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ASTRONOMICAL STUDY ABOUT THE RISING OF SUN FROM THE WEST AS ONE OF THE GREAT APOCALYPSE SIGNS

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A. INTRODUCTION

The frightening event that marked the end of human civilization was the occurrence of the great apocalypse. Allah SWT keeps the time of the apocalypse a secret, but in several hadiths the Prophet SAW mentions the characteristics that can be used as a marker of the coming of the great apocalypse. There are two kinds of signs in Islam, namely small signs and big signs. So the signs of the apocalypse are small and big as a warning to those who think that they should remember death, the Day of Judgment and the Day of Judgment. In a number of hadiths of the Prophet Muhammad, it is mentioned that the big signs before the apocalypse are the appearance of Dajjal, the descent of Prophet Isa, the release of Ya'juj and Ma'juj the rising of the Sun from the west and so on.

The chaos of the apocalypse which became a mystery made a group of the Prophet's companions wonder about the signs of the apocalypse. Some of the signs of the great apocalypse are the appearance of Dajjal, the bearer of a great slander for mankind until they will stray into the path of tyranny. In addition to the appearance of the Antichrist, there will be a natural sign which is as horrendous as the appearance of Dajjal, it is the emergence of the Sun from the West. The leading salaf scholar, Imam Al-Qurtubi, quoted a number of hadiths narrated from Hudzaifah. The hadith describes a major event as a sign before the Day of Judgment.

From Hudzaifah bin Asid Al-Ghifari RA, he related: "We were sitting under the shade of a wall in Medina. Meanwhile the Messenger of Allah was in the room. He looked at us and asked: What are you doing sitting there? We answered: We are talking. He asked: About what? We replied: About the apocalypse. The Prophet (SAW) said: 'The Hour will not come until you see the ten signs. First, the sun rises from the west, fog, Dajjal, reptiles, then three lunar eclipses (i.e. eclipses in the east, eclipses in the west, and eclipses in the Arabian peninsula). Then, the coming of Jesus, the exit of Gog and Magog, and finally the emergence

of fire from Yemen in a ravine of Aden. Whoever is behind him, he will be led to the field of mahsyar." (narrated by Imam Muslim)¹

From the hadith above, some of the signs of the apocalypse are explained which are the cause of the destruction of the universe and everything in it. the author concludes, from the signs of the apocalypse, there are several signs that are scientific and can be reasoned with the science of astronomy, namely the emergence of the sun from the west. so in this case the author will explain how critical reasoning related to it.

B. DISCUSSION

1. Sunrise Direction Is Affected By Earth's Rotation

The sun currently rises in the east and sets in the west. This phenomenon is common and scientists discovered the fact that one day the sun rose from the west. In fact, all celestial bodies appear to rise from the east and set in the west when viewed from Earth. This includes the Sun, Moon, stars, to the planets. It turns out that this phenomenon is influenced by the direction of Earth's rotation.

Rotation is the motion of the Earth rotating on its axis². Our planet is known to rotate from west to east. As a result, from our point of view, celestial bodies appear to appear from the opposite direction, namely east to west. In other words, scientists refer to this phenomenon as pseudo-daily motion. The sun and celestial bodies appear to be moving when they are not, but the Earth that rotates toward them.

The book 'Miracles of Al-Qur'an & As-Sunnah'³ reveals that the enemies of Islam from Arab and non-Arab atheists, as well as orientalist reject the possibility of the sun rising from the west. They argue that since humans existed, the sun rises in the east and sets in the west. They never thought and never thought that there was a force on earth capable of causing major changes in the process of sunrise and sunset.

But since the last few years, geologists have begun to study the ancient earth's climates in the past as stored in the trunk; plants, animal skeletons, and deposits of snow blocks that once crept ashore from the earth's two poles as well as from the tops of mountains. Also stored in various types of marine sediments and asphalt, in the rocks of the earth and what is contained therein in

¹ Abul Husain Muslim bin Hajjaj bin Muslim An-Naisaburi, *Al-Jāmi'us aḥīḥ*, [Beirut, Dārul Afaq Al-Jadidah: undated], juz VIII, page 178)

² Muhyiddin Khazin, *Ilmu Falak dalam Teori dan Praktik*, Yogyakarta: Buana Pustaka, 2004, page. 128

³ Zaghul an-Najjar, *Pembuktian Sains dalam Sunnah (Buku I)*, Penerjemah Zainal Abidin dkk, Jakarta: AMZAH, 2006, page. 251-257

the form of remnants of life, especially flour seeds (powder) which are special for plants that are still preserved in large numbers in the lake, river depth, and beach⁴.

These deposits largely ensure a dry surface that recedes due to receding seawater and scarcity of rainwater. These surfaces contain minerals that perfectly reflect the composition of the respective layers of air and water that surrounds the earth, their hot temperatures, and their acidity. Annual cycles (annual rings) in plant stems or posts and growth lines in animal skeletons are amazing documents that record climate change directly and accurately.

In a recent study of climate change recorded in the annual cycles of plant stems, it is clear that each of these annual cycles consists of a number of cycles representing the four seasons (spring, summer, autumn, and winter), as well as the twelve months of the year. (month based on the calculation of the month/qamariyyah), the number of weeks in a qamariyyah month, the seven days in one week, and one night and one day in one day⁵.

In this study, the researchers noted an increase in the number of days in a year as the ages increased. And they found that the only thing that can explain the occurrence of this phenomenon is the increasing speed of the earth's rotation around its axis in front of the sun. It is this speed that increases the number of days and weeks in a year and reduces the length of the days (with their days and nights), while the number of seasons and months in a year remains constant and does not change⁶.

2. Earth's Rotation Period

Astronomers know the period of Earth's rotation by drawing a large number of curve lines showing the number of days in a year in various geological epochs, then by extending it to the history of the earth, it will appear clear that the number of days in a year at the beginning of creation Earth has more than 2,200 days and the length of the day (with day and night) is less than 4 hours⁷.

The period of rotation is a term for how long (time) it takes the earth to make one rotation⁸. Currently, the time for one rotation of the earth is agreed to be 23 hours, 56 minutes and 45 seconds. But history records that the time of Earth's rotation was not so long ago. There are several changes in the time of one rotation of the Earth that have been recorded. According to NASA's

⁴ Zaghul an-Najjar, *Pembuktian Sains dalam Sunnah (Buku I)*, Penerjemah Zainal Abidin dkk, Jakarta: AMZAH, 2006, page. 251-257

⁵ Zaghul an-Najjar, *Pembuktian Sains dalam Sunnah (Buku I)*, Penerjemah Zainal Abidin dkk, Jakarta: AMZAH, 2006, page. 251-257

⁶ Zaghul an-Najjar, *Pembuktian Sains dalam Sunnah (Buku I)*, Penerjemah Zainal Abidin dkk, Jakarta: AMZAH, 2006, page. 251-257

⁷ Zaghul an-Najjar, *Pembuktian Sains dalam Sunnah (Buku I)*, Penerjemah Zainal Abidin dkk, Jakarta: AMZAH, 2006, page. 251-257

⁸ Muhyiddin Khazin, *Ilmu Falak dalam Teori dan Praktik*, Yogyakarta: Buana Pustaka, 2004, page. 128

exposure in 2012, when the age of the Dinosaurs, Earth's rotation took about 23 hours. For more details, the following is a more detailed explanation⁹.

- The initial period of the formation of the earth, 1 rotation = 6 hours
- About 4.6 billion years ago, 1 rotation period = 14 hours
- About 620 million years ago, 1 rotation = 22 hours
- Now, 1 rotation period = 23 hours, 56 minutes, 4 seconds

Data on the decreasing speed of the earth's rotation around its axis in front of the sun continuously is evidenced by studies on growth lines in the skeletons of a number of animals such as ancient coral reef fish and their remains in rocks of a number of different geological periods.

3. Causes of Earth's Slowing Rotation

Regarding the time when the Earth's rotation is slowing down, of course there is a cause that we may not know much about. One hypothesis states that this slowing of rotation has something to do with the Earth's outer core, the planet's molten metal layer that circulates under the dense lower mantle¹⁰.

The outer core of the Earth can stick to the mantle, causing disruption of the flow of this layer of molten metal. This disrupts the activity of the Earth's magnetic field and causes vibrations in the Earth's rotation. This is what causes the time of one rotation of the earth to be longer. In addition, there are also other opinions which state that the cause of the slowing down of the Earth's rotation is due to several factors, such as:

- The earth is getting heavier every year
- Due to the influence of space rocks or meteoroids
- The tidal currents of the moon which have an impact on the attraction of the earth to the moon, which causes the moon to be farther away from the earth.

The reduced speed of the earth's rotation around its axis in front of the sun is interpreted as a process of shifting and friction arising from the tidal process, and the wind blowing in the opposite direction to the direction of the earth's rotation. Both work as brakes that slow the speed at which the earth rotates around its axis in front of the sun by a fraction of a second (under a second) per century¹¹.

⁹ <https://ilmugeografi.com/astro/penyebab-rotasi-bumi-melambat>.

¹⁰ Zaghlul an-Najjar, *Pembuktian Sains dalam Sunnah (Buku I)*, Penerjemah Zainal Abidin dkk, Jakarta: AMZAH, 2006, page. 251-257

¹¹ Zaghlul an-Najjar, *Pembuktian Sains dalam Sunnah (Buku I)*, Penerjemah Zainal Abidin dkk, Jakarta: AMZAH, 2006, page. 251-257

By drawing the predictive curve lines of the slow process of the earth's rotation speed around its axis, it will appear that this process will eventually force the earth to change the direction of its rotation during this time (i.e. from west to east so that the sun appears to rise from the east and set in the west) to the opposite direction, by rotating from east to west, so that the sun will rise from the west of the earth¹².

4. The Sun Can Just Rise In The West When The Earth's Rotation Changes Course

Entering the main discussion, if it really happened later, how could the sun rise in the west. Referring to the explanation above, this change can only take place if the Earth changes its rotation to a clockwise direction. In other words, from east to west. The question is, what could be causing the Earth to turn around and about when this will happen. Answering this question is not easy considering that we cannot accurately predict the motion of the Earth. But experts say that there are several things that can make the rotation turn around.

First, we need a large force that is able to slow down, stop, before finally changing the direction of the rotation. One that is predicted to be able to do so is the Moon.

Reported by Socratic, the satellite holds a great influence on the tides of sea water on Earth. Technically, its gravitational force is able to influence the Earth's rotation to become slower until it eventually reverses direction. But this is still a hypothesis so experts can't say that this theory is accurate either¹³.

The second possibility is that Earth's rotation could stop and change direction due to the collision of celestial bodies, such as asteroids. According to EOS, the event is thought to be strong enough to cause the Earth to stop and turn around¹⁴.

Alanna Mitchell¹⁵, a Canadian journalist and author of Science, admits the essay is an adaptation of her latest book, 'The Spinning Magnet: The Electromagnetic Force that Created the Modern World and Could Destroy It.' This book was published by Dutton, Penguin Publishing Group, on January 31, 2018.

In 1905, the French geophysicist Bernard Brunhes brought back to his lab some rocks he'd unearthed from a freshly cut road near the village of Pont Farin. When he analyzed their magnetic properties, he was astonished at what they showed: Millions of years ago, the Earth's magnetic poles had been on the opposite sides of the planet. North was south and

¹² Zaghlul an-Najjar, *Pembuktian Sains dalam Sunnah (Buku I)*, Penerjemah Zainal Abidin dkk, Jakarta: AMZAH, 2006, page. 251-257

¹³ <https://kaltim.idntimes.com/science/experiment/izza-namira-1/bagaimana-jika-matahari-terbit-di-barat-regional-kaltim/1>

¹⁴ <https://kaltim.idntimes.com/science/experiment/izza-namira-1/bagaimana-jika-matahari-terbit-di-barat-regional-kaltim/1>

¹⁵ Alanna Mitchell, *The Spinning Magnet: The Electromagnetic Force that Created the Modern World and Could Destroy It*, Dutton, Penguin Publishing Group, 2018

south was north. The discovery spoke of planetary anarchy. Scientists had no way to explain it.

Today, we know that the poles have changed places hundreds of times, most recently 780,000 years ago. (Sometimes, the poles try to reverse positions but then snap back into place, in what is called an excursion. The last time was about 40,000 years ago.) We also know that when they flip next time, the consequences for the electrical and electronic infrastructure that runs modern civilization will be dire. The question is when that will happen.

In his conclusion, Mitchell said that if a reversal were to occur, it would likely result in some areas of Earth being labeled 'uninhabitable'. The world that was once fertile has turned into a dry, barren planet that is no longer able to support life.

NASA Magnetosphere Scientist, Mona Kessel said that this reversal also shuts down the power grid and changes the Earth's temperature and creates storms. These storms create extremely high radiation levels that can adversely affect satellites and astronauts working in space.

5. Scientists Made Some Simulations About This

Earth's rotation can indeed change course, although this process requires a very large amount of energy. Moreover, the current rotation speed reaches 1,670 kilometers per hour. Russian scientist. Demitri Bolyakov, knowing this information based on a history in a hadith from the Prophet SAW which is known to Muslims, even includes the core of their creed which reinforces the necessity for the theory to exist, according to the results it has achieved¹⁶.

Demitri was convinced that this kind of knowledge, which dates back more than 1,400 years as the only possible source, was the creator of this universe. The theory proposed by Prof. Kosinov is the newest and most daring theory in interpreting the phenomenon of the rotation of the earth on its axis. The research group designed a sample in the form of a ball filled with a thin board of melted metal, placed on a magnetic body made up of opposing electrodes¹⁷.

When an electric current runs on the two electrodes, it creates a magnetic force and the ball filled with a thin board of metal begins to rotate on its axis, this phenomenon is called "Electro Magno-Dynamic Integral Motion". This motion is essentially an activity of the earth's rotation on its axis¹⁸.

¹⁶ <https://www.republika.co.id/berita/m8dhwf/subhanallah-ilmuwan-matahari-sangat-mungkin-terbit-dari-barat-2>

¹⁷ <https://www.republika.co.id/berita/m8dhwf/subhanallah-ilmuwan-matahari-sangat-mungkin-terbit-dari-barat-2>

¹⁸ <https://www.republika.co.id/berita/m8dhwf/subhanallah-ilmuwan-matahari-sangat-mungkin-terbit-dari-barat-2>

At the level of reality in nature, the sun's power is the 'moving force' that can give birth to a magnetic field that can push the earth to spin on its axis. Then the motion of the earth's rotation in terms of sooner or later along with the power of the sun's power intensity. On this basis also the position and direction of the north pole depends¹⁹.

It has been researched that the earth's magnetic poles until 1970 moved at a speed of no more than 10 km in a year, but in recent years this speed has increased to 40 km in a year. Even in 2001 the earth's magnetic pole shifted from its place to reach a distance of 200 km in one fell swoop²⁰.

This means that the earth with the influence of the magnetic force causes the two magnetic poles to alternate places. This means that the 'motion' of the earth's rotation will lead in the opposite direction. At that time the sun will rise from the West²¹. This kind of knowledge and information is not found by Demitri in books or heard from anywhere, but he derives these conclusions from the results of research and experimentation and research²².

C. CONCLUSION

Through the explanation above, it can be concluded that the rising of the Sun in the west has a close relationship with changes in the direction of Earth's rotation. In the short term, this is expected to result in major disasters such as hurricanes, storms, tsunamis, and various other natural disasters that can wipe out humans and other living things. Incidents and events that are very terrible at the time of the apocalypse Allah SWT keep a secret so that mankind can prepare for the coming of the Day of Judgment. However, as a form of Allah's mercy and compassion for His servants, Allah SWT gave a sign of the apocalypse which was conveyed in His word both in the Qur'an and the Hadith of the Prophet Muhammad.

¹⁹ <https://www.republika.co.id/berita/m8dhwf/subhanallah-ilmuwan-matahari-sangat-mungkin-terbit-dari-barat-2>

²⁰ <https://www.republika.co.id/berita/m8dhwf/subhanallah-ilmuwan-matahari-sangat-mungkin-terbit-dari-barat-2>

²¹ <https://www.republika.co.id/berita/m8dhwf/subhanallah-ilmuwan-matahari-sangat-mungkin-terbit-dari-barat-2>

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