural organisation of the Universe. Stars in galaxies are bound together by gravity and revolve around the galaxy's centre. Galaxies interact with each other and form large structures like galaxy clusters. Observing galaxies helps us understand the evolution of the Universe.

In the Qur'anic context to "stars" and "galaxies" often appear to show the greatness of Allah's creation, evoke the wonders of the universe, and as signs of his greatness. Verses that mention the stars and the heavens often invite humans to contemplate and learn from creation.

Al-Qur'anic verse reflecting this is found in Qs. Al-An'am: 97

وَهُوَ الَّذِي جَعَلَ لَكُمُ النُّجُومَ لِتَهْتَدُوا بِهَا فِي ظُلُمَاتِ اللَّيْلِ وَالْبَحْرِ قَدْ فَصَّلْنَا الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ

Meaning: "And it is He who made the stars for you that you may be guided by observing them in the darkness of the land and the sea. We explain the signs (of Allah's greatness and power) to those who use their reason."

The meaning of the mention of stars and galaxies in the universe refers to two main things.¹³

a. The beauty and majesty of creation

This universe is filled with beauty that can be found in various aspects such as the beauty of nature, the beauty of the stars in the sky, the beauty of flora and fauna, and the beauty in the interaction between living things. The majesty of this universe is remarkable in its complexity. In every detail, there is a majesty that illustrates intelligence and power far beyond human understanding. This majesty can be seen in the laws of physics that govern the universe, in the existence of

¹²Afifah, G., Ayub, S., Sahidu, H., Menengah, S., & Negeri, A. (2020). Konsep Alam Semesta Dalam Perspektif Al-Quran dan Sains. *GeoScienceEdu Journal*, 1(1), 5–10.

¹³Purwanto, Y. (2011). *Jurnal Sains Islam dan Teknologi*.



planetary systems organised in harmony across the various elements of nature. The majesty of creation can make us feel connected to the universe and inspire us to care for and appreciate its existence more deeply. Stars and galaxies are considered evidence of the majesty and beauty of God's creation. When humans reflect on the complexity and diversity of the heavens, it should remind them of God's awesome power.

b. Clues and signs of the universe

There are clues and signs of the universe that astronomical scientists are constantly observing: Eclipses, solar eclipses, lunar eclipses are examples of signs of the universe that are observed periodically. Through the observation of eclipses, astronomy scientists learn about the movement and interaction between the sun, earth, moon and understand more about the orbital and rotational mechanisms of the universe. Changes in the spectrum of light, as light from astronomical objects passes through mediums such as planetary atmospheres or interstellar gas, the spectrum of that light is shifted or altered. Analysing these spectra allows us to study the chemical composition, temperature and movement of the astronomical object.

The Qur'an emphasises that stars and galaxies are also used as guidance for people who use their minds. Observing the night sky and understanding the star system leads to reflection and belief in God. Here are some of the impacts that arise, among others ¹⁴ :

a. Inspiration for research and exploration of astronomy studies

Quranic verses that refer to astronomical phenomena can be a source of inspiration for Muslim scientists to explore and understand the universe. The meaning of inspiration for research and exploration of astronomical studies refers to how Quranic verses that touch on astronomical themes can motivate and encourage scientists, especially those who are Muslim, to conduct further research and explore the universe.

b. Encouragement to research the universe

Humans are naturally curious and inquisitive about their world. The natural world provides an opportunity to delve into the fundamentals of the origin, evolution, and structure of the universe. It helps humans understand the basic principles of physics, chemistry. It paves the way for fundamental understanding of how the universe works, the laws of nature, complex phenomena. It gives humans the opportunity to explore new places, understand the formation of stars, planets and galaxies and discover rare objects or natural phenomena that were not known before. Astronomical and cosmological research has fuelled the development of advanced technologies developed to understand the universe as well as practical applications in areas such as communications, earth observation and natural resource mapping.

¹⁴Iryani, E. (2017). Al- Qur'an Dan Ilmu Pengetahuan Eva Iryani 1. *Jurnal Ilmiah Universitas Batanghari Jambi*, 17(3), 70.



Astronomy of the universe helps understand the origin of the universe, major events such as the big bang, and its subsequent development. It also helps predict the evolution and future of the universe. The context of the study of astronomy relates to the motivation of encouragement that can be found in the teachings of the Qur'an that inspire or encourage scientists or scholars to investigate and understand the universe. Verses that show the wonders of the creation of the universe or that mention the high heavens, the vast earth, and the moving heavenly bodies can stimulate curiosity and a desire to investigate these phenomena in more detail.¹⁵

The verses of the Qur'an that can be related to the study of astronomy and its potential effects include ¹⁶:

1. Creation of the Universe

The creation of the universe refers to the process or event by which everything in the universe including the heavens, earth, stars, planets, animals, plants, humans, was created or made by a divine force, the creator of the universe. In Qs. Al-Mulk: 3-4
الَّذِي خَلَقَ سَبْعَ سَمَاوَاتٍ طِبَاقًا مَّا تَرَىٰ فِي خَلْقِ الرَّحْمَنِ مِن تَفَوتٍ فَأَرِجْ أَلْبَصَرَ هَلْ تَرَىٰ مِن فُطُورٍ

Meaning: "It is Allah who created the seven heavens in layers. You do not see in the creation of the Most Gracious God anything unequal. So look once more, do you see any defect?"

This verse shows Allah's power and greatness in creation. Creation of seven layered heavens: seven layered heavens can be interpreted as different layers or dimensions in the universe. This reflects the complexity and diversity in Allah's creation which may involve aspects that are not fully understandable to humans. The seven layered heavens can be understood as a symbol of the beauty, wonder and complexity of God's creation. Each layer reflects the uniqueness and majesty of his creation. This concept allows humans to contemplate and understand the greatness of God through His creation. Through understanding and researching the universe, humans seek knowledge and wisdom.¹⁷

2. Sun and Moon Cycles

The solar cycle refers to the changes in the sun's position throughout the year. The sun moves in a circular trajectory in the sky, and these cycles are linked to the seasons we once experienced. the best known major solar cycle is annual, which consists of 4 seasons, spring, summer, autumn, winter. It is tied to the seasonal changes and duration of day and night that occur due to the rotation of the earth on its axis and the

¹⁵Masruri, M. H. (2007). *Filsafat Sains dalam Al-Qur'an, Melacak Kerangka dasar Integrasi Ilm dan Budaya*. 38.

¹⁶Khoirudin, A. (2017). Sains Islam Berbasis Nalar Ayat-ayat Semesta. *At-Ta'dib*, 12(1), 195. <https://doi.org/10.21111/at-tadib.v12i1.883>

¹⁷Rahmawati, R. D., & Bakhtiar, N. (2019). Pembelajaran IPA Berbasis Integrasi Islam-Sains pada Pokok Bahasan Penciptaan Alam Semesta dan Tata Surya. *Journal of Natural Science and Integration*, 1(2), 195. <https://doi.org/10.24014/jnsi.v1i2.6599>.



revolution of the earth around the sun. The cycle includes changes in the angle of inclination of the earth's axis, which causes changes in the seasons.¹⁸

The lunar cycle refers to the changing phases of the moon as seen from earth and undergoes changes in luminance as seen from earth due to its position relative to the sun and earth. The main lunar cycle is the synodic lunar cycle that includes the phases of the new moon, first quarter, full moon, and last quarter lasting approximately 29.5 days. In Qs. Yasin: 38-40

وَالشَّمْسُ تَجْرِي لِمُسْتَقَرٍّ لَهَا ذَلِكَ تَقْدِيرُ الْعَزِيزِ الْعَلِيمِ ٣٨ وَالْقَمَرَ قَدَرْنَاهُ مَنَازِلَ حَتَّىٰ عَادَ كَالْعُرْجُونِ الْقَدِيمِ ٣٩ لَا الشَّمْسُ يَنْبَغِي لَهَا أَنْ تُدْرِكَ الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ ٤٠

Meaning: 38. "And the sun travels in its circuit. Such is the decree of Allah, the Mighty, the All-Knowing. 39. And We have fixed the revolving place for the moon, so that (when it reaches the last revolving place) it returns to the shape of an old bunch. 40. It is not possible for the sun to catch up with the moon, nor for the night to precede the day. Each circulates on its orbital line."

This verse confirms that the sun moves on a certain path or trajectory that has been determined by Allah. The movement of the sun and moon is part of the decree of the all-powerful and all-knowing Allah, which reflects his power and wisdom in organising the universe. The moon has certain manzilahs or stages in its cycle that experience a cycle of bringing back darkness, possibly referring to the new moon phase when the side visible from the earth is in shadow and appears dark. The sun and moon circulate in orbits that emphasise God's determination of movement in the universe.¹⁹

D. Conclusion

From the above discussion, it can be seen that the Qur'anic concept is a scientific concept for all types of science including astronomy. Astronomical science according to the Qur'an refers to the knowledge and understanding contained in the text of the Qur'an relating to various aspects of the life of the universe. Therefore, to analyse the Qur'ān fully and thoroughly, scientific, sensory and theological thinking is required.

The Qur'an provides a strong foundation for studying and understanding astronomical phenomena. Verses in the Qur'an invite humans to pay attention and study the signs of Allah's greatness in the universe including the movement of the sun, moon and stars. The Qur'an provides inspiration and motivation for scientists to conduct further research and exploration of the universe. It also emphasises the importance of knowledge and understanding in finding out about God's creation. Several verses in the Qur'ān can be considered as positive encouragement to explore and understand the universe through knowledge, particularly in astronomy. Humans are invited to contemplate the wonders of Allah's creation, which can provide motivation for scientists to research and understand more about the structure and dynamics of astronomy.

¹⁸Admiranto, A. G. (Ed.). (2000). *jurnal Tata Surya dan Alam Semesta*.

¹⁹Rasyid, A. N. (2020). Astronomi dan Kosmologi dalam perspektif Al-Qur'an. *VEKTOR: Jurnal Pendidikan IPA*, 1(1), 39–49. <https://doi.org/10.35719/vektor.v1i1.3>.



Analysing the Qur'ān and using it as a reference material for astronomy will open up the horizons of knowledge of the universe and study all objects related to the trajectories of celestial bodies in their orbits. Humans can know and utilise and study more deeply the astronomical discussions contained in the Qur'an.

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