

**STUDY OF THE *FALAKIYAH* FATWAS OF THE INDONESIAN ULEMA COUNCIL
(Methodological Analysis, Socio-Political Influences and Science Considerations)**

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ABSTRACT

The issue of *falakiyah*, or the worship of celestial objects, has given rise to different views among personalities and scholars on the role of science. Some scholars try to consider the presence of science, while others reject it. This research aims to reveal the role and consideration of science in the fatwas of the Indonesian Ulema Council and also conducts a comprehensive study of the methodological aspect of the determination of *falakiyah* fatwas of the Indonesian Ulema Council and the influence of socio-political factors in the determination of *falakiyah* fatwa by using normative and political sociological approaches. This study is a normative legal research/library research using *ushūl fiqh*, astronomy, historical and sociological approaches. The research data sources were obtained from the *falakiyah* fatwas of the Indonesian Ulema Council documents from 1976-2010. The data were analysed using the content analysis method. This research provides three findings: First, the Indonesian Ulema Council uses two *ijtihad* procedures in determining *falakiyah* fatwas, namely comparative-selective (taking the strongest opinion of the scholar) and constructive-innovative (formulating new *ijtihad*). Second, there are several sociological and political factors that influenced the Indonesian Ulema Council in issuing the *falakiyah* fatwa, including the tendency to support government policy, the urge to respond to contemporary problems, the effort to integrate

religious propositions and scientific findings, the realisation of brotherhood among Muslims, and the hope to be accepted by Islamic groups in Indonesia. Third, science has three roles in falakiyah fatwas: (1). To rationalise the problems that cannot be explained from the perspective of religious science (2). Scientific studies and religious propositions play a role in determining fatwas (3). Science plays a role as a fatwa consideration and the basis for changing the previous fatwa. However, not all *falakiyah* fatwas are considered science in the fatwa's consideration.

Keywords: *Falakiyah Fatwas, Indonesian Ulema Council, Methodological, Socio-Political, Scientific Consideration*

INTRODUCTION

Science and its encounter with religion have elicited different responses and views from scientists and religious circles. In this context, Ian G. Barbour suggests that the view of the relationship between religion and science in the Western world can be divided into four typologies: First, a relationship oriented towards a mutual negation of religion and science (conflict). Second, the separation of religion and science (independent). Third, a view that offers a constructive relationship between religion and science by seeking and exploring similarities and differences as well as advantages and disadvantages of each other (dialogue). Fourth, the view that seeks to find common ground between the two is synthesised and comprehensive (integration) (Barbour, 2000, p. 7). In the Islamic world, the interaction between Islam and science has elicited different responses from Muslim scholars, leading to serious debate. Some scholars seek to make room for science in the understanding of religion, while others reject the presence of science in religious affairs.

The issue of falakiyah, or the worship of celestial bodies, has given rise to different views of figures and scholars on the role and procedures of science in it. Some scholars try to take science into account, while others reject the presence of science in it. In this regard, M. Amin Abdullah gave an example related to the issue of the beginning of the lunar month, which led to a prolonged polemic in the public sphere between the ru'yah al-hilāl school and the astronomical hisāb school, indicating that there is no paradigmatic agreement to bring the two methods together (Abdullah, 2014, pp. 179–180). Similarly, the issue of Qibla's direction has elicited various responses among scholars from the classical period to the contemporary era. According to Ahmad Sarwat (2023), to understand the Qibla issue, scholars and academics in Indonesia are divided into two groups. The first group is those who give space to the role and procedures of science in understanding the Qibla issue, while the second group is those who only adhere to religious arguments and reject others, including the presence of science in the Qibla direction issue (Sarwat, 2023). The cases above indicate that the issue of the relationship between religion and science has not shown an agreement on the paradigm in bringing the two together, especially in *falakiyah* issues in Indonesia.

Theoretically, these *falakiyah* issues are closely related to scientific studies, especially Astronomy. As Ahmad Izzuddin stated *falakiyah* issues concerning the problems of Muslim worship times are astronomical issues that are closely related to the movement/orbit of celestial bodies, so astronomy is needed as an approach (Izzuddin, 2007). The close contact with scientific studies, so these *falakiyah* issues are the most obvious example of the integration relationship between *fiqh* and science that is mutualistic (Adib, 2014). Unfortunately, the level of reality as described above shows that the response of the scholars on this falakiyah issue varies, from accepting to rejecting the role of science in this *falakiyah* issue.

Based on the above description, the author will further elaborate on the scientific considerations in the *falakiyah* fatwas of the Indonesian Ulema Council. From 1976 to 2010, the Indonesian Ulema Council issued six *falakiyah* fatwas that generally discuss three issues, namely the determination of prayer times, the direction of the Qibla, and the beginning of the months of Ramadan, Shawwal, and Dhulhijjah. The author chooses these *falakiyah* fatwas as the subject of this research study because the Indonesian Ulema Council is an institution where Muslim scholars and intellectuals gather in Indonesia, so this research will provide an overview and map of the direction of the relationship between religion and science that is developing in Indonesia, especially in *falakiyah* fatwas. This research will also try to examine the methodological aspects in determining *falakiyah* fatwas. In addition, this research will also look at the socio-political struggles that accompany the presence of *falakiyah* fatwas from the Indonesian Ulema Council.

This research has two main objectives. First, to find out the method of determining *falakiyah* fatwas of the Indonesian Ulema Council and the influence of socio-political factors that affect the determination of *falakiyah* fatwas. Second, to show the involvement of modern science in the consideration of the *falakiyah* fatwas of the Indonesian Ulema Council.

PREVIOUS RESEARCH

The study of *falakiyah* fatwas of the Indonesian Ulema Council is a study that is still very minimal by previous researchers. So far, the study of the Indonesian Ulema Council and its fatwas is still mostly focused on the aspects of fatwa methodology, factors that influence fatwas, fatwa content analysis, controversial of the Indonesian Ulema Council fatwas, and so on. Studies on the aspects of scientific considerations in of the Indonesian Ulema Council fatwas have only recently begun to be carried out but are still focused on fatwas on health/medicine. Ali Sodiqin, who examined 20 of the Indonesian Ulema Council medical fatwas from 2010 to 2021, revealed that in the determination of medical fatwas, of the Indonesian Ulema Council has developed scientific *ijtihad* through inductive and deductive methods and involves three parties, namely scholars, science experts and the government who collectively seek to dialogue between reason, revelation and reality (A. N. Sholeh, 2022). Furthermore, M. Asrorun Ni'am Sholeh (2022) found that the of the Indonesian Ulema Council Fatwa on Covid-19 has logical reasoning that is in accordance with the direction of the WHO organization and is the main consideration in the fatwa (M. A. N. Sholeh, 2020). Ahmad Izzudin (2012) who criticized the *ijtihad* method applied by of the Indonesian Ulema Council in Fatwa Number 03 of 2010 concerning Qibla which is not contextual and irrelevant because it is not based on astronomical studies that are developing today (Mudzhar et al., 2012). According to Ansori (2022), fatwa Number 03 of 2010 concerning Qibla is included in the category of controversial fatwa because both the institutional process and output process are considered problematic and invite polemics amid society (Ansori, 2022). Meanwhile, Muhammad Rasyid (2020) sees that Fatwa Number 02 of 2004 concerning the Determination of the Beginning of Ramadan, Shawwal, and Dhul Hijjah comes as a step taken by of the Indonesian Ulema Council to integrate religious arguments and scientific studies by carrying out the *hisab* and *rukayah al-hilal* methods as criteria in determining the beginning of the month (Rasyid, 2020).

Based on the previous studies above, the study that will be conducted in this research is a new study related to the Indonesian Ulema Council fatwas. The novelty of this research is that the previous studies include: First, this research focuses on the aspect of scientific

considerations in *falakiyah* fatwas of the Indonesian Ulema Council. Second, previous studies about the Indonesian Ulema Council and its fatwas have not touched much on the issue of *falakiyah* fatwas, although some studies attempt to portray the issue of *falakiyah* fatwas of the Indonesian Ulema Council in terms of astronomical approach, but the object of study is only focused on one of the fatwas, not looking at the overall *falakiyah* fatwas of the Indonesian Ulema Council. Third, in addition to examining the scientific aspect, this research will also try to reveal the methodology and socio-political influence that accompanied the emergence of the *falakiyah* fatwas of the Indonesian Ulema Council. According to the author, this aspect is also important to be raised in this research, considering that the product of Islamic legal thought is the result of interaction between the thinker/maker of the law and the circumstances and conditions of his environment. The presence of this research is the first step to identifying the relationship between religion and science and attempting to map the scientific considerations in the *falakiyah* fatwas.

RESEARCH METHOD

This study will research 6 fatwas of the Indonesian Ulema Council issued from 1976 to 2010. Those fatwas are Fatwa on Friday Prayer for Travelers on Ships in 1976 and Fatwa on Prayer and Fasting in Areas with Unequal Day and Night in 1980, Fatwa on Determining the Beginning of Ramadan, the Beginning of Shawwal/Idul Fitri, the Beginning of Dhul Hijjah/Idul Adha in 1980 and Fatwa Number 2 of 2004 on Determining the Beginning of Ramadan, Shawwal and Dhul Hijjah, Fatwa Number 3 of 2010 on Qibla and Fatwa Number 5 of 2010 on Qibla Direction. These fatwas are the primary sources in this research, while books, journals, and other research results are secondary sources in this research. These fatwas will be analyzed using content analysis techniques by examining the legal arguments, opinions of scholars, and expert opinions, scientific considerations of *falakiyah* fatwas of the Indonesian Ulema Council.

FATWAS OF THE INDONESIAN ULEMA COUNCIL: SCOPE OF FATWA AND METHOD OF *IJTIHĀD*

The Indonesian Ulema Council is a religious institution established on July 26, 1975, in Jakarta that accommodates Muslim scholars, scholars, and scholars from representatives of Islamic social organizations and university academics throughout Indonesia. One of the important roles of the Indonesian Ulema Council for Muslims in Indonesia is as a fatwa provider both to individuals and collectively (Nafis, 2011).

The fatwa products of the Indonesian Ulema Council generally consist of several themes, namely fatwa on religious issues consisting of fatwa on worship, fatwa on faith and religious sects, fatwa on socio-culture, and fatwa on science and technology, fatwa on Food, Drugs, Cosmetics, Science and Technology, and fatwa on Sharia Economics. These fatwas are determined in several forums, namely the Fatwa Commission forum, the National Shari'ah Council forum, the *Ijtimā' Ulama* forum of the Indonesian Ulema Council, the National Deliberation forum of the Indonesian Ulema Council, the National *Muzakarah*, the Rakernas of the Indonesian Ulema Council, and the Alim Ulama Workshop and the Ulama National Conference. All fatwa products issued by of the Indonesian Ulema Council are the result of collective *ijtihad* (*ijtihad jamā'ī*) based on the methodology established by the Indonesian Ulema Council (A. N. Sholeh, 2016).

In determining a fatwa, the Indonesian Ulema Council uses three approaches, namely the *qaṭ'ī* approach, the *qawlī* approach, and the *manhajī* approach which are applied hierarchically, as well as an integral unit in determining the Indonesian Ulema Council fatwas. The *qaṭ'ī* approach refers to the extraction of Islamic law that is studied directly from the *Qur'ān* and *Ḥadīṣ* which are the main sources of Islamic law. This *qaṭ'ī* approach is strengthened by the *qawlī* approach, which in extracting fatwas is guided by the opinions of previous scholars contained in trusted *fiqh* books (*mu'tabarah*). If there is no evidence in the *Qur'ān* and *Ḥadīṣ*, or it has never been discussed in the *fiqh* books of the scholars, or there are contradictions in the views of the scholars, the Indonesian Ulema Council uses the *manhajī* approach, an approach that uses methods of extracting Islamic law that are recognized as correct in determining a fatwa. This approach can use four methods: *al-jam'ū wa al-taufīq* (finding common ground), *tarjihī* (finding the strongest opinion), *ilhaqī* (analogizing a case with its equivalent case found in the books of *fiqh*) and *istinbāṭī* (performing *ijtihād* using recognized *uṣūl fiqh* methods) (Mar'uf Amin, 2017).

In addition to using these arguments, the Indonesian Ulema Council also considers other arguments, namely the results of science and technology studies. In certain issues, the Indonesian Ulema Council fatwa commission meetings present experts or experts in various fields of science that are closely related to the issue to be decided. In particular, this science and technology perspective becomes the basis for the Institute for Food, Drug and Cosmetic Studies in determining the legal status of the halalness of food products, medicines, and cosmetics as well as other used goods (Tim Penyusun, 2018).

According to Ma'ruf Amin, the consideration of scientific studies in determining the fatwa of the Indonesian Ulema Council can't be separated from the emergence of various new problems that were never known or even imagined by previous scholars due to the advancement of science and technology today. Therefore, in order to understand the new problems caused by the development of modern science and technology, the Indonesian Ulema Council also needs a perspective on science and technology. The development of science and technology is an important factor that urges the need for renewal of Islamic law in the current era, in addition to changes in community conditions and the emergence of various complex contemporary problems. According to Amin, the study of science in understanding Islamic law, including fatwa, has three important roles, namely First, determining the strongest legal opinion (*rājih*) among the opinions of classical *fuqahā*, where science had not developed as rapidly as it has today. Second, studies and findings of current science and technology can be applied to review the legal views of previous scholars so that they can be contextualised with the current situation and conditions of the world, whose dynamics are much more complex. Third, to explain new issues of Islamic law due to the development of science and technology that have never been discussed in the classical *fiqh* books (Mar'uf Amin, 2017).

FALAKIYAH FATWAS OF THE INDONESIA ULEMA COUNCIL: IDENTITY, ARGUMENTS, AND LEGAL PROVISIONS OF FATWAS

fatwas of can be categorized into three major themes: religious fatwas, halal products, and shariah economy. Of the many fatwas issued by the Indonesian Ulema Council since its establishment in 1975, there are religious fatwas that specifically discuss issues of worship that are closely related to the phenomena of celestial bodies, especially the Earth, Moon, and Sun. The author categorizes those fatwas as *falakiyah* fatwas.

The term *falakiyah* in Arabic is synonymous with *madār* or orbit in English, which means the circular lines of celestial bodies. The word *falak* itself is taken from the *Qur'ān*, which is mentioned twice, namely in Surah al-Anbiya verse 33 and Surah Yasin verse 40 which means the circular line/orbit of celestial bodies (Bakhtiar, 2011). The discussion of *falakiyah* issues is then discussed and studied in the discipline of *Falak Science*. *Falak Science* in Islamic literature is also called *Hisāb Science*, *Haiah Science*, *Mīqāt Science*, and *Raṣd Science* (Syami, 1997). The definition of *Falak Science* can be classified into two meanings, namely general and specific meanings. *Falak Science* in its general meaning is understood as the study of celestial bodies and their movements, while *Falak Science* in a more specialized meaning is understood as a scientific discipline that explores celestial bodies and the phenomena that accompany them, especially the Sun, Earth and Moon to implement Muslim worship (Izzuddin et al., 2021).

There are at least two interests in studying *Falak Science*, namely: First, it helps in determining Muslim worship, including the determination of Qibla direction, prayer times, and Ramadan fasting and two holidays. Second, as a means of mastering and developing science, as a scientific project of medieval Muslim scholars and scientists who have contributed greatly to developing science in the modern era and helping in terms of worship (Azhar, 2007).

The fatwas of the Indonesian Ulema Council on *falakiyah* issues are included in the scope of fatwas in the field of worship, which in total amount to six fatwas and can be grouped into three themes of discussion, namely: First, fatwas on the determination of prayer times as many as two fatwas, namely the fatwa on Friday Prayers for Travelers on Ships in 1976 and Fatwa on Praying and Fasting in Areas with Unequal Day and Night in 1980. Second, fatwas on the determination of the beginning of the lunar month as many as two fatwas, namely fatwas on the Determination of the Beginning of Ramadan, the Beginning of Shawwal / Eid al-Fitr, the Beginning of Dhulhijjah / Eid al-Adha in 1980 and Fatwa Number 02 of 2004 concerning the Determination of the Beginning of Ramadan, Shawwal and Dhulhijjah. Third, fatwas on Qibla direction which also amounted to two fatwas, namely Fatwa Number 03 of 2010 on Qibla and Number 05 of 2010 on Qibla Direction.

In terms of the forum, the six *falakiyah* fatwas were issued in two forums, namely the Fatwa Commission forum and the National Conference. Fatwa on Friday Prayers for Travelers on Ships in 1976, Fatwa No. 2 of 2004 on the Determination of the Beginning of Ramadan, Shawwal and Dhulhijjah, Fatwa No. 3 of 2010 on Qibla and Fatwa No. 5 of 2010 on Qibla Direction were determined from the Fatwa Commission forum. While the Fatwa on Praying and Fasting in Areas with Unequal Day and Night in 1980 and Fatwa on Determining the Beginning of Ramadan, the Beginning of Shawwal / Eid al-Fitr, the Beginning of Dhul Hijjah / Eid al-Adha in 1980 were determined from the results of the National Consultative Forum.

Methodologically, the *falakiyah* fatwas of the Indonesian Ulema Council do not fully follow a consistent pattern. The fatwa on Praying and Fasting in Areas with Unequal Daytime and Nighttime, which was stipulated in the Second National Deliberation in 1980, did not mention the consideration of the fatwa in full by referring to the *Qur'ān*, *Ḥadīṣ*, scholars' opinions, or other arguments, but directly mentioned the dictum of the fatwa. The Fatwa on Friday Prayers for Travelers on Ships in 1976 and the Fatwa on the Determination of the Beginning of Ramadan, the Beginning of Shawwal/Eid al-Fitr, the Beginning of Dhul Hijjah/Eid al-Adha in 1980 only refer to the views of scholars without mentioning the legal basis of the *Qur'ān*, *Ḥadīṣ*. Meanwhile, the other three fatwas fully mention the fatwa's considerations, starting from the legal basis of the *Qur'ān*, *Ḥadīṣ*, *fiqh* rules, and the views of

scholars, namely Fatwa Number 02 of 2004 concerning the Determination of the Beginning of Ramadan, Shawwal and Dhulhijjah, Fatwa Number 03 of 2010 concerning Qibla and Fatwa Number 05 of 2010 concerning Qibla Direction. These fatwas were issued later, in 2004 and 2010.

The legal arguments used by the Indonesian Ulema Council in determining falakiyah fatwas and the legal provisions (dictum) of its fatwas, the author briefly describes in the following table (Amin et al., 2019):

Table 1: *Falakiyah* Fatwas of the Indonesian Ulema Council and their legal arguments

No.	Fatwa Identity	Legal Argument	Fatwa Dictum
1.	Fatwa on Friday Prayer for Travelers on Ships, 1976	The opinion of Ibn Hazm and the Hanbali school of thought	<ul style="list-style-type: none"> ▪ The validity of Friday prayer for travelers on ships. ▪ If there are two Fridays in a week while traveling on a ship, then the Friday prayer is offered on the first Friday. ▪ If it seems as if there is no Friday, then the determination of the time of prayer is simply estimated by the day.
2.	Fatwa on Prayer and Fasting in Areas with Unequal Day and Night Times, 1980	-	<ul style="list-style-type: none"> ▪ Prayer and fasting times in areas where night and day are unequal are adjusted to those of the nearest balanced area.
3.	Fatwa on the Determination of the Beginning of Ramadan, the Beginning of Shawwal/Idul Fitri, the Beginning of Dhul Hijjah/Idul Adha in 1980	The opinion of the <i>jumhūr</i> ulama	<ul style="list-style-type: none"> ▪ For the determination of the beginning of Ramadan and Shawwal, global <i>ru'yah</i> applies. ▪ For the determination of the beginning of Dhul Hijjah / Eid al-Adha, the <i>maṭla'</i> of each country applies.
4.	Fatwa Number 02 of 2004 concerning the Determination of the Beginning of Ramadan, Shawwal and Dhulhijjah	<i>Qur'ān, Hadīth</i> , rules of <i>fiqh</i> , and scholarly opinions among Imam Sharwānī	<ul style="list-style-type: none"> ▪ Determination of the beginning of Ramadan, Shawwal, and Dhulhijjah based on the <i>ḥisāb</i> and <i>ru'yah al-hilāl</i> methods by the Ministry of Religious Affairs of the Republic of Indonesia which applies nationally.

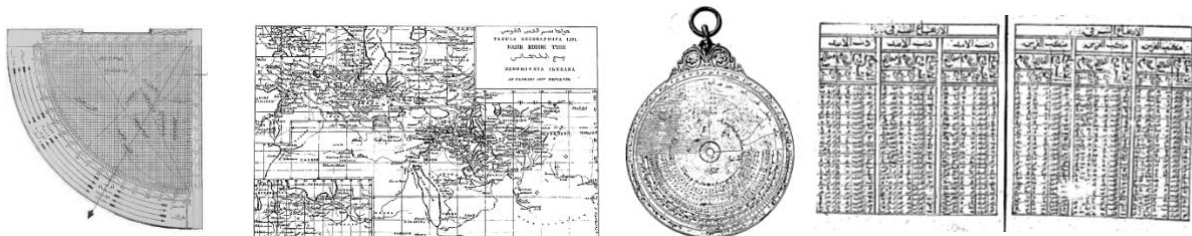
			<ul style="list-style-type: none"> ▪ Muslims are obliged to follow the decision of the Government of Indonesia. ▪ The Minister of Religious Affairs must consult with the Indonesian Ulema Council, Islamic organizations, and related institutions in determining the beginning of the months of Ramadan, Shawwal, and Dhul Hijjah. ▪ The results of <i>ru'yah hilāl</i> from the nearest country whose <i>maṭla'</i> is the same as Indonesia can be used as a guide for the Minister of Religion.
5.	Fatwa No. 03 of 2010 on Qibla	<i>Qur'ān</i> , <i>Hadīth</i> , scholarly opinions including Imām 'Alāuddīn al-Kasanī al-Ḥanafī, Imām al-Qurṭūbī, Ibn Qudamah and Imām al-Syirāzī as well as papers by Prof. Dr. KH. Ali Mustafa Ya'qub, MA	<ul style="list-style-type: none"> ▪ The Qibla direction for people facing/seeing the Kaaba is the building of the Kaaba (<i>'ain al-Ka'bah</i>). ▪ The Qibla direction for people praying away from the Kaaba is the direction of the Kaaba (<i>jihād al-Ka'bah</i>). ▪ The Qibla direction for Indonesia is the direction of the Kaaba (<i>jihād al-Ka'bah</i>).
6.	Fatwa No. 05 of 2010 on Qibla Direction	<i>Qur'ān</i> , <i>Hadīths</i> , opinions of scholars including Imam 'Alāuddīn al-Kasanī al-Hanafī, Imām al-Qurṭūbī, Ibn Qudamah, and Imām al-Syirāzī as well as KH. A. Ghozali Masruri's paper.	<ul style="list-style-type: none"> ▪ The Qibla direction for people facing/seeing the Kaaba is the building of the Kaaba (<i>'ain al-Ka'bah</i>). ▪ The Qibla direction for people praying away from the Kaaba is the direction of the Kaaba (<i>jihād al-Ka'bah</i>). ▪ The Qibla direction for Indonesia is the Northwest direction with varying positions according to the location of the region.

OVERVIEW OF FALAKIYAH ISSUES IN THE FRAMEWORK OF ISLAMIC LAW

David King, in his book *Astronomy in the Service of Islam*, states that in the history of the world's religions, Islam is the only religion that uses scientific procedures involving various scientific disciplines to determine matters of worship, such as the direction of the Qibla, prayer times, the beginning of Ramadan, Shawwal, and Zulhijjah. The determination of matters of worship in Islam cannot be separated from scientific procedures using astronomical approaches (King, 1993).

According to David King, the process of determining the time of worship using scientific methods began in the early days of Islam and developed in the IXth to XVth centuries (King, 1993). In addition to direct observations of celestial bodies such as the Sun and the Moon, Muslim scholars also developed theories, compiled astronomical tables, and invented new instruments to determine the direction of the Qibla, prayer times, and the beginning of the lunar month, and they were even able to produce world maps with geographical coordinates to determine the direction of the Qibla throughout the world. In view of this fact, David King concluded that the need to determine worship inspired most Muslim scholars to study and develop the scientific fields of astronomy, astrophysics, mathematics, and geography for hundreds of years. Muslim scholars and scientists were both ministers of religion and observers of the heavenly bodies (David A. King, 1999).

Image 1: Various astronomical instruments were made by Muslim scientists for astronomical observations and determination of times of worship and Qibla direction.



Rubu al-Mujayyab Geographical Map of the Earth Astrolabe Astronomical Tables

Because of the close relationship between Muslim worship and scientific studies of astronomy, mathematics, and geography, Ebrahim Moosa calls it an epistemic coherence between *fiqh* and science. According to him, some of the classical *fuqahā* were quite familiar with general disciplines such as astronomy, geography, mathematics, geometry, medicine, and others, so there was rarely a clash with positive law (*fiqh*). Even if there is a conflict, both can be resolved amicably (Moosa, 2003).

Scientific procedures in determining Muslim worship, as in the issue of determining the Qibla direction, prayer time, and the beginning of the lunar month, are also known as the discipline of Falak Science, which is a science that studies celestial bodies and their trajectories to determine the times of worship on the surface of the Earth for Muslims. Falak Science is the most obvious representation of the mutual integration between Islamic law and science from

the classical period to the modern era today. The integration of Islam and science in the discipline of Falak Science can be seen in the application of various disciplines of science and modern information technology, as in the issue of determining the Qibla direction, prayer time, and the beginning of the lunar month, which is not only based on the arguments of the *Qurān*, *Ḥadīṣ* and scholarly opinions alone but also involves the disciplines of astronomy, astrophysics, geography, satellite technology, and so on (Adib, 2014). The importance of Falak Science, according to Susiknan Azhar, apart from being a means to determine the times of Muslim worship, including determining the beginning of Ramadan, Shawwal, and Dhulhijjah, prayer times, and determining the Qibla direction. Falak Science is also an important medium for the development and mastery of science and technology, as done by Muslim scholars and scientists in the classical era who have produced various scientific works and contributed to science and technology today (Azhar, 2007).

In its journey, this *falakiyah* issue has generated different responses from scholars regarding the role and procedures of science in it. The issue of using the astronomical *hisāb* method to determine the beginning of the month has been criticized and rejected by later scholars. Some scholars rejected the use of astronomical *hisāb* for several reasons, including that *hisāb* has no evidence in religion, contradicts the *ijmā'* of the scholars, is closely related to *nujum* and *tasyabbuh* with the Jews. The same applies to the issue of determining the Qibla direction. This issue has led to polemics and debates among scholars from the classical period to the present day. Ahmad Sarwat noted that in this Qibla issue, the scholars in Indonesia are divided into two groups: those who support the utilization of science in the issue of Qibla direction and the second group is those who cling to religious arguments and reject the scientific approach in the issue of Qibla direction (Sarwat, 2023).

Thus, the scholars' debate above indicates that the role and procedures of science in understanding religion have not shown any paradigm agreement by the scholars, especially in this *falakiyah* issue. As long as there is no agreement on the role of science in religion, differences in this *falakiyah* issue will always occur.

METHODOLOGICAL ANALYSIS OF THE INDONESIAN ULEMA COUNCIL'S FALAKIYAH FATWAS AND THE SOCIO-POLITICAL INFLUENCE ON FATWA STIPULATION.

The method of determining *falakiyah* fatwas of the Indonesian Ulema Council can be concluded in several ways, namely: First, the Indonesian Ulema Council in its *falakiyah* fatwas does not bind itself to the Shāfi'ī school of thought alone, which is a popular and developed school in Indonesia, as in the fatwa on Friday Prayers for Travelers on Ships in 1976, Fatwa on the Determination of the Beginning of Ramadan, the Beginning of Shawwal / Eid al-Fitr and the Beginning of Dhuhijjah / Eid al-Adha in 1980, and Fatwa Number 03 of 2010 concerning Qibla. These fatwas do not follow the opinions of the Shāfi'ī school. Even in the case of the fatwa on Friday Prayers for Travelers on Ships in 1976, it took the opinion of a school of thought even outside the four schools of thought popular in Indonesia, namely the opinion of Ibn Hazm from the Zahirī school of thought (Amin et al., 2019).

Second, the aspect of *ijtihād* fatwa method. The majority of *falakiyah* fatwas are based on the selective comparative *ijtihād* method (*intiqa'ī*), namely the *ijtihād* method by describing the opinions of classical scholars along with the arguments used then comparing and selecting the *rājih* (strongest) opinion and more suitable for the conditions at that time, such as the fatwa on Friday prayer for travelers on ships, fatwa on prayer and fasting in polar regions,

determination of the beginning of Ramadan, Shawwal and Zulhijjah in 1980 and fatwa on qibla. Other fatwas apply the method of constructive-innovative *ijtihad (insyā'ī)*, namely the method of *ijtihād* by taking new legal provisions, both on issues that have never been touched on by previous scholars or have been discussed but have legal provisions/decisions that are different from the provisions/decisions of previous scholars, as in the fatwa on the determination of the beginning of Ramadan, Shawwal and Zulhijjah and the fatwa on Qibla direction.

Third, the factors that influence the fatwa. Apart from being based on Shara' postulates, the *falakiyah* fatwas of the Indonesian Ulema Council are also influenced by various factors, both influenced by one factor and a combination of several factors. These factors are the tendency to give support to government policies, the desire to answer contemporary problems, the effort to integrate religious propositions and scientific findings, the realizing brotherhood among Muslims, and the hope to be accepted by Islamic groups in Indonesia. The fatwa on the determination of the beginning of Ramadan, Shawwal, and Dhul Hijjah shows the attitude of the Indonesian Ulema Council to support the Indonesian Government's policy in resolving differences in the determination of the beginning of the month in Indonesia and efforts to integrate religious doctrine and science. Fatwa on Friday prayer for travelers on ships in 1976 and the Fatwa on prayer and fasting in polar regions are efforts of the Indonesian Ulema Council in responding to new issues that have no legal provisions in the books of previous scholars due to the times. Meanwhile, Fatwa Number 03 of 2010 concerning Qibla and Fatwa Number 05 of 2010 concerning Qibla Direction is an effort by the Indonesian Ulema Council to integrate religious doctrine and science and to be accepted by Islamic groups in Indonesia. While the Fatwa on the Determination of the beginning of Ramadan, the beginning of Shawwal / Eid al-Fitr, and the beginning of Dhul Hijjah / Eid al-Adha in 1980 to realize *ukhuwwah Islāmiyah* among Muslims throughout the world and in Indonesia.

The method of determining of the *falakiyah* fatwa can be summarized in the following table: (See Table 2).

Table 2: *Ijtihād* Method of Determining the Indonesian Ulema Council *Falakiyah* Fatwa and Influencing Factors.

No.	Fatwa Title	<i>Ijtihād</i> Methode	Factors That Influence Fatwas
1.	Fatwa on Friday Prayer for Travelers on Ships, 1976	<i>Comparative-Selective</i>	<ul style="list-style-type: none"> The desire to answer contemporary issues by choosing the opinion that is more relevant to the context.
2.	Fatwa on Prayer and Fasting in Areas with Unequal Day and Night Times, 1980	<i>Comparative-Selective</i>	<ul style="list-style-type: none"> The desire to answer contemporary issues by referring to the opinions of the majority.
3.	Fatwa on the Determination of the Beginning of Ramadan, the Beginning of Shawwal/Idul Fitri, the Beginning of Dhul Hijjah/Idul Adha in 1980	<i>Comparative-Selective</i>	<ul style="list-style-type: none"> Realizing <i>ukhuwwah Islāmiyah</i> among Muslims around the world and in Indonesia.

4.	Fatwa Number 02 of 2004 concerning the Determination of the Beginning of Ramadan, Shawwal and Dhulhijjah	<i>Construktive-Inovative</i>	<ul style="list-style-type: none"> ▪ An attempt to integrate religious arguments and scientific findings. ▪ To provide support for government policies.
5.	Fatwa No. 03 of 2010 on Qibla	<i>Comparative-Selective</i>	<ul style="list-style-type: none"> ▪ The desire to answer contemporary issues, while still maintaining the opinion of the <i>jumhur</i>.
6.	Fatwa No. 5 of 2010 on Qibla Direction	<i>Construktive-Inovative</i>	<ul style="list-style-type: none"> ▪ The efforts of the Indonesian Ulema Council to respond to the findings of modern science. ▪ The efforts to be accepted by Islamic groups in Indonesia.

SCIENCE CONSIDERATIONS IN THE *FALAKIYAH* FATWAS OF THE INDONESIAN ULEMA COUNCIL

From the methodological aspect, in addition to using the arguments of the *Qur'ān*, *Hadīs*, scholars' opinions, *fiqh* rules, and *uṣul fiqh* studies, in determining *falakiyah* fatwas, the author finds that the Indonesian Ulema Council also considers perspectives from modern scientific studies, especially astronomy and earth sciences. In the *falakiyah* fatwas, science studies have three roles: First, to understand issues that cannot be explained using religious knowledge. Second, science, together with *shar'ī* evidence, is used as the main consideration in determining fatwas. Third, scientific studies are the main consideration in determining fatwas as well as being the basis for changes in fatwas.

The involvement of scientific studies in understanding issues that cannot be explained by religious knowledge can be seen in the fatwa on Friday prayers for travellers on ships in 1976. In this fatwa, the Indonesian Ulema Council refers to the opinion of Hanbali and Ibn Hazm scholars who argue that Friday prayers are obligatory for travellers and non-travellers (Mudzhar, 1993). This opinion was taken because it considered the beneficial aspect of strengthening *ukhuwah Islamiyah* for sailors on ships. This opinion was adopted because it considered the beneficial aspect of strengthening *ukhuwah Islamiyah* for sailors on ships.

On the other hand, the Indonesian Ulema Council also uses the consideration of scientific studies in this fatwa, which can be seen in the use of scientific studies approach to rationalise and understand the issue of holding Friday prayers on ships, which was asked by the ship's crews who experience day/calendar problems when sailing from Indonesia to America or vice versa with several unique cases, namely the occurrence of Friday twice a week and the absence of Friday during the journey using ships. In this case, the Indonesian Ulema Council involved the disciplines of *Falak* Science and Earth Science to explain this matter. The fatwa mentioned that from the explanation of Earth Science and *Falak* Science, there is a possibility that there are two equal days or days that are not on the international date line. (Amin et al., 2019). This happens because the ship's crew crosses the International Date Line either from the East or vice versa from the West which results in the addition or subtraction of days

(Nashiruddin, 2013). Although not the main consideration, the scientific approach and scientific studies in fatwas play an important role in understanding issues that are outside the realm of *fiqh*.

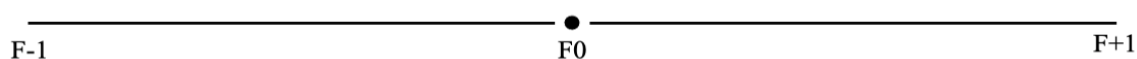
In other fatwa cases, scientific studies along with sharī arguments are used as the main consideration in determining fatwas. This is the case in Fatwa No. 02 of 2004 concerning the determination of the beginning of Ramadan, Shawwal, and Dhulhijjah. In this fatwa, the Indonesian Ulema Council opens up the possibility of the role of astronomical *hisāb* in determining the beginning of the month, which is parallel to the *ru'yah al-hilāl* method as reflected in the dictum of the fatwa. Historically, the *ru'yah al-hilāl* method is a method exemplified by the Prophet Muhammad and his companions in determining the beginning of the lunar month, which has a strong religious foundation. The *hisāb* method, on the other hand, is a product of the science of astronomy and mathematics that emerged later. Astronomical history plays an important role in supporting the implementation of *ru'yah al-hilāl* in the field and can even be used as a legal argument to accept or reject hilal testimony (Umar et al., 2018). The *hisāb* method together with the *ru'yah al-hilāl* method is used by the Indonesian Ulema Council in its fatwa as a recognized method in determining the beginning of the fasting month and holidays. The determination of the beginning of the month by combining these two methods is also expected by the Indonesian Ulema Council to create uniformity among Muslims in Indonesia in starting fasting and holidays.

Scientific studies may also be the main consideration in determining fatwas as well as the basis for changes in fatwas. This is reflected in Fatwa No. 05 of 2010 on Qibla Direction. Before this fatwa was issued, the Indonesian Ulema Council had issued Fatwa No. 03 of 2010 on Qibla, which drew controversy and criticism from various circles. The controversy and criticism arose because the fatwa stated that the Qibla direction of Muslims in Indonesia is sufficient to face the West. The fatwa is considered to have clashed Islamic sharia with science and does not give the slightest authority to science as a consideration in determining fatwas (Mudzhar et al., 2012). To respond to the feedback and criticism of the fatwa, the Indonesian Ulema Council then conducted a review of its fatwa by inviting KH. Ghozali Masruri, a *falak* expert, to present his paper on determining the direction of the Qibla from the perspective of *falak* scholarship. Through its Fatwa Commission, the Indonesian Ulema Council reissued Fatwa No. 05 of 2010 on Qibla Direction, which, according to the statement in the fatwa, is an explanation and completion of the previous fatwa on Qibla Direction. There seems to be a change in the dictum of the fatwa, where the previous fatwa stated that the Qibla direction of Muslims in Indonesia is to the west, then in this latest fatwa it is stated that the Qibla direction of Indonesia is to the north-west with different positions according to the location of each region. This fatwa indicates that the latitude and longitude position of different parts of Indonesia is taken into account, which varies and has implications for determining the angle and azimuth of the Qibla direction. This shows that the Indonesian Ulema Council is not only supported by the arguments of the *Qur'ān*, the *Hadīs*, the rules of *fiqh*, and the opinions of scholars, but also takes into account scientific studies, which in this case are *falak* science, astronomy, geography, and other related sciences, and even becomes the main consideration in determining and revising its fatwas.

Other fatwas on *falakiyah* issues, namely Fatwa on Praying and Fasting in Areas with Unequal Day and Night in 1980, Fatwa on Determining the Beginning of Ramadan, the Beginning of Shawwal / Eid al-Fitr, the Beginning of Dhul Hijjah / Eid al-Adha in 1980 and Fatwa Number 03 of 2010 on Qibla, show the absence of consideration of scientific studies in determining fatwas. Fatwas only refers to the arguments of the *Qur'ān*, *Hadīs*, *fiqh* rules, or

the opinions of scholars alone without trying to consider or involve scientific studies. The issue of determining the time of prayer and fasting in polar regions where the duration of day and night is unbalanced is discussed in the Fatwa on Praying and Fasting in Areas with Unbalanced Day and Night and the issue of *maṭla'* related to the applicability of *ru'yah al-hilāl* in a country discussed in the Fatwa on Determining the Beginning of Ramadan, the Beginning of Shawwal / Eid al-Fitr, the Beginning of Dhul Hijjah / Eid al-Adha are issues related to astronomical phenomena or events, so that to understand them astronomical studies are also needed. However, the two fatwas do not relate at all to the studies of Astronomy or *Falak* science. The same applies to Fatwa No. 03 of 2010 on Qibla. The issue of determining the Qibla direction is an issue that not only concerns the realm of religion but also becomes part of scientific studies that have long been developed by classical-era Muslim scientists. Qibla direction determination has involved various methods, theories, tools, and satellite-based technology. However, in reality, fatwas are only guided by *qat'ī* arguments and opinions of classical scholars and seem to override the authority of science in understanding religious issues.

Apart from various other factors and considerations for the formulation of the *falakiyah* fatwas of the Indonesian Ulema Council, if the typology of the *falakiyah* fatwas is depicted in relation to the influence and consideration of scientific studies, it can be represented on the line below:



The line illustration above illustrates that the center of the line, F0, shows fatwas that do not consider modern science studies. Fatwas are only guided by the arguments of Shara' and the opinions of *fiqh* scholars. Furthermore, the line drawn to the left, F-1, is fatwas that do not consider modern science and even contradict modern scientific studies. While the line drawn to the right, F+1 is *falakiyah* fatwas that consider modern scientific studies.

Of all the *falakiyah* fatwas of the Indonesian Ulema Council, 3 *falakiyah* fatwas are classified as F0 (fatwas that do not consider modern scientific studies), namely Fatwa on Praying and Fasting in Areas with Unequal Day and Night Times in 1980, Fatwa on Determining the Beginning of Ramadan, the Beginning of Shawwal and the Beginning of Zulhijjah in 1980 and Fatwa Number 03 of 2010 concerning Qibla. Among the 3 fatwas classified as F0, 1 fatwa is classified as between F0 and F-1 (fatwas that do not consider modern science and even contradict modern scientific studies), namely Fatwa Number 03 of 2010 on Qibla. Furthermore, 3 fatwas are classified as F+1 fatwas (fatwas that involve the discipline of modern science), namely Fatwa on Friday Prayers for Travelers on Ships in 1976, Fatwa Number 02 of 2004 concerning the Determination of the Beginning of Ramadan, Shawwal, and Zulhijjah and Fatwa Number 05 of 2010 concerning Qibla Direction.

The author considers that the inconsistency of science involvement in the *falakiyah* fatwas of the Indonesian Ulema Council that makes the pattern of religion and science relations vary from conflict, independence, dialog, integration, and even confirmation as described above is caused by several factors, either caused by a single factor or a combination of several factors. These factors include socio-political influences, religious ideology, aspects of benefit, and views on the role of science in religion. These factors play a major role in influencing the determination of the *falakiyah* fatwas of the Indonesian Ulema Council.

First, the socio-political influence. In the context of the Fatwa on the Determination of the Beginning of Ramadan, Shawwal, and Zulhijjah, on the one hand, there is an effort from

the Indonesian Ulema Council to compromise between religious texts and scientific studies by integrating hisab and rukyat methods, but on the other hand the presence of this fatwa cannot be separated from the Indonesian Ulema Council steps to support the Indonesian Government's policy in resolving differences in determining the beginning of the lunar month in Indonesia (Muthmainnah & Santoso, 2020). Likewise, the existence of two fatwas on the issue of Qibla was caused by the different views of the Fatwa Commission members about the role of science in religious matters. In this issue, the Fatwa Commission tries to be neutral and become a mediator in the controversial issue of Qibla direction in Indonesia so that various Islamic communities can accept it. This factor seems to have played a major role in formulating the two fatwas of the Indonesian Ulema Council on this Qibla issue (Ngamilah, 2016).

Second, the influence of religious ideology. In the field of fatwa specifically on the theme of worship, the Indonesian Ulema Council seems to only use a monodisciplinary approach, which is only guided by religious arguments and Islamic science alone. The Indonesian Ulema Council is very careful in issuing fatwas without attempting to interpret them further. On this issue of worship, the Indonesian Ulema Council strongly adheres to the rules of *fiqh* which state that the original law of worship is *tawqifi* (implemented if there are arguments and provisions from the sharia). Worship is not prescribed until there is a sharia command from Allah. On this basis, the *falakiyah* fatwas of the Indonesian Ulema Council mostly represent the opinions of scholars in classical books that refer to normative and textual religious arguments. This tendency to take and refer to the opinions of classical scholars without looking at the context makes fatwas ignore scientific considerations. This tendency to take the opinions of classical school scholars has led to the neglect of scientific considerations and even the rejection of members of the Fatwa Commission of the Indonesian Ulema Council because science is not a religious proposition, has never been used by classical scholars and is prone to lead to misguidance in religion.

Third, prioritizing the benefit. The author finds that this aspect of benefit is also prioritized by the Indonesian Ulema Council in issuing a fatwa (Rosyid, 2013). In the Fatwa on the Determination of the Beginning of Ramadan, the Beginning of Shawwal, and the Beginning of Zulhijjah, the Indonesian Ulema Council stipulates that the hilal testimony in one country can be applied to all Islamic countries in the world. This fatwa was taken by the Indonesian Ulema Council on consideration of the benefit of realizing *ukhuwwah Islāmiyah* and unity of Muslims in starting fasting activities and major Islamic holidays. This consideration of the benefit aspect is also the basis for the establishment of Fatwa No. 03/2010 on Qibla. This fatwa stipulates that for the territory of Indonesia, the Qibla direction is facing towards the West, with the consideration that facing the Qibla in '*ain al-Ka'bah*, is burdensome and difficult for people who cannot pray facing exactly in '*ain al-Ka'bah*. Thus, the consideration of this aspect of benefit in the fatwas of *falakiyah* becomes the main basis even defeating other considerations including scientific considerations.

Fourth, views on the role of science in religion. On the issue of worship, the role of science tends to be ignored because the Indonesian Ulema Council adheres more to *naş* and the opinions of the *jumhūr* ulama without further interpretation. Some members of the Commission of the Indonesian Ulema Council are of the view that issues of pure worship (*al-'ibadah al-mahdah*) must be understood based on the guidance of the *Qur'ān*, *Hadīs*, and the consensus of scholars. Worship based on other than that is rejected in religion. In understanding *falakiyah* issues, the Fatwa Commission members have different views. In the case of the fatwa on the Qibla issue, the Fatwa Commission members have different views on the direction of the Qibla. Some members of the Fatwa Commission rejected the presence of science in the issue of Qibla

direction because it involves prayer which is a mahdah worship, while some other members gave room for the involvement of science and even made science the main consideration in the issue of determining the Qibla direction (Mudzhar et al., 2012). This is what gave birth to the two fatwas of the Indonesian Ulema Council on the issue of Qibla direction due to the different views of the Fatwa Commission members on the role of science in religious matters.

CONCLUSION

The inconsistency of scientific considerations in the *falakiyah* fatwas of the Indonesian Ulema Council of, as described in the previous discussion, shows that there is no agreement among fatwa formulators on the paradigm of the relationship between religion and science. Therefore, the Indonesian Ulema Council needs to formulate the paradigm of the relationship between religion and science as a guideline for the formulation of fatwas, especially those that overlap with aspects of science. The Indonesian Ulema Council also needs to elaborate on *ijtihad* that involves various elements, including Islamic jurists, scientists, and even the government, especially on issues that intersect with science and technology. All these elements must be actively involved in harmonising revelation, science, and reality so that the fatwa issued does not lose its correlation with the actual situation today.

AUTHOR CONTRIBUTIONS

Muhammad Rasyid: Conceptualization, Methodology, Software, Writing, Original Draft Preparation; Ahmad Izzuddin: Data Curation, Validation, Supervision; Muhsin Aseri: Software, Validation, Writing-Reviewing and Editing; Akh. Fauzi Aseri: Supervision Software, Writing; Sukarni : Validation, Writing-Reviewing and Editing; Muhamad Syazwan Faid: Software, Writing.

CONFLICTS OF INTEREST

The manuscript has not been published elsewhere and is not under consideration by other journals. All authors have approved the review, agree with its submission and declare no conflict of interest on the manuscript.

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