



Navigating Tradition and Science

SINGAPORE'S APPROACH IN DETERMINING THE HIJRI CALENDAR

Office
OF THE
MUFTI



Navigating Tradition and Science - Singapore's Approach in Determining the Hijri Calendar
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CONTENT PAGE

Foreword by Mufti of Singapore	2
Foreword by Darussalam Mosque (Chairman)	3
Understanding Singapore's Approach in Determining the Hijri Calendar: Introduction, History and Approaches	
Introduction to <i>Falak Shar'ī</i>	4
Understanding the Concept of <i>Hilāl</i> (Crescent Moon)	6
A Brief History of <i>Falak Shar'ī</i> in Singapore	8
Singapore's Approach in Determining the New Months in the Islamic Calendar	12
Reasons for Adopting the <i>Imkanur Ru'yah</i> Method in Singapore	14
<i>Imkanur Ru'yah</i> Method in Relation to MABIMS Criteria	15
Revised MABIMS Criteria	16
The First Application of the New MABIMS Criteria	17
The Autonomy of Each Country to Determine the New Hijri Month	18
The Office of the Mufti's (OOM) Experience and Data in <i>Hilāl</i> Observation	20
Frequently Asked Questions (FAQ): Clearing Misconceptions Surrounding <i>Falak Shar'ī</i> in the Singapore Context, and Religious Guidance	22

Foreword by MUFTI OF SINGAPORE

Assalamualaikum wr wb,

We live in an era of advanced technological and scientific progress and development. Some see science and technology as a threat to, and can undermine, faith. As Muslims, we take a different view. Our Islamic tradition thrived on the cooperation between science and faith, not a conflict or a contradiction. This has allowed Muslim communities to progress and advance, and develop the confidence and resilience in finding new ways and solutions to the complex challenges they may encounter in life.

An example is the matter of determining the lunar calendar based on the movements of God's creations in the heavens, i.e. the sun and the moon. Whilst these movements are physical and visible phenomena, astronomical science has progressed so far as to predict these movements with precision by using advanced mathematical calculations. Such calculations are helpful when visibility is affected or weakened, due to the climate or atmospheric conditions in certain places. These methods are already indicated by the Prophet Muhammad ﷺ as legitimate

ways of determining the Hijri calendar, and continue to guide us in adopting the *Imkanur Ru'yah* method.

Many of us may not be familiar with this body of knowledge that exists within the past and contemporary Islamic intellectual tradition. We therefore hope that this booklet will serve as an introduction. It also explains Singapore's unique approach in determining the Hijri calendar, and why Singapore adopts the *Imkanur Ru'yah* method, as it is suited for our specific climate and geographical location.

We hope that this booklet will be of benefit to you as you seek to gain a deeper understanding of Singapore's approach in determining the Hijri calendar, and to clear your doubts on the legitimacy and significance of astronomical calculations in determining the timing of Islamic events and religious observances.

Nazirudin Mohd Nasir
Mufti of Singapore



Foreword by CHAIRMAN OF DARUSSALAM MOSQUE

Assalamualaikum, Wr. Wb.

Alhamdulillah, Masjid Darussalam has started its very own brand of Hikmah since 2020. This series of casual and open talks brings together our very own local Asatizah and domain experts to discuss topics that are current and contextual to guide our community and those who might join the talk of the town.

Realising the hot discussion among our Muslim community when we welcome Ramadan and celebrate Eid on a different date from our neighbours, Hikmah Series explains it virtually on July 6, 2022.

We received plenty of positive feedback on the sharing of *Falak* and its evolution in determining our Islamic calendar, especially in justifying when to start our fasting month of Ramadan and both Eids.

With the support of the Office of the Mufti and the aspiration of our Mufti of Singapore, Sohibussamahah Ustaz Dr Nazirudin Nasir, we are providing our Muslim community a compact yet comprehensive sharing on *Falak* in this handy booklet.

We hope this effort will provide informative knowledge on *Falak* and how it has progressed in Singapore. On top of that, we also would like to welcome you to our 'walk-thru' panel that displays the brief version of this booklet available at Darussalam Mosque for you to experience a more close-up pictorial explanation of *Falak* and understand it in our local context in Singapore.

Thank you.

Rashid Bin Ramli
Chairman of Darussalam Mosque



Introduction to **FALAK SHAR'Ī**

Falak, or astronomy, is a branch of science pertaining to celestial objects, space, and the physical universe as a whole. *Shar'ī* refers to something which is in accordance with the Shariah¹.

Falak Shar'ī or more widely known as Islamic astronomy is a branch of astronomy that aids in the implementation of some aspects of the Shariah and religious practice, particularly in our *ibadah*, or worship. It concerns itself with two celestial objects; namely, the Sun and the Moon, and their movements and positions relative to our planet, Earth. As they move in the sky, we can better determine the passage of time that helps us identify the start and end time of many aspects of our religious practices. The following verses of the Holy Qur'an refer to the two aforementioned celestial objects:

لَا الشَّمْسُ يَنْبَغِي لَهَا أَنْ تُدْرِكَ الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ

"Neither is it for the Sun to overtake the Moon, nor can the night outpace the day. Each one is floating in an orbit."

Surah Yā-Sīn: 40

وَهُوَ الَّذِي خَلَقَ اللَّيْلَ وَالنَّهَارَ وَالشَّمْسَ وَالْقَمَرَ كُلٌّ فِي فَلَكٍ يَسْبَحُونَ

"He is the One who has created the night and the day, and the Sun and the Moon, each floating in an orbit."

Surah Al-Anbiyā': 33

¹ Shariah is the legal code of Allah's commands for Muslims, which constitutes a system of duties that are incumbent upon all Muslims by virtue of their religious belief.


Falak Sharī centres on the following **five main topics** of discussion:



Qiblah Direction



Solar & Lunar Eclipses



Prayer Times

Sighting of *Hilāl* or New Moon



***Taqwīm* or Calendars**



Understanding the Concept of **HILĀL (CRESCENT MOON)**

يَسْأَلُونَكَ عَنِ الْأَهْلِ قُلْ
هِيَ مَوْقِيتٌ لِلنَّاسِ وَالْحَجِّ

*“They ask you about the new Moons.
Say: They are indicative of time for
the people, and of the Hajj.”*

Surah Al-Baqarah: 189

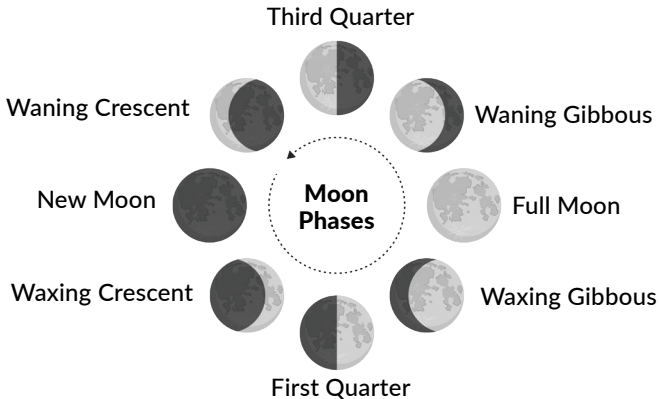


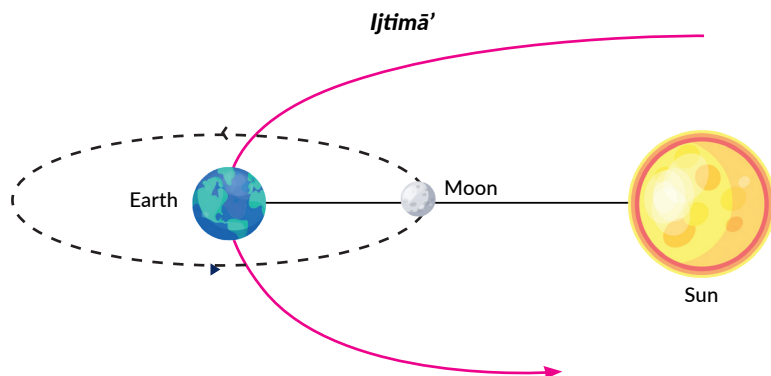
the month of February every leap year, which happens every four years. Almost all countries in the world, including Singapore, have adopted the Gregorian calendar as their civil calendar.

The Islamic calendar (also known as the Hijri calendar) is a lunar calendar, which is based on the phases of the Moon. The lunar calendar has 12 months, each of which has either 29 or 30 days. What this means is that there are no fixed Gregorian dates for important dates in our calendar, such as Eid al-Fitr.

This is in opposition to the Gregorian calendar, which is a solar calendar consisting of a fixed number of 365 days in a year, with a leap day added to

Moon phases refer to the appearance of the illuminated portion of the Moon as seen from Earth. As the Moon orbits around the Earth, the Sun illuminates different portions of the Moon, creating the various phases, which are: New Moon, Waxing Crescent, First Quarter, Waxing Gibbous, Full Moon, Waning Gibbous, Third Quarter, and Waning Crescent.





During the period of *ijtimā'*, or conjunction, the side of the Moon facing earth is not illuminated by the Sun, and appears completely dark. As the Moon continues to orbit around earth, the illuminated portion gradually becomes visible as a thin crescent, or *hilāl*.

The first day of the new Islamic month begins with the new Moon. Traditionally, this is determined when the new Moon is visible and can be sighted, right after the Sun sets completely on the western horizon, on the evening of the 29th day of the month according to the Hijri calendar.

If the new Moon is not visible, a 30th day is added to the current month, to be automatically followed by the first day of the following month.

The sighting of the new Moon is usually observed by each country's or community's Islamic authorities to determine the start of important months for Muslims all around the world. These are the months of Ramadan, Syawal, Zulhijjah, and Muharram. For example, the obligation of fasting is contingent on the sighting of the *hilāl* to indicate the beginning of Ramadan, as mentioned in the following Hadith:

عن أبي هريرة رضي الله عنه أن رسول الله صلى الله عليه وسلم قال:
صُومُوا لِرُؤْيَيْتِهِ وَأَفْطِرُوا لِرُؤْيَيْتِهِ، فَإِنْ غَيَّبَ عَلَيْكُمْ فَأَكْمِلُوا عِدَّةَ شَعْبَانَ ثَلَاثِينَ

Abu Hurairah (May Allah be pleased with him) reported:
The Messenger of Allah ﷺ said:

"Fast upon sighting [the new moon], and break the fast upon sighting it, and should it be obscured, then complete thirty days of Sha'ban."

Bukhari & Muslim

A Brief History of **FALAK SHAR'Ī IN SINGAPORE**

The earliest recorded history of *hilāl* sighting in Singapore can be traced back to the year 1924. The sightings were conducted at Mount Faber and Fort Canning Observation Stations, and were led by the then-Chief Kadi of Singapore, Imam Haji Muhammad Yusuf bin Haji Muhammad Said, J.P. (Justice of the Peace).

Since then, there had been numerous attempts at *hilāl* sighting at multiple observation points all around Singapore, other than Mount Faber and Fort Canning. Other observation points from which *hilāl* sighting have been attempted include Buona Vista Hill, Pasir Panjang, Changi Coast, Bukit

Timah, Raffles Lighthouse, Sultan Shoal Lighthouse, and the rooftops of other tall buildings, such as the Asia Building (now Ascott Raffles Place).

Despite all the attempts throughout the years, there have been no known reports of positive *hilāl* sightings in Singapore due to the atmospheric and geographical factors. Given the repeated unsuccessful attempts to sight the *hilāl*, an alternative way in determining the new Moon was deemed as necessary, and was eventually implemented, i.e., using astronomical calculations (*hisāb*) to predict the visibility of a crescent Moon above the horizon.



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We recognise the contributions of two important figures in our community who had introduced and implemented *hisāb* or astronomical calculations as an alternative to sighting to determine the new months of Islam here in Singapore.

KIAYI AHMAD ZOHRI MUTAMMIM

(1905-1985)



Kiyai Zohri was well-known for being the only scholar during his time who regularly predicted the beginning of the Islamic months of Ramadan, Syawal, and Zulhijjah for the country.

He wrote short reports for the local Malay newspaper, *Berita Harian*, explaining the Moon's altitude and duration over the horizon, as well as its conjunction date and time. He would then declare whether it was possible to sight the crescent Moon.

While he was a well-known *Falak* scholar at that point of time who contributed immensely on *Falak*, he made it clear that the official start of the month would still depend on the Mufti making his official announcement.²



SHAIKH SYED ISA BIN SEMAIT

(1938-)



During Shaikh Syed Isa's tenure as Mufti of Singapore, he proposed to the Fatwa Committee that Singapore shift from *Ru'yat al-Hilāl* (new Moon sighting) to *hisāb*. Since 1974, the Islamic Religious Council of Singapore (MUIS) has adopted *hisāb* as the preferred method to determine the beginning of the Hijri calendar, based on the guidance set by the Fatwa Committee of Singapore.

² Firdaus Yahya, Introduction to *Falak Shar'ī*- Islamic Astronomy for beginners, pg 5

Summary of Fatwa Decision 22/1/1974:

The Fatwa Committee of Singapore in 1974 concluded that the beginning of Ramadan and Syawal could be determined through astronomical calculations. This conclusion rested upon the verse in 10:5 & 55:5, which asserted that the orbit of the Moon, Sun and other celestial bodies adhere to the divine calculations of Allah (s.w.t). Astronomers, particularly contemporary ones, comprehend these calculations and advanced scientific instruments have validated the accuracy of such astronomical calculations. The Fatwa Committee acknowledged that past scholars harboured reservations toward astronomy due to the unavailability of sophisticated tools during their time, and they needed clarification about the precision of these calculations.

The Mufti's proposal was based on his own personal observations, as he noticed how the uncertainty of the dates in our Islamic calendar led to serious difficulties in the lives of Muslims in Singapore. For example, on the day of Eid al-Adha in 1974, when the Mufti was on his way to perform the Eid prayer, he saw a Muslim worker sweeping the floor. He was struck by the fact that the worker had to work on a festive day as the date of Eid was not pre-determined, and therefore was not gazetted as a public holiday earlier. From this encounter, the Mufti realised the importance of shifting from the *Ru'yat al-Hilāl* method to *ḥisāb*.

As learning *Falak Shar'ī* and the *ḥisāb* are considered a collective obligation or *Fard al-Kifāyah*, he then, at great expense to his personal time and finances, decided to study astronomical calculations under a renowned *Falak* scholar in Malaysia, Haji Mohd Khair Bin Mohd Taib (1922-1989). To ensure that this knowledge is passed down to the next generation, Shaikh Syed Isa invited Haji Abdul Ghani bin Salleh, another expert in *Falak Shar'ī* from Malaysia, to conduct *Falak* courses for Singaporean students. Haji Abdul Ghani's students include Ustaz Dr Firdaus Yahya, who assists in determining prayer times and important Islamic dates in Singapore through astronomical calculation.

Other local *Falak* experts include Mr Muhammad Faizal Othman, who graduated from the National University of Singapore with a bachelor's degree in science and a master's degree in education from Singapore's Nanyang Technological University. He currently serves as Singapore's resource person in the *Falak* Committee of the Unofficial Meetings of Religious Ministers in Brunei, Indonesia, Malaysia and Singapore (MABIMS).

ARTICLES

Observation of the New Moon.

We have received the following notice signed by Mr. R. J. Farrer, chairman of the Mohammedan Advisory Board: The official observation of the new moon of the fasting month (Ramadan) this year will be done by the Religious Advice Committee (which consists of the Kadies of Singapore headed by Imam Haji Mohammed Yusoff Bin Haji Mohammed Said, J.P., Chief Kadi, Singapore), of the United Islamic Association, Singapore, as in the past. Two launches and two telescopes, both in Fort Canning and Mount Faber Signalling Stations, have been kindly placed by Government at the disposal of the Religious Advice Committee of the United Islamic Association this year as in the past. Official notices fixing the beginning of the fasting month (Ramadan) will be issued by this Board this year as in the past.

The Straits Times © SPH Media Limited.
Published on March 10, 1926.

MOON SEEN: TODAY IS FIRST DAY OF THE FAST

MUSLIMS throughout the Federation and Singapore began their month-long annual fast today.

The Keeper of the Rulers' Seal, Tuan Haji Mustapha Al Bakri officially announced in Kuala Lumpur last night that the new moon for the month of Ramadan, the Muslim fasting month, was sighted at Telok Kamang, Negri Sembilan, at 6.50 p.m. yesterday. Fasting would begin today, he added.

Tuan Haji Ali, the Singapore Chief Kadi, simultaneously announced here last night that Singapore Muslims would begin fasting today. The sighting of the moon in the Federation would be recognised in Singapore, he said.

The new moon, however, was not seen in Singapore.

Six teams of observers, stationed at vantage points in Singapore, reported no sign of the moon.

Article Source: The Straits Times © SPH Media Limited. Permission required for reproduction.

THE MOON OF SHAWWAL.

Up to a late hour last night no report of the Moon of Shawwal having been seen had been received by the Chief Kadi, Imam Haji Muhammad Yusoff bin Haji Muhammad Said. The following article on Hari Raya puasa is appropriate to the present occasion.

Hari Raya Puasa is the day of thanksgiving for the benefits derived from the rigid self-discipline of the Muslim fasting month. As progress places within men's reach more and more luxuries of civilisation there is an ever present tendency for mankind to relax into indolence and carelessness of higher things. History has shown over and over again how easy is attainment of wealth and comfort but, in the absence of disciplinary factors, invariably led the greatest nations to destruction. Islam, which is not merely a faith, but more than anything a social guide to the righteous and happy life of mankind as a whole, proves, once more, in this its all-sufficiency by providing a correct and normally reformed with backwardness—this is not the fault of the system. That must be looked for rather in ourselves. Failure, in many cases through ignorance, to realize the high ideals of its teachings might be said to be at the root of much. The man who traits himself to cheerless self-denial during one month out of twelve attains, or should attain, to an increasing strength of character which, if not indolently realized should stand him in good stead in ordering his life to more fruitful purpose. The great fallacy of regarding religious usages as mere rites—born of ignorance of the high teachings of Islam—or blind observance, lacking intelligent understanding of underlying principles, alas, as yet still all to prevalent. The intellectuality of our great forebears and leaders of yore are to a great extent forgotten. This is an age, a country and a time where greater thoughts are wont to go to the wall. In self-satisfied search for a more or less comfortable competence the highest and most valued principles of our are left undeveloped.

On this, our festival of thanksgiving let all Muslims ponder.

A lecture entitled "Character in Islam will form the text in the series on "Islam and Civilisation" being delivered by H. Abdeen Esq., Eff., at the United Islamic Association. This is fixed for Saturday 11th. Instant, 8 p.m. at the Association Club (No. 1, Lorong VI, Gayang Road). All are cordially welcome.

The Singapore Free Press © SPH Media Limited.
Published on 5 May 1924.



ANXIOUS EYES watch every time the Chief Kadi in Singapore, through the telescope, seeking news of the new moon on Thursday night. It was not seen, however, until yesterday and, since the fasting month, begins today.—Straits Times picture.

The Straits Times © SPH Media Limited.
Published on 17 June 1950.

MALAYS SEE THE NEW MOON Hari Raya Puasa Observed Today

TODAY is Hari Raya Puasa, the great Muslim festival at the end of the fasting month of Ramadan. The new moon was seen last night in various parts of Malaya.

The public holiday, however, will not be observed until tomorrow, as Nov. 1st is gazetted as a bank holiday.

The Free Press understands that observers including members of the Muslim Advisory Board saw the new moon off Changi last night about 7.30 p.m.

SEEN IN JOHORE

Observers were stationed in various parts of the island including Mount Faber, Fort Canning and in boats off the coast of Singapore.

Muslims in Selangor also received reports last night that the new moon had been seen at Batu Pahat, Muar and Klang in Johore and elsewhere in the peninsula.

To mark the end of the fasting month, Malays and other Muslims will attend prayers at the various mosques. Some of the services begin early and most are over by 9.30 a.m.

TWO DAYS' HOLIDAY?

Since today is not a public holiday, Muslim employees in offices will have to attend prayers before going to work. Muslims in domestic employment may decide, with their employers' consent, to make today instead of tomorrow their holiday. Some may try to get two days' holiday.

Hari Raya Puasa is marked by much celebration among all Muslims. Presents are exchanged and visits paid to relations and friends.

All who can afford them appear in new clothes and the holiday affords an opportunity for the Malays to display their taste in brightly coloured sarongs and baju.

The Singapore Free Press © SPH Media Limited.
Published on 13 Nov 1939.

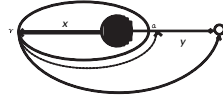
Singapore's Approach in DETERMINING NEW MONTHS IN THE ISLAMIC CALENDAR

From the perspective of the Shariah, there are two widely accepted methods to determine the new months in Islam.



Ru'yah

(observation), whether through the naked eye, or through aided vision, such as telescopes or binoculars



Hisab

(astronomical calculations)
Using astronomical calculation to predict the existence of the new Moon: on the basis that it would be visible, if not for the cloud cover and/or inclement weather conditions.

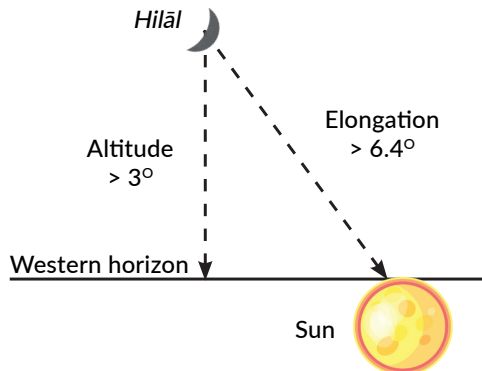
Both methods are in line with the Hadith narrated by Ibn Umar (r.a). The Prophet Muhammad ﷺ said:

إِذَا رَأَيْتُمُ الْهِلَالَ فَصُومُوا، وَإِذَا رَأَيْتُمُوهُ فَأَفْطِرُوا، فَإِنْ غَمَّ عَلَيْكُمْ فَأَقْدُرُوا لَهُ

“Begin your fast when you can observe the crescent, and end it when you can observe it. But should it cloud over, you can predict its visibility (through calculations)

Bukhari & Muslim

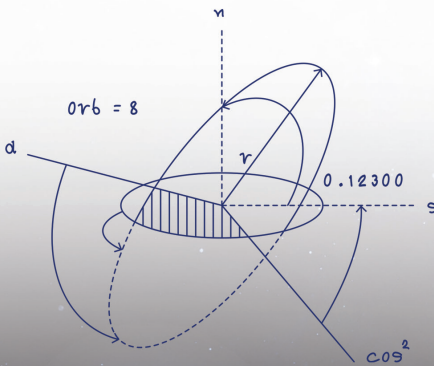
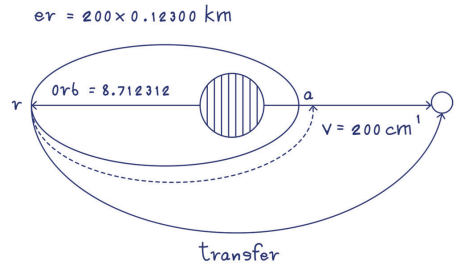
The *hisab* method to determine the new month is based on the *Imkanur Ru'yah* method, which literally means, the possibility of the *hilāl* being visible. For the *hilāl* to be sighted, several parameters have been set by astronomers. For example, the altitude of the Moon needs to be at least 3° during sunset, according to the new MABIMS criteria.



Throughout history, there have been many scholarly debates on the validity of *Imkanur Ru'yah* method, which relies solely on astronomical calculations. This is because in the early days, the astronomical calculations were not precise and the knowledge pertaining to it was not widely accessible.

However, scholars such as a Shafi'i jurist Ibn Surayj (d. 306) from the Shafi'i scholars interpreted the word "فَأَقْدِرُوا لَهُ" in the Hadith as predicting the movements of the Moon through calculations to determine the starting

of fasting month, if the new Moon is not visible due to cloud cover. Thus, there is a basis for using the *Imkanur Ru'yah* method within the early Muslim tradition.



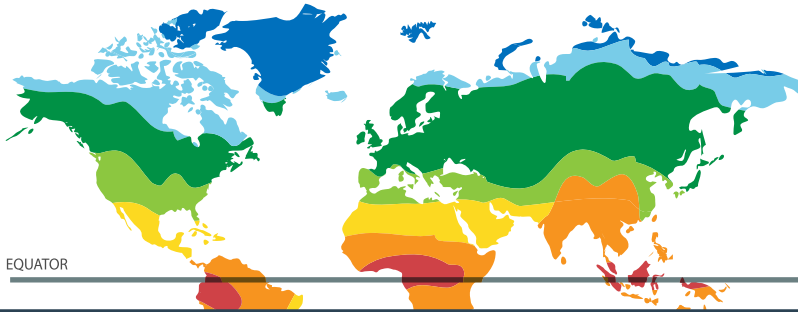
Over time, with the further progress of astronomical calculations and the advancement of technologies such as the computerised telescope and the CCD (charge-coupled device) camera, most scholars have accepted the *Imkanur Ru'yah* method as a valid method of determining the Islamic calendar.



Reasons for Adopting the *IMKANUR RU'YAH* METHOD IN SINGAPORE

There are many factors which hinder the sighting of *hilāl* in Singapore, despite all efforts to sight it, as mentioned earlier. The main factors that affect the sighting are the atmospheric and geographical factors, as explained below.

Hilāl is the very early age of the Moon with minimal illumination. Generally, it is difficult to be sighted as this position is very close to the Sun. It gets even more difficult with the atmospheric and geographical factors that are specific to Singapore.



Singapore is situated near the equator and has a typically tropical climate, with abundant rainfall, high and uniform temperatures, and high humidity all year round. It rains an average of 167 days of the year. Much of the rain is heavy and accompanied by thunder. The 1981-2010 long-term mean annual rainfall total was 2165.9 mm.

Geographically, as an island city-state country, Singapore is very small and heavily urbanised, with a total land area of only 724.2 square kilometres. As such, finding a good location with a total clear view of the

western horizon for *hilāl* sighting is challenging due to environmental factors, low altitude and light pollution.

Considering the atmospheric and geographical factors, the sighting of the *hilāl* (*Ru'yat al-Hilāl*) is considered probable (*Zanni*), i.e., subject to error, whereas the astronomical calculations are close to certainty (*Qarib Ilā al-Yaqīn*). As such, the *Imkanur Ru'yah* is preferred for Singapore context and given precedence over *Ru'yat al-Hilāl* due to its certainty.

Imkanur Ru'yah Method in Relation to **MABIMS CRITERIA**

As The *Imkanur Ru'yah* method relies on empirical evidence, the parameters set by astronomers may vary over time. As such, astronomers collect past data on *hilāl* sightings to set the parameter on the visibility of crescent Moon.

In 1978, the International Conference on Lunar Crescent Visibility held in Istanbul agreed upon the Istanbul Criteria, notably that the crescent can be considered to be seen when one of the following conditions is fulfilled:

Elongation (the distance of the Sun and the Moon) during sunset is not less than 8°

The altitude of the Moon during sunset should not be less than 5°

However, in 1992, MABIMS agreed upon adopting the following *Imkanur Ru'yah* criteria for a crescent Moon to be sighted:

The Moon altitude above the horizon must not be less than 2° and elongation 3° , or

The age of the crescent must not be less than 8 hours after conjunctions.



Summary of *Imkanur Ru'yah* Criteria from 1978 - 2021

1978

Istanbul Criteria:

- Elongation $> 8^\circ$
- Altitude $> 5^\circ$

MABIMS Criteria:

- Elongation $> 3^\circ$
 - Altitude $> 2^\circ$
- or

- The age of the crescent must not be less than 8 hours after conjunctions.

1992

MABIMS Criteria:

- Elongation $> 6.4^\circ$
- Altitude $> 3^\circ$

2021

Revised

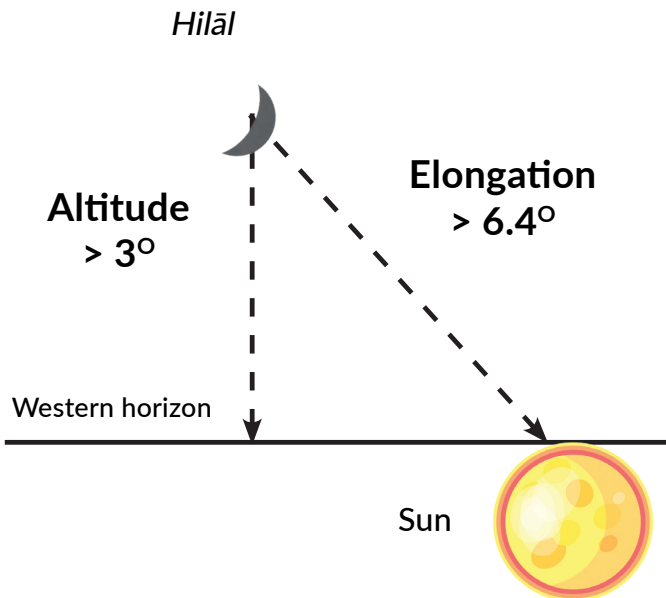
IMKANUR RU'YAH CRITERIA

The criteria have since been reviewed and refined in 2017. These refinements were based on 737 observations from around the world.

The new criteria consider two parameters during sunset on the 29th day of the month:

The Moon altitude above the horizon must not be less than 3°

The elongation must not be less than 6.4°



MABIMS 2021

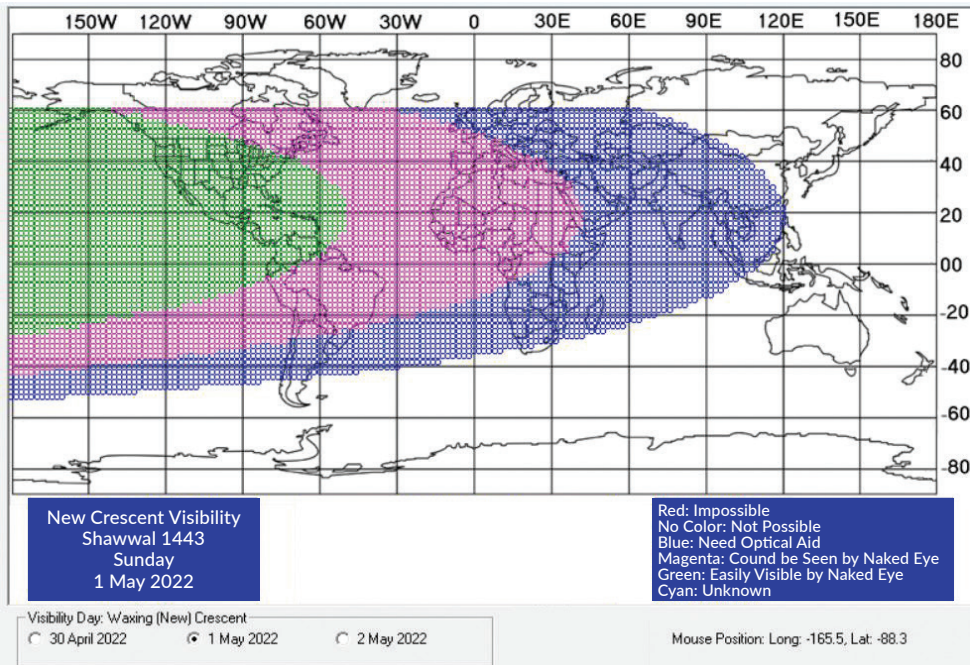
The First Application of the New MABIMS CRITERIA

Based on these revised criteria which were applied for the first time in 2022, it was not possible for the *hilāl* for Syawal 1443H to be sighted in Singapore as the elongation was 6.1° , which was slightly lower than the criteria.

As such, the crescent moon was not possibly sighted according to the new MABIMS criteria. In addition, experts have identified Singapore as one of the few locations with poor visibility of the *hilāl* due to atmospheric (e.g., light pollution) and geographical factors.

In order to confirm it, the Office of the Mufti (OOM), together with our *Falak* experts attempted to conduct a *hilāl* sighting in the western part of Singapore. However, the *hilāl* was not visible. During the sighting attempt, it was also clear that the western horizon was overcast with clouds.

Therefore, Singapore continued fasting for another day to complete 30 days of Ramadan, as opposed to the other MABIMS countries who reported that they had been able to sight the *hilāl*, or crescent Moon, albeit only at certain locations in their own territories.



The Autonomy of Each Country to DETERMINE THE NEW HIJRI MONTH

Notwithstanding the existence of the MABIMS criteria as a guide to its member countries, each country still has the sovereignty and autonomy to determine the dates of the new months in their respective countries. As such, should a new Moon be sighted at one location in a certain country, signalling the beginning of the new month there, that does not necessarily apply to other countries. This guidance is based on the following Hadith as narrated by Imam Muslim.

عَنْ كُرَيْبٍ، أَنَّ أُمَّ الْفَضْلِ بِنْتَ الْحَارِثِ، بَعَثَتْهُ إِلَى مُعَاوِيَةَ بِالشَّامِ قَالَ
فَقَدِمْتُ الشَّامَ فَقَضَيْتُ حَاجَتَهَا وَاسْتَهَلَّ عَلَيَّ رَمَضَانُ وَأَنَا بِالشَّامِ فَرَأَيْتُ الْهَيْلَالَ
لَيْلَةَ الْجُمُعَةِ ثُمَّ قَدِمْتُ الْمَدِينَةَ فِي آخِرِ الشَّهْرِ فَسَأَلَنِي عَبْدُ اللَّهِ بْنُ عَبَّاسٍ - رَضِيَ
اللَّهُ عَنْهُمَا - ثُمَّ ذَكَرَ الْهَيْلَالَ فَقَالَ مَتَى رَأَيْتُمُ الْهَيْلَالَ فَقُلْتُ رَأَيْنَاهُ لَيْلَةَ الْجُمُعَةِ .
فَقَالَ أَنْتَ رَأَيْتَهُ فَقُلْتُ نَعَمْ وَرَأَاهُ النَّاسُ وَصَامُوا وَصَامَ مُعَاوِيَةُ . فَقَالَ لَكِنَّا
رَأَيْنَاهُ لَيْلَةَ السَّبْتِ فَلَا نَزَالَ نَصُومُ حَتَّى نُكْمَلَ ثَلَاثِينَ أَوْ نَرَاهُ . فَقُلْتُ أَوْلَا تَكْتَفِي
بِرُؤْيَا مُعَاوِيَةَ وَصِيَامِهِ فَقَالَ لَا هَكَذَا أَمَرَنَا رَسُولُ اللَّهِ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ .

Kuraib reported that Umm Fadl, daughter of Harith, sent him to Mu'awiya in Syria. I (Fadl) arrived in Syria, and did the needful for her. It was there in Syria that the month of Ramadan commenced. I saw the new Moon (of Ramadan) on Friday. I then came back to Medina at the end of the month. Abdullah b. 'Abbas (May Allah be pleased with him) asked me (about the new Moon of Ramadan) and said:

'When did you see it?' I said: 'We saw it on the night of Friday.' He said: '(Did) you see it yourself?' I said: 'Yes, and the people also saw it and they fasted and Mu'awiya also fasted', whereupon he said: 'But we saw it on Saturday night. So we will continue to fast till we complete thirty (fasts) or we see it (the new Moon of Syawal).' I said: 'Is the sighting of the Moon by Mu'awiya not valid for you? He said: No; this is how the Messenger of Allah has commanded us.'

Muslim

Office of the Mufti's (OOM)

EXPERIENCE AND DATA IN *HILĀL* OBSERVATION

As mentioned briefly earlier, Singapore has a typically tropical climate, with abundant rainfall, high and uniform temperatures, and high humidity all year round. This means that while theoretically, the *hilāl* can be sighted if it fulfils the MABIMS criteria, it might not be possible during the sighting itself due to atmospheric factors.

For example, in Zulkaedah 1443H, although the data of the *hilāl* fulfils

the MABIMS criteria, the Office of the Mufti (OOM) did not manage to sight the *hilāl* due to the clouds covering the *hilāl* as is customary.

More recently, the OOM has conducted several sightings in the past to demonstrate that the sighting of *hilāl* has not been successful in the Singapore context, as reflected in the table below:

Syawal 1443H	Location	Tuas
	<i>Hilāl</i> Data	Altitude: 4.5° Elongation: 6.1°
	Weather	Cloudy
	Was the crescent Moon sighted?	No



Hilāl observation at Tuas

Zulkaedah 1443H	Location:	Pulau Satumu
	Hilāl Data:	Altitude: 8.53° Elongation: 10.23°
	Weather:	Cloudy
	Was the crescent Moon sighted?	No

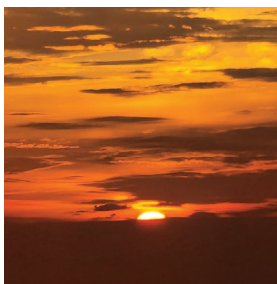
Zulhijjah 1443H	Location:	Pulau Satumu
	Hilāl Data:	Altitude: 4.48° Elongation: 2.23°
	Weather:	Clear sky
	Was the crescent Moon sighted?	No



Hilāl observation at Pulau Satumu

Muharram 1444H	Location:	Central Area
	Hilāl Data:	Altitude: 8.6° Elongation: 7.1°
	Weather:	Raining with thunderstorm
	Was the crescent Moon sighted?	No

Rejab 1444H	Location:	Tuas South
	Hilāl Data:	Altitude: 7.3° Elongation: 9°
	Weather:	Raining with thunderstorm
	Was the crescent Moon sighted?	No



Hilāl observation at Tuas South



FREQUENTLY ASKED QUESTIONS (FAQ)

Religious Guidance and
Clearing Misconceptions Surrounding
Falak Shar'ī in Singapore Context

Q Are the MABIMS criteria subject to change in the future?

A As the criteria set by MABIMS *Falak* experts are a form of *ijtihād*³, the criteria are subject to change, based on prevailing scientific evidence and observations. This is in line with our religious principles pertaining to the method of *Imkanur Ru'yah*, which is based on empirical evidence and may differ from time to time.

Q Someone claimed to have sighted the crescent Moon, despite not fulfilling the criteria set by MABIMS. Is the claim acceptable?

A No. This is due to the fact that the criteria are based on astronomical calculations, which are close to certainty (*Qarīb Ilā al-Yaqīn*), whereas the sighting of the *hilāl* is probable (*Zannī*), i.e., subject to error. As such, what is close to certainty (astronomical calculations) is given precedence over what is probable (sighting of the *hilāl*). Therefore, such claims of sighting the *hilāl* cannot be accepted.

● How did the rest of MABIMS countries manage to sight the Syawal 1443H *hilāl*?

A Malaysia and Indonesia are both countries with large land areas. Each country spans thousands of kilometres across, which increases the likelihood of them sighting the *hilāl*. Even so, in Malaysia, out of 29 observatory stations, only one station claimed to have sighted the *hilāl*. This station was located in Sabah, almost 3000 kilometres away from Singapore.

³ *Ijtihād* is the effort exerted by an appropriately qualified jurist in producing a legal ruling.





Q Can the *hilāl* sighting be done at tall buildings such as the Marina Bay Sands?

A The position of the new Moon is where the Sun sets, which is the west. Although Marina Bay Sands has an ideal vantage point in terms of height and the south-facing horizon is clear, the west-facing horizon from the building is blocked by other high-rise buildings. Therefore, it is not an ideal place to sight the crescent Moon.

Q Our neighbouring countries sighted the *hilāl*. Are we obliged to follow them?

A It is not obligatory under Islamic Shariah for one country to follow another. There is no precedent of this happening during the time of the Sahabah. In fact, it worked the other way around, as explained earlier in the Hadith of Kuraib. As a result, each country should rely on its own methods to determine the beginning of the Hijri calendar such as the *Ru'yah* or the *Imkanur Ru'yah* method.

Q Is it permissible to fast on the 30th of Ramadan for countries which have yet to declare Syawal, despite other neighbouring countries declaring the advent of Syawal?

A As each country has the sovereignty and autonomy to decide the beginning of Syawal, someone who fasts on the 30th of Ramadan in their country is not fasting on the day of Syawal, because the latter applies to another country. Therefore, it is neither a prohibited nor a sinful act.

Q If Singapore were to have more days of fasting than the neighbouring countries, would the rest of our Islamic events also differ from theirs?

A Since the Islamic calendar is based on the lunar cycle, the Islamic month is self-correcting. As a result, any differences in starting the Islamic lunar month can be corrected, not only by visual sightings of the crescent at the end of the month, but also by eclipses, which occur at least four times a year.





Q Is it obligatory for someone who has completed 30 days of fasting and plans to travel to a country, which has yet to complete 30 days, to fast?

A No, he is not allowed to fast another day. This is because the Prophet ﷺ explicitly mentioned that the fasting of Ramadan is restricted to only 29 or 30 days. However, he must refrain from eating publicly to show respect to those fasting in the place where he is visiting.

Q Someone claimed that Singapore was unwilling to change the Eid al-Fitr date when the neighbouring countries sighted the *hilāl*, because the date had already been predetermined earlier. To what extent is this statement true?

A As Singapore employs the *Imkanur Ru'yah* method, the dates for Eid can be predetermined early using astronomical calculations. Singapore will only change the predetermined dates if there are concrete scientific evidence and observations that abrogate the information available at the time.

In situations where our neighbouring countries are able to sight the *hilāl*, Singapore is not obliged to follow them as Singapore relies solely on astronomical calculations. In other words, Singapore will maintain its position. (Refer to the question 1 above)

Q Suppose Singapore declares that the *hilāl* is not visible in Singapore on the 29th day of Ramadan⁴. Is it permissible for someone living in Singapore to follow the sighting of other neighbouring countries, and hence celebrate Eid al-Fitr early?

A No, it is not permissible to celebrate Eid al-Fitr one day earlier. Instead, one should follow the country that he or she is living in. This is because local geographical and atmospheric factors play a significant role in the visibility of the *hilāl*. As such, the visibility of the *hilāl* might differ from other neighbouring countries.

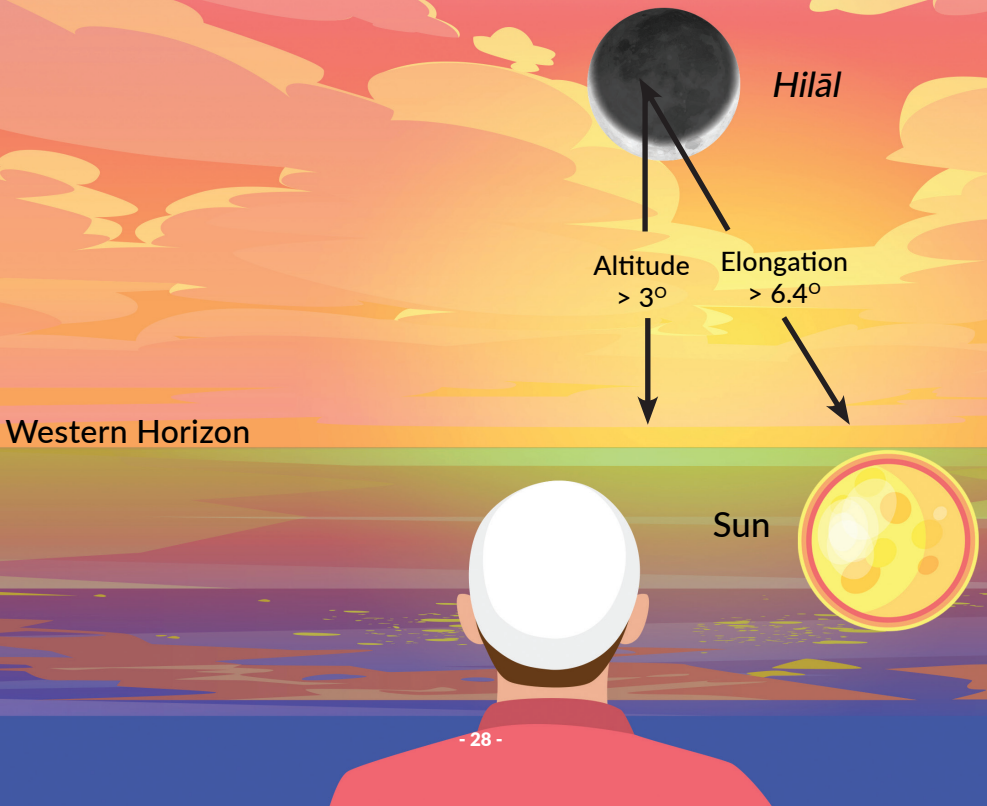
Q Why is it not feasible to observe the crescent moon through the Science Centre Observatory in Singapore?

A Sighting the crescent moon using the Science Centre Observatory in Singapore is not ideal as it is surrounded by buildings and trees, which obstruct the view of the western horizon. While the Science Centre Observatory in Singapore is a good location to observe the night sky and other celestial objects, observing the crescent moon is challenging due to environmental factors, low altitude and light pollution.



Q Where is it possible to observe the crescent moon during sunset?

A The sighting of the crescent moon during sunset is contingent on several factors, including the observer's location and the moon's phase. Typically, the crescent moon can be spotted near the western horizon shortly after sunset. As for the moon's position in the sky at sunset, it is influenced by its phase. If the moon is in a waxing crescent phase, it will be closer to the sun and will set shortly after it.



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