

Prediction of the Start of The Holy Month of Ramadhan 1436 Hejriah

The Calculations are done for the Longitude and Latitude of Makkah AlMukarramah Area and the times are for the Local Time of Saudi Arabia (GMT+3)

Makkah Al-Mukarramah: Latitude = 21.45 ° N , Longitude = 39.82 ° E

Umm-UIQura: [(Thursday 01 Ramadhan 1436 Hejriah, 18 June 2015)]

Prediction: [(Sunday 01 Ramadhan 1436 Hejriah, 18 June 2015)]

New Moon of the Month of Ramadhan occurs on Tuesday 16 June 2015 at 05:06 p.m.

Day	(2015) Date	Sun Set	Moon Set	Moon altitude & azimuth at sunset	According to:	
					UmmUIQura	Prediction
Tuesday	16 / 6	19:05	18:56	-2.1 ° , 291 °	29 Shaaban	29 Shaaban
Wednesda	17 / 6	19:05	19:49	8.7 ° , 286 °	30 Shaaban	30 Shaaban
Thursday	18 / 6	19:05	20:38	19.5 ° , 281 °	01 Ramadhan	01 Ramadhan

According to the astronomical calculations, the birth of the new moon (conjunction) occurs at about 5:06 pm on the evening of Tuesday 16 June 2015 and the moon sets about nine minutes before the Sun on that evening in Makkah AlMukkaramah, therefore and according to the astronomical calculations and possibility of actual sighting, the crescent moon cannot be sighted on that evening from all Islamic countries because it sets before the sun.

The crescent may be sighted by naked eyes if the sky is clear (perfect atmospheric conditions), but with some difficulty and using optical aids on the evening of Wednesday 17 June 2015 (just after the sunset), where the age of the moon will be about 26 hours, it stays about 44 minutes , it is about 8.7 ° above the horizon, its elongation with the Sun is about 13.5 ° , about 9.8 ° to left (south) of the setting sun, and its visible part (phase) is about 1.5% of the full moon. **Therefore, according to the astronomical calculations and possibility of actual sighting of the crescent, Inn-Shaa-Allah, Thursday 18 June 2015 is predicated to be the first day of the month of Ramadhan 1436 H and Allah has the knowledge (wAllahuAllam).**

Note that birth of the "visible" crescent happens after the new moon (conjunction) which may not exceed half a day or it may extend to a day or more depending on the Moon location relative to the Sun, duration of its presence above the horizon, its luminosity (phase), crescent width, and of course the atmospheric condition just after sunset. Adding to that, the physical, psychological, health conditions, eye sensitivity and its speed of adaptation to light, and accumulated experience of the person doing the sighting should be considered as important factors.

For crescent sighting on Wednesday evening, provided that the sky is dark and clear, free of clouds, dust, and humidity (perfect atmospheric conditions): Starting just after the sunset, the altitude of the moon above the horizon will be about 8.7 ° , its elongation with the sun is about 13.5 ° , it is about 9.8 ° to left (south) of the setting sun (about 15.8 ° north of West direction), and the shape of the crescent moon will be tilted to the left as shown in the figure.



The above prediction is based on astronomical formulas and calculations and theoretical possibility of sighting the crescent which may be used for the purpose of a general guidance and one should go with the method of actual sighting of the crescent, the method which, our Prophet Mohammad SallallahuAlihiWassallam (ﷺ) guided and ordered us to observe and follow, and Allah has the knowledge.