

Explanation of the Lunar Occultation Prediction Format

Item	Meaning
Day	The day of the event. Occult searches for events on the basis of geocentric conjunctions that occur within a 24hr - with that period starting at the UT indicated in the date selection box. Users should ensure that the period starts near the middle of their day.
Time	The predicted UTC, in hours, mins and secs.
P	The Phase of the event. Values are: <ul style="list-style-type: none"> • D - disappearance • d - disappearance, but star is less than 1 mag brighter than the predicted visibility limit. • R - reappearance • r - reappearance, but star is less than 1 mag brighter than the predicted visibility limit. • Gr - grazing occultation at site. At mid-occultation, or closest approach, the star is less than 4" from the limb of the moon (either above or below). • gr - grazing occultation at site, but star is less than 1 mag brighter than the predicted visibility limit. • M - miss. At closest approach, the star is more than 4" above the limb of the moon • m - miss, but star is less than 1 mag brighter than the predicted visibility limit.
Star	The star identifier. Three formats are used: <ul style="list-style-type: none"> • nnnn - A ZC star. When reporting occultations, the catalogue is identified with 'R'. • nnnnn, or nnnnnn - An SAO star. When reporting occultations, the catalogue is identified with 'R'. • X nnnnnn - an XZ star. When reporting occultations, the catalogue is identified with 'X'.
D	The double star code
Sp	Star's spectral type. Only basic spectral type information is provided
Mag v	The star's visual magnitude
Mag r	The star's red magnitude. For observers using CCD video cameras, the red magnitude provides a better indication of visibility.
D	The variable star code
% ill	the percent illumination of the moon. If followed by a +, values are for a waxing moon; - for a waning moon; and E for illumination during a lunar eclipse.
Elon	the elongation of the moon from the sun, in degrees. [Strictly, the quantity is calculated as the elongation of the star from the sun]
Sun Alt	the altitude of the sun. The field is blank if the sun is lower than -12 deg. (Nautical twilight)
Moon Alt	the altitude of the moon
Moon Az	the azimuth of the moon

CA	<p>Cusp Angle - the angle of the event around the limb of the moon, measured from the nearest cusp. -'ve values indicate a bright limb event. The cusps are usually N (north) or S (south), but near full moon can be E (East) or W (west).</p> <p>If a lunar eclipse is in progress, CA gives is the % distance from the centre of the umbra, and is followed by a 'U'. Values up to 103% are possible. Where an event occurs more than 103% of the umbral radius, the usual Cusp Angle value is displayed.</p>
PA	Position Angle - the angle of the event around the limb of the moon, measured from true north
VA	Vertex Angle - the angle of the event around the limb of the moon measured anticlockwise from the vertex of the lunar limb - i.e. the point on the limb highest from the horizon
AA	<p>Axis Angle - the angle of the event around the limb of the moon, measured eastward from the moon's north pole. Essential for reappearance, as it locates the event with reference to lunar features. To use, mark a map of the moon around the circumference at 10 deg intervals, starting at the north pole. Mare Crisium is at about 300 deg.</p> <p>[Note - the so-called Watts Angle differs from the Axis Angle by 0.21 deg. The term Watts Angle is limited to the context of accessing the Watts Charts. In all other situations, the term Axis Angle is preferred.]</p>

DOUBLE STAR CODES

code	Meaning
C	double, component in XZ, Separation <1"
c	double, component not in XZ, Separation <1"
D	double, component in XZ, Separation <10"
d	double, component not in XZ, Separation <10"
W	double, component in XZ, Separation >10"
w	double, component not in XZ, Separation >10"
M	multiple system, all components in XZ
S	multiple system, some but not all in XZ

GENERAL VARIABLE STAR CODES

Code	Meaning
E	Eclipsing variable (E, EA, and EB), magnitude range >0.5
e	Eclipsing variable (E, EA, and EB), magnitude rang <0.5, or unknown
V	All other types of variables, magnitude range >0.5
v	All other types of variables, magnitude range <0.5