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Astronomical Analysis of Hilal Testimony Data: A Comprehensive Study of the Ministry of Religious Affairs of the Republic of Indonesia from 1962 – 2021

Novi Sopwan[a,2], Abu Dzarrin Alhamidi[b,2], Muhammad Muadz Zulikrom[b,3], Muhammad Akbarul Humam[b,4]
[a]Laboratory of the Faculty of Sharia and Law, Sunan Ampel State Islamic University Surabaya
[b]Falak Science Study Program of the Faculty of Sharia and Law, Sunan Ampel State Islamic University Surabaya
[1]sopwan@uinsa.ac.id; [2]adzarrin2015@gmail.com; [3]muhammadmuadz1117@gmail.com;
[4]m.akbarulhumam@gmail.com

Abstract: *This study is a quantitative study of hilal position parameters in the report of the results of hilal testimony at the beginning of Ramadan, Shawwal, and Zulhijjah. A compilation of hilal testimony data from each Decree of the Minister of Religious Affairs of the Republic of Indonesia (KMA RI) from 1962 - 2021 was carried out. The position parameters, crucial for our analysis, were calculated with utmost precision for each hilal testimony data using the well-established and accurate VSOP87 and ELP91. There is a discrepancy between hilal testimony data and hilal visibility, which is used as a reference for hilal visibility. The results showed that all hilal testimony data is a hilal that is difficult to observe with the naked eye. Some testimonies show hilals that are impossible to detect. Another possibility is the presence of errors of observed objects other than hilal, such as a glowing cloud resembling the hilal, the appearance of the crescent of Venus that is suspected to be hilal, or the appearance of a lamp near the horizon that is identified as a suspected hilal. In the case of negative hilals that have been successfully observed, the possibility of miscalculation of the hilal position is also very high.*
Keywords: *Hilal, Hilal Visibility*

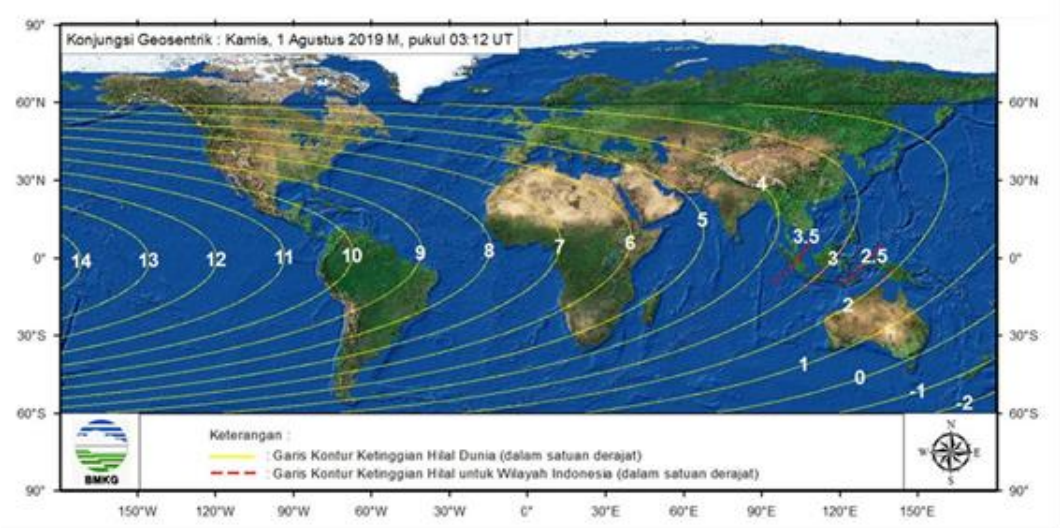
Abstrak: *Penelitian ini merupakan penelitian kuantitatif parameter posisi hilal pada laporan hasil kesaksian hilal setiap awal Ramadan, Syawal dan Zulhijjah. Dilakukan kompilasi data kesaksian hilal dari setiap Keputusan Menteri Agama Republik Indonesia (KMA RI) tentang penentu awal bulan Ramadan, Syawal, dan Dzulhijjah dari tahun 1962 - 2021. Parameter posisi dihitung untuk setiap data kesaksian hilal menggunakan VSOP87 dan ELP91. Terdapat ketidaksesuaian data kesaksian hilal dengan visibilitas hilal yang dijadikan acuan untuk keterlihatan hilal. Hasil penelitian memperlihatkan bahwa data kesaksian hilal seluruhnya hilal yang sulit terlihat dengan mata telanjang. Beberapa kesaksian memperlihatkan hilal yang tidak mungkin terdeteksi. Kemungkinan lainnya adalah adanya kesalahan objek yang teramati selain hilal. Bisa saja awan yang bersinar meyerupai hilal, penampakan sabit venus yang diduga hilal, atau penampakan lampu didekat ufuk yang diidentifikasi sebagai dugaan hilal. Untuk kasus hilal negatif yang berhasil diamati kemungkinan adanya kesalahan perhitungan posisi hilal juga sangat dimungkinkan.*
Kata kunci: *Hilal, Visibilitas Hilal*

A. Introduction

According to the decree of the Minister of Religious Affairs of the Republic of Indonesia, number 669 of 2019, 1 Zulhijjah 1440 corresponds to Friday, August 2, 2019. KMA RI No.669 of 2019 considers the testimony of ten hilal reports confirming the sighting of the new moon on Thursday, August 1, 2019, which coincided with 29 Zulqaidah 1440 Hijri.

In accordance with KMA RI No.669 of 2019, ten hilal observation reports were reviewed, which were submitted by the following individuals:

1. K.H. Inwanudin, 44 years old, is a member of the Falakiyah Institute of Nahdlatul Ulama Gresik Branch in East Java Province. He was sworn in by Dr. H. Suhartono, S.Ag., S.H., M.H., Judge of the Gresik Regency Religious Court.
2. Syamsul Fuad, 51 years old, a member of the Falakiyah Institute of Nahdlatul Ulama Gresik Branch in East Java Province. He was also sworn in by Dr. H. Suhartono, S.Ag., S.H., M.H., Judge of the Gresik Regency Religious Court.



Picture 1. Hilal Altitude Map at Sunset for Indonesia Location

3. Syamsul Maarif, 37, is the chairman of the Falakiyah Institute of Mojokerto Branch Management in the East Java Province. He was sworn in by Dr. H. Suhartono, S.Ag., S.H., M.H., who is also the Gresik Regency Religious Court Judge.
4. K.H. Azhar, aged 54, is a Teacher at Al-Fatih Islamic Boarding School in Surabaya, East Java Province. Dr. H. Suhartono, S.Ag., S.H., M.H., the Judge of the Religious Court of Gresik Regency, swore him in.
5. Ustadz Umar Syarif, aged 49, is the Chairman of the Falakiyah Institute of Nahdlatul Ulama Ponorogo Branch in the East Java Province. He has been sworn in by Dr. H. Suhartono, S.Ag., S.H., M.H., who serves as the Gresik Regency Religious Court Judge.
6. Ustadz Moh. Nuvel, aged 29, is a Lecturer at Ngalah Islamic Boarding School in Pasuruan, East Java Province. He was sworn in by Dr. H. Muhibbin, M.A., Chairman of the Pasuruan Regency Religious Court.
7. K.H. Khotib Asmuni, aged 52, is the caretaker of An-Nuriyah Islamic Boarding School in Jember, East Java Province, and was sworn in by Dr. Faisal, Judge of the Lamongan Regency Religious Court.

8. Ustadz Abdul Mujib, aged 42, is a Madrasah teacher sworn in by Dr. Faisal, Judge of the Lamongan Regency Religious Court.
9. Drs. H. Sulthon, aged 52, holds the position of Section Head at the Ministry of Religious Affairs Office in Kudus Regency, East Java Province. H. has sworn him in. Ah. Sholih, S.H., Judge of the Kudus Regency Religious Court.
10. Wiwik Haris Prasetyo, 42, is a Sharia Organizing Staff member at the Ministry of Religious Affairs Office in Kudus Regency, East Java Province. H. has sworn him in. Ah. Sholih, S.H., Judge of the Kudus Regency Religious Court.

All testimonies and confessions are officially recorded and reported under oath, administered by a judge of the local religious court.

Regarding astronomical calculations, the height of the hilal in Indonesia at sunset on August 1, 2019, ranges from 2°04' to 3°57'. According to the Meteorology, Climatology, and Geophysics Agency (BMKG) of the Republic of Indonesia, the hilal height in Indonesia at sunset on August 1, 2019, ranges from 1.86° in Merauke, Papua, to 3.96° in Sabang, Aceh (Figure 1).[1]

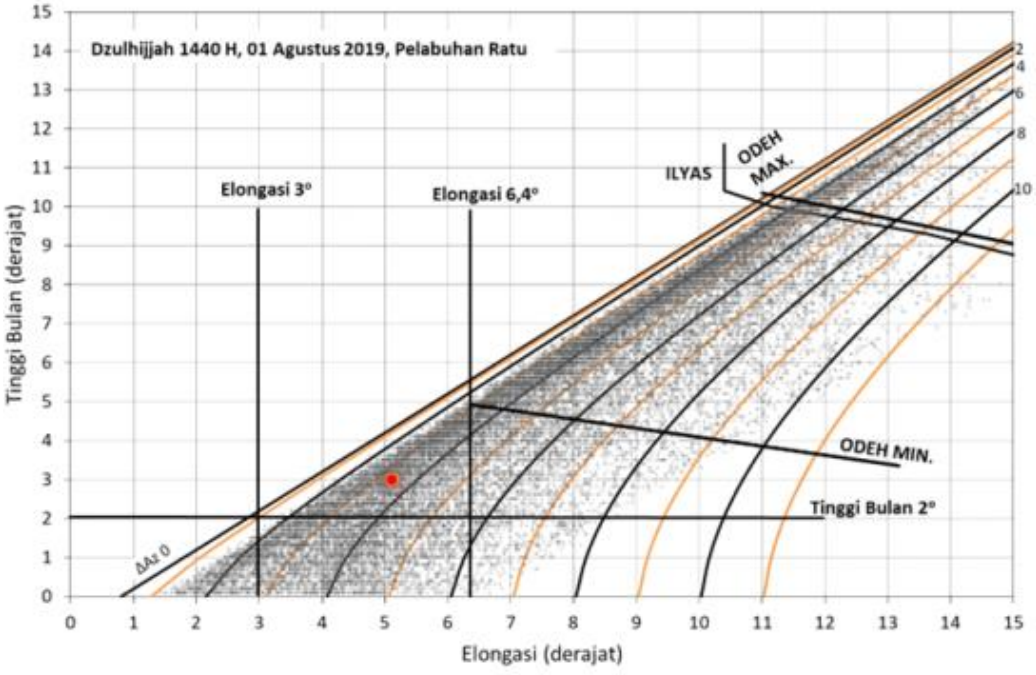
The elongation diagram depicts the position of the hilal on August 1, 2019, to compare the height of the Moon with the visibility criteria.[2] The initial crescent of Zulhijjah was not visible below the criteria line with telescopes.

The criterion for visibility of the new moon (hilal) with a telescope is the minimum limit that can be observed. Telescopes are much better at observing faint objects like the moon than the human eye. The hilal is more likely to be more easily detected through telescopes than with the naked eye. Since the 1990s, there have been three differences in determining Eid al-Fitr. In 1992 (1412 H), some celebrated the holiday on Friday (3/4) following Makkah, while others celebrated on Saturday (4/4) according to the results of rukyat, and some celebrated Eid al-Fitr on Sunday (5/4) based on hisab. In 1993 (1413 H) and 1994 (1414 H), there were also differences in the determination of 1 Shawwal due to the difference between ru'yah and hisab. This difference occurred for Eid al-Fitr and Eid al-Adha in 2000. At that time, the government set Eid al-Adha to fall on March 16, 2000, while PBNU set it on March 17, 2000.[3]

[1]BMKG, "Informasi Prakiraan Hilal Saat Matahari Terbenam Tanggal 19 Agustus 2020 M (Penentu Awal Bulan Muharam 1442 H)," 2020, https://cdn.bmkg.go.id/web/info_hilal_dzulhijjah_1440h.pdf.

[2]Novi Sopwan Moedji Raharto dan Al Khansa Rodhiyah, "Relasi Antar Parameter Visibilitas Hilal," *Prosiding SNSA 2017 Http://Pussainsa.Lapan.Go.Id/Upload/Prosiding/Prosiding_SNSA_2017.Pdf*, 2018, 9–17.

[3]Anonim, "Sejak 1990-an, Sudah 3 Kali Beda Idul Fitri," 2015, www.nu.or.id/post/read/5435/sejak-1990-an-sudah-3-kali-beda-idul-fitri.



Picture 2. Zulhijjah's initial crescent moon position in the high-elongation diagram for Pelabuhan Ratu, West Java

In another case, on Eid al-Fitr 1427 H, PWNU East Java and PBNU differed in their initial determination of Eid al-Fitr, confusing Nahdliyin. PBNU, through the Falakiyah Institute, has held meetings with PWNU East Java and organized training to produce qualified observers to avoid a recurrence of the same case.[4]

The difference in holidays due to differences in methods and criteria is evident in the determination of Eid al-Fitr 1418. At that time, the Minister of Religious Affairs did not make a firm decision, stating that the government celebrated the holiday on January 30, 1998, but allowed people who believed on January 29 to pray Eid. At that time, Muhammadiyah used the hilal wutitle hisab on Eid al-Fitr on January 29. Meanwhile, the Government and PERSIS are considering hisab with imkanur rukyat for Eid al-Fitr on January 30. NU in East Java and parts of Central Java received testimony in Bawean and Cakung until Eid al-Fitr on January 29. Meanwhile, PB NU agreed to Eid al-Fitr on January 30 because the rukyat was considered impossible based on hisab considerations with *imkanur rukyat*.

[4]Anonim, "PWNU Jatim Akan Ikuti Hasil Rukyat PBNU," 2007, https://www.nu.or.id/post/read/9760/pwnu-jatim-akan-ikuti-hasil-rukyat-pbnu.

B. Methode

This study is a quantitative analysis of the hilal position parameters reported during the sightings of the new moon at the beginning of Ramadan, Shawwal, and Zulhijjah. The research gathers data on the hilal sightings from the start of Ramadan in 1381 Hijri to the commencement of Shawwal in 1442 Hijri. The beginning of Ramadan was determined in 1348 H with KMA number 6 of 1962, while the start of Shawwal in 1442 H was determined with KMA number 583 of 2021.[5] The testimony data for the Islamic months of Ramadan, Shawwal, and Zulhijjah from 1381 H to 1440 H is obtained from the Decree of the Minister of Religious Affairs of the Republic of Indonesia from 1962 AD to 2019 AD.[6] Data for 1441 H and 1442 H are sourced from the determination of 1 Ramadan 1441 H,[7] 1 Shawwal 1441 H,[8] 1 Dhul-Hijjah 1441 H,[9] 1 Ramadan 1442 H,[10] and 1 Shawwal 1442 H[11]All data are compiled into 59 years of compilation of hilal testimonies in Indonesia, presented in Table 1. Table 1 is a 59-year hilal testimony data table issued by the Ministry of Religious Affairs of the Republic of Indonesia.

C. Result and Analysis

The results of the compilation of hilal data for 59 years, along with the calculation of hilal position parameters, are presented in Table 1. The hilal position parameter for the entire hilal testimony case was calculated using the VSOP8 algorithm[12] for the calculation of the position of the Sun and the ELP91 algorithm[13] Calculating the moon's position is essential to derive the hilal position parameter for each case of hilal testimony. The precise positions of the Moon and sun are calculated at sunset and adjusted based on the locations of observers who claim to have witnessed the hilal.

The parameters of the hilal position calculated are the sunset time of the Moon and Sun, the Moon's Azimuth and Altitude, the Moon's Elongation, the Difference in the Moon's height and

[5]Ministry of Religious Affairs of the Republic of Indonesia, Decree of the Minister of Religious Affairs of the Republic of Indonesia Number 583 of 2021 concerning the Determination of 1 Shawwal 1442 H (2021).

[6]Ministry of Religious Affairs of the Republic of Indonesia, Decree of the Minister of *Religious Affairs of the Republic of Indonesia; 1 Ramadan, Shawwal, and Zulhijjah 1381 H - 1440 H / 1962 M - 2019 AD* (Jakarta: Ministry of Religious Affairs of the Republic of Indonesia, 2019).

[7]Ministry of Religious Affairs of the Republic of Indonesia, Decree of the Minister of Religious Affairs of the Republic of Indonesia Number 400 of 2020 concerning the Determination of 1 Ramadan 1441 H (2020).

[8]Ministry of Religious Affairs of the Republic of Indonesia, Decree of the Minister of Religious Affairs of the Republic of Indonesia Number 443 of 2020 concerning the Determination of 1 Shawwal 1441 H (2020).

[9]Ministry of Religious Affairs of the Republic of Indonesia, Decree of the Minister of Religious Affairs of the Republic of Indonesia Number 575 of 2020 concerning the Determination of 1 Zulhijjah 1441 H (2020).

[10]Ministry of Religious Affairs of the Republic of Indonesia, Decree of the Minister of Religious Affairs of the Republic of Indonesia Number 418 of 2021 concerning the establishment of 1 Ramadan 1442 H (2021).

[11]Ministry of Religious Affairs of the Republic of Indonesia, Decree of the Minister of Religious Affairs of the Republic of Indonesia Number 583 of 2021 concerning the Determination of 1 Shawwal 1442 H.

[12]Pierre Bretagnon and Jean-Louis Simon, *Planetary Programs and Tables from -4000 to +2800* (Virginia: Willmann-Bell,Inc., 1986).

[13]M Chapront-Touzé and J Chapront, *Lunar Tables and Programs from 4000 B.C. to A.D. 8000* (Virginia: Willmann-Bell,Inc., 1991), https://books.google.co.in/books?id=dHvvAAAAMAAJ.

Azimuth, the difference in the sunset time of the Moon and Sun, the width of the Moon's crescent, and the Moon's age.[14]

Table 1 contains 13 columns of data. Column 1 indicates the sequence number. Columns 2 and 3 show the month and year of the Hijri calendar, while Column 4 indicates the year in the AD calendar. Column 5 represents the number of the Decree of the Minister of Religious Affairs. Column 6 records the location where the rukyat hilal takes place. Columns 7 through 13 contain calculated hilal visibility parameters, including sunset time (Column 7), Sun azimuth (Column 8), Moon height (Column 9), Moon azimuth (Column 10), elongation (Column 11), the sunset time difference (Column 12), and Moon age (Column 13).

Table 1. Comparison Table of Moon Position Parameters of Hilal Testimony Data with the criteria of Hilal Visibility and Determination of the Beginning of the Month

Criteria	Number Data	Number Data	Total
Mabims 2-3	400	11	411
Altitude >0	390	21	411
LAPAN Criteria (Arcv 4 Arcl 6.4)	179	232	411
Danjon Limit (Arcl 7)	168	243	411
Odeh Minimum Elongation (Optik)	200	211	411
Odeh Minimum Elongation (Mata)	126	285	411

Table 1 shows the sunset time in hours, minutes, and seconds (column 7). Columns 8 through 11 display angles in degrees (°), arc minutes ('), and arc seconds ("). Column 12 represents the difference in the sunset time of the Moon and Sun in hours (h), minutes (m), and seconds (s). Column 13 displays the age of the Moon, which is the time from the New Moon to sunset, in hours (h), minutes (m), and seconds (s). These values are for cases where the hilal occurs positionally and does not reach istikmal. The monistic hilal is most likely to be positionally observed.

The sunset timing for the Sun is used to determine the position of the hilal, while the sunset timing for the Moon marks the deadline for hilal observations as it becomes unlikely to be seen again after it sets. Azimuth and height are the coordinates that reference the hilal position during observation. The height discrepancy, azimuth, and elongation indicate the distance between the

[14]Novi Sopwan and Moedji Raharto, "Comparison of the Distribution of Sunset Hilal Haat Position in the Cities of Jayapura, Pontianak, Pelabuhan Ratu, and Banda Aceh," in *Conference Proceedings of the National Symposium on Science Innovation and Learning (SNIPS 2019)*, vol. 1 (ITB Physics Study Program, 2020), 165–71.

Moon and the Sun. The farther the moon is from the Sun, the greater the likelihood of seeing it, whereas the closer the Moon is to the Sun, the more challenging it is to observe.[15]

The discrepancy in sunset times between the Moon and the Sun reflects when the Moon remains visible above the horizon for observers. A prolonged duration of the Moon's visibility increases the likelihood of it being observed. The Moon's crescent's width denotes the crescent's thickness formed during hilal observations. A thicker crescent makes the Moon easier to see. The age of the Moon is a measure of its distance from the moment of conjunction with the Sun. An older Moon, indicating a greater distance from the Sun, results in a thicker crescent that is easier to observe.[16]

To obtain an overview of the visibility of the new moon from each reported sighting, the parameters of the new moon's position are compared with the MABIMS criteria[17], LAPAN [18]criteria, Danjon limit[19], and ODEH criteria[20]. The MABIMS criterion is a hilal visibility criterion used by the Ministry of Religious Affairs of the Republic of Indonesia. It requires a minimum Moon height of 2º, Moon and Sun elongation of 3º, and a Moon age of 8 hours. The LAPAN criterion states that the Moon must meet a minimum difference in Moon and Sun height of 4º and Moon and Sun elongation of 6.4º. The Danjon limit is the minimum criterion that must be achieved for the hilal to be visible to the naked eye or other detectors. The Danjon limit used as a comparison is 7º elongation. The Odeh criteria used for comparison are the limit for visible observation with the naked eye on an apparent sky without any interference and the criterion for observation with a telescope. A comparison of each case of hilal testimony against these criteria is presented in Table 2.

Table 2 provides an overview of the cases where hilal testimony was used to determine the visibility of the hilal. A total of 411 hilal testimony reports were analyzed. Notably, a single observation location could result in multiple hilal testimony reports. When comparing the hilal testimony reports to the MABIMS criteria, 400 reports met the criteria, while 11 did not.

[15]Novi Sopwan and Abu Dzarrin Al-Hamidy, "Implications of Jakarta 2017 Recommendation Hilal Visibility Criteria on Hijri Calendar in Indonesia," *Azimuth: Journal of Islamic Astronomy* 1, no. 1 (2020): 52–73.

[16]M Raharto and N Sopwan, "Moon Age as a Parameter of Hilal Visibility," in *Proceedings of the National Seminar on Physics (SNF)*, vol. 3, 2020, 26–29.

[17]Thomas Djamaluddin, "Indonesia Applies New MABIMS Criteria," 2022, https://tdjamaluddin.wordpress.com/2022/02/23/bismillah-indonesia-menerapkan-kriteria-baru-mabims/.

[18]Thomas Djamaluddin, "Re-Evaluation of Hilaal Visibility in Indonesia," *Center for Application of Space Science National Institute of Aeronautics and Space (LAPAN)*, 2001, 1–5.

[19]Mohammad Ilyas, "The Danjon Limit of Lunar Visibility: A Re-Examination," *The Journal of the Royal Astronomical Society of Canada* 77, no. 1 (1983): 214–19.

[20]Mohammad Sh Odeh, "New Criterion for Lunar Crescent Visibility," *Experimental Astronomy* 18, no. 1–3 (2004): 39–64, https://doi.org/10.1007/s10686-005-9002-5.

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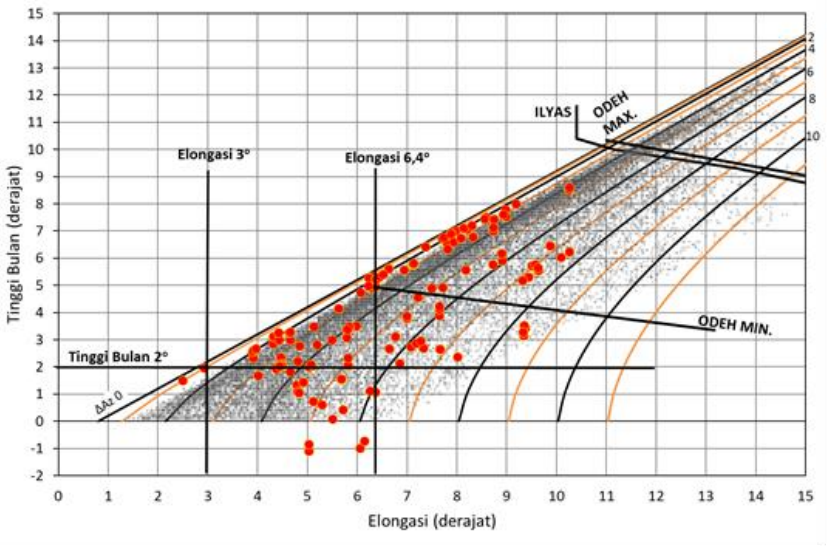
Additionally, 11 reports met the MABIMS criteria, yet it was determined that there was a change in the moon's visibility.



Picture 3. Plot Hilal Testimony Data against Hilal Visibility Criteria

A total of 390 testimonial data showed that it was above the height of 0 degrees. The remaining 21 data have negative heights below the horizon. The hilal can practically not be observed in conditions below the horizon because it is already dead at sunset. This case shows that there is inaccurate testimony about the object observed. The observer likely saw objects other than the hilal that resembled the hilal, but his testimony was acknowledged.

A total of 179 testimonial data have met the LAPAN criteria. The remaining 232 testimonies did not meet the LAPAN criteria. A total of 168 hilal testimony data met the Danjon 7º limit; the remaining 243 did not meet the Danjon 7º limit. A total of 200 hilal testimony data met the lowest elongation criteria of observation with the help of optical instruments; the remaining 211 hilal testimony data did not meet the lowest elongation criteria of observation with the help of optical instruments. 126 hilal testimony data met the lowest elongation criteria of observation with the eye; the remaining 285 hilal testimony data did not meet the lowest elongation criteria of observation with the eye.

To facilitate the distribution of data on the variety of hilal visibility, a plot of hilal testimony data was carried out against the variety of hilal visibility used (Figure 3). Figure 3 shows the distribution of hilal testimony data (red dot data) in the Moon height and Elongation plots, both parameters in degrees. A height of 0º indicates the observer's horizon boundary. The 2º Moon Height is a representation of the MABIMS criteria. An elongation of 6.4 degrees is the limit of

Danjon's thinnest hilal observation record. The minimum order is the limit of observation with the help of optical instruments. The maximum odeh is the limit of hilal visibility with the naked eye.[21]

All Hilal testimony data fall below the line of maximum Odeh and Ilyas criteria. Both criteria are the limits of observation criteria with the naked eye. Data below the limits of the maximum Odeh criterion and the Ilyas Criterion show that all hilal testimony data should be challenging to see by the human eye without the help of optical instruments such as telescopes. According to the KMA issued, almost all of Hilal's testimony states that Hilal is observed with the eye. There is a discrepancy between the hilal testimony and the empirical criterion of hilal visibility.[22]

Some cases of hilal hilal testimony are above the criteria of minimal Odeh. This minimum Odeh criterion is the limit of observation with a telescope. Telescopes can observe data above the minimum Odeh criteria. Data below the minimum Odeh criterion cannot be observed even by telescopes. There is a discrepancy between the testimony data and the hilal visibility of the telescope because the hilal data may be observed only with telescopes, not only with the naked eye.[23]

All data below the Odeh minimum criterion line are likely hilal not challenging to observe with telescopes. It needs a scientific explanation to explain this hilal testimony data. Many data are recognized hilal testimony but astronomically challenging to prove, primarily if the observations only use the naked eye. The evidence was carried out by observing the hilal case we managed to observe at the Sunan Ampel Astronomical Observatory (OASA) Faculty of Sharia and Law UIN Sunan Ampel Surabaya. The image of Hilal that we managed to capture with a camera and the help of a telescope is the hilal determining the beginning of Ramadan 1442 Hijri, dah Hilal determining the beginning of Safar 1443 Hijri. Both moons are imaged in the camera we use, but even until the Moon sets, they are not observed with the naked eye. After we try to analyze the parameters of the hilal position in plots such as Figure 3, the hilal determining the beginning of Ramadan 1442 Hijri and the hilal determining the beginning of Safar 1443 Hijri are on the boundary line of the observation criteria with the eye. These two Hilal are far above the hilal testimony data collected from KMA.

Hilal testimony data above 2º and below the minimum Odeh criterion are hilal data that are unlikely to be visible or even close to impossible. Hilal testimony data below 2º. It may be impossible to observe because the time of the Moon above the horizon is very short, only 8-10 minutes. The moon will likely set first before the sky darkens. Another possibility is the presence of errors of observed objects other than hilal. It could be a glowing cloud resembling the hilal, the

[21]M. Raharto et al., "New Approach on Study of New Young Crescent (Hilal) Visibility and New Month of Hijri Calendar," in *Journal of Physics: Conference Series*, vol. 1170, 2019, https://doi.org/10.1088/1742-6596/1170/1/012080.

[22]Moedji Raharto and Al Khansa Rodhiyah, "The Relationship Between Hilal Visibility Parameters."

[23]Novi Sopwan and Moedji Raharto, "Characteristics of Hilal Elongation Position Parameters and Moon Height at Sunset in Pelabuhan Ratu West Java," in *National Seminar on Science Education 2017*, vol. 2, 2018.

appearance of the crescent of Venus that is suspected to be hilal, or the appearance of a lamp near the horizon that is identified as a suspected hilal. In the case of negative hilals that have been successfully observed, the possibility of miscalculating the hilal position is also very high.

D. Conclusion

There is a discrepancy between hilal testimony data and hilal visibility, which is used as a reference for hilal visibility. Almost all hilal data in hilal testimony is hilal data that is difficult to observe with the eye. Still, hilal testimony is documented as hilal observed with the eye. There are even hilals that may be impossible to observe but are documented as hilals observed with the naked eye. Sunset hilals are still recorded, and some are documented as observed hilals, although it is suspected that there are errors in objects observed other than hilal. It could be a glowing cloud resembling the hilal, the appearance of the crescent of Venus suspected to be hilal, or a lamp near the horizon identified as a suspected hilal. In the case of a negative hilal that has been successfully observed, the possibility of miscalculating the hilal position is also very high.

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Table 1. Table of the calculation of hilal position parameters of the beginning of Ramadan, Shawwal, and Zulhijjah in 1962 – 2021

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
No	Bulan	Tahun (H)	Tahun (M)	Nomor Putusan	Lokasi	Waktu Matahari Terbenam	Azimuth Matahari	Tinggi Bulan	Azimuth Bulan	Elongasi	Beda Waktu Terbenam	Umur Bulan
1	Ramadhan	1381 H	1962 M	6 Tahun 1962	Kupal Pelabuhan Ratu, Sukabumi	18:19:54	253° 46' 01"	04° 09' 24"	256° 07' 57"	05° 37' 32"	00j 22m 02d	11j 10m 04d
2	Syawal	1381 H	1962 M	6 Tahun 1962								
3	Ramadhan	1382 H	1963 M	7 Tahun 1963								
4	Syawal	1382 H	1963 M	-								
5	Ramadhan	1383 H	1964 M	3 Tahun 1964	Kampung Bandan Ancol	18:15:32	248° 30' 24"	05° 18' 24"	248° 48' 40"	06° 15' 40"	00j 27m 52d	14j 31m 56d
					Gedung Departemen Agama RI MH. Thamrin	18:15:39	248° 30' 12"	05° 18' 26"	248° 48' 55"	06° 15' 43"	00j 27m 52d	14j 32m 02d
6	Syawal	1383 H	1964 M	-								
7	Ramadhan	1384 H	1965 M	1 Tahun 1965								
8	Syawal	1384 H	1965 M	-								
9	Ramadhan	1385 H	1965 M	1 Tahun 1965								
10	Syawal	1385 H	1966 M	-								
11	Ramadhan	1386 H	1966 M	90 Tahun 1966	Kelapa Gading Jl. By Pass Tanjung Priuk	18:00:39	246° 40' 40"	02° 20' 23"	243° 39' 39"	04° 27' 42"	00j 15m 14d	07j 47m 22d
					Puntjak Tugu Nasional Lapangan Merdeka Djakarta	18:02:08	246° 38' 35"	02° 05' 43"	243° 38' 12"	04° 28' 11"	00j 15m 20d	07j 48m 51d
					Masjid Batu Tjeper-Tangerang	18:01:43	246° 40' 36"	02° 21' 00"	243° 39' 39"	04° 28' 07"	00j 15m 17d	07j 48m 26d
					Kampung Baru Gapura Muka	18:00:29	246° 40' 21"	02° 20' 34"	243° 39' 44"	04° 27' 35"	00j 15m 15d	07j 47m 12d
12	Syawal	1386 H	1967 M	-								
13	Ramadhan	1387 H	1967 M	-								
14	Syawal	1387 H	1968 M	-								
15	Ramadhan	1388 H	1968 M	254 Tahun 1968								
16	Syawal	1388 H	1968 M	267 Tahun 1968	Perbengkelan Antjol Tandjung Priok	18:05:07	246° 18' 17"	08° 31' 34"	242° 24' 56"	10° 14' 27"	00j 44m 55d	16j 46m 35d
					Pulo Gadung Djatinegara	18:05:05	246° 17' 59"	08° 31' 53"	242° 25' 32"	10° 14' 24"	00j 44m 57d	16j 46m 34d
					Pelabuhanratu Sukabumi	18:07:53	246° 14' 44"	08° 36' 59"	242° 32' 03"	10° 15' 30"	00j 45m 24d	16j 49m 21d
17	Ramadhan	1389 H	1969 M	160 Tahun 1969	Puntjak Tugu Nasional di Djakarta	17:49:24	252° 35' 32"	03° 53' 30"	246° 53' 37"	07° 38' 58"	00j 23m 18d	12j 38m 00d
					Gedung Markas Besar Angkatan Udara(Pantjoran-Djakarta)	17:48:17	252° 37' 27"	04° 08' 13"	246° 54' 59"	07° 38' 36"	00j 23m 12d	12j 36m 53d
					Kampung Baru Desa Gapura Muka Bekasi	17:47:46	252° 37' 16"	04° 08' 20"	246° 55' 16"	07° 38' 19"	00j 23m 13d	12j 36m 23d
					Projek Antjol Tandjung Priok	17:48:08	252° 37' 37"	04° 07' 46"	246° 54' 48"	07° 38' 34"	00j 23m 10d	12j 36m 44d
					Projek Observasi Bulan di Tjidadap Pelabuhan Ratu	17:50:27	252° 34' 50"	04° 14' 25"	246° 57' 32"	07° 38' 55"	00j 23m 43d	12j 39m 03d
18	Syawal	1389 H	1969 M	-								

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19	Ramadhan	1390 H	1970 M	264 Tahun 1970	Puntjak Monumen Nasional Djakarta	17:47:28	256° 03' 27"	-01° 05' 54"	251° 01' 50"	05° 01' 42"	00j 00m 29d	04j 19m 38d
					Kampung Sunter di Djalanan By Pass Djakarta	17:46:12	256° 05' 25"	-00° 51' 14"	251° 03' 50"	05° 01' 38"	00j 00m 23d	04j 18m 21d
					Desa Gapura Muka Bekasi	17:45:51	256° 05' 09"	-00° 50' 51"	251° 03' 44"	05° 01' 29"	00j 00m 25d	04j 18m 00d
20	Syawal	1390 H	1970 M	-								
21	Ramadhan	1391 H	1971 M	62 Tahun 1971								
22	Syawal	1391 H	1971 M	-								
23	Ramadhan	1392 H	1972 M	86 Tahun 1972								
24	Syawal	1392 H	1972 M	97 Tahun 1972	Proyek Ancol Djakarta	17:47:18	253° 42' 58"	01° 32' 28"	248° 36' 22"	05° 41' 00"	00j 11m 00d	09j 26m 01d
					Kampung Baru Desa Gapura Muka Bekasi	17:46:57	253° 42' 37"	01° 32' 58"	248° 36' 29"	05° 40' 48"	00j 11m 03d	09j 25m 39d
					Puncak Gedung Kantor Departemen Transkop Jl. Gatot Subroto	17:47:32	253° 42' 37"	01° 33' 13"	248° 36' 26"	05° 40' 57"	00j 11m 04d	09j 26m 14d
25	Ramadhan	1393 H	1973 M	87 Tahun 1973								
26	Syawal	1393 H	1973 M	96 Tahun 1973	Ancol Tanjung Priok Djakarta	17:45:55	257° 20' 59"	00° 43' 23"	252° 30' 41"	05° 07' 05"	00j 07m 12d	07j 29m 30d
					Desa Gapura Muka Bekasi	17:45:32	257° 20' 42"	00° 43' 49"	252° 30' 45"	05° 06' 53"	00j 07m 14d	07j 29m 07d
27	Ramadhan	1394 H	1974 M	60 Tahun 1974	Proyek Ancol Jakarta	17:50:12	272° 37' 01"	01° 04' 28"	266° 34' 58"	06° 21' 43"	00j 08m 29d	08j 05m 04d
					Puncak Gedung P.N. Timah Djakarta	17:50:15	272° 37' 00"	01° 04' 45"	266° 35' 04"	06° 21' 42"	00j 08m 30d	08j 05m 07d
					Tiungan Yogyakarta	17:35:49	272° 36' 10"	01° 06' 58"	266° 41' 37"	06° 15' 25"	00j 08m 41d	07j 50m 41d
28	Syawal	1394 H	1974 M	66 Tahun 1974								
29	Ramadhan	1395 H	1975 M	42 Tahun 1975	Proyek Ancol Djakarta	17:52:06	276° 31' 38"	05° 39' 10"	269° 35' 01"	09° 34' 31"	00j 27m 38d	15j 33m 34d
					Kampung Baru Desa Gapura Muka Bekasi	17:51:33	276° 31' 37"	05° 39' 43"	269° 36' 03"	09° 34' 09"	00j 27m 41d	15j 33m 01d
					Gedung Veteran Granada Jakarta	17:46:02	276° 31' 31"	05° 44' 25"	269° 45' 33"	09° 30' 32"	00j 28m 05d	15j 27m 30d
					Pos Observasi Bulan Pelabuhan Ratu Sukabumi	17:52:56	276° 31' 27"	05° 45' 55"	269° 41' 41"	09° 34' 17"	00j 28m 10d	15j 34m 24d
30	Syawal	1395 H	1975 M	48 Tahun 1975	Proyek Ancol Djakarta	17:46:58	265° 17' 35"	01° 20' 21"	261° 04' 58"	04° 47' 20"	00j 09m 43d	07j 23m 47d
					Kampung Baru Desa Gapura Muka Kab. Bekasi	17:46:31	265° 17' 24"	01° 20' 36"	261° 05' 16"	04° 47' 02"	00j 09m 44d	07j 23m 19d
					Puncak Monumen Nasional Jakarta	17:48:09	265° 15' 44"	01° 05' 31"	261° 03' 17"	04° 47' 42"	00j 09m 48d	07j 24m 57d
31	Ramadhan	1396 H	1976 M	44 Tahun 1976								
32	Syawal	1396 H	1976 M	-								
33	Ramadhan	1397 H	1977 M	49 Tahun 1977	Kampung Baru Cakung Jakarta Timur	17:54:22	283° 59' 46"	03° 47' 14"	278° 50' 21"	06° 59' 43"	00j 19m 53d	13j 23m 23d
					POB Pelabuhanratu Sukabumi	17:55:10	284° 00' 19"	03° 52' 01"	278° 55' 44"	06° 59' 28"	00j 20m 16d	13j 24m 11d
34	Syawal	1397 H	1977 M	-								
35	Ramadhan	1398 H	1978 M	72 Tahun 1978	Gedung Graha Purna Yudha, Jl. Sudirman Jakarta	17:55:00	287° 16' 31"	02° 01' 52"	283° 09' 14"	05° 04' 49"	00j 12m 36d	09j 54m 10d
					Cakung Jakarta	17:54:31	287° 16' 29"	02° 01' 31"	283° 09' 06"	05° 04' 42"	00j 12m 34d	09j 53m 42d
					Tegal Jawa Tengah	17:44:55	287° 17' 22"	02° 00' 15"	283° 13' 19"	05° 01' 14"	00j 12m 30d	09j 44m 06d
					POB Pelabuhanratu Sukabumi	17:55:07	287° 17' 23"	02° 05' 22"	283° 13' 22"	05° 04' 15"	00j 12m 52d	09j 54m 18d
36	Syawal	1398 H	1978 M	-								
37	Ramadhan	1399 H	1979 M	59 Tahun 1979	POB Pelabuhanratu	17:54:05	289° 58' 50"	02° 06' 29"	286° 42' 21"	04° 28' 23"	00j 13m 08d	09j 13m 21d
					Cakung Jakarta	17:53:39	289° 57' 40"	02° 03' 21"	286° 37' 43"	04° 28' 50"	00j 12m 53d	09j 12m 55d
38	Syawal	1399 H	1979 M	64 Tahun 1979								

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39	Ramadhan	1400 H	1980 M	40 Tahun 1980								
40	Syawal	1400 H	1980 M	47 Tahun 1980	Pantai Ampenan Lombok NTB	18:15:24	285° 11' 44"	05° 20' 07"	284° 32' 47"	06° 18' 30"	00j 26m 58d	15j 06m 01d
					POB Pelabuhanratu Sukabumi	17:55:15	285° 09' 19"	05° 37' 44"	284° 16' 08"	06° 37' 41"	00j 28m 05d	15j 45m 52d
					Cakung Jakarta	17:54:31	285° 08' 38"	05° 36' 35"	284° 09' 02"	06° 37' 27"	00j 27m 57d	15j 45m 08d
41	Ramadhan	1401 H	1981 M	54 Tahun 1981	POB Pelabuhanratu Sukabumi	17:49:56	293° 05' 20"	07° 00' 31"	292° 22' 15"	07° 58' 48"	00j 35m 49d	15j 46m 48d
					Pantai Tanjung Kabut Situbondo	17:18:56	293° 06' 51"	06° 43' 41"	292° 27' 42"	07° 41' 45"	00j 34m 37d	15j 15m 49d
42	Syawal	1401 H	1981 M	66 Tahun 1981	Gedung YTKI, Jl. Gatot Subroto Jakarta	17:54:42	288° 14' 26"	01° 57' 54"	288° 35' 39"	02° 55' 32"	00j 12m 44d	07j 02m 45d
					Kampung Baru Cakung	17:54:19	288° 14' 23"	01° 57' 42"	288° 35' 24"	02° 55' 19"	00j 12m 43d	07j 02m 21d
43	Ramadhan	1402 H	1982 M	55 Tahun 1982								
44	Syawal	1402 H	1982 M	68 Tahun 1982	Pantai Kastela Ternate	18:42:13	290° 31' 11"	06° 56' 15"	290° 41' 05"	07° 52' 40"	00j 35m 01d	14j 45m 42d
					Ladang Dawan Pantai Ampenan NTB	18:13:11	290° 35' 30"	07° 04' 35"	292° 18' 36"	08° 11' 49"	00j 36m 18d	15j 16m 39d
					POB Pelabuhanratu Sukabumi	17:53:42	290° 31' 58"	07° 31' 06"	291° 59' 14"	08° 34' 53"	00j 38m 05d	15j 57m 11d
45	Ramadhan	1403 H	1983 M	41 Tahun 1983	POB Pelabuhanratu Sukabumi	17:45:26	293° 07' 20"	01° 29' 48"	293° 39' 57"	02° 29' 46"	00j 11m 10d	06j 07m 56d
					Kampung Baru Cakung Jakarta	17:45:12	293° 05' 50"	01° 30' 09"	293° 35' 18"	02° 29' 27"	00j 11m 11d	06j 07m 42d
46	Syawal	1403 H	1983 M	-								
47	Ramadhan	1404 H	1984 M	40 Tahun 1984								
48	Syawal	1404 H	1984 M	53 Tahun 1984	Gedung Pengadilan Negeri Pare-pare	17:02:03	293° 12' 12"	01° 41' 03"	296° 14' 18"	04° 00' 46"	00j 12m 09d	06j 43m 38d
					Kampung Baru Jakarta Timur	17:49:06	293° 14' 45"	01° 58' 53"	296° 28' 52"	04° 21' 31"	00j 13m 36d	07j 30m 41d
					POS Observasi Bulan Pelabuhan Ratu	17:49:19	293° 16' 16"	01° 56' 03"	296° 33' 55"	04° 22' 16"	00j 13m 25d	07j 30m 54d
49	Ramadhan	1405 H	1985 M	-								
50	Syawal	1405 H	1985 M	-								
51	Ramadhan	1406 H	1986 M	155 Tahun 1986								
52	Syawal	1406 H	1986 M	163 Tahun 1986								
53	Ramadhan	1407 H	1987 M	70 Tahun 1987	POS Observasi Bulan Pelabuhan Ratu	17:48:16	284° 02' 53"	01° 02' 59"	288° 26' 43"	04° 49' 36"	00j 08m 41d	09j 14m 00d
54	Syawal	1407 H	1987 M	81 Tahun 1987	POS Observasi Bulan Pelabuhan Ratu	17:44:03	291° 27' 40"	05° 32' 44"	298° 35' 26"	09° 38' 15"	00j 30m 30d	19j 30m 45d
					Kampung Baru Cakung Jakarta Timur	17:43:42	291° 26' 20"	05° 38' 54"	298° 27' 24"	09° 37' 32"	00j 30m 55d	19j 30m 24d
55	Ramadhan	1408 H	1988 M	-								
56	Syawal	1408 H	1988 M	73 Tahun 1988	Kampung Baru Cakung Jakarta Timur	17:43:54	289° 13' 04"	02° 38' 52"	295° 58' 44"	07° 39' 14"	00j 16m 33d	12j 33m 29d
					Puncak Masjid Jami' Al Makmur Klender Jakarta	17:44:02	289° 13' 05"	02° 38' 45"	295° 58' 54"	07° 39' 19"	00j 16m 33d	12j 33m 37d
57	Ramadhan	1409 H	1989 M	70 Tahun 1989	Masjid Al-Ma'mur Klender Jakarta Timur	17:55:46	276° 28' 11"	00° 04' 24"	281° 52' 47"	05° 30' 16"	00j 04m 26d	07j 23m 04d
58	Syawal	1409 H	1989 M	92 Tahun 1989								
59	Ramadhan	1410 H	1990 M	51 Tahun 1990	POS Observasi Bulan Pelabuhan Ratu	18:01:49	272° 29' 33"	03° 25' 07"	280° 47' 04"	09° 22' 10"	00j 18m 36d	15j 13m 32d
					Kampung Baru, Cakung Jakarta Timur	18:00:21	272° 30' 04"	03° 31' 16"	280° 42' 38"	09° 20' 42"	00j 19m 00d	15j 12m 04d
60	Syawal	1410 H	1990 M	62 Tahun 1990	Ujung Pangkah Gresik	17:25:19	283° 09' 32"	-00° 59' 53"	289° 12' 36"	06° 03' 05"	-00j 00m 09d	05j 57m 54d
					Kampung Baru Cakung	17:48:17	283° 09' 25"	-00° 43' 16"	289° 17' 48"	06° 08' 36"	00j 01m 04d	06j 20m 52d
61	Ramadhan	1411 H	1991 M	45 Tahun 1991								
62	Syawal	1411 H	1991 M	62 Tahun 1991	Kampung Baru Cakung	17:51:59	279° 37' 32"	03° 16' 34"	287° 56' 19"	09° 19' 19"	00j 18m 32d	15j 14m 22d

					POB Pelabuhan Ratu	17:53:02	279° 37' 41"	03° 10' 03"	288° 01' 04"	09° 20' 31"	00j 18m 05d	15j 15m 26d
					Menara Masjid Al-Makmur, Klender	17:52:08	279° 37' 32"	03° 16' 26"	287° 56' 30"	09° 19' 24"	00j 18m 31d	15j 14m 31d
					Kampung Basmol, Kelurahan Kembangan Jakarta Barat	17:52:47	279° 37' 33"	03° 16' 54"	287° 56' 35"	09° 19' 41"	00j 18m 33d	15j 15m 10d
63	Ramadhan	1412 H	1992 M	64 Tahun 1992								
64	Syawal	1412 H	1992 M	85 Tahun 1992								
65	Ramadhan	1413 H	1993 M	49 Tahun 1993								
66	Syawal	1413 H	1993 M	84 Tahun 1993								
67	Ramadhan	1414 H	1994 M	38 Tahun 1994								
68	Syawal	1414 H	1994 M	74 Tahun 1994								
69	Ramadhan	1415 H	1995 M	58 Tahun 1995	Pelabuhan Ratu, Sukabumi, Jawa Barat	18:20:04	252° 18' 14"	02° 21' 41"	259° 35' 45"	08° 00' 27"	00j 14m 00d	12j 32m 23d
					Manado, Sulawesi Utara	17:56:11	252° 33' 48"	02° 41' 59"	258° 55' 18"	07° 19' 48"	00j 15m 22d	11j 08m 30d
70	Syawal	1415 H	1995 M	104 Tahun 1995								
71	Ramadhan	1416 H	1996 M	33 Tahun 1996								
72	Syawal	1416 H	1996 M	71 Tahun 1996	Pelabuhan Ratu, Sukabumi, Jawa Barat	17:47:40	284° 41' 37"	05° 46' 12"	287° 06' 13"	07° 07' 48"	00j 29m 00d	17j 11m 25d
					Cakung, Jakarta	17:46:55	284° 40' 59"	05° 47' 54"	286° 58' 52"	07° 07' 12"	00j 29m 04d	17j 10m 41d
					Surabaya	17:22:33	284° 41' 34"	05° 34' 41"	287° 04' 23"	06° 56' 18"	00j 28m 11d	16j 46m 19d
					Jakarta Barat	17:47:42	284° 41' 00"	05° 48' 13"	286° 59' 05"	07° 07' 34"	00j 29m 06d	17j 11m 28d
73	Ramadhan	1417 H	1997 M	6 Tahun 1997	Pantai Pasir Putin, Manado	17:49:31	247° 57' 02"	00° 36' 14"	253° 00' 14"	05° 17' 11"	00j 06m 44d	05j 23m 49d
					Rembang Jawa Tengah	17:56:51	247° 39' 33"	00° 26' 02"	253° 12' 12"	05° 42' 50"	00j 06m 01d	06j 31m 09d
74	Syawal	1417 H	1997 M	60 Tahun 1997								
75	Ramadhan	1418 H	1997 M	887 Tahun 1997								
76	Syawal	1418 H	1998 M	47 Tahun 1998								
77	Ramadhan	1419 H	1998 M	654 Tahun 1998								
78	Syawal	1419 H	1999 M	10 Tahun 1999								
79	Ramadhan	1420 H	1999 M	629 Tahun 1999								
80	Syawal	1420 H	2000 M	3 Tahun 2000								
81	Ramadhan	1421 H	2000 M	460 Tahun 2000								
82	Syawal	1421 H	2000 M	504 Tahun 2000								
83	Dzulhijjah	1421 H	2000 M	47 Tahun 2001								
84	Ramadhan	1422 H	2001 M	489 Tahun 2001								
85	Syawal	1422 H	2001 M	536 Tahun 2001	Pelabuhan Ratu Sukabumi	18:05:15	246° 24' 17"	05° 16' 23"	246° 43' 43"	06° 13' 43"	00j 28m 14d	14j 17m 42d
86	Dzulhijjah	1422 H	2002 M	19 Tahun 2002								
87	Ramadhan	1423 H	2002 M	443 Tahun 2002								
88	Syawal	1423 H	2002 M	471 Tahun 2002								
89	Dzulhijjah	1423 H	2003 M	35 Tahun 2003								
90	Ramadhan	1424 H	2003 M	509 Tahun 2003								
91	Syawal	1424 H	2003 M	534 Tahun 2003	Dermaga Pelabuhan Biak	15:48:03	249° 28' 47"	03° 29' 22"	246° 56' 06"	05° 07' 11"	00j 20m 09d	09j 49m 07d

					Masjid Al-Makmur Klender	17:52:21	249° 15' 04"	04° 55' 34"	247° 00' 48"	06° 17' 07"	00j 26m 51d	11j 53m 24d
					Al-Makmur Klender Jakarta Timur	17:52:21	249° 15' 04"	04° 55' 34"	247° 00' 48"	06° 17' 07"	00j 26m 51d	11j 53m 24d
					Gebang Bangkalan	17:30:31	249° 12' 09"	04° 44' 41"	247° 06' 25"	06° 04' 00"	00j 26m 04d	11j 31m 34d
92	Dzulhijjah	1424 H	2004 M	9 Tahun 2004								
93	Ramadhan	1425 H	2004 M	441 Tahun 2004								
94	Syawal	1425 H	2004 M	429 Tahun 2004								
95	Dzulhijjah	1425 H		-								
96	Ramadhan	1426 H	2005	495 Tahun 2005								
97	Syawal	1426 H	2005	534 Tahun 2005	Gresik Jawa Timur	17:25:49	254° 52' 17"	01° 49' 41"	251° 21' 59"	04° 38' 39"	00j 13m 28d	09j 01m 17d
					Cakung Jakarta Utara	17:46:20	254° 57' 05"	02° 12' 05"	251° 19' 14"	04° 48' 17"	00j 13m 53d	09j 21m 48d
98	Dzulhijjah	1426 H	2006	1 Tahun 2006	Jakarta	18:10:27	246° 40' 02"	03° 30' 36"	242° 40' 53"	05° 58' 45"	00j 20m 59d	07j 58m 45d
					Malang Jawa Timur	17:50:22	246° 32' 24"	03° 27' 06"	242° 41' 34"	05° 50' 41"	00j 20m 48d	07j 38m 40d
99	Ramadhan	1427 H	2006	603 Tahun 2006								
100	Syawal	1427 H	2006	647 Tahun 2006								
101	Dzulhijjah	1427 H	2006	781 Tahun 2006								
102	Ramadhan	1428 H	2007	92 Tahun 2007								
103	Syawal	1428 H	2007	109 Tahun 2007								
104	Dzulhijjah	1428 H	2007	124 Tahun 2007								
105	Ramadhan	1429 H	2008	118 Tahun 2008	Bukit Condrodipo Gresik	17:30:23	278° 20' 23"	04° 33' 55"	274° 01' 17"	07° 12' 48"	00j 24m 08d	14j 32m 19d
					Lampung	18:00:26	278° 22' 05"	04° 54' 18"	273° 41' 17"	07° 29' 18"	00j 24m 18d	15j 02m 21d
106	Syawal	1429 H	2008	28 Tahun 2008								
107	Dzulhijjah	1429 H	2008	164 Tahun 2008								
108	Ramadhan	1430 H	2009	121 Tahun 2009								
109	Syawal	1430 H	2009	139 Tahun 2009	Pelabuhanratu Sukabumi	17:50:43	271° 13' 52"	05° 18' 57"	264° 10' 04"	09° 26' 11"	00j 26m 18d	16j 06m 22d
					Semarang Jawa Tengah	17:35:09	271° 14' 06"	05° 11' 01"	264° 13' 18"	09° 18' 40"	00j 25m 45d	15j 50m 48d
110	Dzulhijjah	1430 H	2009	168 Tahun 2009	Bukit Condrodipo Gresik	17:29:41	250° 36' 37"	04° 55' 12"	245° 56' 48"	07° 42' 38"	00j 28m 03d	15j 16m 00d
111	Ramadhan	1431 H	2010	94 Tahun 2010	Bukit Condrodipo Gresik	17:31:58	285° 29' 48"	01° 26' 50"	281° 21' 51"	04° 54' 52"	00j 11m 26d	07j 23m 56d
112	Syawal	1431 H	2010	116 Tahun 2010								
113	Dzulhijjah	1431 H	2010	150 Tahun 2010								
114	Ramadhan	1432 H	2011	125 Tahun 2011	Mall GTC Makassar	18:05:58	288° 17' 14"	05° 46' 06"	282° 43' 08"	08° 43' 03"	00j 28m 39d	15j 26m 10d
					Bukit Condrodipo Gresik	17:31:33	288° 17' 07"	05° 55' 09"	282° 56' 42"	08° 54' 33"	00j 30m 36d	15j 51m 46d
					Bangkalan	17:30:19	288° 19' 01"	06° 10' 35"	282° 58' 13"	08° 54' 02"	00j 30m 31d	15j 50m 32d
115	Syawal	1432 H	2011	148 Tahun 2011								
116	Dzulhijjah	1432 H	2011	192 Tahun 2011	Bukit Condrodipo Gresik	17:24:59	257° 00' 18"	05° 33' 48"	252° 26' 02"	08° 10' 41"	00j 29m 58d	14j 29m 12d
117	Ramadhan	1433 H	2012	99 Tahun 2012								
118	Syawal	1433 H	2012	120 Tahun 2012	Kupang, NTT	17:43:50	282° 56' 22"	06° 27' 42"	276° 24' 56"	09° 51' 58"	00j 31m 20d	17j 49m 20d
					Makassar, Sulawesi Selatan	18:05:19	282° 51' 51"	06° 01' 35"	275° 34' 13"	10° 05' 09"	00j 29m 06d	18j 10m 49d

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					Bukit Condrodipo Gresik, Jawa Timur	17:31:42	282° 50' 24"	06° 13' 44"	275° 46' 32"	10° 15' 38"	00j 31m 13d	18j 37m 12d
119	Dzulhijjah	1433 H	2012	159 Tahun 2012								
120	Ramadhan	1434 H	2013	132 Tahun 2013								
121	Syawal	1434 H	2013	152 Tahun 2013	Kab. Fak-Fak, Papua Barat	18:17:11	286° 17' 48"	02° 07' 22"	280° 10' 22"	06° 50' 48"	00j 12m 49d	11j 26m 22d
					Makassar, Sulawesi Selatan	18:06:02	286° 17' 43"	02° 44' 37"	280° 15' 40"	07° 04' 09"	00j 15m 28d	12j 15m 13d
					Bukit Condrodipo Gresik, Jawa Timur	17:31:55	286° 17' 06"	02° 52' 46"	280° 22' 56"	07° 10' 55"	00j 17m 16d	12j 41m 06d
					Kab. Tegal, Jawa Tengah	17:46:13	286° 16' 41"	02° 57' 30"	280° 19' 48"	07° 15' 52"	00j 17m 35d	12j 55m 24d
122	Dzulhijjah	1434 H	2013	192 Tahun 2013	Kab. Kolaka, Sulawesi Tenggara	17:47:11	265° 03' 07"	02° 01' 29"	261° 45' 02"	04° 26' 20"	00j 12m 29d	09j 12m 35d
123	Ramadhan	1435 H	2014	99 Tahun 2014								
124	Syawal	1435 H	2014	130 Tahun 2014	Bukit Condrodipo Gresik, Jawa Timur	17:31:12	289° 10' 22"	02° 40' 40"	283° 47' 35"	06° 38' 20"	00j 16m 34d	11j 49m 22d
					Pelabuhan Ratu, Sukabumi, Jawa Barat	17:54:36	289° 11' 56"	03° 06' 58"	283° 47' 30"	06° 45' 32"	00j 17m 16d	12j 12m 46d
125	Dzulhijjah	1435 H	2014	158 Tahun 2014								
126	Ramadhan	1436 H	2015	144 Tahun 2015								
127	Syawal	1436 H	2015	206 Tahun 2015	Bukit Condrodipo Gresik, Jawa Timur	17:29:31	291° 23' 31"	02° 04' 17"	286° 35' 59"	05° 48' 34"	00j 14m 12d	09j 05m 07d
					Tanjung Kodok, Lamongan, Jawa Timur	17:29:52	291° 25' 03"	02° 19' 39"	286° 36' 27"	05° 48' 52"	00j 14m 07d	09j 05m 28d
128	Dzulhijjah	1436 H	2015	279 Tahun 2015								
129	Ramadhan	1437 H	2016	269 Tahun 2016	Kab. Belu, NTT	17:28:16	292° 44' 49"	03° 00' 06"	288° 55' 30"	05° 29' 24"	00j 17m 30d	06j 28m 41d
					Jombang, Jawa Timur	17:21:05	292° 41' 16"	03° 22' 58"	288° 51' 06"	05° 46' 46"	00j 19m 07d	07j 21m 30d
					Kab. Kebumen, Jawa Tengah	17:31:11	292° 41' 36"	03° 29' 08"	288° 53' 36"	05° 49' 58"	00j 19m 34d	07j 31m 36d
					Bukit Condrodipo Gresik, Jawa Timur	17:21:22	292° 38' 22"	03° 04' 41"	288° 45' 27"	05° 47' 10"	00j 18m 57d	07j 21m 47d
					Kab. Bojonegoro, Jawa Timur	17:23:09	292° 40' 26"	03° 22' 24"	288° 48' 11"	05° 47' 43"	00j 19m 03d	07j 23m 34d
130	Syawal	1437 H	2016	343 Tahun 2016								
131	Dzulhijjah	1437 H	2016	508 Tahun 2016								
132	Ramadhan	1438 H	2017	361 Tahun 2017	Kupang, NTT	17:30:45	291° 21' 49"	07° 27' 13"	289° 44' 42"	08° 32' 52"	00j 37m 31d	13j 46m 19d
					Manado, Sulawesi Utara	17:44:01	291° 13' 25"	07° 00' 28"	287° 37' 11"	08° 43' 36"	00j 34m 47d	13j 59m 35d
					Bukit Condrodipo Gresik, Jawa Timur	17:20:38	291° 12' 31"	07° 32' 25"	289° 12' 02"	08° 58' 48"	00j 38m 45d	14j 36m 12d
					Jakarta Utara	17:44:10	291° 13' 02"	07° 59' 58"	289° 06' 10"	09° 11' 09"	00j 39m 29d	14j 59m 44d
133	Syawal	1438 H	2017	501 Tahun 2017	Kupang, NTT	17:34:22	293° 36' 56"	02° 47' 07"	290° 31' 43"	04° 50' 16"	00j 16m 47d	07j 03m 40d
					Bukit Condrodipo Gresik, Jawa Timur	17:24:50	293° 25' 59"	02° 48' 40"	290° 09' 08"	05° 11' 31"	00j 17m 57d	07j 54m 07d
134	Dzulhijjah	1438 H	2017	610 Tahun 2017	Kupang, NTT	17:43:51	281° 39' 58"	06° 25' 11"	281° 24' 54"	07° 21' 50"	00j 31m 33d	15j 13m 40d
					Bukit Condrodipo Gresik, Jawa Timur	17:31:25	281° 34' 36"	06° 32' 43"	280° 48' 38"	07° 47' 43"	00j 32m 56d	16j 01m 15d
					Kab. Situbondo, Jawa Timur	17:24:18	281° 37' 04"	06° 45' 45"	280° 57' 03"	07° 43' 51"	00j 32m 45d	15j 54m 08d
					Kab. Kendal, Jawa Tengah	17:40:09	281° 36' 23"	06° 53' 38"	280° 48' 00"	07° 52' 29"	00j 33m 14d	16j 09m 59d
135	Ramadhan	1439 H	2018	289 Tahun 2018								
136	Syawal	1439 H	2018	368 Tahun 2018	Manado, Sulawesi Utara	17:47:32	293° 18' 12"	06° 19' 49"	290° 26' 26"	07° 48' 47"	00j 32m 22d	14j 04m 18d
					Palu, Sulawesi Tengah	18:03:18	293° 15' 23"	06° 36' 18"	290° 47' 30"	07° 56' 11"	00j 33m 37d	14j 20m 04d
					Bukit Condrodipo Gresik, Jawa Timur	17:22:42	293° 18' 03"	06° 44' 40"	291° 54' 10"	08° 04' 44"	00j 35m 52d	14j 39m 28d

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					Gresik Jawa Timur	17:22:42	293° 18' 03"	06° 44' 40"	291° 54' 10"	08° 04' 44"	00j 35m 52d	14j 39m 28d
					Yogyakarta	17:29:23	293° 21' 38"	07° 06' 00"	292° 06' 18"	08° 08' 14"	00j 36m 20d	14j 46m 10d
					Jakarta Utara	17:46:24	293° 18' 10"	07° 13' 04"	291° 47' 46"	08° 17' 43"	00j 36m 41d	15j 03m 10d
137	Dzulhijjah	1439 H	2018	517 Tahun 2018								
138	Ramadhan	1440 H	2019	182 Tahun 2019	Bangkalan, Jawa Timur	17:21:44	286° 14' 21"	05° 13' 18"	284° 39' 34"	06° 21' 37"	00j 26m 28d	11j 36m 23d
					Bukit Condrodipo Gresik, Jawa Timur	17:22:58	286° 12' 27"	04° 57' 34"	284° 38' 22"	06° 22' 03"	00j 26m 31d	11j 37m 37d
					Lamongan, Jawa Timur	17:23:13	286° 14' 10"	05° 13' 39"	284° 38' 18"	06° 22' 14"	00j 26m 29d	11j 37m 52d
					Makassar, Sulawesi Selatan	17:57:04	286° 12' 27"	04° 58' 26"	284° 17' 58"	06° 12' 53"	00j 25m 18d	11j 11m 43d
					Brebes, Jawa Tengah	17:36:29	286° 14' 19"	05° 19' 38"	284° 41' 30"	06° 27' 19"	00j 26m 55d	11j 51m 08d
					Pelabuhan Ratu, Sukabumi, Jawa Barat	17:46:20	286° 14' 34"	05° 24' 15"	284° 44' 52"	06° 31' 05"	00j 27m 15d	12j 00m 59d
139	Syawal	1440 H	2019	481 Tahun 2019								
140	Dzulhijjah	1440 H	2019	669 Tahun 2019	Bukit Condrodipo Gresik, Jawa Timur	17:31:38	288° 01' 11"	02° 19' 52"	289° 40' 15"	03° 54' 33"	00j 15m 47d	07j 19m 56d
					Kab. Pasuruan, Jawa Timur	17:28:43	288° 04' 00"	02° 33' 29"	289° 45' 59"	03° 53' 19"	00j 15m 36d	07j 17m 00d
					Kab. Lamongan, Jawa Timur	17:31:55	288° 02' 49"	02° 36' 48"	289° 40' 48"	03° 54' 36"	00j 15m 49d	07j 20m 13d
					Kab. Kudus, Jawa Tengah	17:38:04	288° 02' 41"	02° 40' 31"	289° 40' 10"	03° 57' 47"	00j 16m 05d	07j 26m 21d
141	Ramadhan	1441 H	2020	400 Tahun 2020	Gresik Jawa Timur	17:26:16	282° 42' 27"	02° 59' 39"	280° 44' 16"	04° 38' 41"	00j 17m 42d	08j 00m 35d
					Pasuruan	17:23:34	282° 44' 49"	03° 16' 05"	280° 48' 55"	04° 37' 47"	00j 17m 43d	07j 57m 53d
					Bojonegoro	17:28:07	282° 44' 30"	03° 16' 50"	280° 46' 56"	04° 39' 10"	00j 17m 45d	08j 02m 26d
142	Syawal	1441 H	2020	443 Tahun 2020								
143	Zulhijjah	1441 H	2020	575 Tahun 2020	Kupang	17:40:50	290° 30' 07"	06° 47' 28"	293° 35' 07"	08° 19' 22"	00j 35m 23d	16j 08m 04d
					Gresik Jawa Timur	17:30:30	290° 20' 31"	07° 07' 48"	292° 54' 44"	08° 43' 45"	00j 37m 44d	16j 57m 44d
					Tuban	17:32:00	290° 22' 08"	07° 25' 30"	292° 54' 38"	08° 44' 31"	00j 37m 48d	16j 59m 14d
					Pelabuhan Ratu, Sukabumi, Jawa Barat	17:53:55	290° 22' 05"	07° 37' 09"	292° 55' 24"	08° 55' 53"	00j 38m 41d	17j 21m 08d
144	Ramadhan	1442 H	2021	418 Tahun 2021	Gresik Jawa Timur	17:30:30	290° 20' 31"	07° 07' 48"	292° 54' 44"	08° 43' 45"	00j 37m 44d	16j 57m 44d
					Lamongan, Jawa Timur	17:30:51	278° 47' 42"	03° 07' 13"	277° 20' 49"	04° 18' 39"	00j 16m 53d	08j 00m 06d
					Tuban	17:32:04	278° 47' 44"	03° 07' 44"	277° 21' 20"	04° 18' 59"	00j 16m 55d	08j 01m 19d
					Kab. Kubu Raya Kalimantan Barat	17:46:38	278° 51' 12"	03° 00' 24"	276° 50' 44"	04° 25' 47"	00j 16m 19d	08j 15m 53d
					Pelabuhan Ratu, Sukabumi, Jawa Barat	17:54:02	278° 48' 04"	03° 16' 15"	277° 27' 31"	04° 25' 18"	00j 17m 31d	08j 23m 17d
145	Syawal	1442 H	2021	583 Tahun 2021								