

# The Concept Of Rukyatul Hilal In Determining 1 Ramadhan, 1 Shawwal And 1 Dzulhijjah

*By Suraya Attamimi*

## The Concept Of Rukyatul Hilal In Determining 1 Ramadhan, 1 Shawwal And 1 Dzulhijjah

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### ABSTRACT

*Rukyatul hilal* is a method in determining the month of *qamariah*. *Rukyatul hilal* is the attempt of seeing or observing the *hilal* in the open with the eyes or with equipment at the moment sun sets before the new moon of *qamariah*. This study aims to find out the concept of *Rukyatul hilal* in determining 1 *Ramadan*, 1 *Shawwal* and 1 *Dzulhijjah*. This type of research is a type of descriptive qualitative research. The method of data collection used documentation techniques. The results of the study found the implementation of *Rukyatul hilal* in determining 1 *Ramadan*, 1 *Shawwal* and 1 *Dzulhijjah*, namely by paying attention to the clock that points to the time accurately, as well as the directional signs that are used as a benchmark in measuring the position of celestial bodies. Meanwhile, things that must be prepared before the *rukkyat* is carried out include: Make detailed calculations about the direction and position of the sun and *hilal*, according to the calculations for the month in question and also use an accurate tool to see the position of the moon.

### 1. Introduction

When it is about to enter the fasting month, the Ministry of Religion (Kemenag) and a number of related agencies such as BMKG (Meteorological, Climatological, and Geophysical Agency), National Institute of Aeronautics and Space (Lapan) and several Islamic Mass Organizations including Nahdlatul Ulama today, will conduct observation or *rukyatul hilal* in 34 provinces. *Rukyatul hilal* is to see the new month which marks the entry of the beginning of Ramadan fasting or 1 *Ramadan*, 1 *Shawwal* and 1 *Dzulhijjah*. *Rukyatul hilal* is a method in determining the month of *qamariah*. *Rukyatul hilal* is the attempt of seeing or observing the new moon (*hilal*) in the open with the eyes or with the equipment at the moment when the sun sets before the new moon of *qamariah*.

The main reason why it is mandatory to observe *hilal* is because *hilal* is a sign that the beginning of the new month in the Hijri calendar has begun. If the *hilal* has not been seen, then it has not changed the month in the Hijri calendar.

Indeed, the Qur'an does not explicitly explain how the initial determination of *Ramadan*, *Shawwal* and *Dzulhijjah*, is determined, only that there are several verses of the Quran that give their cues. The Head of the National Institute of Aeronautics and Space (Lapan) Prof. Thomas Djamaluddin gave an astronomical explanation of the verses that signaled the operational determination of the beginning of *Ramadan* as follows:

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خُرُومٌ أَرْبَعَةٌ مِنْهَا وَالْأَرْضُ السَّمَاوَاتِ خَلَقَ يَوْمَ اللَّهُ كِتَابَ فِي شَهْرًا عَمَرَ اثْنَا اللَّهُ عِنْدَ الشُّهُورِ عِدَّةً إِنَّ

"Indeed, the number of months ordained by Allah is twelve—in Allah's Record since the day He created the heavens and the earth—of which four are sacred." (QS 9:36).

Based on the analysis of these problems, so the purpose of writing this article is to find out the concept of *Rukyatul hilal* in determining 1 *Ramadan*, 1 *Shawwal* and 1 *Dzulhijjah*.

## 2. Literature review

### 2.1. Definition of *Rukyat al-hilal*

<sup>3</sup> *Rukyat al-hilal* consists of two words in Arabic, namely *rukayat* and *hilal*. <sup>3</sup> *Rukyat* in terms of epistemology is grouped into two opinions, namely:

- The word *rukayat* is *masdar* from the word *ra'a* which literally means seeing with the naked eye.
- The word *rukayat* is *masdar* which means sight, in English it is called vision which means seeing, both outwardly and inwardly.

The word '*rukayat*' according to language <sup>2</sup> comes from the word *ra'a-yara-ra'yan ru'yatan*, which means to see, to think, suppose, to suspect and to try to see *hilal*. The word "*ra'a*" here can be interpreted in three meanings.

First, *ra'a* which means "*abshoro*" means to see with the eyes (*ra'a bil fi'li*), ie if the object (*maf'ul bih*) shows something that is visible. Second, *ra'a* with the meaning "*'alima / adroka*" means seeing with the mind (*ra'a bil 'aqli*) that is for objects that are abstract or do not have objects. Third, *ra'a* means "*donna / hasiba*" which means to see with the heart (*ra'a bil qolbi*) for the two objects (*maf'ul bih*).

Some of these meanings then give rise to interpretations that are familiar to us, namely the terms <sup>6</sup> *ra'a bil fi'li*, *ra'a bil aqli* and *ra'a bil qalbi*. *Ra'a bil fi'li* means to see *hilal* directly (*rukayat*), while *ra'a bil 'aqli* determines *hilal* with *hisab* (determines the beginning of the month by mathematical calculations), and *ra'a bil qolbi* is to determine the beginning of the month by intuition (feeling) without using calculations or seeing *hilal*.

According to the Arab linguist, Al-Khalil bin Ahmad of Oman, <sup>2</sup> *hilal* is defined by the first moonlight, when people see the crescent moon at the beginning of the month. This word can be rooted in two forms of active or passive sentences such as: it appears (*halla*) or it is being seen (*uhilla*) both of which involve the process of witnessing (Tono, 2007).

The notion of *rukyatul hilal* according to *syara'* is the testimony of seeing <sup>3</sup> *hilal* with the eyes after the sunset on the twenty-ninth day leading up to the new moon of *qamariah*, from a person whose news is trustworthy and whose testimony is acceptable. The person's testimony is used as a guideline for determining the entry of the new moon (Muhyiddin, 2004).

The following are *Rukyat*'s arguments:

- Surah Al-Baqarah Verse 189

مِنَ الْبُيُوتِ تَأْتُوا بَانَ الْبِرِّ وَلَيْسَ ۖ وَالْحَجَّ لِلنَّاسِ مَوَاقِيتَ هِيَ قُلُ ۖ الْأَهْلِيَّةِ عَنِ بَسْأَلُونَكَ ۖ تَقْلِحُونَ لَعَلَّكُمْ اللَّهُ ۖ وَأَتَّقُوا ۖ أَبْوَابَهَا مِنَ الْبُيُوتِ وَأْتُوا ۖ اتَّقَى مِنَ الْبِرِّ وَلَكِنَّ طُغُورَهَا

It means:

<sup>5</sup>

They ask you "O Prophet" about the phases of the moon. Say, "They are a means for people to determine time and pilgrimage." Righteousness is not in entering your houses from the back doors. Rather, righteousness is to be mindful of Allah. So enter your homes through their "proper" doors, and be mindful of Allah so you may be successful.

- Surah Yunus Verse 5

خَلَقَ مَا ۙ وَالْحِسَابَ السَّيِّئِينَ عَدَدًا لِيَتَعَلَّمُوا مَتَارِلَ وَقَدْرَهُ نُورًا وَالْقَمَرَ ضِيَاءَ الشَّمْسِ جَعَلَ الَّذِي هُوَ  
يَعْلَمُونَ لِقَوْمِ الْآيَاتِ يُقَصِّلُ ۙ بِالْحَقِّ إِلَّا ذَلِكَ اللَّهُ

4  
It means:

*He is the One Who made the sun a radiant source and the moon a reflected light, with precisely ordained phases, so that you may know the number of years and calculation 'of time'. Allah did not create all this except for a purpose. He makes the signs clear for people of knowledge.*

c. **Surah Al-Isra Verse 12**

رَبِّكُمْ مِنْ فَضْلًا لِيَتَّبِعُوا مَبْصِرَةً النُّهَارِ آيَةً وَجَعَلْنَا اللَّيْلَ آيَةً فَمَحَوْنَا ۙ آيَتَيْنِ وَالنَّهَارَ اللَّيْلَ وَجَعَلْنَا  
تَفْصِيلًا فَصَلَّنَاهُ شَيْءٍ وَكُلِّ ۙ وَالْحِسَابَ السَّيِّئِينَ عَدَدًا لِيَتَعَلَّمُوا

It means:

*We made the day and night as two signs. So We made the sign of the night devoid of light, and We made the sign of the day "perfectly" bright, so that you may seek the bounty of your Lord and know the number of years and calculation "of time". And We have explained everything in detail.*

1

### 3. Methodology

This type of research is a type of **descriptive qualitative** research. The object is the point of attention of a study. The point of attention in this study is in the form of the substance of the problem or phenomenon under study, namely the resolution of the *hilar* determination case.

The type of data used in writing this article is secondary data obtained from online literature in the form of journals and theses related to the problem under study. In data collection, researchers use documentation techniques, namely by collecting data sources which are carried out through document searches by utilizing online written documents related to the aspects studied. Then the data is analyzed using analytical descriptive methods to get a broad and detailed picture of the object of study in this article.

### 4. Results and Discussion

#### 4.1. The implementation of the Rukyatul hilar in determining 1 Ramadan, 1 Shawwal and 1 Dzulhijjah

The *rukya*t method is usually carried out at the end of the *hijri* month. If at that time the *hilar* can be seen, then on that night begins the 1<sup>st</sup> day of the new month. However, if that *hilar* can not be seen then the night is counted as the 30<sup>th</sup> day of the ongoing month.

In the procession of conducting *Rukyatul Hilar*, the officers who make their observations will be carried out on the 29<sup>th</sup> day or the 30<sup>th</sup> night, from the current month. For example, if it is for *Ramadan*, then *rukyatul hilar* or observation in the process of seeing *hilar* will occur at the end of the month.

To see the *hilar*, usually the position of the moon must be two degrees above the sun. Another condition is the distance of elongation from the sun to the right or left. The wider it is, the easier it is to see the *hilar* directly. Therefore, to see the *hilar* is usually assisted by a telescope. If the *hilar* is not visible, then that night is the 30<sup>th</sup> of the month that is currently running as an *istikmal* process or completion.

Coordination and methods of implementing *rukya*t, from time to time have undergone changes and developments both in terms of politics, science and technology (Nu Executive Board, 2007). Before *rukya*t is carried out, there are several aspects that underlie the implementation of the *rukya*t that need to be known and prepared as well as possible. In the preparation it

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also includes the selection of a site or place that meets the necessary conditions. The Directorate General of Islamic Institutional Development explained that guidelines for the use of clocks that accurately designate time are also necessary, as well as directional signs that are used as a benchmark in measuring the position of celestial bodies.

Things that must be prepared before the *rukya*t is carried out include: Making detailed calculations about the direction and position of the sun and *hilal*, according to the calculations for the moon in question.

- a. Making a *rukya*t projection map according to the calculation details. One map was attempted for each person who will be doing the *rukya*t (observer).
- b. Determining the position of the *perukya*t (*syahid*) and installing auxiliary tools to localize (*ta'yin-kan*) the path of the sinking of the *hilal* to facilitate the monitoring (implementation) of the *rukya*t, according to the *rukya*t projection map.
- c. Observer continued to search for the path of the sinking of the *hilal* according to the calculated time.
- d. Observer may use tools that are believed to help clarify the views

#### ***4.2. The problem of Rukyatul hilal in determining 1 Ramadan, 1 Shawwal and 1 Dzulhijjah***

The Islamic calendar system is also known as the *Hijri* calendar and is a pure lunar calendar based on the existence of *hilal*. In history, *hilal* has been the object of observation since the time of New Babylonian between 626 BC and 75 AD for their calendar purposes (Mutoha, 2015). Observing the curvature of the moon (*hilal*) which is still very thin, a few hours after a conjunction occurs, can rarely be successful because natural conditions are quite difficult. The curvature of the moon that can be seen by the eye is the surface of the moon exposed to the sunlight and therefore the curvature is close to the Sun.

The natural conditions that make it difficult to visually observe are the light of the sky around the moon, while the moon itself is not a good reflector of light. This makes the contrast between the arch of the moon and the sky very small. The moon's proximity to the sun means that the moon has a small height above the horizon at sunset. Therefore the time for observation is relatively short, before the moon sinks below the horizon.

The state of such a thin and smooth *hilal* is really hard to see. The moon is a dark object that has no light of its own. What can be seen is the part of the moon illuminated by the sun. Under certain circumstances the light of the earth (as well as the reflection of the sun's light) can also be seen on the moon, giving the moon a complete roundness. At the beginning of the month, the observation was made at the time of sunset; the state of the sky at that time began to change. During the day the sun is bright so is the sky. The brightness of the sky is caused by the light of the sun being spread by the earth's air.

The sun sets, the brightness of the sky reduced but the light of dusk is still visible until the time of *Isha* arrived. By the time the sun had just set, the light of the twilight sky was still quite bright, which made it difficult for us to be able to see the *hilal*. The moon is still too thin, so its light was barely different from the bright, cloudless evening sky.

Factors that affect *rukya*t *al-hilal* (Himayatika, 2019):

##### **1. Natural Factor**

- a. Human (observer)

To practice *rukya*t *al-hilal*, one must possess certain skills, including:

- 1) For the eyes of ordinary people who have not been trained to do *rukya*t, it will be difficult to find the *hilal* in question. Related to the soft color of the *hilal* which is soft and does not contrast with the sky that surrounds it.
- 2) Knowing the position of the *hilal* at sunset (*ghurub*). So that during the *rukya*t process, they don't look in the wrong direction and of course wouldn't find the *hilal* in that (wrong) direction. These data are obtained from *hisab* calculations.
- 3) A person who will do *rukya*t *al-hilal* must also know the form of *hilal* in question.

- b. Observation Point

7) sically a good place to hold observations at the beginning of the month is a place that allows observers to hold observations around the place where the sun sets. The view in that direction should be undisturbed, so that the horizon will look straight in areas that have an azimuth of 240° to 300°. D

c. Weather

*Rukyat* is carried out in clear weather conditions and there is no barrier between observers and *hilar*. These barriers can be clouds, smoke, or fog.

d. Earth's Atmospheric Conditions

The influence of the local atmosphere greatly affects the credibility of the *hilar*, the brightness of the afternoon sky and local weather conditions can cause undetected *hilar* sightings because one's observation in seeing the *hilar* also adds to the difficulty of observation. City light pollution is obviously very influential because it increases the foreground light

e. Climate

If regular observation is required, then the place must have a good climate for observation.

## 2. Non-Natural Factors

a. The quality of the instrument (optics) for observation.

The naked eye is not able to see in detail the complete form of the Moon and without a reference to the actual location of the Moon, it can be mistaken for other objects, such as slightly bright clouds. Attempts to obtain details of the object of observation is to use binoculars.

b. The observation environment (to the western horizon) should not be disturbed by trees, buildings, mountains or other light sources.

c. Hisab

Before the *rukayat* is carried out, first do the initial *hisab* of the month to help the implementation of the *rukayat*, namely to perform calculations to determine the position of the moon mathematically and astronomically, to find out when and where the *hilar* (the first crescent moon after the new moon) can be seen.

d. Crescent Moonlight

At the time of *rukayat*, which is when the sun sets, even though the sun is already below the horizon, the evening light is still bright and gives a yellow-orange to red hue.

e. The existence of other planets that outwit the view, such as the planet Venus in the crescent phase.

f. Position of the celestial bodies.

## 5. Conclusion

The implementation of *Rukyatul hilar* in determining 1 *Ramadan*, 1 *Shawwal* and 1 *Dzulhijjah* is by paying attention to the clock that points to the time accurately, as well as the directional signs that are used as a benchmark in measuring the position of celestial bodies. Meanwhile, things that must be prepared before the *rukayat* is carried out include: Making detailed calculations about the direction and position of the sun and *hilar*, according to calculations for the month concerned and also using accurate tools to see the position of *hilar*.

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