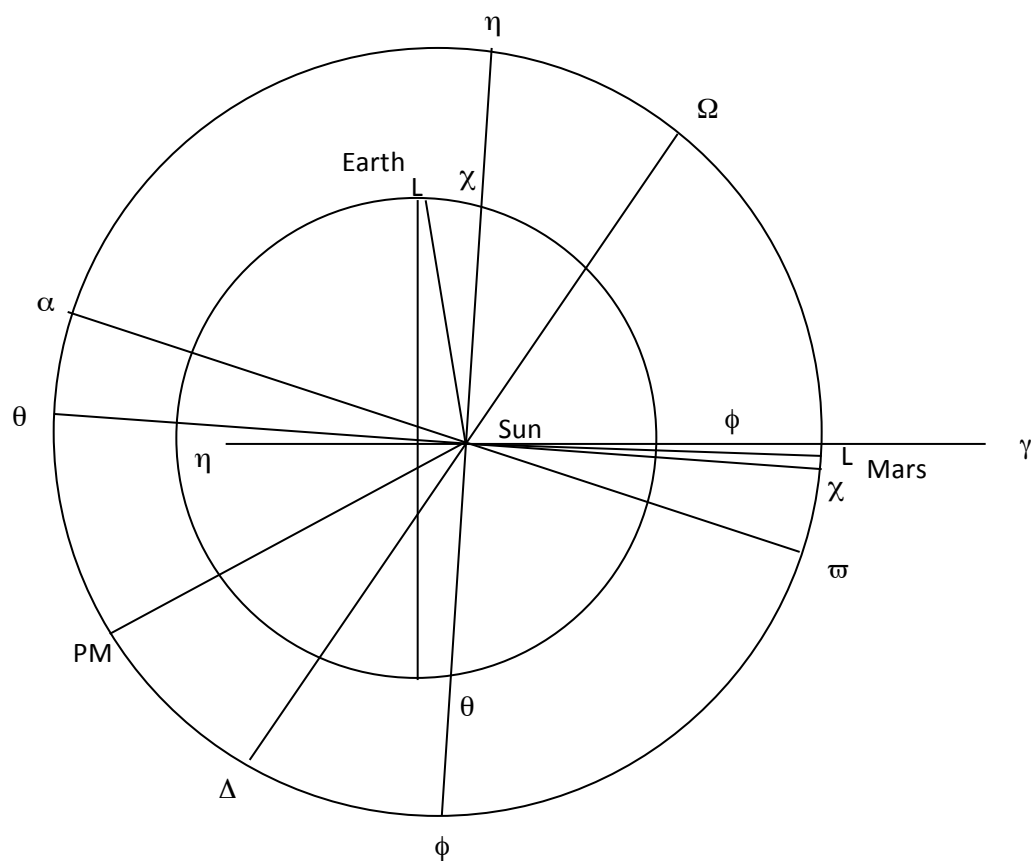




The Martian orbit.

The following diagram compares the orbits of Earth and Mars, plotted roughly to scale.



Legend:

- γ First point of Aries
- Ω Ascending node of Martian orbit
- Δ Descending node of Martian orbit
- η Position of Earth or Mars at northern vernal equinox
- ϕ Position of Earth or Mars at northern autumnal equinox
- θ Position of Earth or Mars at northern summer solstice
- χ Position of Earth or Mars at northern winter solstice

α	Aphelion of Martian orbit
ϖ	Perihelion of Martian orbit
L	Mean longitude of Earth or Mars at epoch J2000
PM	Longitude of Martian prime meridian

The positions shown in the diagram are for the J2000 epoch, namely, AD 2000 January 1 UT 12 h, or JD 2451545.0.

The figures cited here for the orbits and rotational elements of Earth and Mars are from [1]. Distances in the Solar System are measured in Astronomical Units, the mean distance of the Earth from the Sun, namely 149,598,000 km, or 92,956,000 mi. Mars orbits the Sun in an elliptical orbit. Its semi-major axis (half of its long or major axis) is 1.52368 AU or 227,939,000 km (141,635,000 mi). Because solar power is inversely proportional to the distance from the Sun, Mars receives on the average 43% of the solar power that the Earth does, and consequently is much colder – so much so that at the poles, the carbon dioxide in the atmosphere freezes out as dry ice.

From 'A Calendar for Mars' by Rev. George D. Lardas.

<http://fortnightlyreview.co.uk/2012/08/martian-calendar/>