

## ABSTRAK

Penentuan arah kiblat merupakan salah satu syarat sah salat yang harus diperhatikan oleh setiap muslim. Perkembangan ilmu falak telah melahirkan berbagai instrumen penentuan arah kiblat, salah satunya Qiblat Tracker RHI, yang dirancang untuk memberikan hasil pengukuran secara praktis dan akurat. Penelitian ini bertujuan untuk mengetahui prosedur penggunaan Qiblat Tracker RHI dalam penentuan arah kiblat serta menguji tingkat akurasi arah kiblat Masjid An-Naim di Desa Alue Iet, Kecamatan Peusangan Siblah Krueng, Kabupaten Bireuen, Aceh. Penelitian ini menggunakan metode kualitatif dengan pendekatan deskriptif. Data diperoleh melalui observasi, pengukuran arah kiblat menggunakan Qiblat Tracker RHI, wawancara dengan pengelola masjid, dan dokumentasi. Analisis data dilakukan melalui reduksi data, penyajian data, serta penarikan kesimpulan berdasarkan hasil pengukuran dan perhitungan astronomis. Hasil penelitian menunjukkan bahwa penggunaan Qiblat Tracker RHI meliputi penentuan koordinat geografis, pengumpulan data astronomi, kalibrasi instrumen, pelaksanaan pengukuran, dan analisis hasil. Pengukuran menunjukkan arah kiblat Masjid An-Naim sebesar  $290^{\circ} 10' 08''$ , sedangkan hasil perhitungan astronomis menunjukkan arah kiblat teoritis sebesar  $292^{\circ} 10' 27,5''$ , sehingga terdapat deviasi sebesar  $2^{\circ} 0' 19,5''$ . Penyimpangan tersebut menunjukkan bahwa arah kiblat masjid bergeser ke arah selatan sehingga arah kiblat yang benar berada sekitar  $2^{\circ} 0' 19,5''$  ke arah utara dari orientasi bangunan saat ini. Berdasarkan batas toleransi kemelencengan arah kiblat menurut Ahmad Izuddin sebesar  $2^{\circ}$ , deviasi tersebut hanya melebihi batas toleransi sebesar 19,5 detik busur. Dengan demikian, secara praktis arah kiblat Masjid An-Naim masih dapat dianggap memenuhi kriteria menghadap kiblat, meskipun penyesuaian arah saf ke utara disarankan untuk memperoleh akurasi yang lebih tinggi.

Kata Kunci: arah kiblat, akurasi, Qiblat Tracker RHI, ilmu falak, Masjid An-Naim.

## ABSTRACT

Determining the Qibla direction is one of the essential requirements for the validity of Muslim prayer. The development of Islamic astronomy (*Ilmu Falak*) has produced various instruments for determining the Qibla direction, one of which is the Qiblat Tracker RHI, designed to provide practical and accurate measurement results. This study aims to examine the procedure for using the Qiblat Tracker RHI in determining the Qibla direction and to evaluate the accuracy of the Qibla direction of An-Naim Mosque located in Alue Iet Village, Peusangan Siblah Krueng District, Bireuen Regency, Aceh.

This research employed a qualitative method with a descriptive approach. Data were collected through observation, Qibla direction measurements using the Qiblat Tracker RHI, interviews with the mosque administrators, and documentation. The data were analyzed through data reduction, data presentation, and conclusion drawing based on measurement results and astronomical calculations.

The findings indicate that the procedure for using the Qiblat Tracker RHI consists of determining the geographical coordinates of the location, collecting astronomical data, calibrating the instrument, conducting the measurement, and analyzing the results. The measurement showed that the Qibla direction of An-Naim Mosque is  $290^{\circ} 10' 08''$ , while the theoretical Qibla direction based on astronomical calculations is  $292^{\circ} 10' 27.5''$ , resulting in a deviation of  $2^{\circ} 0' 19.5''$ . This deviation indicates that the mosque's Qibla orientation is shifted toward the south, whereas the correct Qibla direction lies approximately  $2^{\circ} 0' 19.5''$  to the north of the current building orientation. Based on Ahmad Izuddin's tolerance limit for Qibla deviation of  $2^{\circ}$ , the measured deviation exceeds the tolerance by only 19.5 arcseconds. Therefore, in practical terms, the Qibla direction of An-Naim Mosque can still be considered acceptable for facing the Qibla, although a slight adjustment of the prayer rows toward the north is recommended to achieve greater accuracy.

**Keywords:** Qibla direction, accuracy, Qiblat Tracker RHI, Islamic astronomy, An-Naim Mosque.