



Study Of The Global Unified Hijri Calendar Parameters In The Development Of Rukyatul Hilal In Indonesia

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Abstract

Differences in determining the beginning of the lunar month in Indonesia often spark public discourse due to the dichotomy between hisab and rukyat methods. The emergence of the Single Global Hijri Calendar (KHGT) concept offers a solution for international unification of the Islamic calendar. This article aims to examine the parameters of the KHGT and their relevance to the development of rukyatul hilal practices in Indonesia. The research method used is qualitative, with a library research approach and descriptive-comparative analysis of astronomical data and the policies of religious authorities in Indonesia. The hypothesis of this study asserts that the KHGT does not eliminate the essence of rukyat, but rather repositions rukyat as a verification instrument for precise mathematical calculations. Adopting the KHGT parameters in Indonesia requires synergy between the readiness of digital optical technology and the political will of Islamic community organizations to achieve certainty of uniform and collective worship laws.

Keywords:

Unified Global Hijri Calendar, Observation of the New Moon, Calendar Unification, Lunar Crescent Parameters, Islamic Astronomy.

Abstrak

Perbedaan penentuan awal bulan Kamariah di Indonesia sering kali memicu diskursus publik akibat dikotomi metode antara *hisab* dan *rukya*t. Munculnya gagasan Kalender Hijriah Global Tunggal (KHGT) menjadi tawaran solusi untuk unifikasi penanggalan Islam secara internasional. Artikel ini bertujuan untuk menelaah parameter-parameter KHGT dan relevansinya terhadap perkembangan praktik rukyatul hilal di Indonesia. Metode penelitian yang digunakan adalah

kualitatif dengan pendekatan studi pustaka (*library research*) dan analisis deskriptif-komparatif terhadap data astronomis serta kebijakan otoritas agama di Indonesia. Hipotesis dari penelitian ini menegaskan bahwa KHGT tidak meniadakan esensi rukyat, melainkan mereposisi rukyat sebagai instrumen verifikasi terhadap perhitungan matematis yang presisi. Adopsi parameter KHGT di Indonesia memerlukan sinergi antara kesiapan teknologi optik digital dan kemauan politik (*political will*) dari organisasi kemasyarakatan Islam guna mencapai kepastian hukum ibadah yang seragam dan kolektif.

Kata kunci:

Kalender Hijriah Global Tunggal, Rukyatul Hilal, Unifikasi Kalender, Parameter Hilal, Ilmu Falak.

A. Introduction

The Hijri calendar holds a very important position in the lives of Muslims, especially in determining the times for worship such as fasting during Ramadan, Shawwal, and Dhu al-Hijjah. However, until now, Muslims in various parts of the world still face differences in determining the beginning of the Hijri month. These differences are generally caused by the various methods used, such as rukyatul hilal (moon sighting) and hisab (astronomical calculation), as well as differing criteria in determining the visibility of the hilal. As a result, the phenomenon of ikhtilaf arises repeatedly every year, impacting the unity of Islamic worship practices globally.

Until now, it is estimated that there are around 40 different models of calendars used on Earth, and each calendar system has a different method of determination according to the reference used. Of the 40 types of calendars, all of them have anomalies influenced by various factors in each calendar.¹ Acculturation and adaptation of calendars are not forbidden in order to achieve a level of accuracy in providing certainty and uniformity of time, regardless of the background of calendar formulation development with tribes, religions,

¹Huttenbach, Henry R, The Reconstruction and Evaluation of A Social Calendar As Primary Source for The History of The Jewish Community of Worms, *Journal of World Union of Jewish Study*, Juni 2014, h. 367-397.

organizations, and intellectual cultures. For whatever reason, the calendar holds philosophical value and is extremely urgent in establishing a system for the benefit of humanity.²

The ongoing issue related to the unification of the Islamic calendar is the lack of clarity regarding the identity of the calendar, whether it is solely a civil calendar (muamalah) or also a religious calendar. If it is considered a religious calendar, then problems will arise in countries where the confirmation of the lunar month has already occurred on a certain day even tho the crescent moon is still below the horizon at sunset on the previous day.³

Islamic calendar in the context of current developments in science and technology, various ideas have emerged to unify the Hijri Calendar into a single, integrated Global system. One of the concepts that has developed is the Single Global Hijri Calendar, which aims to create uniformity in the Islamic calendar worldwide. This idea is not only based on modern astronomical calculations but also strives to remain in harmony with the principles of Islamic law (fiqh) and ushul fiqh.

The development of the unification of the Islamic calendar continued with the decision of the 2016 Turkey Congress, in line with the decision of the 47th Muhammadiyah Congress in Makassar in 2015, which stated, "Based on this reality, Muhammadiyah sees the need for the unification of the Hijri calendar to be applied internationally, so that it can provide certainty and be used for transactions. Thus, the Muhammadiyah Congress decision precedes the Islamic world's decision to build a global calendar system that unifies the scheduling system for Muslims worldwide." With this decision in Istanbul (Turkey),

²Muh. Rasywan Syarif, Diskursus Perkembangan Formulasi Kalender Hijriah. *Jurnal Elfalaky*, Vol. 2, 1 (2018), h. 59.

³M.Ma'rufin Sudibyo, *Beberapa Pertanyaan Tentang (Usulan) Kalender Hijriah Persatuan Internasional*, Prosiding Seminar Nasional, Kalender Islam Global, Observatorium Ilmu Falak (OIF UMSU, Medan, 2016) h.19.

Muhammadiyah has a strong foundation to promote and encourage Muslims toward the unification of the Islamic calendar.⁴

The Tarjih Council of Muhammadiyah views the need for a global Islamic calendar not only as related to the uniformity of worship practices but also as part of the integration of Muslims on an international scale. This idea aligns with the spirit of the universality of Islam and the importance of building an advanced and integrated Islamic civilization in the fields of science, technology, and socio-religious order.

As part of the effort to unify the Islamic calendar, Muhammadiyah has declared the use of KHGT on June 25, 2025, at the Convention Hall of the Walidah Dahlan Mosque, attended by various domestic and international experts. The Chairman of the Tarjih and Tajdid Council of the Muhammadiyah Central Leadership, Hamim Ilyas, stated that the launch of KHGT is the result of an in-depth study that was decided at the 32nd National Conference (Munas) in February 2024. This decision adopts the results of the 2016 Turkey Congress, which are considered to comply with Islamic law and are scientifically based.⁵

Based on a comprehensive description of the shift in the criteria for the visibility of the new moon, the researchers see the need for an in-depth and critical study of the parameters for the development of the Global Unified Hijri Calendar (GUHC) in the context of the implementation of rukyatul hilal in Indonesia. The urgency of this research is based on the fact that the transition to a single calendar is not merely a technical astronomical issue, but rather a paradigm transformation that demands harmonization between the authority of modern science and traditional religious authority.

⁴Syamsul Anwar, "Muhammadiyah, Kongres Istanbul 2016, dan Kalender Global Hijriah", disampaikan pada acara pengajian Ramadhan PP Muhammadiyah pada tanggal 09-11 Juni 2016 di Universitas Muhammadiyah Yogyakarta. <https://muhammadiyah.or.id/2022/06/mengapa-muhammadiyah-memakai-kriteria-istanbul-2016-untuk-kalender-islam-global/> Diakses Pada 02 Februari 2026.

⁵Muhammadiyah.org, <https://muhammadiyah.or.id/2025/06/muhammadiyah-resmi-luncurkan-kalender-hijriah-global-tunggal/> Di Akses Pada 02 Februari 2026.

B. Methods

The method used in this research is library research, which involves examining library materials, including books, journals, magazines, and other sources relevant to the topic being studied.⁶ This research uses intellectual analysis to clarify meanings, make values tangible, identify ethics, and even study the nature of science. Philosophical research is based on issues and ideas from all perspectives of literature, examining or deeply analyzing the meaning of a concept, formulating it in the form of questions, thinking about the answers, and then suggesting implications based on those answers.⁷

C. Result and Discussion

1. The Legal Basis of the Hijri Calender

The Hijri calendar has 12 months, namely Muharram, Safar, Rabi'ul Awal, Rabi'ul Akhir, Jumadil Ula, Jumadil Akhirah, Rajab, Sya'ban, Ramadan, Shawwal, Dhu al-Qi'dah, Dhu al-Hijjah. The Hijri calendar is based on the Moon's orbit around the Earth. One complete cycle lasts 29 days, 12 hours, 44 minutes, and 2.5 seconds. To avoid fractional days, it is determined that the age of the month can be either 30 days or 29 days, with odd months having 30 days and even months having 29 days, except for the 12th (Dhu al-Hijjah) in a leap year, which has 30 days.⁸

The establishment of these 12 months is in accordance with the word of Allah SWT in QS. At-Taubah/9:36;

إِنَّ عِدَّةَ الشُّهُورِ عِنْدَ اللَّهِ اثْنَا عَشَرَ شَهْرًا فِي كِتَابِ اللَّهِ يَوْمَ خَلَقَ السَّمَوَاتِ وَالْأَرْضَ

Translation:

"Indeed, the number of months in the sight of Allah is twelve in the Book of Allah since the day He created the heavens and the earth."

⁶Soerjono Soekanto dan Sri Mamudji, *Penelitian Hukum Normatif Suatu Tinjauan Singkat*, (Jakarta: Rajawali: 1986), 15.

⁷Suyitno, *Metode Penelitian Kualitatif: Konsep, Prinsip Dan Operasional*, (Cet. I; Tulungagung: 2018), h. 90.

⁸Muhyiddin Khazin, *Ilmu Falak Dalam Teori dan Praktik*, (Yogyakarta: Buana Pustaka), h. 111.

Every 30 years, there are 11 leap years (long years with 355 days) and 19 ordinary years (short years with 354 days). The leap years fall on the 2nd, 5th, 7th, 13th, 15th, (16th), 18th, 21st, 24th, 26th, and 29th positions. The other positions are ordinary years.

2. Parameters of the Global Hijri Calender (KHGT)

As part of the effort to unify the Islamic calendar, Muhammadiyah held an International Symposium on the Efforts to Unify the Islamic Calendar on 22-24 Sya'ban 1428 H (September 4-6, 2007 AD) at the Sahid Jaya Hotel, Jakarta. This symposium invited several important figures who proposed an international Islamic calendar, including Mohammad Ilyas from Malaysia, Mohammad Syawkat Audah from the United Arab Emirates, and Jamaluddin Abd Razeq from Morocco. In addition, the meeting was also attended by the Islamic astronomer from Egypt, Muhammad Ahmad Sulaiman. This meeting is an important step in integrating the methods of hisab and rukyat with the aim of unifying the Islamic calendar internationally. Muhammadiyah believes that the unification of the Islamic calendar at the national level has not been able to resolve the issue of standing at Arafah, so the unification of the calendar must be done globally to address this problem.⁹

The parameters of the Global Unified Hijri Calendar from time to time are as follows:

Tabel. 1.1. Parameters KHGT Muhammadiyah

No	Year	Muhammadiyah Ideas	Results/Criteria for Hilal
1	1978 M / 1398 H	Istanbul Meeting (Turkish Directorate of Religious Affairs, European Fatwa and Research Council, and Islamic Jurisprudence Academy)	a. That the principle in determining the beginning of the month is rukyat, either with the naked eye or with

⁹Susiknan Azhari, "Gagasan Menyatukan Umat Islam Indonesia Melalui Kalender Islam", Ahkam, Vol. XV, No.2, (Juli 2015), h. 254,

			modern scientific observation methods, b. The possibility of sighting the new moon (imkanu rukyat) must meet two basic conditions, namely an elongation of no less than 8° after the conjunction and the moon's altitude above the horizon at sunset of no less than 5°. ¹⁰
2	2007 M / 1248 H	International Symposium "The Effort Toward Unifying the Islamic International Calendar" in Jakarta.	Result: According to Sharia, KHGT becomes a fair calendar for the entire Islamic world, and culturally, it can elevate the community from the backwardness of civilization in terms of calendaring. ¹¹
3	2013 M / 1434 H	Konferensi Internasional Rukyat Hilal (Preparation Meeting for International Crescent Obsevation Conference / <i>al-Ijtima' at-Tahdiri li Mu'tamar Ru'yat al-Hilal ad-Duwal</i>) di Istanbul Turki atas undangan Badan Urusan Agama (<i>Presidency of Religious Affairs</i>) Republik Turki.	a. Ways to unite Muslims in determining the beginning of the lunar month. b. Concern over the unfortunate differences experienced by Islamic countries and Muslims in Europe regarding the issue of the lunar month's beginning c. The fundamentals of creating a unified Islamic calendar,

¹⁰"Muqarrarat ad-Daurah al-Ula 1398/1978" dalam *Dirasar Haula Tauhi al-Ayad wa al-Mawasim ad-Diniyyah* (Tunis: Idarat asy-Syu'n ad-Diniyyah, 1981), h. 134.

¹¹Majelis Tarjih dan Tajdid PP Muhammadiyah, "Memahami Kalender Hijriah Global Tunggal Secara Ringkas" 2025, h. 8. <https://tarjih.or.id/wp-content/uploads/2025/06/Buku-Saku-KHGT.pdf> Diakses Pada 02 Februari 2026.

			d. Formulation of fiqh and astronomy parameters for determining prayer times in high latitude areas. e. Forming a scientific commission for Islamic-astronomy¹²
4	2015 M / 1436 H	Muhammadiyah Congress on KHGT	a. Realizing the unity of the ummah Realizing the unity of the ummah b. Eliminating the differences in determining the beginning of the Hijri month c. The unification of the Hijri calendar is used for worship purposes and worldly transactions.¹³
5	2016 M / 1437 H	Muktamar Turki, Seminar Internasional Penyatuan Kalender Hijriah (<i>Uluslararası Hicrî Takvim Birliği Kongresi / International Hijri Calendar Unity Congress / Mu'tamar Tauhîd at-Taqwîm al-Hijrî ad-Duwalî</i>)	a. The calendar region, KHGT, is considered a single entity encompassing the entire world, so the beginning of the Hijri month starts on the same day worldwide. b. The Hijri month begins if the following conditions are met anywhere in the world

¹²Syamsul Anwar, "Dari Istanbul Kembali Ke Istanbul: Mengintip Jalan Panjang Upaya Penyatuan Penanggalan Islam, 2013, h. 10. <http://arsip.muhammadiyah.or.id/muhfile/download/Dari%20Istanbul%20ke%20Istanbul%20pdf.pdf> Diakses Pada 02 Februari 2026.

¹³Rahmadi Wibowo Suwano, Kalender Hijriah Global Tunggal (KHGT) dalam Muktamar Muhammadiyah Ke-47, Muktamar Muhammadiyah Ke-48 dan Muktamar Turki 2016, h. 5. <https://tarjih.or.id/wp-content/uploads/2023/10/Kalender-Hijriah-Global-dalam-Putusan-Muktamar-Muhammadiyah-Rahmadi-Wibowo-Suwarno-Lc.-M.A..pdf> Diakses Pada 02 Februari 2026.

			before midnight Greenwich time. The condition is that the angle between the moon and the sun (elongation) at sunset must reach 8 degrees or more, and the altitude of the moon above the horizon at sunset must reach 5 degrees or more. c. Calendar correction, if not fulfilled, can be exempted on the condition of imkan anywhere, conjunction occurs before dawn in New Zealand and has imkanur rukyat in the American continent.
6	2018 M / 1439	Post-Turkey Congress 2016	Post-Turkey Congress 2016, the Organization of Islamic Cooperation (OIC) held a meeting in Dakar on May 14-15, 2018, attended by ministers of culture and information from member countries of the 57 nations. The draft resolution on the Hijri calendar emerged in response to the urgent need to unify and standardize the Islamic calendar.
7	2024 M / 1446 H	National Conference XXXII Tarjih Muhammadiyah in Pekalongan, Central Java in 2024.	Muhammadiyah published the Global Tunggal Hijri calendar. And for the Hijri calendar year 1446.
8	2025 M / 1447 H	The inauguration of KHGT took place at the Convention Hall of	Muhammadiyah officially launched the Unified

		Masjid Walidah Dahlan, Universitas 'Aisyiyah (Unisa) Yogyakarta, on Wednesday, June 25, 2025. This event was attended by various national and international figures from Islamic organizations, the government, and the academic community.	Global Hijri Calendar (KHGT) as an effort to achieve uniformity in the Islamic calendar worldwide. This calendar applies the principle of one day, one date, for the entire world, based on one time zone (one matlak). ¹⁴
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Muhammadiyah has a vision that the global Islamic calendar should be built on a foundation of scientific, rational, and universally acceptable methodology. Therefore, Muhammadiyah has long advocated the use of hisab as the primary approach in determining worship times, as a form of modern *ijtihad* that addresses the challenges of the times. The use of hisab is considered more objective and allows for the creation of a definitive annual calendar, making it easier for the community to plan worship and other social activities.

Muhammadiyah's efforts to mainstream the global calendar also represent a contribution to the unity of the international Muslim community. With that background, it is important to deeply examine Muhammadiyah's views on the global Islamic calendar, its epistemological foundations, as well as the opportunities and challenges of its implementation in a pluralistic global community.

3. Concept of the Global Unified Hijri Calender (KHGT)

a. Scientific Argument

1) The Use of Accurate Astronomical Calculations (Hisab Hakiki)

The advancement of science and technology, especially in the field of astronomy, allows for the very accurate determination of the positions of the Moon and the Sun. With precise calculations, we can know exactly when

¹⁴<https://news.unismuh.ac.id/2025/06/25/muhammadiyah-resmi-luncurkan-kalender-hijriah-global-tunggal-di-yogyakarta/>. Di Akses Pada 02 Februari 2026.

the conjunction (when the Sun, Moon, and Earth align) occurs, even down to the seconds. This allows us to determine the beginning of the month with high precision, no longer relying on naked-eye observations that are often hindered by weather or location.¹⁵

2) One Saturday Date Worldwide

The Earth rotates on its axis, causing time differences in various parts of the world. However, the International Date Line (IDL) has been established to standardize the determination of dates worldwide. This line crosses the Pacific Ocean, so no country is divided by the IDL. When we talk about one day one date for the Gregorian calendar, we refer to the Coordinated Universal Time (UTC) standard and this international date line.

Logically, if the Gregorian calendar can have one day one date globally, then the Hijri calendar should be able to as well. KHGT is built on this principle, using agreed-upon time standards and astronomical criteria to create a universally applicable calendar. KHGT is a calendar that uses the synodic month cycle with the principle of one day one date worldwide. In formulating KHGT, principles, conditions, and parameters that must be adhered to are required.¹⁶

b. The Principles of KHGT Emissions Include

- 1) Alignment of days and dates worldwide. The alignment of days and dates worldwide means one day one date worldwide.
- 2) The use of hisab. In determining the beginning of the lunar month, hisab holds the same status as rukyat [Tarjih Decision XXVI, 1424 H/2003 M]. Therefore, the use of hisab in determining the beginning of the lunar

¹⁵Majelis Tarjih dan Tajdid PP Muhammadiyah, "Memahami Kalender Hijriah Global Tunggal Secara Ringkas" 2025, h. 8. <https://tarjih.or.id/wp-content/uploads/2025/06/Buku-Saku-KHGT.pdf> Diakses Pada 02 Februari 2026.

¹⁶Majelis Tarjih dan Tajdid PP Muhammadiyah, "Memahami Kalender Hijriah Global Tunggal Secara Ringkas" 2025, h. 8. <https://tarjih.or.id/wp-content/uploads/2025/06/Buku-Saku-KHGT.pdf> Diakses Pada 02 Februari 2026.

month is valid and in accordance with the Sunnah of the Prophet (PBUH). Both rukyat and hisab are means to determine the beginning of the Hijri month, but hisab is considered a means that provides more certainty in determining the beginning of the month, so hisab should be prioritized over rukyat. From a technical calendar perspective, rukyat becomes impractical for unifying the calendar. In fact, creating a calendar based on rukyat is considered impossible.

- 3) The use of hisab. In determining the beginning of the lunar month, hisab holds the same status as rukyat [Tarjih Decision XXVI, 1424 H/2003 M]. Therefore, the use of hisab in determining the beginning of the lunar month is valid and in accordance with the Sunnah of the Prophet (peace be upon him). Both rukyat and hisab are means to determine the beginning of the Hijri month, but hisab is considered a method that provides more certainty in determining the beginning of the month, so hisab should be prioritized over rukyat. From a technical calendar perspective, rukyat makes it impossible to unify the calendar. In fact, creating a calendar based on rukyat is considered impossible.

This is due to the limitations of rukyat in determining the first day of the new month, which can only be known on H-1. Conversely, a calendar must have the ability to predict dates accurately far into the future and present a schedule of dates at least one year ahead. The First Conference of the Emirates Astronomical Society in Abu Dhabi, United Arab Emirates (1427 H/2006 AD) decided that solving the Islamic calendar problem is impossible unless the calculation method is accepted in determining the beginning of the month, just as the calculation method is used in determining prayer times.

- 3) Absolute unity. Absolute unity refers to the concept that the entire surface of the earth is considered as one absolute unity. Therefore, the concept of matlak diversity or ikhtilāf al-maṭālī' becomes impossible to

adhere to. The zonal calendar divides the Earth's surface into several different date zones or matlaks. The impact is that it is impossible to align the occurrence of dates on the same day. In the context of the Islamic calendar, there is only one calendar zone or matlak, which encompasses the entire surface of the earth. Ibn 'Asyūr (d. 1393/1973) emphasized;¹⁷ The Sunnah evidence and the opinions of the four schools of that align with the principle of not considering differences in matlak. The Hanafite scholars said, *"This is the opinion of the majority of scholars."* The Maliki scholars stated, *"This is the well-known opinion."* The Shafi'i scholars stated, *"Regarding this issue [in the Shafi'i school], there are two opinions that are considered valid."* The Hanbali scholars said, *"There is no difference of opinion that the sighting of the moon by the residents of one country is binding for all other countries."*

- 4) The global implementation of calendar parameters, but sufficient, in a certain place on Earth. The meaning is that the calendar parameters (Moon's altitude of 5° + elongation of 8° along with its corrections) that have been met in a certain area on Earth are applied globally to the entire world. The $5^{\circ} + 8^{\circ}$ parameter is analogous to the visibility criteria (imkanu rukyat) of the crescent moon, because with such parameters, the crescent moon is already visible from the perspective of visibility. There are even parameters for imkanu rukyat lower than that, such as the criteria ($3^{\circ} + 6.4^{\circ}$). However, it should be noted that visibility (imkanu rukyat) here is very different from the concept commonly understood by the public about imkanu rukyat, which is the imkanu rukyat in a specific place at sunset.

¹⁷Majelis Tarjih dan Tajdid PP Muhammadiyah, "Memahami Kalender Hijriah Global Tunggal Secara Ringkas" 2025, h. 8. <https://tarjih.or.id/wp-content/uploads/2025/06/Buku-Saku-KHGT.pdf> Diakses Pada 02 Februari 2026.

This is a local concept. In the KHGT system, the $5^{\circ} + 8^{\circ}$ parameter (which is analogous to imkanu rukyat) is global, meaning it is fulfilled anywhere on Earth before 00:00 UTC, and if it occurs after 00:00 UTC, the new month still begins with the condition that the easternmost time zone has experienced ijtimak before dawn, and the $5^{\circ} 8^{\circ}$ parameter has reached the mainland of the Americas. Moreover, the principle behind this parameter is not about whether or not the imkanu rukyat has occurred, but rather how, with this parameter, the easternmost time zone is not forced to enter the new month when the conjunction has not occurred before dawn, and how the westernmost time zone is not forced to delay entering the new month even tho the crescent moon is clearly visible on their horizon.¹⁸

5) Acceptance of the International Date Line (IDL). The entire world, including Muslims, has accepted the current International Date Line (IDL) as the boundary separating two consecutive days/dates. The line is located on the meridian line (longitude) 180° . From that line, the day begins. Muslims determine Friday, where there is a Sharia obligation to perform Friday prayers, counting Friday from that line. So there is no possibility of creating another date line and placing it elsewhere because it would create a dualism of days.

c. Requirements for KHGT

- 1) The Islamic calendar must be a system that can accommodate both religious and worldly affairs simultaneously.
- 2) The Islamic calendar must be based on the lunar months, where the duration is no more than 30 days and no less than 29 days.

¹⁸Majelis Tarjih dan Tajdid PP Muhammadiyah, "Memahami Kalender Hijriah Global Tunggal Secara Ringkas" 2025, h. 8. <https://tarjih.or.id/wp-content/uploads/2025/06/Buku-Saku-KHGT.pdf> Diakses Pada 02 Februari 2026

- 3) The Islamic calendar must be a unifying calendar with the provision of one day one date worldwide.
- 4) The Islamic calendar should not allow a group of Muslims in a certain area of the world to enter a new month before the *ijtimak* occurs.
- 5) The Islamic calendar should not allow a group of Muslims in a certain area of the world to start a new month before being certain of the possibility of sighting the crescent moon in a certain place on Earth.
- 6) The Islamic calendar should not prevent a group of Muslims in a certain area of the world from entering a new month while the crescent moon is clearly visible on their horizon.¹⁹

d. Parameters KHGT

- 1) The entire world is considered a single unit, the new moon begins simultaneously across the region.
- 2) A new month begins when, anywhere on Earth, before 24:00 UTC, the criteria are met: an elongation of 8° or more and the height of the crescent moon above the horizon at sunset is at least 5°.
- 3) Calendar correction is made when the above criteria are met after midnight, then the new month is determined with the following provisions:
 - a) If the possibility of sighting has occurred in any place and the conjunction in New Zealand happens before dawn.
 - b) The possibility of the sighting mentioned in item 1) occurring in the land area of the American continent.²⁰

¹⁹Majelis Tarjih dan Tajdid PP Muhammadiyah, "Memahami Kalender Hijriah Global Tunggal Secara Ringkas" 2025, h. 8. <https://tarjih.or.id/wp-content/uploads/2025/06/Buku-Saku-KHGT.pdf> Diakses Pada 02 Februari 2026.

²⁰Majelis Tarjih dan Tajdid PP Muhammadiyah, "Memahami Kalender Hijriah Global Tunggal Secara Ringkas" 2025, h. 8. <https://tarjih.or.id/wp-content/uploads/2025/06/Buku-Saku-KHGT.pdf> Diakses Pada 02 Februari 2026.

This study is crucial considering Indonesia's unique tropical geographical characteristics with high humidity levels and dynamic cloud cover, which often pose technical challenges in achieving the physical parameters of the crescent moon. Considering that Indonesia still applies the criteria of 3 degrees altitude and 6.4 degrees elongation (MABIMS), which is in contrast to the KHGT concept. However, KHGT is able to minimize observation deviations (false sightings) that have been the root of differences in determining the beginning of the lunar month.

The absence of a single authority is not merely due to the weakness of the government, but also reflects the diversity of sects, traditions, and religious interpretations in Indonesia. The state upholds freedom of religion and the autonomy of religious organizations in determining worship practices, so the unification of the calendar requires deep dialog and consensus among various parties. This poses a major challenge in the effort to unify the Hijri calendar at both the national and global levels, as each group has strong historical, theological, and socio-cultural reasons to maintain their respective methods. Thus, the unification of the Hijri calendar in Indonesia must involve an inclusive approach and open dialog to respect diversity while strengthening the unity of the community.

Furthermore, this analysis is not only focused on mathematical figures on paper but also evaluates the readiness of observation infrastructure and the socio-religious acceptance of the Indonesian people toward the idea of calendar unification. Thus, this research is expected to provide a framework for solutions to the dualism of calendars, which has often sparked public discourse every time a major Islamic holiday approaches.

D. Conclusion

1. Pioneer of Calendar Unification: Muhammadiyah is the first Islamic social organization in Indonesia to officially adopt KHGT (since 1 Muharram 1447 H / June 2025). This step is a manifestation of a collective ijtihad to end the dualism of calendars that has occurred due to differences in the methods of hisab and rukyat.

2. Transformation of Astronomical Parameters: The implementation of KHGT, which aligns with the new MABIMS criteria (Hilal Height 3° elongation 6.4, is a scientific moderation step to minimize false sightings (incorrect rukyat claims). This parameter physically provides a more logical threshold for the visibility of the crescent moon in Indonesia's tropical regions, which are often hindered by water vapor and light pollution.
3. Synergy of Hisab and Rukyat: KHGT does not eliminate the essence of rukyat, but rather positions rukyat as a means of physical verification against precise mathematical calculations. With the existence of measurable global parameters, the potential differences in the beginning of the Kamariah month among community organizations in Indonesia can be reduced through the standardization of objective astronomical data.
4. Geographical and Technical Challenges: Although KHGT offers a calendar unification solution, its implementation in Indonesia still faces challenges such as weather anomalies and limited observation infrastructure at certain sighting points. Therefore, the digitalization of optical instruments and image processing has become an absolute necessity in meeting the stricter criteria of KHGT.
5. Urgency of Unification: Socio-politically, the study of KHGT emphasizes that the unification of the Islamic calendar is not merely a technical-astronomical necessity, but a symbol of the unity of the ummah. The adoption of this parameter is expected to end the dichotomy of methods that has been occurring, in order to achieve legal certainty in collective worship at both the national and global levels.

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