

## Imkanur Rukyat Mabims 3-6,4 Criteria According to the Hisab Rukyat Team of Riau Islands Province's Viewpoint

M. Arbisora Angkat<sup>1\*</sup>, Rizki Ananda Putra<sup>2</sup>

<sup>1,2</sup>STAIN Sultan Abdurrahman Kepulauan Riau

(Jl. Lintas Barat KM. 19 Ceruk Ijuk Toapaya Asri, Kabupaten Bintan, Provinsi Kepulauan Riau, Indonesia)

\*Email: [arbisora\\_angkat@stainkepri.ac.id](mailto:arbisora_angkat@stainkepri.ac.id)

---

### Abstract

The purpose of this research is to determine the implementation of Imkanur Rukyat MABIMS 3-6.4 Criteria in Riau Islands Province and to find out the viewpoint of Hisab Rukyat Team of Riau Islands Province regarding this criteria. This research is qualitative research using Purposive Sampling Techniques to determine informants. In implementation, this criteria has not provided positive results because the documentation of *rukyatul hilal* activities carried out by the Hisab Rukyat Team of Riau Islands Province from 2022 to 2023 shows that the hilal has never been seen. The viewpoint of Hisab Rukyat Team of Riau Islands Province regarding this criteria are divided into 2 viewpoints. The first viewpoint is agree with this criteria because this new criteria was the *rukyatul hilal* result of hundreds years so that it can be scientifically justified. The second view viewpoint disagrees because this criteria still needs to be tested theoretically and practically. The dynamics and polemics as well as the Government's inconsistency in implementing this new criteria are also considerations in agreeing it.

### Article Info

**Received:**

11 Juni 2023

**Revised:**

20 November 2023

**Accepted:**

20 Juni 2023

**Published:**

29 Juni 2024

---

**Keywords:** *Imkanur Rukyat, MABIMS 3-6,4, Hisab and Rukyat*

---

### A. Introduction

In Indonesia, Imkanur Rukyat criteria were introduced to mediate between the rukyat mazhab and the hisab mazhab. The Ministry of Religious Affairs of Republic of Indonesia in 1998 has initiated the Imkanur Rukyat criteria known as MABIMS criteria as a result of the agreement of the Ministers of Religious Affairs of Malaysia, Brunei Darussalam, Indonesia and Singapore [1]. This criteria has a simple formula that is the height of the moon  $> 2^\circ$ , elongation  $> 3^\circ$ , the age of the moon at sunset  $> 8$  hours post-conjunction [2]. This criteria are then commonly referred to as the Imkanur Rukyat MABIMS 2-3-8 Criteria and are implemented in Indonesia until 2021.

On December 8, 2021, in a virtual meeting, the new MABIMS criteria were finally ratified by the ministers of religion of Brunei Darussalam, Indonesia, Malaysia, and Singapore. The validation document of new MABIMS criteria was signed separately by each Minister of Religion, then put together. The validation text states that the new MABIMS

criteria will be implemented in 2021 M (1443 H) or according to the readiness of each country to implement this criteria. Malaysia began implementing the new MABIMS criteria in Muharram 1443 in conjunction with the Malaysian Falak Month 2021. The declaration of the application of the new MABIMS criteria was stated at the Falak Nusantara 1443 Webinar and the Closing of the Malaysian Falak Month. The Indonesian Minister of Religious Affairs stated in the official MABIMS document that Indonesia applies the Imkanur Rukyat MABIMS 3-6.4 Criteria starting in 2022 and has been applied at the beginning of Ramadan 1443 H/2022 M [3].

After the implementation of the Imkanur Rukyat MABIMS 3-6.4 Criteria, problems have arisen in the field. Conceptually, the visibility of 3-6.4 is considered better than the old visibility of 2-3-8, but implementatively, especially in the context of Indonesia, this new criteria in the future is predicted to face implementation problems in the field. The problem with the MABIMS 3-6.4 criteria is that the topocentric-geocentric formulation of the moon's altitude and elongation angle is not yet definitive, where differences in the application of the two have consequences for the differences in the resulting parameter numbers [4].

For example, in hilal Syawal 1443 H, only the tip of Sumatra (Aceh) fulfills the Imkanur Rukyat MABIMS 3-6.4 Criteria and that is with geocentric assumptions. If referring to this data, then conceptually the fulfillment of the criteria and reference for hilal visibility should be based on data and hilal visibility in Aceh and from Aceh, not from other regions. But in fact, as in the Itsbat of the Ministry of Religious Affairs in determining the beginning of Shawwal 1443 AH, the Minister of Religious Affairs stated that the basis for determining the beginning of Shawwal 1443 AH to fall on May 02, 2022 was because there was a rukyat report. However, the Minister of Religious Affairs did not mention where and by whom the sighting was made, and there was no information that the hilal was sighted in Aceh. On social media, what is circulating is the visibility at the island of Java, not in Sumatra (Aceh) [5].

The next problem is the *mathla'* of hilal visibility, which raises interpretations from experts and users. Regarding the *mathla'* of the first hilal visibility, the question arises whether the first visibility of the hilal starts from the western end or from the eastern end of the MABIMS countries. Or based on the visibility of the hilal that appears in each MABIMS country, or anywhere in the MABIMS region. In practice, if the *mathla'* is set at one point, be it the western end or the eastern end, there will be reluctance from user countries whose countries do not meet this criteria [6].

Conversely, if the application of *mathla'* is returned to the practice in the territory of each country, then the consequences of the 3-6.4 formulation do not have the urgency of unification at the MABIMS level, because in the end it returns to each user, and runs respectively. After the determination of the beginning of Shawwal 1443 H, it is evident that the application of the new criteria 3-6.4 at the MABIMS level is not uniform and inconsistent, where all MABIMS countries should have Eid on May 03, 2022. Except for Singapore, which sets the beginning of Syawal on May 03, 2022, which conceptually and criteria this country consistently applies the new MABIMS 3-6.4 criteria. This non-uniformity proves that this new MABIMS formulation is only valid for local (each country), not for regional use together. This proves that the Imkanur Rukyat MABIMS 3-6.4 Criteria are not well-established and mature and appear to be without adequate field testing and implementation.

The determination of a criteria must be in accordance with the provisions of shara', because in determining the beginning of the lunar month related to a worship, it must be in accordance with the basis of religion so that it is valid and becomes more solemn in running it. Because many problems arise after the implementation of the Imkanur Rukyat MABIMS 3-6.4 Criteria, the views of experts who are experienced in the implementation of *rukyatul hilal* including the Hisab Rukyat Team of Riau Islands Province are needed so that this criteria become more established.

The Hisab Rukyat Team of Riau Islands Province is a team formed to carry out *rukyatul hilal* every year in Riau Islands. This team was initially formed on August 30, 2007 by the Head of the Regional Office of the Ministry of Religious Affairs of Riau Islands, Drs. H. Razali and chaired by Drs. H. Marwin, who at that time served as Head of URAIS Regional Office of the Ministry of Religious Affairs of Riau Islands [7]. Currently, the Hisab Rukyat Team of Riau Islands Province consists of various elements, such as Bimas Islam, MUI (Majelis Ulama Indonesia), NU (Nahdhatul Ulama), Muhammadiyah and BMKG (Badan Meteorologi, Klimatologi dan Geofisika). The Imkanur Rukyat MABIMS 3-6.4 Criteria is certainly a new thing for the Hisab Rukyat Team of Riau Islands Province. Of course, the Hisab Rukyat Team of Riau Islands Province has viewpoints, both in the form of criticism, suggestions and responses to the Imkanur Rukyat MABIMS 3-6.4 Criteria.

Based on the problems that the author has mentioned above, the researcher believes it is very important to conduct research related to the views of the Hisab Rukyat Team of Riau Islands Province on the Imkanur Rukyat MABIMS 3-6.4 Criteria. Because the Imkanur

Rukyat MABIMS 3-6.4 Criteria are closely related to worship issues, such as fasting, Idul Fitri and Hajj. With a good viewpoint in the form of criticism, suggestions and responses to this new criteria, it will certainly make the Imkanur Rukyat MABIMS 3-6.4 Criteria more established.

## **B. Methods**

The method used in this research is qualitative method. Qualitative research is intended because the primary data are narrative data in the form of interviews with the Hisab Rukyat Team of Riau Islands Province, reports on the results of hilal observations of the Hisab Rukyat Team of Riau Islands Province after the implementation of the Imkanur Rukyat MABIMS 3-6.4 Criteria and information in the form of documents related to the Imkanur Rukyat MABIMS 3-6.4 Criteria. The experiences, opinions, feelings and knowledge of the sources are very important in the qualitative approach. This is because the qualitative approach can understand the source's point of view more deeply and dynamically on the theme under study. Data collection uses interview instruments and documentation to find out the implementation of the Imkanur Rukyat MABIMS 3-6.4 Criteria by the Hisab Rukyat Team of Riau Islands Province and their opinion about the Imkanur Rukyat MABIMS 3-6.4 Criteria.

This primary data is data that comes directly from the source of the data collected and is also related to the problem under study. Primary data sources are obtained by researchers to answer research questions [8]. Data sources according to Sutopo consist of sources (informants), events or activities, places or locations, objects, pictures and recordings, and documents [9]. Based on this, the primary data that the author uses in this research is from sources (informants). The informants in this research include the Hisab Rukyat Team in Riau Islands Province consisting of Bimas Islam, MUI Majelis Ulama Indonesia), NU (Nahdhatul Ulama), Muhammadiyah and BMKG (Badan Meteorologi, Klimatologi dan Geofisika). Researchers used Purposive Sampling Technique in determining sources. Purposive sampling is a sampling technique with certain considerations. This means that sampling is based on certain considerations or criteria that have been formulated in advance by the researcher [10]. The researcher considers that the sources mentioned above have competence in the field of hisab and rukyat.

Secondary data is supporting or additional data that is a complement to the primary data above. This secondary data is sought from books, articles, scientific works published in mass media such as magazines and newspapers, as well as scientific journals and research reports [11].

Data collection techniques in qualitative research are generally grouped into two forms: interactive and non-interactive data collection techniques [12]. The author in this study uses interactive

data collection techniques, in the form of interviews. Interview is a data collection technique for primary data collection that uses oral questions to research subjects. In this case, researchers conducted interviews with competent sources, namely the Hisab Rukyat Team in Riau Islands Province consisting of Bimas Islam, MUI (Majelis Ulama Indonesia), NU (Nahdhatul Ulama), Muhammadiyah and BMKG (Badan Meteorologi, Klimatologi dan Geofisika). In-depth interview studies with open-ended questions will maximize field findings and their depiction. Interviews allow us to get into the opinions, thoughts and memories of the interviewees in more depth and detail, so that we can collect detailed information from the interviewees. The data to be extracted from the sources is the views of the Hisab Rukyat Team of Riau Islands Province about the Imkanur Rukyat MABIMS 3-6.4 Criteria.

While conducting research, researchers collect data by looking at or recording a report that is already available. This method is done by looking at official documents such as the draft of the Imkanur Rukyat MABIMS 3-6.4 Criteria, the reports of *rukyatul hilal* by the Hisab Rukyat Team of Riau Islands Province. The data sought is the implementation of the Imkanur Rukyat MABIMS 3-6.4 Criteria by the Hisab Rukyat Team of Riau Islands Province.

## C. Results & Discussion

### 1. Implementation Of Imkanur Rukyat MABIMS 3-6.4 Criteria In Riau Islands Province

In imkanur rukyat, the hisab and rukyat methods must complement each other in order to make accurate observations. The hisab calculation is done so that rukyat can be done. While rukyat is done to prove the results of hisab calculations. Along with the development of the times, of course the tools used to make hilal observations are increasingly sophisticated. The imkanur rukyat criteria are used as a guideline for the minimum limit of visible hilal. The existence of these criteria is used to minimize the false testimony of seeing the hilal. If the hilal is not visible during observation, istikmal can be done or estimated according to the results of hisab [13].

The change in the old criteria (2-3-8) to the new criteria (3-6,4) is of course reasonable because there is a benefit that must be achieved in accordance with the rule '*taghayyur al-ahkam bi taghayyur al-azminah wa al-amkinah wa al-ahwal*' (changes in the law occur due to changes in time, place and situation) [14]. The rule provides an interesting concept of Islamic law. Islamic law can change following the development of society depending on the place, time, and circumstances of that society. An example of the implementation of these legal changes is the change in the criterion of the new moon in determining the beginning of the month. In history itself, the criteria for the height of the hilal continue to change and differ from one period to the next [15].

The change in criteria was based on the scientific reason that there were many criticisms of the old criteria (2-3-8) which were considered too low astronomically. At an altitude of 2 degrees, it is considered that the crescent of the hilal is still too thin and it is difficult to overcome the shofar light

which is still too strong at that altitude after sunset. Meanwhile, the elongation parameter was changed because, if the elongation is greater, it will allow the hilal to be seen. Globally, no hilal was observed with an altitude of 2° and an elongation of 3° even with the help of a telescope.

The decision taken by the government to change the criteria to 3-6.4 is certainly through long studies and research. In the process, the Ministry of Religious Affairs of the Republic of Indonesia formed the Hijri Calendar Unification Team, which includes experts and experts in Falak and astronomy. The decision taken by the government, as an effort to accommodate all madhhabs, should be accepted and followed by all parties. In making decisions, the criteria set should meet the criteria of shar'i and astronomy because it is related to the benefit of the people. The unscientific nature of a decision will only add to the differences.

The change is also based on the Fatwa of Majelis Ulama Indonesia No. 2/2004, which states that "all Indonesian Muslims are obliged to obey the decree of the Indonesia Government regarding the determination of the beginning of Ramadan, Syawal, and Dhulhijjah". But in reality, the authority of Islamic mass organizations is certainly more dominant than the authority of the government. Despite having implemented the concept of wilayatul hukmi, the issue of criteria still adds to the differences between madzhab. The context in Indonesia means that the results of hisab rukyat are applied throughout Indonesia. If there is one region that successfully sees the hilal and is supported by hisab data, the results apply to all regions in Indonesia. The use of this concept is for the common good because of the problem of rukyat and hisab results that differ between one region and another [16]. The joint commitment in implementing the Imkanur Rukyat MABIMS criteria in Indonesia can be realized if rukyat and hisab observers agree to practice it.

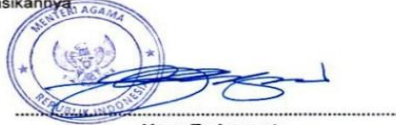
The validation text states that the new MABIMS criteria will be implemented in 2021 M (1443 H) or according to the readiness of each country to implement these criteria. Malaysia began applying the new MABIMS criteria in Muharram 1443 in conjunction with the Malaysian Falak Month 2021. The Indonesian Minister of Religious Affairs stated in the official MABIMS document that Indonesia applies the Imkanur Rukyat MABIMS 3-6.4 Criteria starting in 2022 and has been applied at the beginning of Ramadan 1443 H/2022 M.



## AD-REFERENDUM

**PERTEMUAN TAHUNAN TIDAK RASMI MENTERI-MENTERI AGAMA  
NEGARA BRUNEI DARUSSALAM, REPUBLIK INDONESIA, MALAYSIA  
DAN REPUBLIK SINGAPURA (MABIMS)**
**PERSETUJUAN KRITERIA IMKANUR RUKYAH BAHARU MABIMS**

Sempena Pertemuan Tahunan Tidak Rasmi Menteri-Menteri Agama Negara Brunei Darussalam, Republik Indonesia, Malaysia dan Republik Singapura (MABIMS) pada 8hb Disember 2021 telah bersetuju dan mengesahkan bagi pelaksanaan **Kriteria Imkanur Rukyah Baharu MABIMS (tinggi 3 darjah dan elongasi 6.4 darjah)** yang disepakati pada Mesyuarat Pegawai-Pegawai Kanan (SOM) MABIMS Kali Ke-44 Tahun 2019 di Republik Singapura pada 11 hingga 14 November 2019, untuk dilaksanakan pada tahun 2021M (1443H) atau tertakluk kepada kesediaan setiap negara anggota untuk mengimplementasikannya.



Yang Terhormat  
Bapak Yaqut Cholil Qoumas  
Menteri Agama Republik Indonesia  
Republik Indonesia

Figure 1. MABIMS Official Document Signed By The Indonesian Minister of Religious Affairs

According to the results of the author's interview with the Hisab Rukyat Team of Riau Islands Province, this new criteria has also been applied to *rukyyatul hilal* at the beginning of the month of Ramadan 1443 H/2022 M in accordance with the direction of the Minister of Religion of Indonesia Republic. The implementation of the Imkanur Rukyah MABIMS 3-6.4 Criteria was carried out by the Hisab Rukyat Team of Riau Islands Province in the Riau Islands Province, especially at Setumu Beach, Tanjungpinang City. The *rukyyatul hilal* activities carried out by the Hisab Rukyat Team of Riau Islands Province are in determining the beginning of the months of Ramadan, Syawal and Dhulhijjah every year. Although this criteria is better than the old criteria in terms of the height of the hilal, but through documentation of *rukyyatul hilal* activities carried out from 2022 to 2023 the hilal has never been seen in the Riau Islands Province, especially at Setumu Beach, Tanjungpinang City. The following is documentation of hilal data from 2022-2023:

Tabel 1. Hilal Data For The Beginning Of Ramadan 1443 H/2022 M

<b>RAMADHAN 1443 H</b>	
<b>Date</b>	: Saturday, 02 April 2022
<b>Time</b>	: 16.00 – 19.00 WIB
<b>Location</b>	: Setumu Beach Tanjungpinang City
<b>Location Position</b>	: Latitude : 0° 52' 35" LS Longitude : 104° 25' 2" BT Altitude : +- 0 meter
<b>Set Time</b>	: Sun : 18.09 WIB Moon : 19.04 WIB
<b>Sun &amp; Moon Data</b>	: Sun Azimuth : 275° 1' 34"

	Moon Azimuth : 278° 18' 16"
	Moon Altitude : 12° 26' 15"
	Moon Age : 28h 45m 20s
	Elongation : 13°35' 42"
	Position Of The Moon In The North - Above The Sun
	Moon Illumination Fraction : 1.41 %
<b>Weather Conditions</b>	: Temperature : 29° C
	: Pressure : 1008 mb
	: Humidity : 76 %
<b>Information</b>	: Hilal Not Visible Due To Thick Clouds

Tabel 2. Hilal Data For The Beginning Of Syawal 1443 H/2022 M

<b>SYAWAL 1443 H</b>	
<b>Date</b>	: Sunday, 01 Mei 2022
<b>Time</b>	: 16.00 – 19.00 WIB
<b>Location</b>	: Setumu Beach Tanjungpinang City
	Latitude : 0° 52' 35" LS
<b>Location Position</b>	: Longitude : 104° 25' 2" BT
	Altitude : +- 0 meter
<b>Set Time</b>	: Sun : 18.03 WIB
	: Moon : 18.28 WIB
	Sun Azimuth : 285° 9' 47"
	Moon Azimuth : 285° 47' 9"
	Moon Altitude : 05° 8' 39"
<b>Sun &amp; Moon Data</b>	: Moon Age : 14h 35m 56s
	: Elongation : 06° 2' 26"
	Position Of The Moon In The North - Above The Sun
	Moon Illumination Fraction : 0,28 %
<b>Weather Conditions</b>	: Temperature : 30° C
	: Pressure : 1005 mb
	: Humidity : 72 %
<b>Information</b>	: Hilal Not Visible Due To Thick Clouds

Tabel 3. Hilal Data For The Beginning Of Dzulhijjah 1443 H/2022 M

<b>DZULHIJAH 1443 H</b>	
<b>Date</b>	: Wednesday, 29 Juni 2022
<b>Time</b>	: 16.00 – 19.00 WIB



<b>Location</b>	: Setumu Beach Tanjungpinang City
	Latitude : 0° 52' 35" LS
<b>Location Position</b>	: Longitude : 104° 25' 2" BT
	Altitude : +- 0 meter
<b>Set Time</b>	: Sun : 18.10 WIB
	: Bulan : 18.25 WIB
	Sun Azimuth : 293° 14' 3"
	Moon Azimuth : 296° 50' 15"
	Moon Altitude : 01° 30' 04"
<b>Sun &amp; Moon Data</b>	: Moon Age : 08h 18m 35s
	: Elongation : 04° 48' 0"
	: Position Of The Moon In The North - Above The Sun
	: Moon Illumination Fraction : 0.19%
	Temperature : 29° C
<b>Weather Conditions</b>	: Pressure : 1006 mb
	: Humidity : 70 %
<b>Information</b>	: Hilal Not Visible Due To Thick Clouds

Tabel 4. Hilal Data For The Beginning Of Ramadhan 1444 H/2023 M

<b>RAMADHAN 1444 H</b>	
<b>Date</b>	: Wednesday, 22 Maret 2023
<b>Time</b>	: 16.00 – 19.00 WIB
<b>Location</b>	: Setumu Beach Tanjungpinang City
	Latitude : 0° 52' 35" LS
<b>Location Position</b>	: Longitude : 104° 25' 2" BT
	Altitude : +- 0 meter
<b>Set Time</b>	: Sun : 18.12 WIB
	: Bulan : 18.49 WIB
	Sun Azimuth : 270° 38' 16,38"
	Moon Azimuth : 272° 36' 28,8"
	Moon Altitude : 08° 17' 2,4"
<b>Sun &amp; Moon Data</b>	: Moon Age : 17h 49m 37s
	: Elongation : 08° 31' 12"
	: Position Of The Moon In The North - Above The Sun
	: Moon Illumination Fraction : 0.76 %
	Temperature : 29° C
<b>Weather Conditions</b>	: Pressure : 1006 mb
	: Humidity : 70 %

---

**Information** : Hilal Not Visible Due To Thick Clouds

---

Tabel 5. Hilal Data For The Beginning Of Syawal 1444 H/2023 M

---

**SYAWAL 1444 H**

---

<b>Date</b>	: Thursday, 20 April 2023
<b>Time</b>	: 16.00 – 19.00 WIB
<b>Location</b>	: Setumu Beach Tanjungpinang City
<b>Location Position</b>	Latitude : 0° 52' 35" LS
	Longitude : 104° 25' 2" BT Altitude : +- 0 meter
<b>Set Time</b>	Sun : 18.05 WIB
	Bulan : 18.15 WIB
<b>Sun &amp; Moon Data</b>	Sun Azimuth : 281° 31' 48"
	Moon Azimuth : 282° 43' 40,8"
	Moon Altitude : 01° 57' 36"
	Moon Age : 06h 52m 59s
	Elongation : 08° 31' 12"
<b>Weather Conditions</b>	Position Of The Moon In The North - Above The Sun
	Moon Illumination Fraction : 0.10 %
	Temperature : 29° C
<b>Information</b>	Pressure : 1006 mb
	Humidity : 70 %
<b>Information</b>	: Hilal Not Visible Due To Thick Clouds

---

Tabel 6. Hilal Data For The Beginning Of Dzulhijjah 1444 H/2023 M

---

**DZULHIJAH 1444 H**

---

<b>Date</b>	: Sunday, 18 Juni 2023
<b>Time</b>	: 16.00 – 19.00 WIB
<b>Location</b>	: Setumu Beach Tanjungpinang City
<b>Location Position</b>	Latitude : 0° 52' 35" LS
	Longitude : 104° 25' 2" BT Altitude : +- 0 meter
<b>Set Time</b>	Sun : 18.09 WIB
	Bulan : 18.19 WIB
<b>Sun &amp; Moon Data</b>	Sun Azimuth : 293° 15' 17,28"
	Moon Azimuth : 297° 25' 36,84"
	Moon Altitude : 01° 25' 1,92"

---

	Moon Age : 06h 49m 00s
	Elongation : 04° 29' 24,36"
	Position Of The Moon In The North - Above The Sun
	Moon Illumination Fraction : 0.18 %
	Temperature : 29° C
<b>Weather Conditions</b>	: Pressure : 1006 mb
	Humidity : 70 %
<b>Information</b>	: Hilal Not Visible Due To Thick Clouds

From the table above, it can be seen that the implementation of Imkanur Rukyat MABIMS 3-6.4 Criteria carried out by Hisab Rukyat Team of Riau Islands Province in the Riau Islands Province, especially at Setumu Beach, Tanjungpinang City, has never been successfully seen. Even though the criteria have changed from the old criteria (2-3-8) to the new criteria (3-6.4). This is because the Riau Islands Province area is included in the wet month category. If the amount of rain in 1 month > 100 mm, then this month is called a wet month, that is, the weather conditions are more often cloudy than sunny weather conditions [17].

BMKG (Badan Meteorologi, Klimatologi dan Geofisika) Tanjungpinang City as a representative of Hisab Rukyat Team of Riau Islands Province routinely conducts *rukyyatul hilal* activities independently. This activity is carried out every month outside the official *rukyyatul hilal* activities carried out by Hisab Rukyat Team of Riau Islands Province. The selection of *rukyyatul hilal* locations is also carried out randomly to get the ideal location in carrying out *rukyyatul hilal*. In *rukyyatul hilal* activities carried out by BMKG (Badan Meteorologi, Klimatologi dan Geofisika) Tanjungpinang City in determining the beginning of the month of Rabiul Akhir 1444 H/2023 M hilal was successfully seen. The following is the documentation of the hilal data for the beginning of Rabiul Akhir 1444 H/2022 M :

Tabel 7. Hilal Data For The Beginning Of Rabiul Akhir 1444 H/2022 M

<b>RABIUL AKHIR 1444 H</b>	
<b>Date</b>	: Wednesday, 26 Oktober 2022
<b>Time</b>	: 16.00 – 19.00 WIB
<b>Location</b>	: Tanjungmoco Beach Tanjungpinang City
	Latitude : 0° 50' 32" LU
<b>Location Position</b>	: Longitude : 104° 29' 56" BT
	Altitude : 7 meter
<b>Set Time</b>	: Sun : 17.48 WIB
	: Moon : 18.36 WIB

---

<b>Sun &amp; Moon Data</b>	:	Sun Azimuth : 257° 29' 49,2"
		Moon Azimuth : 252° 41' 9,6"
		Moon Altitude : 10° 14' 16,8"
		Moon Age : 06h 52m 59d
		Elongation : 11° 18' 36"
		Position Of The Moon In The North - Above The Sun
		Moon Illumination Fraction : 1.25%
<b>Weather Conditions</b>	:	Temperature : 28° C
		Pressure : 1005 mb
		Humidity : 69 %
<b>Information</b>	:	Hilal Visible At 18:10 WIB

---



Figure 2. Hilal Photo Of The Beginning Of Rabiul Akhir 1444 H/2022 M

The new criteria are actually better than the old criteria in terms of hilal altitude, although in its implementation this criteria still cannot provide positive results when applied in Riau Islands Province, especially at Setumu Beach, Tanjungpinang City. But when implemented in a different location, namely Tanjungmoco Beach Tanjungpinang City, it gave positive results even though the hilal was only seen once, namely at the beginning of Rabiul Awal 1444 H/2022 M. Because there are many factors that affect the visibility of the hilal in a location, such as weather, rukyat method, and rukyat location [18].

## 2. Imkanur Rukyat MABIMS 3-6,4 Criteria According To The Hisab Rukyat Team Of Riau Islands Province's Viewpoint

The effort to unify the Global Islamic Calendar is something that is still often discussed by Falak Science figures in order to minimize differences in determining the beginning of the Hijriyah month. The Hijri calendar is an annual requirement used to determine the beginning of Ramadan, Syawal, and Dzulhijjah. The differences in eid that often occur lately are more due to the use of different criteria. Both hisab and rukyat adherents basically use the criteria for determining the

beginning of the month. Various meetings have been held to accommodate ideas and ideas related to the criteria used in determining the new moon. This is also expected to bridge the differences in mazhab of hisab and rukyat in order to minimize confusion in the community due to confusion about who to follow in starting and ending worship.

Of course the determination of the beginning of the month is crucial because it is related to the time of worship, especially the determination of Ramadan, Syawal, and Dzulhijjah. And the role of Falak Science figures is needed to add insight and treasures to falakkan science. The influence of a science figure is very strong for the general public. Because proficiency in their field is certainly recognized by the general public. In practice, the discussion of determining the beginning of the month is not an easy matter, because the difference is a form of caution for the people in carrying out worship.

Many ideas certainly contributed to the birth of various criteria used in determining the beginning of the month. Updates related to the hilal altitude criteria continue to be studied by Falak science figures and the government. One of them is the application of the new MABIMS criteria with a hilal altitude of 3 degrees and an elongation of 6.4 degrees. This is considered the first step in unifying the Islamic calendar, starting from the regional scope before heading to the international scope. Of course, the falak figures have different opinions regarding the application of the new criteria.

In this research, the author conducted interviews with several sources, namely Bimas Islam, MUI (Majelis Ulama Indonesia), NU (Nahdhatul Ulama), Muhammadiyah and BMKG (Badan Meteorologi, Klimatologi dan Geofisika). The above sources are members of Hisab Rukyat Team of Riau Islands Province and certainly have competence in hisab and rukyat. This research will look at how the Hisab Rukyat Team of Riau Islands Province's viewpoint about the new MABIMS criteria. The viewpoint of Hisab Rukyat Team of Riau Islands Province are as follows:

### **1. Bimas Islam**

This new MABIMS criteria is the result of a long-term study and has been approved by astronomers from Malaysia, Brunei Darussalam, Indonesia and Singapore (MABIMS). This criteria is an amendment to the old criterion agreed upon in 1992, which was the hilal altitude of 2°, elongation of 3° and the age of the moon of 8 hours. This criteria were considered too low astronomically, although there were some testimonies that were legally acceptable because the witnesses had been sworn in by a Religious Court Judge. Under the old criterion, the moon was still so thin that it was impossible to beat the light of the *syafak*, which was still quite strong at 2° after sunset. So this old criterion was proposed to be changed in several meetings of the Hisab Rukyat Team of the Ministry of Religious Affairs and meetings of MABIMS countries (Brunei Darussalam, Indonesia, Malaysia and Singapore) [19].

Bimas Islam agreed on the new MABIMS criteria, because the Ministry of Religious Affairs has followed the development of these criteria since 2012. On June 27-29, 2012 at Aston Hotel Denpasar, the MABIMS Islamic Rukyat Takwim Harmonization Conference was held. This activity

recommends a review of the old MABIMS criteria and needs to consider shar'i, sociological, and psychological aspects in determining the beginning of the qamariah month. Ministers of Religious Affairs from all MABIMS countries agreed on the new MABIMS criteria through a referendum which states that the application of the new MABIMS criteria begins in 2022, although Malaysia has implemented it in 2021.

To determine the effectiveness of the implementation of this new criteria, it is necessary to conduct long-term research on the position of the new moon in the coming years and proven by field observations. So far, the Hisab Rukyat Team of Riau Islands Province has never succeeded in seeing the hilal image using the old criteria. It is expected that with the application of the new criteria, the image of the hilal can be seen by the Hisab Rukyat Team of Riau Islands Province. The chance that the hilal can be seen is certainly higher if this new criteria is applied, because in terms of the elongation angle this criteria increases from  $3^\circ$  to  $6.4^\circ$ , thus making the hilal light brighter than the syfak light so that the image of the hilal can be seen.

In addition, astronomers are also expected to support this by socializing the new MABIMS criteria to the public, so that people understand comprehensively the application of these new criteria in determining the beginning of the month. For the sake of mutual benefit, it is hoped that all Indonesian people will be able to unite their views and policies in determining the beginning of the qamariah month by following the decision of Indonesia Government [20].

## **2. MUI Riau Islands Province**

The implementation of the new MABIMS criteria has recently become an interesting topic of discussion, especially in Indonesia. The dynamics of the implementation of this criteria have led to differences in the determination of the beginning of the qamariah month in Indonesia. In addition, there are requests to delay or even reject the implementation of the new criteria by various parties, because they think the new criteria still have shortcomings. In fact, improvements can be made simultaneously with the implementation of this new criteria. This new criteria needs to be implemented immediately because it comes from hundreds of years of scientific studies and scientific studies can certainly be accounted for.

This new criteria is a big idea of Indonesia that has been discussed for several years to find the best criteria solution for the unification of the Hijri Calendar. This new criteria has been discussed for a long time and has to be socialized before it is implemented in 2022. This new criteria is one that has been astronomically studied to resolve the formation of the Hijri Calendar, especially in the Southeast Asian region. Therefore, there needs to be a mutual agreement for the sake of the implementation of this new criteria.

The observation test of this new criteria is not conducted to assess whether or not the new

criteria is efficient. This new criteria is a tool to verify the position of the hilal that is too low, then used to check whether what is seen is really the hilal or not. The new criteria data is currently very valid data that can be accounted for.

MUI expects Indonesia or Southeast Asia to be the center in the unification of the Hijri Calendar, because it sees that many efforts have been made to realize this. The testimony of seeing the hilal in any region in Southeast Asia is expected to be a reference to enter the beginning of the qamariah month simultaneously. The government as the highest authority is expected to minimize the gaps that can cause differences. The government must have a consistent attitude towards determining the beginning of the qamariah month, and have a strategic solution in determining the beginning of the qamariah month in Indonesia, especially in the Southeast Asia region [21].

### 3. NU (Nahdlatul Ulama) Tanjungpinang City

Based on the Decree of the PBNU Falakiyah Institute Number: 001/SK/LF-PBNU/III/2022, a new imkanur rukyat criterion has been established, namely the Nahdlatul Ulama Imkan Rukyat criteria. This criteria is expressed as a minimum mar'i hilal altitude of  $3^\circ$  and a minimum haqiqy hilal elongation of  $6.4^\circ$ . This new criteria has 2 functions, namely (1) as the basis for the formation of the Nahdlatul Ulama Almanac and (2) as the basis for receiving *rukyatul hilal* reports in determining the beginning of the lunar month in the Nahdlatul Ulama Hijriyah Calendar. There are 3 reasons that underlie the revamping of Imkanur Rukyat Criteria in Nahdlatul Ulama, namely (1) environmental changes, (2) international vision.

The new MABIMS criteria have been an idea for a long time to be used as a basis for updating the old criteria and the implementation of the new criteria must be implemented immediately. NU fully agrees and supports the implementation of this new criteria. However, the implementation of this criteria still needs time to adapt. Given that this new criteria has just been applied at the beginning of Ramadan 1443 H/2022 M then, it still needs socialization efforts to the level of structure Nahdlatul Ulama. Therefore, the management of the PBNU Falakiyah Institute is a transition phase from the old criteria to the new criteria.

In the transition phase, if there is a report of the sighting of the hilal even though the parameters of the hilal at that location are still below the new criteria, then there is the concept of *Hadidul Bashar*. This concept refers to the opinion of Imam Ibn Hajar Al-Haitami. In this concept, people who reports the sighting of the hilal even though the parameters are below the criteria and the people is a person who is blessed with the ability to see better and sharper than the average human being, then the results of his rukyat are accepted in fiqh. However, fiqh stipulates that the position of *Hadidul Bashar* is identical to hishab. So that both of them can use the results of their rukyat only for themselves and those around them who believe in them.

Regarding the difference in decisions between PBNU and PWNU, it is a natural thing. The difference in local hisab results must affect the resulting time because the hisab used by the Ministry of Religion and MABIMS as a whole is generally contemporary hisab. PBNU considers that there is no problem with this and suggests that the elongation used is topocentric elongation so that the new criteria are more flexible. Massive socialization needs to be intensified considering that there are still differences that occur in determining the beginning of the month of Shawwal 1443 H/2022 M. The government must also control the hisab method used so that there are no differences in hisab results [22].

#### **4. Muhammadiyah Riau Islands Province**

The new MABIMS criteria are basically conceptually better than the old MABIMS criteria. Although actually when viewed in the entire history of Islamic civilization, the new MABIMS criteria are still relatively low. In its implementation, this new criteria still face challenges in the field, Muhammadiyah continues to monitor the dynamics and implementation in the future. At least the presence of the new MABIMS criteria shows the Government's response to rukyat claims using the old MABIMS criteria.

Muhammadiyah still cannot say that it agrees with this new criteria. It depends on the consistency and consequences in the field, it also depends on how the Government implements these new criteria, especially how the communication and socialization of the Government (Ministry of Religious Affairs) with Islamic organizations, especially with Muhammadiyah. The point is that socially and scientifically this new criteria is still in the implementation test stage, and has pros and cons. As is known, this criteria was only applied in determining the beginning of Ramadan 1443 H/2022 M ago, and as is known in Syawal 1443 H/2022 M there were dynamics and polemics. Whether it is efficient or not can only be seen and assessed in the next few years.

The impact of the implementation of the new criteria has pluses and minuses, because after all, until now the desire and calling of the people to carry out *rukyyatul hilal* is almost unstoppable. Therefore, it is possible that someday there will be claims or reports that claim to have seen the image of the hilal even though it is below the limit of the new criteria and Muhammadiyah has witnessed such phenomena many times. Until now, especially in Indonesia, the height of the hilal has indeed become the main standard and parameter for determining the beginning of the qamariah month, although in fact the indicators of the sighting of the hilal are very many such as elongation, the age of the moon, the condition of the horizon, the instruments used, the observers themselves, and others.

Over time in concept and practice, the renewal of a criteria is a necessity, because in history itself the hilal altitude criteria continue to change and differ from one period to the next. Especially Muhammadiyah, whose tendency today is to switch to an Islamic calendar that is global (international),



not local (national), such as the 2016 Turkish Congress which decided on the need for a Global Islamic Calendar. Where the majority of the participants of the Congress at that time wanted the realization of the Global Islamic Calendar. In practice, this new criteria can be used as guidelines for verification of *rukyatul hilal*, so as to create better quality *rukyatul hilal*. However, if this criteria is used as a guideline for the formation of the Hijriyah Calendar, of course it still has to go through more field tests.

The government (Ministry of Religious Affairs) must consistently and consequently implement and apply this new criteria. The government must curb rukyat claims below the threshold of this new criteria. The government must also continue to educate the society about this and at the same time the government must build a substantive dialog with mass organizations, especially with Muhammadiyah which has a great influence in Indonesia [23].

## 5. BMKG Tanjungpinang City

The new MABIMS criteria were proposed because the old MABIMS criteria were considered by all MABIMS countries to be low and did not comply with astronomical criteria. This new criteria is based on astronomical data that there is no testimony of a crescent moon whose height is less than  $3^\circ$  and its elongation is less than  $6.4^\circ$ . A crescent moon at an altitude of less than  $3^\circ$  will physically be disturbed by the *syafak* light which is still quite bright. In addition, a crescent moon whose elongation is less than  $6.4^\circ$  is still too thin to defeat the light of the *syafak*.

The implementation of the new MABIMS criteria by the Indonesian Government was based on the reason that the old criteria were deemed no longer in accordance with astronomical data. Basically, BMKG agrees with the new MABIMS criteria set by the Government, because this new criteria are based on the results of astronomical data analysis. Basically, BMKG is only the implementer of every *rukyatul hilal* activity carried out in Indonesia, so whatever criteria are agreed upon by the Government, BMKG will implement it and report on it.

The new MABIMS criteria are considered valid because they are based on astronomical data. So new criteria need to be applied first and there is no need to immediately update them before they are implemented correctly. The new MABIMS criteria are expected to become a meeting point for rukyat practitioners and reckoning practitioners and will be directed towards the Global Islamic Calendar in stages from the National Islamic Calendar (MABIMS country) towards the Global Islamic Calendar. Implementation of the criteria in the calendar requires the agreement of the authorities. Therefore, it is hoped that all parties can agree on a single authority that determines the Islamic calendar, especially the beginning of the months of Ramadan, Syawal and Dzulhijjah by applying this new criteria [24].

From the views of the sources above, the author concludes that there are different views regarding this new criterion. Bimas Islam, MUI (Majelis Ulama Indonesia), NU (Nahdhatul Ulama), and BMKG (Badan Meteorologi, Klimatologi dan Geofisika) agreed regarding this new criteria, while

Muhammadiyah has not agreed regarding this new criteria. This is a natural thing because their viewpoint are of course based on the background of each character, and also their understanding and knowledge regarding hisab and rukyat. Several viewpoint provide suggestions for improvements related to this new criteria. Studies or research need to continue to be carried out because this criteria is a new criteria and needs to be tested in the next few years so that it can become a more established criteria and can be accepted by all people.

#### **D. Conclusion**

Based on the discussion and analysis above, it can be concluded that :

1. Implementation of the Imkanur Rukyat MABIMS 3-6.4 Criteria in the Riau Islands Province, especially at Setumu Tanjungpinang Beach, began to be implemented at the start of the month of Ramadhan 1443 H/2022 M. This is in accordance with the statement of the Indonesian Minister of Religion in the official MABIMS document that Indonesia applies the Imkanur Rukyat MABIMS 3-6.4 Criteria starting in 2022. Implementationally, this new criteria has not yet produced positive results even though this new criteria is better than the old criteria in terms of hilal altitude. Several documentations of *rukyatul hilal* activities carried out officially by Hisab Rukyat Team of Riau Islands Province from 2022 to 2023 show that the hilal has never been seen in the Riau Islands Province, especially at Setumu Beach, Tanjungpinang City. However, BMKG which carries out *rukyatul hilal* activities independently, claims to have succeeded in seeing the new moon at the beginning of Rabiul Akhir 1444 H/2022 M at Tanjungmoco Beach, Tanjungpinang City. This could happen considering that there are several factors that influence the success of *rukyatul hilal* in a location, such as weather, rukyat method and rukyat location.
2. From the various viewpoints of Hisab Rukyat Team of Riau Islands Province regarding the Imkanur Rukyat MABIMS 3-6.4 Criteria, the author can conclude that the views of Hisab Rukyat Team of Riau Islands Province are divided into 2 views. The first view is that you agree with this criteria and the second view is that you do not agree. The viewpoint that expressed agreement were Bimas Islam, (Majelis Ulama Indonesia), NU (Nahdhatul Ulama), and BMKG (Badan Meteorologi, Klimatologi dan Geofisika) while those who said they had not agreed or not were Muhammadiyah. The first view believes that the new MABIMS criteria are better than the previous criteria, because they are considered to be adequate and can be used as new rukyat standards. This new criteria is also the result of hundreds of years of research so that it can be scientifically justified. The second view feels

that this criteria still needs to be tested theoretically and practically, because there have been dynamics and polemics in determining the beginning of the month of Syawal 1443 H/2022 M. The Government's inconsistency in applying this new criteria is also a consideration, because the Government must consistently regulate rukyat claims which still falls under this new criteria. The government must also build substantive dialogue with community organizations in Indonesia and need to carry out massive socialization about this new criteria.

## References

- [1] M. A. Angkat, "Kalender Hijriyah Global Dalam Perspektif Fiqh," *AL-MARSHAD : Jurnal Astronomi Islam dan Ilmu-Ilmu Berkaitan*, vol. 3, no. 2, p. 4, 2017.
- [2] T. Djamaluddin, "Bismillah, Indonesia Menerapkan Kriteria Baru MABIMS," 04 September 2022. [Online].
- [3] N. Hermuzi and M. A. Angkat, "Uji Kelayakan Bukit Cermin Kota Tanjungpinang Provinsi Kepulauan Riau Sebagai Lokasi Rukyatul Hilal (Analisis Geografis, Meteorologis Dan Klimatologis)," *AL-MARSHAD : Jurnal Astronomi Islam dan Ilmu-Ilmu Berkaitan*, vol. 07, no. 02, p. 109, 2021.
- [4] E. M. Sangadji and Sopiah, *Metodologi Penelitian*, Yogyakarta: ANDI, 2010, p. 171.
- [5] Sutopo, *Metodologi Penelitian Kualitatif*, Surakarta: Sebelas Maret University Press, 2002, p. 50.
- [6] Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif & RND*, Bandung: Alfabeta, 2019.
- [7] S. Suryabrata, *Metodologi Penelitian*, Jakarta: PT. Raja Grafindo Persada, 1997, p. 22.
- [8] Sugiyono, *Memahami Penelitian Kualitatif*, Bandung: Alfabeta, 2009, p. 50.
- [9] I. Q. Al-Jauziyah, *I'lam al-Muwaqi'in*, vol. III, Bairut: Maktabah al-'Asriyah, 2003, p. 33.
- [10] A. N. F. Sari, "Perspektif Tokoh Ilmu Falak Indonesia Terhadap Kriteria Baru Imkanu Rukyat MABIMS Dalam Penetapan Awal Bulan Hijriyah Di Indonesia," UIN Walisongo Semarang, Semarang, 2022.
- [11] N. F. Maratus, "Implementasi Neo Visibilitas Hilal Mabims di Indonesia," *Ahkam*, vol. 10, no. 02, p. 15, 2022.
- [12] S. Ernawati, "Aplikasi Hopfield Neural Network Untuk Prakiraan Cuaca," *Jurnal Meteorologi dan Geofisika*, vol. 10, no. 02, pp. 151-175, 2009.
- [13] M. A. d. Angkat, "Tingkat Kelayakan Pantai Tanjung Pinggir Sekupang Kota Batam Provinsi Kepulauan Riau Sebagai Lokasi Rukyatul Hilal," *TERAJU : Jurnal Syariah dan Hukum*, vol. 05, no. 01, 2023.
- [14] M. Hasbi, Interviewee, *Wawancara dengan Bapak Muhammad Hasbi selaku Kasi Bimas Islam Kementerian Agama Kabupaten Bintan*. [Interview]. 29 Maret 2023.

- [15] R. A. Anugerah, Interviewee, *Wawancara dengan Bapak Robby Akbar Anugerah selaku PMG Muda Pelaksana Lanjutan BMKG Tanjungpinang*. [Interview]. 21 Maret 2023.
- [16] M. Taufiq, Interviewee, *Wawancara dengan Bapak M. Taufiq selaku Ketua Lakpesdam PCNU Kota Tanjungpinang*. [Interview]. 09 Mei 2023.
- [17] R. Nawi, Interviewee, *Wawancara dengan Bapak Rafris Nawi selaku Wakil Ketua Muhammadiyah Provinsi Kepulauan Riau*. [Interview]. 18 Agustus 2023.
- [18] Z. A. Muttaqen, Interviewee, *Wawancara dengan Bapak Zubad Akhadi Muttaqen selaku MUI (Majelis Ulama Indonesia) Provinsi Kepulauan Riau*. [Interview]. 29 Mei 2023.
- [19] A. J. R. Butar-Butar, "Paradoks Kriteria MABIMS 3-6.4," 09 Mei 2022. [Online]. Available: <https://oif.umsu.ac.id/2022/05/paradoks-kriteria-mabims-3-6-4/>.
- [20] A. J. R. Butar-Butar, "Dinamika Para Ahli Tentang Kriteria 3-6.4," 26 April 2022.
- [21] S. T. Qulub and A. Munif, "The Urgency and Contribution of Information Technology in Verifying the Beginning of Shubuh Time and the Height of Hilal Determining the Beginning of the Hijri Month," *Al-Marshad: Jurnal Astronomi Islam dan Ilmu-Ilmu Berkaitan*, vol. 09, no. 02, pp. 114-128, 2023.
- [22] H. Nofran and M. A. Angkat, "Uji Kelayakan Bukit Cermin Kota Tanjungpinang Provinsi Kepulauan Riau Sebagai Lokasi Rukyatul Hilal," *Al-Marshad: Jurnal Astronomi Islam dan Ilmu-Ilmu Berkaitan*, vol. 07, no. 02, pp. 104-124, 2021.
- [23] M. A. Angkat, R. P. Hidayatullah and R. A. Putra, *Imkanur Rukyat : Perkembangan, Implementasi & Pandangan Para Ahli Di Indonesia*, Yogyakarta: Istana Agency, 2024.
- [24] M. A. Angkat and M. A. Triputra, *Rukyatul Hilal Di Kota Batam*, Yogyakarta: CV. Bening Pustaka, 2024.