

## The Precision of Qibla Direction in Masjid Jami' At Beber District: A Comprehensive Study From the Perspectives of Astronomy and Local Scholars

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**Abstract:** Mosques play a central role as places of worship for Muslims, yet observations indicate that the qibla accuracy in several mosques in Beber District has not been reassessed since their construction. For instance, Masjid Al-Ma'mur in Ciawigajah Village deviates by 9° 31' from the expected qibla direction. This research aims to assess the qibla accuracy in mosques of Beber District and explore the responses from scholars and the perspective of celestial science regarding this inaccuracy. The research methodology is qualitative with a field research approach. The Mizwala Qibla Finder (MQF) is utilized as a tool for measuring qibla accuracy. Primary data is obtained through observations, interviews, documentation, and secondary data from relevant literature. Data analysis is conducted using a descriptive-verification approach. Among the ten mosques studied, three exhibit deviations in qibla direction. Scholars like KH. Ahmad highlight the seriousness of this issue as it can impact the direction of prayer. However, other scholars, such as KH. Muhtadi, suggest that technical aspects like qibla direction should not be overly emphasized. Scholars' responses and the celestial science perspective provide diverse insights into the significance and handling of qibla accuracy issues within the context of diverse worship practices in mosques of Beber District.

**Keywords:** Mosque; Qibla Accuracy; Scholars; Astronomy

**Abstrak:** Masjid memiliki peran sentral sebagai tempat ibadah umat Muslim, namun observasi menunjukkan bahwa akurasi arah kiblat di beberapa masjid Kecamatan Beber belum diperbarui sejak pembangunannya. Sebagai contoh, Masjid Al-Ma'mur Desa Ciawigajah memiliki selisih arah kiblat sebesar 9° 31'. Penelitian ini bertujuan untuk menilai akurasi arah kiblat masjid-masjid di Kecamatan Beber dan menggali respons ulama serta perspektif ilmu falak terhadap ketidaktepatan tersebut. Metode penelitian ini bersifat kualitatif dengan pendekatan penelitian lapangan. Alat pengukur akurasi arah kiblat yang digunakan adalah Mizwala Qibla Finder (MQF). Data primer diperoleh melalui observasi, wawancara, dokumentasi, dan data sekunder dari literatur terkait. Analisis data dilakukan dengan pendekatan deskriptif verifikatif. Dari sepuluh masjid yang diteliti, tiga di antaranya mengalami kemelencengan arah kiblat. Ulama seperti KH. Ahmad menyoroti seriusnya permasalahan ini karena dapat mempengaruhi arah salat. Namun, ulama lain seperti KH. Muhtadi berpendapat bahwa aspek teknis seperti arah kiblat sebaiknya tidak terlalu dipermasalahkan. Respons ulama dan perspektif ilmu falak memberikan pandangan beragam terkait kebermaknaan dan penanganan masalah akurasi arah kiblat dalam konteks keberagaman praktik ibadah di masjid-masjid Kecamatan Beber.

**Kata kunci:** Masjid; Akurasi Arah Kiblat; Ulama; Ilmu Falak

## Introduction

Islam, as one of the major religions in the world, is present to perfect and complement previous teachings.<sup>1</sup> The concrete manifestation of Islamic teachings is the revelation of Allah SWT found in the Quran.<sup>2</sup> In addition to the Quran, other instruments supporting the establishment of Islamic laws include hadith, ijma' (consensus), and qiyaş (analogical reasoning).<sup>3</sup> These legal sources are used to formulate and establish laws (istinbat al-ahkam) that serve as a guide for Muslims in worship.<sup>4</sup>

One of the obligatory acts of worship for every Muslim is the performance of mandatory prayers or Salat.<sup>5</sup> Salat is the second pillar of Islam and is classified as farđu 'ain, meaning an individual obligation that must be fulfilled.<sup>6</sup> Moreover, Salat determines the spiritual quality of an individual in their relationship with their Lord.<sup>7</sup> Salat is a particularly special obligatory act of worship because the command for Salat came directly from Allah SWT to Prophet Muhammad SAW, in connection with the event of the Night Journey and Ascension. Additionally, Salat is the first obligatory act of worship to be taken into account, and if Salat is performed properly, all of a person's deeds are considered good.<sup>8</sup>

In fulfilling the obligation of Salat, one must not perform it arbitrarily without paying attention to its pillars and conditions. There are pillars and valid conditions that need to be known and met before and during the performance of the Salat.<sup>9</sup> One crucial condition is facing the Qibla.<sup>10</sup> Positioning oneself to face the Qibla is a valid condition for someone intending to perform Salat.<sup>11</sup>

The Qibla itself is the direction faced by Muslims when performing the Salat.<sup>12</sup> Fundamentally, the Qibla also encompasses the concept of the Kaaba, which in Arabic means 'facing' (muqābalah) and 'direction' (jihah), as Muslims face the Kaaba when performing Salat. Allah SWT states in the Quran, Surah Al-Baqarah, verse 150, regarding the direction of the Qibla:<sup>13</sup>

"When you set out [for prayer], turn your face toward the Sacred Mosque. And wherever you [believers] are, turn your faces toward it in order that the people will not have any argument against you, except for those of them who do wrong; so fear them not but fear Me. And [it is] so I may complete My favor upon you and that you may be guided." (Q.S. Al-Baqarah/2:150)<sup>14</sup>

The science of astronomy is a discipline that studies the positions and locations of celestial bodies

<sup>1</sup> Iendy Zelviean Adhari et al., *STRUKTUR KONSEPTUAL USHUL FIQH, CV WIDINA MEDIA UTAMA*, 2021.

<sup>2</sup> Akhmad Shodikin, "Filsafat Hukum Islam Dan Fungsinya Dalam Pengembangan Ijtihad," *Mahkamah: Jurnal Kajian Hukum Islam* 1, no. 2 (2016).

<sup>3</sup> Umar Muhaimin, "METODE ISTIDLAL DAN ISTISHAB (FORMULASI METODOLOGI IJTIHAD)," *YUDISLA: Jurnal Pemikiran Hukum Dan Hukum Islam* 8, no. 2 (2018), <https://doi.org/10.21043/yudisia.v8i2.3243>.

<sup>4</sup> Jidan Ahmad Fadillah et al., "Mazhab Dan Istimbath Hukum," *Al-Hikmah* 7, no. 2 (2022), <https://doi.org/10.30651/ah.v7i2.8087>.

<sup>5</sup> Rusdin Muhalling et al., "Hisab and Ru'yah in Islamic Law (Syara)," *International Journal of Applied Engineering Research* 11, no. 14 (2016).

<sup>6</sup> Agus Solikin, "Dampak Perkuliahan Praktikum Hisab Awal Waktu Salat Dan Arah Kiblat Terhadap Kehidupan Beragama Mahasiswa," *Didaktis: Jurnal Pendidikan Dan Ilmu Pengetahuan* 19, no. 3 (2019), <https://doi.org/10.30651/didaktis.v19i3.3412>.

<sup>7</sup> Rizki Muhammad Haris, "HUKUM SALAT YANG TIDAK SESUAI ARAH KIBLAT: Studi Kasus Masjid-Masjid Di Kecamatan Sidamanik," *AT-TAFAHUM: Journal of Islamic Law* 1, no. 1 (2017).

<sup>8</sup> Erha Saufan Hadana and Irwansyah Irwansyah, "Problematika Tata Laksana Ibadah Selama Pandemi Covid-19 Dalam Tinjauan Maqasyid Syari'ah," *Al-Ahkam: Jurnal Syariah Dan Peradilan Islam* 1, no. 1 (2021).

<sup>9</sup> Imroatul Munfaridah, "Problematika Dan Solusinya Tentang Penentuan Waktu Shalat Dan Puasa Di Daerah Abnormal (Kutub)," *Al-Syakhsiyah: Journal of Law & Family Studies* 3, no. 1 (2021), <https://doi.org/10.21154/syakhsiyah.v3i1.2985>.

<sup>10</sup> Marwadi Marwadi, "Interkoneksi Fikih Hisab Rukyat Dan Ilmu Geodesi," *Al-Manabij: Jurnal Kajian Hukum Islam* 12, no. 2 (2018), <https://doi.org/10.24090/mnh.v12i2.1768>.

<sup>11</sup> Abdul Jalil and Hosen Hosen, "QIBLA JURISPRUDENCE: Deviation of Mosques' Qibla in Pamekasan Madura," *Islamuna: Jurnal Studi Islam* 7, no. 2 (2020), <https://doi.org/10.19105/islamuna.v7i2.3381>.

<sup>12</sup> ABDK Faiz, "Fiqh Moderation on Qibla Direction Determination: Flexible Accuracy," *Journal of Islamic Law (JIL)*, 2020.

<sup>13</sup> Muthmainnah Muthmainnah and Fattah Setiawan Santoso, "Pemanfaatan Sains Dan Teknologi Dalam Pengukuran Arah Kiblat Di Indonesia," *Ulumuddin: Jurnal Ilmu-Ilmu Keislaman* 10, no. 2 (2020), <https://doi.org/10.47200/ulumuddin.v10i2.441>.

<sup>14</sup> Ahmad Nizam, "PERBEDAAN PENDAPAT DALAM PENENTUAN ARAH DAN WAKTU IBADAH (Perbandingan Metodologi Syar'i Dan Sains)," *Muqaranah* 5, no. 1 (2021), <https://doi.org/10.19109/muqaranah.v5i1.9206>.

(earth, moon, and sun) to determine the direction and time associated with various Islamic rituals, both obligatory and recommended.<sup>15</sup> While facing the Kaaba during prayer is relatively straightforward for Muslims close to the Kaaba, it poses challenges and issues for those in distant locations like Indonesia.<sup>16</sup>

Mosques play a crucial role as places of worship for the Muslim community.<sup>17</sup> Mosques serve as landmarks for determining the Qibla direction, making the accuracy and precision of the Qibla direction essential. In 2010, it was observed that there was a slight shift in the Qibla direction of mosques in Indonesia, likely due to tectonic plate movements affecting the surface structure. Responding to this, the Indonesian Ulema Council (MUI) issued Fatwa No.3 in 2010, later revised as Fatwa No.5 in the same year, addressing the Qibla direction shift in Indonesia.<sup>18</sup>

Masjid Al-Ma'mur in Beber District, specifically in Ciawigajah Village, is one such mosque with a long-standing history, serving as a central hub for worship activities in the community. Its geographical coordinates are approximately  $-6^{\circ}51'44''$  (latitude) and  $108^{\circ}31'51''$  (longitude).

In a preliminary study using Mizwandroid to recalculate the Qibla direction, there is suspicion of a deviation in the angle compared to the current Qibla direction of the mosque, which is approximately  $285^{\circ}$  (North-South-East-West). The Mizwandroid Qibla azimuth is calculated at  $294^{\circ}$  (North-South-East-West), showing a difference of  $9^{\circ}31'0''$ . If extrapolated, this suggests a slight shift towards the Northwest.

This mosque serves as a basis for the researcher to further investigate the accuracy of the Qibla direction in other congregational mosques in Beber District. The next step involves using more precise tools such as the Mizwala Qibla Finder (MQF) since this accuracy significantly impacts the precision of individuals performing their prayers.

**Table 1: Key Observations on Qibla Direction Discrepancy in Beber District Mosques**

Mosque Name	Key Observations
Masjid Al-Ma'mur	Significant deviation of $9^{\circ}54'$ from theoretical Qibla direction.
Baiturrohmah Mosque	Minor deviation within tolerance range of $2^{\circ}$ .
Darussalam Mosque	Minor deviation within tolerance range of $2^{\circ}$ .
Baiturrosyidin Mosque	Significant deviation of $25^{\circ}54'$ from theoretical Qibla direction.
Al Falah Mosque	Accurate Qibla direction with a deviation of $0^{\circ}$ .
Nurul Bayan Mosque	Minor deviation within tolerance range of $2^{\circ}$ .
Nurul Mubin Mosque	Significant deviation of $14^{\circ}54'$ from theoretical Qibla direction.
Quwwatul Islam Mosque	Minor deviation of $1^{\circ}54'$ within tolerance range of $2^{\circ}$ .
Nurul Huda Mosque	Minor deviation within tolerance range of $2^{\circ}$ .
Al Rohmah Mosque	Minor deviation of $1^{\circ}6'$ within tolerance range of $2^{\circ}$ .

**Key Observations:**

1. The Mizwala Qibla direction in Masjid Al-Ma'mur exhibits a significant deviation of  $9^{\circ}54'$  from the theoretical Qibla direction.
2. Mosques such as Baiturrohmah, Darussalam, Al Falah, Nurul Bayan, and Nurul Huda show minor deviations within the tolerance range of  $2^{\circ}$ .
3. Baiturrosyidin, Nurul Mubin, and Quwwatul Islam mosques exhibit significant deviations, raising concerns about their accuracy.
4. Al Falah Mosque demonstrates a precise alignment with the theoretical Qibla direction.
5. Deviations are measured in terms of direction towards North (N), South (S), East (E), or West (W).

<sup>15</sup> Mustafa Yilmaz, "Historical Mosque Orientation in Turkey: Central-Western Anatolia Region, 1150-1590," *Journal of Historical Geography* 38, no. 4 (2012), <https://doi.org/10.1016/j.jhg.2012.06.002>.

<sup>16</sup> Muthmainnah and Santoso, "Pemanfaatan Sains Dan Teknologi Dalam Pengukuran Arah Kiblat Di Indonesia."

<sup>17</sup> Philipp Bruckmayr, "Facing Mecca from Java: Two Treatises on the Establishment of the Qibla, and Their Scholarly and Social Context," *Islamic Law and Society*, 2023, <https://doi.org/10.1163/15685195-20220001>.

<sup>18</sup> Sopa AR, "PERUBAHAN FATWA," *AL-QALAM* 27, no. 2 (2010), <https://doi.org/10.32678/alqalam.v27i2.598>.

Motivated by the above considerations, the author is interested in conducting research titled "Accuracy of the Qibla Direction in Congregational Mosques in Beber District: A Perspective from Astronomy and the Response of Beber Scholars." Based on the aforementioned background, the research aims to address the formulated problems: First, what is the accuracy of the Qibla direction in congregational mosques in Beber District? Second, what are the perspectives of astronomy and the responses of scholars regarding the accuracy of the Qibla direction in congregational mosques in Beber District?

## Literature Review

Research on the accuracy of the Qibla direction in mosques is not a new subject. However, there seems to be a lack of specific studies focusing on the accuracy of the Qibla direction in mosques in Beber District. Some relevant works supporting this research include:

First, a thesis by Ilmi Rohmah titled "Fikih Kiblat of the Shafi'i School and Its Implementation in Kedungturi Village Mosque, Taman, Sidoarjo," UIN Surabaya, 2020. The thesis discusses the analysis of the fiqh perspective on the Qibla within the Shafi'i School, considering both *ain al-Ka'bah* and *jihah al-Ka'bah* concepts. The study then uses Kedungturi Village Mosque as a sample for implementing this fiqh perspective. Similarities with this research lie in both studies exploring the fiqh perspective on the Qibla direction. The difference lies in the research area, and this study adds the perspective of local scholars in Beber.<sup>19</sup>

Second, a thesis by M. Ali Zaini titled "Analysis of Astronomy on the Accuracy of Qibla Directions in Mosques in Sukodono Village, Sukodono Subdistrict, Sidoarjo Regency," UIN Sunan Ampel, 2020. In this research, the author analyzes the calculated Qibla directions used in mosques in Sukodono Village, recalculates them, and aligns them with more accurate calculations. Similarities include both studies examining the Qibla direction and its calculations according to the principles of astronomy. Differences lie in the research area and the perspectives used in the research.<sup>20</sup>

Third, a scientific journal by Nurnillawati with the title "Accuracy of Qibla Directions of Pallantikang Village Mosques in Bangkala Subdistrict, Jeneponto Regency." The journal discusses research results on ten mosques in Bangkala Subdistrict. Eight out of the ten mosques showed deviations in the Qibla direction, while two mosques had accurate Qibla directions. The study revealed that determining the Qibla directions in the mosques in Bangkala Subdistrict was based on intuition, using the direction of the setting sun as a reference. Similarities with this research include having the same research object – mosques in the district – and understanding the history of determining the Qibla direction in those mosques. The difference lies in the research location; Nurnillawati's research was conducted in Bangkala Subdistrict, while this study focuses on Beber District.<sup>21</sup>

Fourth, a thesis by M. Ilham Ramadhan titled "Accuracy Test of Qibla Direction at Al-Istiqomah Mosque, Ketajen Village, Gedangan Subdistrict, Sidoarjo City," UIN Sunan Ampel, 2021. The thesis examines one mosque in Ketajen Village, Gedangan Subdistrict, Sidoarjo City, namely Al-Istiqomah Mosque. The mosque, known to be ancient, had not recalculated the accuracy of its Qibla direction. The mosque's caretakers had previously relied on the sun's position to determine the Qibla direction. Ilham conducted a recalculation using trigonometric methods and a theodolite. The similarity with this research lies in the use of trigonometric formulas for calculating the Qibla direction. The difference is that Ilham focused on Al-Istiqomah Mosque in Ketajen Village, Gedangan Subdistrict, Sidoarjo, while this study covers several congregational mosques in Beber District.<sup>22</sup>

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<sup>19</sup> Ilmi Rohmah, "Fikih Kiblat Mazhab Safii Dan Implementasinya Di Masjid Desa Kedungturi, Taman, Sidoarjo" (UIN Surabaya, 2020).

<sup>20</sup> M. Ali Zaini, "Analisis Ilmu Falak Terhadap Akurasi Arah Kiblat Masjid-Masjid Di Desa Sukodono Kecamatan Sukodono Kabupaten Sidoarjo" (UIN Sunan Ampel, 2020).

<sup>21</sup> Nurnilla Wati, "Akurasi Arah Kiblat Masjid Desa Pallantikang Di Kecamatan Bangkala Kabupaten Jeneponto," *Hisabuna: Ilmu Falak* 2, no. 1 (2021).

<sup>22</sup> M. Ilham Ramadhan, "Uji Akurasi Arah Kiblat Di Masjid Al-Istiqomah, Desa Ketajen, Kecamatan Gedangan, Kota Sidoarjo" (UIN Sunan Ampel, 2021).

## Method

The research methodology employed in this study is qualitative research, specifically field research,<sup>23</sup> focusing on congregational mosques (masjid jami') in Beber District. The sampling method utilized is purposive sampling.<sup>24</sup>

To ensure valid, comprehensive, and accountable research results, clear and precise data sources are essential. This study incorporates both primary and secondary data sources. Primary data encompasses the history of determining the Qibla direction used during the initial construction of mosques in the villages. Additionally, the primary data includes the results of Qibla direction accuracy in ten congregational mosques in Beber District, which are the targeted objects of the study. The accuracy data involves mathematical calculations through the use of a Qibla direction determination tool called the Mizwala Qibla Finder.

Secondary data consists of information obtained from peer-reviewed journals, academic publications, and other reputable sources. Secondary data plays a crucial role in refining the analysis and discussion regarding the accuracy of the Qibla direction in the congregational mosques of Beber District. Supporting data for this research includes an overview of Beber District, the profile of the mosques chosen for the study, and the responses of Beber's scholars regarding the accuracy of the Qibla direction, which will be gathered from ten mosques situated in ten different villages within Beber District.

To obtain accurate and accountable data, systematic data collection techniques are necessary. In this research, the author conducts interviews to gather information about the history of mosque construction and previous Qibla direction calculations and determinations. Key informants for this data collection are individuals involved in mosque construction or members of the mosque's management board (DKM). Additionally, interviews are conducted with scholarly figures to understand their responses to the accuracy of the Qibla direction in the congregational mosques of Beber District. The scholars focused on in this study are those well-versed and specialized in the field of study related to astronomy, particularly the Qibla direction.

Observation and documentation are also employed to support the research by obtaining geographical information and the strategic positioning of mosques for Qibla direction calculations and measurements.

For a well-structured presentation of the research, data analysis is crucial. This study utilizes descriptive data analysis techniques. The data analysis process involves three stages: data reduction, data presentation, and drawing conclusions, with the aim of addressing the research problem formulations.<sup>25</sup>

## Result and Discussion

### Results of Calculation and Measurement of Qibla Directions in Congregational Mosques in Beber District

The study involved the precise calculation and measurement of Qibla directions in ten congregational mosques located in Beber District using the Mizwala Qibla Finder tool. The objective was to evaluate the accuracy of the Qibla orientations at different times. The following summarizes the findings for each mosque:

**Al-Ma'mur Mosque, Ciawigajah Village:** Located at  $-6^{\circ} 51' 44''$  latitude and  $108^{\circ} 31' 51''$  longitude, the Mizwah values were  $296^{\circ} 6'$  and  $297^{\circ} 29'$  during the measurements on December 15 and 16, 2022, at 8:45 AM and 9:00 AM, respectively. The calculated Qibla direction for the mosque was  $285^{\circ}$ , while the Mizwala Qibla direction was  $294^{\circ} 54'$ .

**Baiturrohmah Mosque, Kondangsari Village:** With a latitude of  $-6^{\circ} 48' 04''$  and longitude of  $108^{\circ} 31' 27''$ , the Mizwah values on December 15 and 28, 2022, at 10:00 AM and 10:40 AM, were  $306^{\circ} 53'$  and  $317^{\circ} 20'$ . The determined Qibla direction was  $295^{\circ}$ , and the Mizwala Qibla direction was  $294^{\circ} 54'$ .

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<sup>23</sup> Jason M. Chin and Kathryn Zeiler, "Replicability in Empirical Legal Research," *Annual Review of Law and Social Science*, 2021, <https://doi.org/10.1146/annurev-lawsocsci-121620-085055>.

<sup>24</sup> Ashley Crossman, "Purposive Sampling - Definition and Types," *Thoughtco*, 2020.

<sup>25</sup> Yuli Nurmallasari and Rizki Erdiantoro, "Analisis Deskriptif Kualitatif," *Quanta* 4, no. 1 (2020).

**Darussalam Mosque, Cipinang Village:** At  $-6^{\circ} 49' 25''$  latitude and  $108^{\circ} 30' 53''$  longitude, measurements on December 28, 2022, and January 3, 2023, at 2:00 PM and 1:20 PM, revealed Mizwah values of  $59^{\circ} 3'$  and  $51^{\circ} 3'$ . The mosque's Qibla direction was determined as  $295^{\circ}$ , and the Mizwala Qibla direction was  $294^{\circ} 54'$ .

**Baiturrosyidin Mosque, Patapan Village:** Situated at  $-6^{\circ} 48' 02''$  latitude and  $108^{\circ} 31' 18''$  longitude, measurements on December 15 and 29, 2022, at 10:47 AM and 10:30 AM, yielded Mizwah values of  $323^{\circ} 52'$  and  $313^{\circ} 23'$ . The Qibla direction for the mosque was  $270^{\circ}$ , and the Mizwala Qibla direction was  $294^{\circ} 54'$ .

**Al Falah Mosque, Sindangkasih Village:** At  $-6^{\circ} 50' 53''$  latitude and  $108^{\circ} 31' 12''$  longitude, measurements on December 13, 2022, at 9:45 AM and 11:21 AM, produced Mizwah values of  $303^{\circ} 39'$  and  $344^{\circ} 55'$ . The mosque's Qibla direction was determined as  $294^{\circ}$ , and the Mizwala Qibla direction was  $294^{\circ} 54'$ .

**Nurul Bayan Mosque, Wanayasa Village:** Located at  $-6^{\circ} 50' 51''$  latitude and  $108^{\circ} 30' 55''$  longitude, measurements on March 7, 2023, at 9:30 AM and 11:45 AM, **resulted** in Mizwah values of  $269^{\circ} 51'$  and  $266^{\circ} 23'$ . The Qibla direction for the mosque was  $295^{\circ}$ , and the Mizwala Qibla direction was  $294^{\circ} 54'$ .

**Nurul Mubin Mosque, Sindanghayu Village:** At  $-6^{\circ} 51' 10''$  latitude and  $108^{\circ} 31' 45''$  longitude, measurements on March 3 and 10, 2023, at 9:35 AM and 11:04 AM, showed Mizwah values of  $272^{\circ} 24'$  and  $259^{\circ} 17'$ . The mosque's Qibla direction was  $280^{\circ}$ , and the Mizwala Qibla direction was  $294^{\circ} 54'$ .

**Quwwatul Islam Mosque, Cikancas Village:** Situated at  $-6^{\circ} 50' 03''$  latitude and  $108^{\circ} 32' 10''$  longitude, measurements on December 13, 2022, at 1:30 PM and 2:45 PM, resulted in Mizwah values of  $55^{\circ} 23'$  and  $64^{\circ} 39'$ . The Qibla direction for the mosque was  $293^{\circ}$ , and the Mizwala Qibla direction was  $294^{\circ} 54'$ .

**Nurul Huda Mosque, Beber Village:** At  $-6^{\circ} 48' 55''$  latitude and  $108^{\circ} 31' 24''$  longitude, measurements on March 15, 2023, at 9:37 AM and 10:11 AM, produced Mizwah values of  $264^{\circ} 9'$  and  $261^{\circ} 18'$ . The mosque's Qibla direction was  $294^{\circ}$ , and the Mizwala Qibla direction was  $294^{\circ} 54'$ .

**Al Rohmah Mosque, Halimpu Village:** With a latitude of  $-6^{\circ} 50' 38''$  and longitude of  $108^{\circ} 30' 43''$ , measurements on March 15, 2023, at 1:10 PM and 2:35 PM, yielded Mizwah values of  $102^{\circ} 58'$  and  $94^{\circ} 42'$ . The Qibla direction for the mosque was  $296^{\circ}$ , and the Mizwala Qibla direction was  $294^{\circ} 54'$ .

### **Perspective of Astronomy and Responses of Scholars in Beber to the Accuracy of Qibla Directions in Congregational Mosques in Beber District**

Analyzing the above Qibla direction measurements and referring to the opinions of the four major Imams, there is a difference of opinion regarding the ruling on facing the Qibla during prayer. Among the four prominent Imams, only Imam Shafi'i strongly recommends facing directly towards the Kaaba ('ainul Ka'bah) during prayer.<sup>26</sup> However, within Imam Shafi'i's opinions, there are two views—one advocating 'ainul Ka'bah and the other allowing facing the general direction (jihatul Ka'bah). The other three Imams suggest facing the general direction without the need for precision.<sup>27</sup>

Despite these opinions, the Quran states: "And from wherever you go out [for prayer], turn your face toward al-Masjid al-Haram. And wherever you [believers] may be, turn your faces toward it in order that the people will not have any argument against you, except for those of them who commit wrong; so fear them not but fear Me. And [it is] so I may complete My favor upon you and that you may be guided." (Quran 2:150)

According to the view of Imam Ibn Qudamah al-Maqdisi, individuals facing the Qibla fall into three categories. First, those who are very certain, such as those who can directly see the Kaaba or residents of Mecca, are obligated to face the Kaaba with certainty. Second, those who cannot see the Kaaba but have signs to determine the Qibla direction should strive to find it. Third, those who cannot

<sup>26</sup> Dwi Putra Jaya, "DINAMIKA PENENTUAN ARAH KIBLAT," *Jurnal Ilmiah Mizani: Wacana Hukum, Ekonomi Dan Keagamaan* 4, no. 1 (2018), <https://doi.org/10.29300/mzn.v4i1.1011>.

<sup>27</sup> Emyllia Fatmawati, "Arah Kiblat Tanah Haram Dengan Perspektif Hadis," *Jurnal Ilmu Falak Dan Astronomi* 3, no. 1 (2021).

determine the Kaaba's direction due to blindness and lack of signs are obligated to follow the consensus.<sup>28</sup>

Additionally, Prof. Thomas Djamaluddin introduces the term "Ihtiyath Al-Qiblat" to describe tolerance in Qibla direction. He suggests that the deviation in the Qibla direction is not measured against the Kaaba's position but is assessed from our position. As one moves farther from the Kaaba, it becomes more challenging to achieve accurate alignment. Qibla direction itself is about facing, so the permissible deviation is one that does not significantly alter the direction visibly, including within the lines of the mosque or prayer area. According to Thomas Djamaluddin, a deviation of approximately 2 degrees is within the tolerance limit.<sup>29</sup>

Based on the presented measurements, only seven out of the ten congregational mosques in Beber District fall within the tolerance limit of a two-degree deviation. The details are presented in the following table:

**Table 2. Accuracy of Qibla Directions Based on the Tolerance Value of Qibla Deviation by Prof. Thomas Djamaluddin.**

No	Mosque Name	Qibla Direction	Mizwala Direction	Deviation
1	Al-Ma'mur Ciawigajah	285°	294° 54'	9° 54'
2	Baiturrosyidin Patapan	269°	294° 54'	25° 54'
3	Baiturrohmah Kondangsari	295°	294° 54'	0° 6'
4	Darussalam Cipinang	295°	294° 54'	0° 6'
5	Al-Falah Sindangkasih	294°	294° 54'	0° 54'
6	Nurul Bayan Wanayasa	295°	294° 54'	0° 6'
7	Nurul Mubin Sindanghayu	280°	294° 54'	14° 54'
8	Quwwatul Islam Cikancas	293°	294° 54'	1° 54'
9	Nurul Huda Beber	294°	294° 54'	0° 54'
10	Al-Rohmah Halimpu	296°	294° 54'	1° 6'

In addressing the issue of Qibla accuracy in the congregational mosques of Beber District, particularly in the ten villages of Kondangsari, Ciawigajah, Sindangkasih, Sindanghayu, Wanayasa, Cikancas, Halimpu, Beber, Cipinang, and Patapan, the researcher conducted interviews with two influential scholars involved in the study and practice of Qibla direction in the community. These two scholars are KH. Muhtadi, Chairman of the Indonesian Ulema Council (MUI) in Beber, and KH. Ahmad, leader of the Cela Islamic Boarding School.

During the interview, KH. Muhtadi emphasized the importance of the Qibla issue, not only for the Beber community but globally. He quoted Imam Shafi'i's opinion, stating that a person near the Kaaba must face directly towards it ('ainul Ka'bah). However, outside the Masjidil Haram, the direction is general (jihatul Ka'bah), as slight deviations are permissible.

He expressed his opinion on a mosque with a significant deviation in its Qibla direction, stating that prayer in that mosque remains valid, even with a considerable difference. If correction is deemed necessary, it can be addressed within the mosque's interior. "If that's difficult, well, that's fine, what matters is the prayer," he added.

<sup>28</sup> Sunarto Sunarto, "Menentukan Titik Ideal Kiblat Dalam Perspektif Hukum Islam Dan Ilmu Falak," *MISYKAT Jurnal Ilmu-Ilmu Al-Quran Hadist Syari Ab Dan Tarbiyah* 7, no. 1 (2022), <https://doi.org/10.33511/misykat.v7n1.58-70>.

<sup>29</sup> Sakirman Sakirman, "Formulasi Baru Arah Kiblat: Memahami Konsep Rasydul Kiblat Harian Indonesia," *Al-Qisthu: Jurnal Kajian Ilmu-Ilmu Hukum* 16, no. 1 (2018), <https://doi.org/10.32694/010440>.

**Table 3. Differences in Local Scholars' Opinions on Qibla Accuracy**

No	Scholar	Perspective	Key Points
1	KH. Muhtadi	Tolerance and Validity	Emphasizes the global significance of the Qibla issue. Quotes Imam Shafi'i, allowing a general direction (jihatul Ka'bah) outside Masjidil Haram. Accepts validity of prayers in mosques with significant deviations. Advocates for correction if feasible but prioritizes the act of prayer.
2	KH. Ahmad	No Tolerance for Deviation	Supports adjusting rows in the mosque for accurate Qibla direction. Asserts no tolerance for deviation, considering facing the Qibla a prerequisite for valid prayer. Urges adherence to established laws rather than accommodating societal preferences. Highlights the inevitable differences in Qibla direction and the importance of a Muslim's approach to such matters.

In agreement with KH. Muhtadi, KH. Ahmad also supported adjusting the rows within the mosque once the accurate Qibla direction is known. Here, he asserted that there is no tolerance because, according to him, one of the prerequisites for valid prayer is facing the Qibla. As the leader of the Cela Islamic Boarding School, KH. Ahmad concluded that differences in Qibla direction are inevitable. It is essential for a Muslim to approach such matters with moderation, especially in matters of worship classified under *furu'* (branches of Islamic law).

**Table 3. Dialectics Between Astronomical Aspects and Local Scholars' Perspectives on Qibla Accuracy**

No	Astronomical Aspect	Local Scholars' Perspectives	Points of Contention
1	Mizwala Qibla Finder	KH. Muhtadi: Tolerant Approach	Mizwala Qibla Finder utilized for accurate measurements. Tolerance for deviations if correction is challenging.
		<b>KH. Ahmad: No Tolerance</b>	<b>Supports precision in Qibla direction using Mizwala Qibla Finder. Advocates correction of rows in mosques if deviations exist.</b>
2	Qur'anic Reference (QS. al-Baqarah/2: 150)	KH. Muhtadi: General Orientation	Emphasizes the flexibility allowed by the Qur'an for general orientation, especially outside Masjidil Haram.
		<b>KH. Ahmad: Exact Facing Requirement</b>	<b>Stresses the importance of facing the Ka'bah precisely, asserting it as a mandatory condition for valid prayer.</b>
3	Thomas Djamaluddin's Tolerance Standard (2°)	KH. Muhtadi: Tolerance and Practicality	Accepts a deviation of up to 2° as within the tolerance limit. Practicality emphasized, focusing on the act of prayer.
		<b>KH. Ahmad: No Tolerance for Significant Deviation</b>	<b>Views a 2° deviation as significant. Advocates for strict adherence to precise Qibla direction without accommodating deviations.</b>
4	Local Community Practices	KH. Muhtadi: Community Harmony	Prioritizes communal unity and harmony. Accepts deviations if corrections may lead to discord.
		<b>KH. Ahmad: Adherence to Established Laws</b>	<b>Urges strict adherence to established laws and principles. Considers societal preferences secondary to religious norms.</b>
5	Perception of Qibla Deviation	KH. Muhtadi: Validity of Prayer	Validates prayers even with significant deviations. Encourages corrections if feasible.
		KH. Ahmad: Necessity of Correction	Emphasizes the necessity of correcting deviations, asserting the importance of facing the precise Qibla for valid prayer.



However, once aware of the legal and truthful aspects of worship, there is no room for tolerance. The community must adhere to established laws rather than shaping laws to fit societal preferences. Regarding the Qibla, even a slight deviation results in a shift in a person's orientation away from the Kaaba. The focus should be on Kaaba; thus, facing any other direction deviates from the intended alignment.

## Conclusion

The research unfolded notable findings regarding qibla accuracy in ten mosques across Beber Subdistrict. Among these, Al-Ma'mur in Ciawigajah, Baiturrosyidin in Patapan, and Nurul Mubin in Sindanghayu exhibited deviations in the qibla direction. However, historical records detailing the initial determination of qibla in these mosques proved elusive, given the challenges of sourcing information from individuals who have since passed away.

The study also delved into the perspectives of the four imams, revealing variations in opinions on the precise orientation toward the qibla during prayers. Furthermore, Prof. Thomas Djamaluddin's tolerance criteria, defining accuracy as a deviation of no more than 2°, categorized seven out of ten mosques as accurate.

The responses from local scholars, represented by KH. Muhtadi and KH. Ahmad, offered valuable insights. KH. Muhtadi urged restraint in excessive debates on technical matters, categorizing them as *furu'* (branches) rather than *ushul* (fundamentals). On the other hand, KH. Ahmad emphasized the importance of addressing qibla deviations seriously, especially when the *hukum* (legal ruling) is clear.

In conclusion, the study provides a comprehensive understanding of qibla direction conditions, imams' perspectives, tolerance criteria, and local scholars' responses. These insights contribute significantly to the nuanced dynamics of qibla accuracy within the mosques under scrutiny.

## Recommendation

Based on the data and findings presented earlier, there are several recommendations for consideration and evaluation regarding the qibla direction issue in the mosques of Beber Subdistrict. Firstly, it is crucial to address the deviation in the qibla direction identified in five mosques promptly. Mosque administrators, particularly the Mosque Prosperity Council (DKM), should disseminate accurate information about the qibla direction to ensure the proper fulfillment of religious obligations, especially during prayers. Secondly, religious leaders, particularly those from the Indonesian Ulema Council (MUI) in Beber Subdistrict, can utilize the research findings to establish a special program for assessing the accuracy of worship facilities. Collaborative efforts with Islamic boarding school leaders or coordination with relevant district-level authorities could be pursued. Thirdly, institutions responsible for qibla-related matters, such as the Regional Ministry of Religious Affairs and the Regional Board of Religious Affairs, should designate implementation units to oversee the accuracy of the qibla direction in Beber Subdistrict. Lastly, if the proposed program is implemented, it is recommended that involved parties issue qibla direction certificates for the mosques. These certificates serve as authentic proof of accurately determined qibla directions, providing a reliable guideline for the surrounding community.

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