

Short-Term Variations of the Lunar Cycle

(percentile trends, per group of 4657 lunar months, based on SOLEX 9.1 β numerical integration)

The longest lunar cycles occur when Moon is moving slowest (near apogee) and Earth is moving fastest (near perihelion). The shortest lunar cycles occur when Moon is moving fastest (near perigee) and Earth is moving slowest (near aphelion). The declining Earth orbital eccentricity tends to reduce the range of lunar cycle variations. The **average** (mean synodic month), slightly more than **29d 12h 44m**, has miniscule long-term change compared to short-term periodic variations.

