ABSTRACT


*Keywords: Calculation, Contemporary, Height of the moon (hilal).*

Contemporary accounting system is a system computation months using computer tools are quite sophisticated with formulas algorithm performed by a computer program that has become the software with a higher level of accuracy. There are several kinds of contemporary reckoning methods, such as; method of computation Jean Meeus, nautical almanac, Newcomb and Ephemeris.

In this study, researchers limit the scope of the problem on the method of determining the height of the new moon calculations contemporary perspective of the two systems, that is nautical almanac calculation system and the Ephemeris calculation system. Ephemeris calculation system is a method that perform calculations using the data of the sun and moon data presented every hour (this data can be known from the books published each year by the Directorate of Religious Courts Islamic Religious Republic of Indonesia). Meanwhile, the calculation method is an almanac marine nautical almanac, published by the Bureau Armed Forces - Navy Hydro-Oceanographic office for shipping interests. Nautical almanac in the early months Qamariyah calculations using the data (latitude where \((\varphi)\), longitude where \((\pi)\), and altitude from sea level \((m = \text{in meters})\) as well as the sunset time \((t \cdot)\) to place and date of the relevant data (according to the intrinsic time).

Of the two methods are then performed an analysis of each method, and analyzed the differences and similarities based on astronomical formulas presented mathematically. The research data is then collected through the reading and study of texts (text reading) and subsequently analyzed with of descriptive methods - analysis.

At this writing the analysis results obtained from both methods have similarities and differences. The equation is the formula used in determining the height of the large moon and the moon, position of the moon, Azimut of the moon and Mukuts of the moon. The difference is the determination of when the sun goes down, determining the time point of the month, the declination of the moon, Equation of Time, Right Ascension of the sun, Right Ascension of the moon, and the astral conjunction’. Similarities and differences are owned indirectly also affect the results of computation the height of the new moon and it is the basis of differences in the provisions of reckoning the beginning of the month Qamariyah.