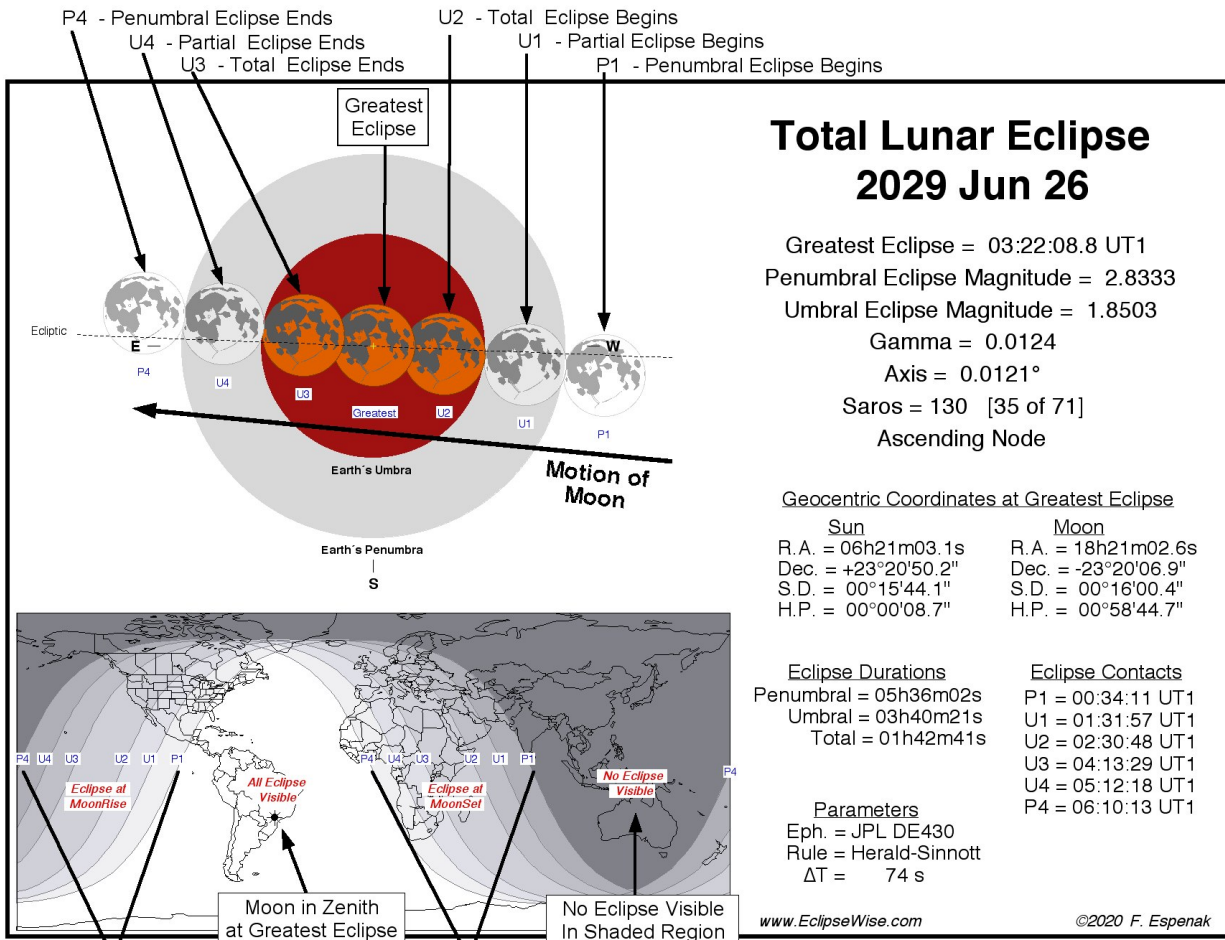


Lunar Eclipse Figures

Key to Lunar Eclipse Figures



Eclipse During Moon Rise

- P1 - Penumbral Eclipse Begins
- U1 - Partial Eclipse Begins
- U2 - Total Eclipse Begins
- U3 - Total Eclipse Ends
- U4 - Partial Eclipse Ends
- P4 - Penumbral Eclipse Ends

Eclipse During Moon Set

- P1 - Penumbral Eclipse Begins
- U1 - Partial Eclipse Begins
- U2 - Total Eclipse Begins
- U3 - Total Eclipse Ends
- U4 - Partial Eclipse Ends
- P4 - Penumbral Eclipse Ends

Layout of Lunar Eclipse Figure

- Upper Left:** Moon's Path Thru Earth's Shadows
- Lower Left:** Map of Eclipse Visibility
- Right Side:** Parameters for Lunar Eclipse

Explanation of Parameters Used in Lunar Eclipse Figures

- Greatest Eclipse** – The instant when the Moon passes closest to the axis of Earth's shadow cone (Universal Time⁹)
- Penumbral Eclipse Magnitude** – Fraction of the Moon's diameter immersed in the penumbra at greatest eclipse.
- Umbral Eclipse Magnitude** – The fraction of the Moon's diameter immersed in the umbra at greatest eclipse.
- Gamma** – Minimum distance from the Moon's center to Earth's shadow axis (units of Earth's equatorial radius).
- Axis** – Minimum distance from the Moon's center to Earth's shadow axis (units of degrees).
- Saros Series** – The Saros series that the eclipse belongs to. The numbers in "[]" are the eclipse's sequential position and the number of eclipses in the Saros series.
- Node** – The orbital node near which the eclipse takes place (Ascending Node or Descending Node).
- Geocentric Coordinates of the Sun and the Moon at Greatest Eclipse**
 - R.A.** – Right Ascension **S.D.** – Semi-Diameter (i.e. - radius)
 - Dec.** – Declination **H.P.** – Horizontal Parallax
- Eclipse Durations** – Durations of Penumbral, Partial, and Total Eclipse.
- Eclipse Contacts** – Contact Times (Universal Time or UT1) of the Moon with the Penumbra and the Umbra
 - P1, P4** – Start and End of the Penumbral Eclipse
 - U1, U4** – Start and End of the Partial Eclipse
 - U2, U3** – Start and End of the Total Eclipse

⁹ Universal Time or UT1 is the modern replacement for Greenwich Mean Time
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