


The Sun Position in Determining the Beginning of Dhuha and Isyraq Prayers

Nabilla Ayu Pramudyanti¹

¹Universitas Islam Negeri Sunan Ampel Surabaya

Email: nabillaayupramudyanti@gmail.com

Article Info	ABSTRACT
<p>Article History Received 02-02-2025 Revision 08-02-2025 Accepted 18-02-2025</p> <p>Keywords: Dhuha Prayer Isyraq Prayer Sun</p>	<p>Determining the prayer time is an important aspect of Muslim worship related to the sun's position. In addition to mandatory prayers, sunnah prayers such as Dhuha and Isyraq require the accuracy of the implementation time based on Sharia postulates and astronomical data. The Dhuha prayer is performed after sunrise until before Dhuhur. In contrast, the Isyraq prayer is carried out about 10-20 minutes after sunrise, provided that it starts after the Fajr prayer and dhikr.</p> <p>This study aims to explain the sun's position in determining the initial time of Dhuha and Isyraq prayers and distinguish between the two. The research method uses a descriptive qualitative approach with secondary data from literature studies. The results show that the sun's position to determine the beginning of the Dhuha prayer time is when the sun is about 4-6 degrees above the horizon, while the Isyraq prayer begins when the sun has just risen as high as a spear.</p> <p>This is an open-access article under the CC-BY-SA license.</p> 

I. Introduction

The timing of prayers in Islam is closely related to the rising and setting of the sun, serving as a fundamental aspect of religious observance. As one of the main obligations for Muslims, the determination of prayer times is based on the position and movement of the sun as observed from Earth. This applies not only to the five obligatory prayers but also to various sunnah (non-obligatory) prayers, including the Dhuha and Isyraq prayers.

Dhuha and Ishraq prayers are significant voluntary acts of worship in Islam, classified as Sunnah Muakkad, which means highly recommended practices. As emphasized in various Islamic teachings, these prayers have numerous virtues and spiritual benefits. [1]. The Dhuha prayer, also known as the Awwabin prayer, is performed in the morning, beginning shortly after sunrise and extending until just before the Dhuhr prayer. It is widely regarded as a source of divine blessings and a means of seeking forgiveness and sustenance.

The Ishraq prayer, on the other hand, is often considered an extension or an initial phase of the Dhuha prayer. It is performed approximately 10 to 15 minutes after the completion of the Fajr prayer [2], once the sun has risen sufficiently above the horizon. However, Islamic scholars hold differing views regarding the relationship between these two prayers. Some scholars argue that the Ishraq and Dhuha prayers are identical, differing only in terminology and timing. Others maintain that they are distinct acts of worship, each with its specific virtues and recommended performance time.

Regardless of the differences in scholarly interpretation, both prayers allow Muslims to engage in additional devotion, express gratitude, and seek spiritual rewards. Understanding the precise timing of these prayers requires careful observation of the sun's position, underscoring the importance of astronomical calculations and observational methods in Islamic practices. Determining the timing of the dhuha prayer and the ishraq prayer is often a concern for worship practitioners, especially regarding accuracy and conformity with Sharia principles. The sun can be measured astronomically so that it can give a clear indication of when the time of dhuha and ishraq begins.

The first scholar to popularize the prayer after sunrise, called the Isyraq prayer, was Hujjatul Islam Al-Ghazali, based on the hadith:

كان إذا أشرقت وارتفعت قام وصلى ركعتين وإذا انبسطت الشمس وكانت في ربع النهار من جانب المشرق صلى أربعاً

"The Messenger of Allah SAW stood up to pray two rakaats when the sun rose and when the sun began to rise high from the east, which was a quarter of the afternoon, the Messenger of Allah SAW again performed four rakaats of prayer" (HR. Turmudzi).

The beginning of the two-rak'ah prayer performed by the Prophet Muhammad PBUH at sunrise, as mentioned in the hadith above, serves as evidence for the sunnah of the Ishraq prayer. This hadith has been used by scholars to establish the significance of the Ishraq prayer as a distinct act of worship. According to scholars who differentiate between the Ishraq and Dhuha prayers, the intention (niyyah) for the Ishraq prayer must be explicitly stated to distinguish it from the Dhuha prayer. The correct wording for the intention of the Ishraq prayer is:

أصلي سنة الإشراق ركعتين مستقبل القبلة لله تعالى

The number of rak'ahs of the Ishraq prayer is only limited to two rak'ahs, according to the hadith narrated by Imam Tirmidhi above, so when a person has performed two rak'ahs of the Ishraq prayer, then he adds two more rak'ahs to pray Ishraq, then the prayer he

performed is considered invalid. [3] The number of rak'ahs for the Ishraq prayer is strictly limited to two, as indicated in the hadith narrated by Imam Tirmidhi. Therefore, if a person performs two rak'ahs of the Ishraq prayer and then adds another two rak'ahs with the same intention, the additional prayer is considered invalid. This restriction highlights the specific nature of the Ishraq prayer and its differentiation from the more flexible Dhuha prayer, which can be performed in multiple sets of two rak'ahs.

One of the key methods for determining the time of the Dhuha and Ishraq prayers is by analyzing the sun's position. The sun's movement provides a natural astronomical reference for establishing the most accurate prayer times. By utilizing this data, Muslims can ensure that their observance of these sunnah prayers aligns with Islamic legal standards and scientific accuracy. Properly determining the prayer times based on the sun's position reinforces the validity of these acts of worship, ensuring that they are performed within the appropriate timeframe as prescribed by Islamic teachings.

This study will explore the significance of accurately determining the times for Dhuha and Ishraq prayers based on solar position data. It will also review the methodology used to measure and calculate these times, providing a comprehensive understanding of how astronomical principles contribute to religious observance. The objective is to enhance the precision of prayer timing, allowing Muslims to implement this sunnah worship with greater awareness and adherence to both Islamic jurisprudence and scientific principles.

I. Method

This study employs a qualitative approach with a descriptive method to analyze the research subject systematically. The qualitative approach is used to explore and interpret the phenomenon in depth, particularly the relationship between the sun's position and the timing of the Dhuha and Ishraq prayers. Meanwhile, the descriptive method allows for a structured explanation of the findings, ensuring that the information presented is clear, systematic, and comprehensive.

The primary data collection technique in this study is library research, which involves gathering and analyzing existing literature from various credible sources. This includes books, journal articles, research papers, and other scholarly references related to Islamic prayer times, astronomical calculations, and the significance of Dhuha and Ishraq prayers. Library research serves as the foundation for this study, as it provides an extensive and well-documented theoretical framework to support the analysis. The literature study approach enables the collection of historical and contemporary perspectives on the subject, ensuring that the study is built upon established knowledge. In addition to religious texts, references from Islamic astronomy (Ilmu Falak) are also examined to understand how the sun's movement influences the determination of these prayer times. This method ensures that the study integrates both religious and scientific viewpoints, providing a holistic understanding of the topic.

The primary aim of this research is to provide a systematic, normative, and accurate explanation of the Dhuha and Ishraq prayers, particularly concerning the position of the sun in determining their appropriate times. More specifically, this study seeks to analyze the role of solar movement in the determination of voluntary (sunnah) prayer times, explore the differences and similarities between the Dhuha and Ishraq prayers as

interpreted by Islamic scholars, provide a comprehensive explanation of the significance of these prayers in Islamic teachings and their impact on religious practice, and investigate the scientific and astronomical aspects that support the accuracy of prayer time determination.

The sources used in this study are classified as literature-based research and consist of a variety of secondary sources, including scientific books discussing Islamic jurisprudence (fiqh), astronomy, and prayer times, academic journals and research papers related to Ilmu Falak, Islamic studies, and astronomy, as well as Islamic classical texts and interpretations from well-known scholars. Contemporary studies on the impact of solar movement on Islamic prayer schedules are also examined. The literature used is critically analyzed to extract key insights and construct a well-supported understanding of the timing and importance of the Dhuha and Ishraq prayers in Islamic worship.

This research is expected to provide an in-depth understanding of the Dhuha and Ishraq prayers, particularly regarding their timing and significance in daily religious practice. The study contributes to a broader discourse on the scientific and religious basis of Islamic prayer times by examining the connection between these prayers and the sun's position. Additionally, this study is hoped to enhance awareness and accuracy in determining voluntary prayer times based on astronomical calculations, offer practical insights for Muslims seeking a deeper understanding of the sunnah prayers, and provide reference material for scholars, researchers, and students interested in the intersection of Islamic worship and astronomy. By integrating religious knowledge with scientific perspectives, this study strengthens the understanding of Islamic prayer practices and highlights the relevance of astronomical studies in religious observance.

II. Results and Discussion

A. Dhuha Prayer

The Dhuha prayer is a Sunnah Muakkad (highly recommended sunnah) prayer performed in at least two rak'ahs and can be extended to a maximum of twelve rak'ahs, with a greeting (salam) after every two rak'ahs. This prayer is observed during the Dhuha period, which begins when the sun has risen approximately a spear's height above the horizon, traditionally estimated to be around 8 or 9 AM, and lasts until just before the Dhuhr prayer. [4] The practice of Dhuha is highly encouraged in Islamic teachings, as it carries significant spiritual rewards.

The duration of Dhuha time extends from when the sun reaches the required height until it approaches noon. In Indonesia, this period generally lasts for several hours, starting approximately 20 minutes after sunrise and ending 15 minutes before the Dhuhr prayer. However, variations exist in scholarly interpretations. According to Ustadz Abdul Somad, the Dhuha time begins 12 minutes after sunrise and concludes 10 minutes before Dhuhr, providing a more specific timeframe for its observance.

The flexibility in determining the start and end of Dhuha time is based on astronomical observations and scholarly opinions, ensuring that the prayer is performed at an appropriate and valid time. This underscores the importance of understanding the

sun's position with Islamic prayer times, as it directly influences the precision and validity of worship practices.[5]

The Dhuha prayer is a highly recommended sunnah practice that holds a special place in Islamic teachings. The Prophet Muhammad PBUH encouraged his followers to be diligent in performing this prayer, emphasizing its virtues and the profound spiritual and worldly benefits it offers. Regularly observing the Dhuha prayer is believed to bring blessings, open doors to sustenance, and strengthen the connection between the worshipper and Allah SWT. It is an act of devotion that not only enhances one's spiritual well-being but also contributes to overall physical and mental health.

One of the key benefits of the Dhuha prayer is its role in facilitating sustenance. Many scholars interpret it as a means to seek Allah's blessings in daily livelihood, believing that those who consistently perform Dhuha will find their provisions made easier. This belief is supported by a hadith in which the Prophet PBUH stated that Allah provides sustenance to those who perform the Dhuha prayer regularly. Additionally, prayer is associated with improving moral character by instilling discipline, patience, and gratitude in a person's daily routine. By committing to this act of worship, a believer nurtures good habits and strengthens their faith.

Another significant virtue of the Dhuha prayer is its ability to remove sins. In a well-known hadith, the Prophet PBUH likened performing Dhuha to giving charity on behalf of every joint in the body, signifying that this prayer serves as a form of daily purification. By offering this voluntary prayer, a Muslim can seek forgiveness for past transgressions, drawing closer to Allah's mercy. The rewards of the Dhuha prayer also extend to the afterlife, as it is said to grant a place in paradise and elevate one's status before Allah SWT.[6]

Beyond these direct benefits, scholars have identified at least nine additional wisdom associated with the regular performance of the Dhuha prayer. These include attaining a high rank in the sight of Allah, being counted among His most obedient servants, and receiving rewards equivalent to performing Umrah. The prayer is also considered a means of having one's sins forgiven, particularly when performed with sincerity and devotion. Moreover, the Dhuha prayer falls within a time considered *mustajab* (a time when supplications are more likely to be accepted), making it an excellent opportunity for worshippers to seek Allah's help and guidance in their affairs.

Furthermore, fulfilling the call of Allah through this prayer strengthens a Muslim's commitment to faith and worship. The Prophet PBUH himself consistently practised the Dhuha prayer, setting an example for his followers. Those who establish this prayer as part of their daily routine are also promised a special reward in the hereafter – a place in heaven. Another important virtue is the elimination of sins, reinforcing the idea that voluntary acts of worship contribute to spiritual purification and inner peace.

In addition to its religious significance, modern research suggests that regular voluntary prayers, including Dhuha, can contribute to mental and physical well-being. The movement involved in prayer promotes flexibility, circulation, and relaxation, while the spiritual focus helps reduce stress and anxiety. This aligns with Islamic teachings that emphasize the balance between physical health and spiritual devotion.

Overall, the Dhuha prayer is a powerful act of worship that carries immense rewards both in this life and the next. Its virtues go beyond mere ritual practice, providing a pathway to spiritual elevation, divine mercy, and personal well-being. By understanding and internalizing its significance, Muslims can strive to incorporate it into their daily routines, reaping its countless benefits and drawing closer to Allah SWT.

B. Shalat Asiraq

Isyraq or syuruq comes from the word "*syaraq*," meaning "east, rise, or illuminate". In terminology, the Isyraq sunnah prayer is a prayer that is carried out when the sun rises as high as a spear, about 10-15 minutes after sunrise [7], which is at the beginning of Dhuha time. When the time of Shuruq arrives, we do not immediately perform the Ishaq prayer because it is forbidden to pray at that time, and it is better to wait for about 15 minutes. So, the person who performs the Isyraq prayer also means that he has performed the Dhuha prayer.

Shaykh Muhammad Shalih al-Munajjid explained that the Isyraq prayer consists of two rak'ahs that are performed after the sun rises and rises for those who perform Fajr (Fajr) in congregation in the mosque, then sit in their place to dhikr to Allah to perform two rak'ahs. Shaykh al-Uthaymeen added that the sunnah of Isyraq is part of the sunnah of Dhuha if it is done immediately after sunrise and rises to the height of a spear, then it is called Isyraq. However, if it is carried out at the end or middle of the time, it is called Dhuha.[8]

There are not many special discussions about Isyraq in classical fiqh literature because, generally, fiqh scholars consider it part of the Dhuha prayer. However, Imam Al-Ghazālī is one of the main references in implementing the Isyraq sunnah prayer. This opinion shows that even though the Isyraq prayer is performed at the same time as the Dhuha prayer, a view considers it a worship with its virtues.[9]

The hadith about Isyraq has been explained in several narrations, one of which is from Abu Umamah RA, who said that the Prophet PBUH once said:

مَنْ صَلَّى الْغَدَاةَ فِي جَمَاعَةٍ ثُمَّ قَعَدَ يَذْكُرُ اللَّهَ حَتَّى تَطْلُعَ الشَّمْسُ ثُمَّ صَلَّى رَكْعَتَيْنِ كَانَتْ لَهُ كَأَجْرِ
حَجَّةٍ وَعُمْرَةٍ تَامَّةٍ تَامَّةٍ تَامَّةٍ

It means: "Whoever performs the Shubuh prayer in a congregation in a mosque, then stays in that place until he performs the Dhuha prayer, then he will get a reward

equal to the reward of a person who performs Hajj or Umrah perfectly." (HR. Ath-Thabrani).

The Isyraq or Syuruq is a sunnah prayer carried out after the Fajr prayer, consisting of two rak'ahs with intentions set in the heart. The implementation of this prayer is similar to other sunnah prayers, ranging from takbirotul ihram to salam. After performing the Fajr prayer in the congregation, it is recommended to stay in the mosque and dhikr to Allah, read the Quran, or listen to the study until the sun rises. The Ishaq prayer is performed 15 to 20 minutes after sunrise and has great virtues, including the rewards promised in the hadith. Thus, the Isyraq prayer is a valuable opportunity to get closer to Allah and get blessings.

During the first rak'ah of the Ishraq prayer, it is Sunnah to recite Surah ad-Dhuha, and in the second rak'ah it is Sunnah to recite Surah al-Insyirah. Then when you finish the prayer, recite the following supplication:

اللَّهُمَّ يَا نُورَ النُّورِ بِالطُّورِ وَكِتَابِ مَسْطُورٍ فِي رَقٍّ مَنْشُورٍ وَالْبَيْتِ الْمَعْمُورِ، أَسْأَلُكَ أَنْ تَرْزُقَنِي نُورًا أَسْتَهْدِي بِهِ إِلَيْكَ وَأَدُلُّ بِهِ عَلَيْكَ، وَيَصْحَبُنِي فِي حَيَاتِي وَبَعْدَ الْإِنْتِقَالِ مِنْ ظَلَامِ مَشْكَاتِي وَأَسْأَلُكَ بِالشَّمْسِ وَضُحَاهَا، وَنَفْسٍ وَمَا سَوَّاهَا، أَنْ تَجْعَلَ شَمْسَ مَعْرِفَتِكَ مُشْرِقَةً بِي لَا يَحْجُبُهَا عَيْمُ الْأَوْهَامِ، وَلَا يَعْتَرِيهَا كُسُوفُ قَمَرِ الْوَاحِدِيَّةِ عِنْدَ التَّمَامِ، بَلْ أَدِمْ لَهَا الْإِشْرَاقَ وَالظُّهُورَ عَلَى مَمَرِ الْأَيَّامِ وَالذُّهُورِ، وَصَلِّ اللَّهُمَّ عَلَى سَيِّدِنَا مُحَمَّدٍ خَاتَمِ الْأَنْبِيَاءِ وَالْمُرْسَلِينَ وَالْحَمْدُ لِلَّهِ رَبِّ الْعَالَمِينَ اللَّهُمَّ اغْفِرْ لَنَا وَلِوَالِدِينَا وَلِإِخْوَانِنَا فِي اللَّهِ أَحْيَاءً وَأَمْوَاتًا أَجْمَعِينَ

Thus, it can be concluded that scholars differ in their opinions on whether the Dhuha prayer and the Ishraq prayer are the same or different prayers. According to the opinion that says that these two prayers are the same, the intention of the Ishraq prayer must also be the same as the intention of the Dhuha prayer and the number of rak'ahs of the Ishraq prayer is included in the calculation of the rak'ahs of the Dhuha prayer, so the number of rak'ahs of the Ishraq prayer and the Dhuha prayer when combined must not exceed eight rak'ahs. The difference between the Dhuha prayer and the Isyraq prayer is shown in Table 1. [8]

Table 1. The difference between the Dhuha and the Isyraq prayer

Dhuha Prayer	Shalat Asiraq
It is carried out from Dhuha until the time of Dhuhur prayer.	It is carried out during Isyraq when the sun has risen as high as a spear.
It is not in line with the Fajr prayer.	A series of Fajr prayers and dhikr.

It can be done separately from the Fajr prayer.	It should not be done separately from the Fajr prayer.
It is carried out in all places except where prohibited.	It is carried out only in prayer rooms and mosques.
Consists of 2, 4, 6, 8, 10, and 12 rak'ahs.	It only consists of 2 rak'ahs.
It is allowed to do activities first.	It is not allowed to do activities first.

C. The sun's position determines the beginning of the Dhuha and Ishraq prayer times.

The unit of measurement referred to as a "spear" is valued at 360 centimeters, which is approximately 3.6 meters. This unit, though not part of the SI (International System of Units), is historically rooted in non-SI measurements and has been used in various contexts, particularly in the United Kingdom and the United States. In these countries, the foot is a more commonly used unit of length, which is roughly equivalent to one-third of a meter, or 30.48 cm, though it is often rounded to 30 cm for simplicity. A foot is also equal to 12 inches, and to calculate the length of one spear in terms of feet, one multiplies 12 feet by 30 cm, resulting in 360 cm, or 3.6 meters.

The spear unit serves as a traditional reference for determining the sun's height at the beginning of the time for Ishraq prayer. This practice reflects the technological limitations when the hadith about the time of Ishraq emerged. The hadith suggests that when the sun rises to the height of one or two spears, it marks the end of the prohibited time for prayer, also known as the tahrir period, and signals the start of the time for the Ishraq prayer. However, there is a diversity of interpretations regarding the exact meaning of this "spear" measurement, especially when viewed through the lenses of Islamic jurisprudence (fiqh) and astronomy.

Scholars of both disciplines have approached measuring the sun's height with varying methodologies, leading to slightly different estimates. According to some scholars, the sun's height at the equivalent of one spear is approximately 3.36 meters, while others estimate it to be 3.35 meters. These values can be measured using different units of measurement, such as degrees, hours, or minutes, depending on the methods used to assess the sun's position in the sky.

While this measurement system is based on traditional practices, it reflects the tools and understandings available to scholars at the time. With advancements in modern astronomy, more precise calculations can now be made, but the historical context of the "spear" remains an interesting bridge between ancient interpretations and contemporary practices in determining prayer times. This blending of tradition with scientific development underscores the dynamic nature of Islamic jurisprudence and its

adaptability to new methods of observation while preserving the essence of the original teachings.[10]

If we use the sun's height of 3.5 degrees as a reference to determine the beginning of Dhuha's time, then the calculation is the beginning of Dhuha's time = $3.5 \times 4 = 14$ minutes after sunrise. Added with ihtiyaat of 2 minutes and considering the difference between the time of shuruq and the time of the sunrise astronomically (which is also the same value as ihtiyaat), then the beginning of the time of Dhuha = $14 + 2 + 2 = 18$ minutes after the time of shuruq. As for determining it using the initial formula, namely, [10]

1. Finding LT (Place Latitude)
2. Sun height (h)
3. Solar declination (δ)
4. Equation of time
5. Then, put it into the formula, $\cos t_{\circ} = \sin h \div \cos LT \div \cos \delta \div \tan LT \times \tan \delta$
6. To convert into hours then, divide by 15 and add 12
7. The time of the region uses the formula: $WH - e + (\lambda^d - \lambda^x) \div 15$ (this result is the beginning of the time of publication/time of origin)

As for calculating the beginning of Dhuha's time by determining,

1. h_{\circ} = The height of the sun at the time of dawn
2. t_{\circ} = Solar time angle
 $\cos t_{\circ} = \sin h_{\circ} \div \cos \varphi^x \div \cos \delta_{\circ} - \tan \varphi^x \times \tan \delta$, then the result is added 12
 (The result is the result of the dhuha time).
3. Syuruq time = Rising + 10 minutes

Regarding the end of Dhuha, this is related to the beginning of Dhuhur, without ignoring the forbidden time for prayer. The end of Dhuha coincides with the beginning of Dhuhur. However, to be more careful, because there is a prohibition on performing prayers when the sun is slipping (culminating), it is recommended to reduce the beginning of Dhuhur by twice the value of ihtiyaat. RHI recommends using ihtiyaat for 2 minutes so that the end of Dhuha time is 4 minutes before the entry of Dhuhur time. It is because the beginning of the Dhuhur prayer time is determined since the entire circle of the sun leaves the zenith, usually taken about two minutes after noon, which is the moment when the position of the sun is between sunrise and sunset.[11]

III. Conclusion

Dhuha and Isyraq prayers are two sunnah prayers with different times and priorities. Dhuha prayer is carried out in two or more rak'ahs between sunrise as high as a spear and before Dhuhur, with benefits such as facilitating sustenance and getting rewards equivalent to Hajj and Umrah. Meanwhile, the Isyraq prayer is carried out after the Fajr prayer, about 10-15 minutes after sunrise, consists of two rak'ahs, and should not be separated from the Fajr prayer.

The initial determination of the Dhuha prayer time uses the unit of length of the "spear" (equivalent to 3.6 meters/3.5 meters) as a reference for the sun's height. The beginning of Dhuha time is estimated to be about 18 minutes after the time of shuruq, considering the time correction (ihtiyaat). The calculation involves formulating the sun's position to convert the altitude into time. The end of Dhuha time is related to the beginning of Dhuhur time, so taking 4 minutes before Dhuhur is recommended to avoid the forbidden time when the sun is culminating.

References

- [1] M. Ritonga, "Penentuan Waktu Subuh Menggunakan All Sky Camera dan Metode Moving Average di Kota Medan," *Mahkamah J. Kaji. Huk. Islam*, vol. 8, no. 1, pp. 13–20, 2023.
- [2] A. Raihana, M. M. Hazwan, and K. Norihan, "Issues on Determination of-Accurate Fajr and Dhuha Prayer Times According to Fiqh and Astronomical Perspectives in Malaysia : A Bibliography Study," *Conf. Proceeding, Bali Indones. Oct 13-14,2016,18 Part V*, vol. 18, 2016.
- [3] S. bin U. bin M. al A. al M. al S. al M. Jamal, *Hasyiyah al jamal 'ala syarh al minhaj*, 4th ed. Kairo: Dar al Kotob Al Ilmiah, 1996.
- [4] H. Sayuti, *Tuntutan Shalat Dhuha*. Sangkala.
- [5] Muchlisin BK, "Niat Sholat Dhuha, Tata Cara, Doa, dan Keutamaannya."
- [6] B. S. Nura, L. Kurnia, M. Dayani, M. Jannah, and Mutamakin, "PENDAMPINGAN PRAKTEK IBADAH SHOLAT DHUHA PADA PESERTA DIDIK KELAS 1 DI MADRASAH IBTIDAIYAH (MI) HIDAYATUL MUBTADIIN TASIKMADU LOWOKWARU KOTA MALANG," *ngabekti J. Pengabdi. Kpd. Masy.*, vol. Vol. 1, No, 2023.
- [7] A. B. Sado, "Waktu Shalat dalam Perspektif Astronomi; Sebuah Integrasi Antara Sains dan Agama," *Mu'amalat*, vol. VII, no. 1, pp. 69–83, 2015.
- [8] Ainur Rohmah, "Praktik Śalat Sunnah Isyraq Dipondok Pesantren Nur At-Thullab JEPARA (Kajian Living Hadis)," Universitas Islam Negeri Wali Songo, Semarang, 2018.
- [9] Farhan Nurfawaid Hasyim, "PENENTUAN WAKTU SALAT SUNAH ISYRĀQ DALAM PERSPEKTIF FIKIH DAN ILMU FALAK," Universitas Islam Negeri Walisongo, 2021.
- [10] Indah Aristya Ningrum, "Tinjauan Fikih Dan Astronomi Terhadap Penentuan Awal Waktu Shalat Isyraq," Universitas Islam Negeri Mataram, 2021.

- [11] Abd. Karim Faiz, Agus Muchsin, and Wahidin, "Studi Waktu Dhuha Dalam Presektif Fiqih Dan Hisab Ilmu Falak," *DIKTUM J. Syariah dan Huk.*, vol. Vol. 18, N, 2020.