

Factors in the sighting of New Moon

The Islamic Calendar is based upon the moon or it's called a lunar Calendar. The criterion for beginning each month is based upon the sighting of the New Crescent.

The New Crescent appears after the birth of the New Moon. The New Moon or the conjunction occurs when the moon's path of orbit comes in line between the Earth and the Sun. At that time there is no possible sighting that can be given because the light of the Moon is not on the side of the Earth.

The light of the New Moon, or the New Crescent can be seen based upon certain conditions.

- 1) The most important situation is that the Sun-Moon-Earth angular distance has to be approximately 9 degrees that will place it outside of the sun's glare.
- 2) The age, or the time it takes from the birth of the New Moon and the sighting of the New Crescent depends upon the speed of the Moon. Because the Moon's orbit is elliptical, the Moon moves faster when it is closer to the Earth and slower when it's farther away.
- 3) Also, visibility occurs depending on the orbit being North or South of the Equator. There are times the New Crescent can be visible in the Southern Hemisphere but it is not visible in the Northern Hemisphere, though the age can be up to or more than 20 hours.

The Age of the Moon is from the time it is born to a specified time after, usually the setting of the Sun. The Altitude is the distance in degrees the Moon is above the horizon of the Earth. The Angle between the Sun and Moon, which is that most important variable, is the angular distance in degrees between the Sun at sunset and the altitude of the Moon above the horizon. The last few years in the moon's 19 year cycle, the fall and winter new moons are tracking quite south of the equator. For this reason, someone in the southern hemisphere might be able to see the new moon crescent a day before we see it here in the continental U.S.