

A Brief Column for the Beginning Stargazer Introducing a New Astronomical Term Each Month

Astronomy is rich with terminology. This column will help beginning stargazers ease into the world of astronomy by *briefly introducing* a new but *basic astronomical term* (word, acronym or abbreviation) each month. This list, which began January 1999 with the letter *a*, is alphabetical but uses successive letters for each month's entry. (We will return to the letter *a* after twenty-six months.)

Word of the Month for May 2000

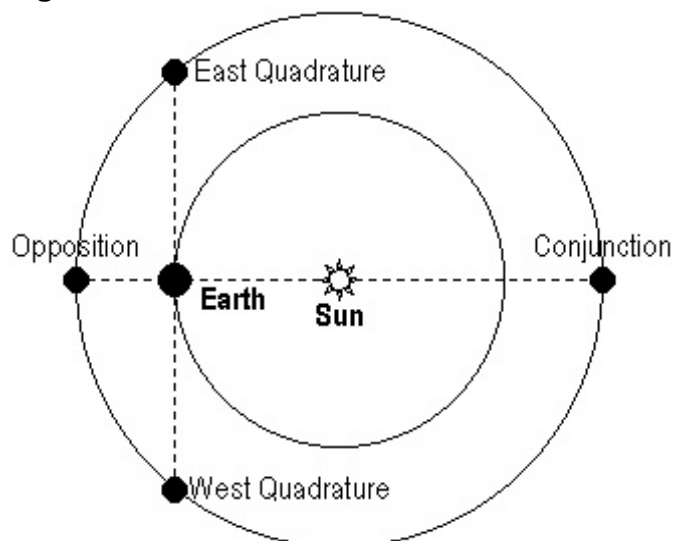
quadrature The position of the Moon or planet on the sky when its angular separation (or *elongation*) from the Sun is 90° .

("Quad" refers to the *fourth* part of a circle.)

Quadrature is one of several named positions (or *aspects*) of the Moon or planet, relative to the Sun, as viewed from Earth.

Other aspects commonly used in modern astronomy include *conjunction*, *opposition* and *greatest elongation*. The first two correspond to angular separations of 0° and 180° . ("Conj-" means together and "oppo-" refers to opposite.) See Figure 1.

Figure 1



(*Elongation* refers to any angular separation between the Moon or planet and the Sun.)

Some configurations no longer used in modern astronomy (but still common in astrology) include the *sextile*, *quintile*, and *trine* corresponding to angular separations of 60° , 72° and 120° respectively (the sixth, fifth and one-third part of a circle.)

Since celestial objects can be either east or west of the Sun by 90° , quadratures can be either *east* or *west*.

The Moon moves from *conjunction*, then to *east quadrature*, goes to *opposition*, and finally *west quadrature* before returning to *conjunction*. The period of this cycle is the Moon's *synodic period* (about 29.53 days).

Superior planets (all planets except Mercury and Venus) go through the four aspects in **reverse order** from the Moon, viz. *conjunction*, *west quadrature*, *opposition*, *east quadrature* and back to *conjunction*.

The *inferior planets* (Mercury and Venus) never reach quadrature. Instead they move from *conjunction*, to *greatest eastern elongation*, back to *conjunction* and then to *western elongation* before going back to *conjunction*.

For each aspect, the Moon has a corresponding *phase*. The Moon is at *first quarter* when at east quadrature and *last (third) quarter* when at west quadrature. (The Moon is *new* at conjunction and *full* at opposition.)

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References. J. Mitton 1991, *Concise Dictionary of Astronomy* (Oxford Univ. Press); I. Ridpath 1997, *A Dictionary of Astronomy* (Oxford Univ. Press).