

**DISTILL THE DEFINITION TO ITS BASIC MEANING**

**Instructions:** Take the word on the left and find the most important information, words, or numbers associated with it to complete a shortened definition on the right. The full definitions of these words can be found elsewhere in Session Five. **You may not use anymore than six words for your core definition.** **Abbreviations will count as words,** such as mi./sec., equals miles/second, equals two words. Numbers, symbols, and punctuation will not count as words unless used incorrectly. Here is an example. “2 b or not 2 b” will mean “To be or not to be,” and will have six words, not four. The grammar police will also be arresting you! The word or a similar word may **NOT** be used in the definition unless there is an asterisk. The asterisk is only good for the word directly next to it. In Broken Eclipse\* only “Eclipse” applies to this situation.

<b>WORD</b>	<b>DEFINITION: NO MORE THAN SIX WORDS MAX.</b>
<b><u>Angular</u>* Diameter</b>	
<b><u>Annular Eclipse</u>*</b>	
<b>Annulus</b>	
<b>Anomalistic Month</b>	
<b>Aphelion</b>	
<b>Apogee</b>	
<b>Ascending Node</b>	
<b>Baily’s <u>Beads</u>*</b>	
<b><u>Broken Eclipse</u>*</b>	
<b>Centerline</b>	
<b>Central <u>Eclipse</u>*</b>	
<b>Chromosphere</b>	
<b>Corona</b>	
<b>Descending Node</b>	
<b>Diamond Ring</b>	
<b>Eclipse</b>	
<b><u>Eclipse</u>* Chaser</b>	
<b><u>Eclipse</u>* Season</b>	
<b><u>Eclipse</u>* Year</b>	
<b>Ecliptic</b>	
<b>First Contact</b>	
<b>Fourth Contact</b>	
<b><u>Full Moon</u>*</b>	
<b>Great <u>Eclipse</u>*</b>	
<b>Greatest Eclipse</b>	
<b>Limb</b>	

<b>WORD</b>	<b>DEFINITION: NO MORE THAN SIX WORDS MAX.</b>
<b>Limb Darkening</b>	
<b>Line of Apsides</b>	
<b>Lunar Eclipse</b>	
<b>Major Axis</b>	
<b>Negative Shadow</b>	
<b>New <u>Moon</u>*</b>	
<b>Node</b>	
<b><u>Nodical</u>* Period</b>	
<b><u>Northern</u>* Limit</b>	
<b><u>Partial</u>* Eclipse</b>	
<b>Penumbral Eclipse</b>	
<b>Penumbra</b>	
<b>Perigee</b>	
<b>Perihelion</b>	
<b>Pinhole <u>Projector</u>*</b>	
<b>Prominence</b>	
<b>Regression of Nodes</b>	
<b>Revolution</b>	
<b>Revolution of Apsides</b>	
<b>Saros</b>	
<b>Second Contact</b>	
<b>Shadow Bands</b>	
<b><u>Shadow</u>* Cone</b>	
<b><u>Sidereal</u> Period*</b>	
<b>Similar <u>Eclipses</u>*</b>	
<b>Solar Eclipse</b>	
<b>Solar Filter</b>	
<b>Solar <u>Projection</u>*</b>	
<b><u>Southern</u>* Limit</b>	
<b>Sunspots</b>	
<b>Synodic Period</b>	
<b>Third Contact</b>	
<b>Total Eclipse</b>	
<b>Totality</b>	
<b>Umbra</b>	

## WORD LIST FOR ECLIPSES

1. **Angular Diameter:** The angle subtended by an astronomical body against the sky.
2. **Annular Eclipse:** A central solar eclipse in which the angular diameter of the moon is too small to cover the sun. With proper filtration the moon appears to have a ring of sun surrounding it.
3. **Annulus:** It is Latin for ring.
4. **Anomalistic Month:** The amount of time it takes the moon to complete two perigee or apogee passages. Its period is 27.55455 days.
5. **Aphelion:** The farthest position to the sun of an astronomical body in an elliptical orbit around the sun.
6. **Apogee:** The farthest point to the Earth in the moon's elliptical orbit around the Earth.
7. **Ascending Node:** With respect to eclipses, it is the location where the moon's orbital plane passes from below the ecliptic plane to above the ecliptic plane.
8. **Baily's Beads:** The light phenomenon which occurs just moments before second contact or moments after third contact in a central solar eclipse. Sunlight shining through lunar valleys on the moon's limb gives the sun a beaded texture. They were discovered by the English astronomer, Francis Bailey, during the May 15, 1836 total solar eclipse.
9. **Broken Annular Eclipse:** A central solar eclipse in which the angular diameter of the moon is just small enough in comparison to the sun to cause the entire limb of the sun to be broken into a Baily's Beads structure during the moment of annularity. It is the rarest of solar eclipses.
10. **Centerline:** The line across the surface of the Earth where the apex of the moon's umbra points.
11. **Central Eclipse:** A total solar or an annular eclipse...
12. **Chromosphere:** The thin layer of solar atmosphere that lies between the photosphere and the corona which is visible as a pinkish hue just before totality. Its color is due to hydrogen emission.
13. **Corona:** Crown... The tenuous outermost atmosphere of the sun visible to the unaided eye during a total solar eclipse.
14. **Descending Node:** With respect to eclipses, it is the location where the moon's orbital plane passes from above the ecliptic plane to below the ecliptic plane.
15. **Diamond Ring:** The visual appearance of the sun about 10-15 seconds before or after a total solar eclipse. The diamond is created by the photosphere or chromosphere, and the ring by the corona.
16. **Eclipse:** It is from the Greek word, "ekleipsis," and it means to hide or cover.
17. **Eclipse Chaser:** A person who travels to see a total solar or annular eclipse.
18. **Eclipse Season:** The time when the moon is either new or full and also at a node. The time interval between two eclipse seasons is 173.3 days.
19. **Eclipse Year:** The time interval between two eclipse seasons occurring at the same node—346.6 days.
20. **Ecliptic:** The plane of the Earth's orbit projected into space. The motion of the sun against the starry background resulting from Earth's orbital motion around the sun.
21. **First Contact:** The first moment of tangency of the moon's limb with the sun's limb in a partial or central solar eclipse. The first moment of tangency of the moon with the Earth's umbral shadow in a partial or a total lunar eclipse.

22. **Fourth Contact:** The last moment of tangency of the moon's limb with the sun's limb in a central solar eclipse. The last moment of tangency of the moon with the Earth's umbral shadow in a total lunar eclipse.
23. **Full Moon:** The lunar phase which occurs when the moon is opposite to the sun and its entire nearside is completely illuminated.
24. **Great Eclipse:** A total solar eclipse in which the length of totality is equal to or greater than five minutes.
25. **Greatest Eclipse:** The moment when the moon's shadow passes closest to the center of the Earth.
26. **Hybrid Eclipse:** A solar eclipse which has a portion of its path seen as an annular eclipse and part of its path viewed as a total solar eclipse. At the point where the eclipse changes from annular to total, a broken annular eclipse will be seen.
27. **Limb:** The apparent boundary of the sun, moon, or any astronomical object which has a true angular diameter in the sky.
28. **Limb Darkening:** The decrease in the amount of light intensity from the center to the limb of the sun, due to a decrease in the depth of the penetration into the photosphere towards the limb. The photosphere becomes hotter with depth.
29. **Line of Apsides:** In the case of eclipses, the major axis of the moon's elliptical orbit.
30. **Lunar Eclipse:** An astronomical event in which the moon is totally or partially hidden by the Earth's umbral or penumbral shadows.
31. **Major Axis:** The longest axis of an ellipse. In an elliptical orbit, the major axis intersects the foci of the ellipse, the center of the ellipse, and the closest and farthest positions of the orbiting body.
32. **Negative Shadow Zone:** The area within the path of a central solar eclipse where the eclipse appears to be ringed.
33. **New Moon:** The phase of the moon in which the hemisphere of the moon facing Earth is in darkness. A condition where the elongation of the moon equals zero.
34. **Node:** The intersection point of two orbital planes.
35. **Nodal/Draconic Period:** With respect to eclipses, the period of time necessary for the moon to complete two successive crossings of the same node.
36. **Northern Limit:** The northernmost boundary along the path of a central solar eclipse where the eclipse appears total or annular.
37. **Partial Eclipse:** It is the portion of a solar eclipse where only a portion of the moon is covering the sun. It is the portion of a lunar eclipse where only part of the moon is immersed within Earth's umbra.
38. **Partial Penumbral Eclipse:** A lunar eclipse in which the moon only partly enters the penumbral shadow of the Earth.
39. **Penumbra:** The secondary shadow of a body created when it is only partially blocking a light source.
40. **Perigee:** The closest point from the Earth along the path of the moon's elliptical orbit.
41. **Perihelion:** The closest position of a body to the sun in its elliptical orbit around the sun.
42. **Pinhole Projector:** A brute force solar projection device in which a small hole, usually made by a pin, acts like a lens projecting an image of the sun to the opposite end of an enclosed tube or long box.

43. **Prominence**: A long lasting coronal event related to magnetic fields in which large amounts of plasma are made to condense and glow. Magnetically induced plasma bubble within the sun's corona.
44. **Regression of the Moon's Nodes**: The westward motion of the moon's orbital intersection points with the ecliptic. The moon's nodes regress completely around the heavens in a period of 18.61 years. The regression of the moon's nodes results from the sun's gravitational force trying to pull the orbital plane of the moon into the plane of the ecliptic.
45. **Revolution**: The period of time it takes for an object of lesser mass to orbit around a body of greater mass.
46. **Revolution of the Moon's Apsides**: The period of time necessary for the major axis of the moon's elliptical orbit to complete one full cycle through the heavens and return to its starting position. Its duration is equal to 8.85 years.
47. **Saros**: The 18 year, 9, 10, 11, or 12 day period between the repetitions of similar solar or lunar eclipses. The time interval varies as a consequence of the number of leap years occurring during this interval.
48. **Second Contact**: In a central solar/lunar eclipse, it is the time when totality or annularity begins. In a partial solar eclipse, it is the instant when the moon is tangent to the sun's disk for the second and last time. In a partial lunar eclipse, it is the time when the moon is tangent to the primary shadow cone of the Earth for the second time, marking the end of the eclipse.
49. **Shadow Bands**: Faint ripples of low contrast light that can undulate across a landscape a minute or so before and after a total solar eclipse. They result from the narrow slit of sunlight shining through a turbulent atmosphere.
50. **Shadow Cone**: The primary or umbral shadow cone of the moon or the Earth.
51. **Sidereal Period of the Moon**: The amount of time it takes the moon to complete one revolution around the Earth, 27.321661 days.
52. **Similar Eclipses**: Eclipses of a particular saros cycle which have nearly the same characteristics.
53. **Solar Eclipse**: An astronomical event in which part of the moon or the entire moon hides the sun.
54. **Solar Filter**: An optical device for safely dimming the sun's brightness to a level where it can be viewed with the human eye. Solar filters should never be used at the eyepiece end of a telescope. They should reduce the sun's intensity prior to its light entering the telescope.
55. **Solar Projection**: A safe solar observing technique where the sun's image is projected through the eyepiece of an unfiltered telescope onto a white screen.
56. **Southern Limit**: The southernmost position along the path of a central solar eclipse where the eclipse appears total or annular.
57. **Sunspots**: Darker, cooler regions in the sun's photosphere where an area of intense magnetic field is preventing the sun from cooling at its normal rate.
58. **Synodic Period of Moon**: The amount of time it takes the moon to complete one phase cycle, 29.5306 days.
59. **Third Contact**: The moment when totality or annularity is over.
60. **Total Eclipse**: An astronomical event where the moon completely covers the photosphere of the sun or the moon is completely immersed in the primary shadow of the Earth.

61. **Totality**: The portion of a solar or lunar eclipse in which the moon completely hides the sun or the moon is entirely immersed within the shadow of the Earth.
61. **Umbra**: The primary shadow cone of an astronomical body. From within this location the eclipse appears to be total.