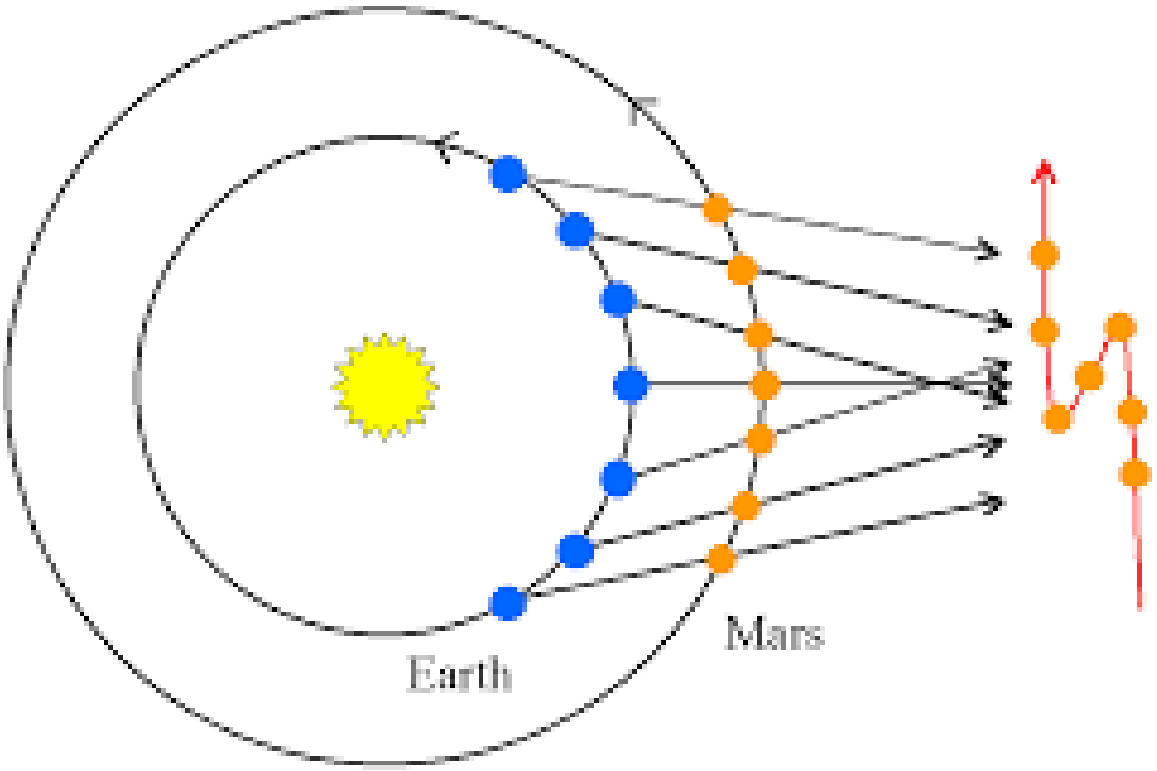
Space – Solar System and Beyond

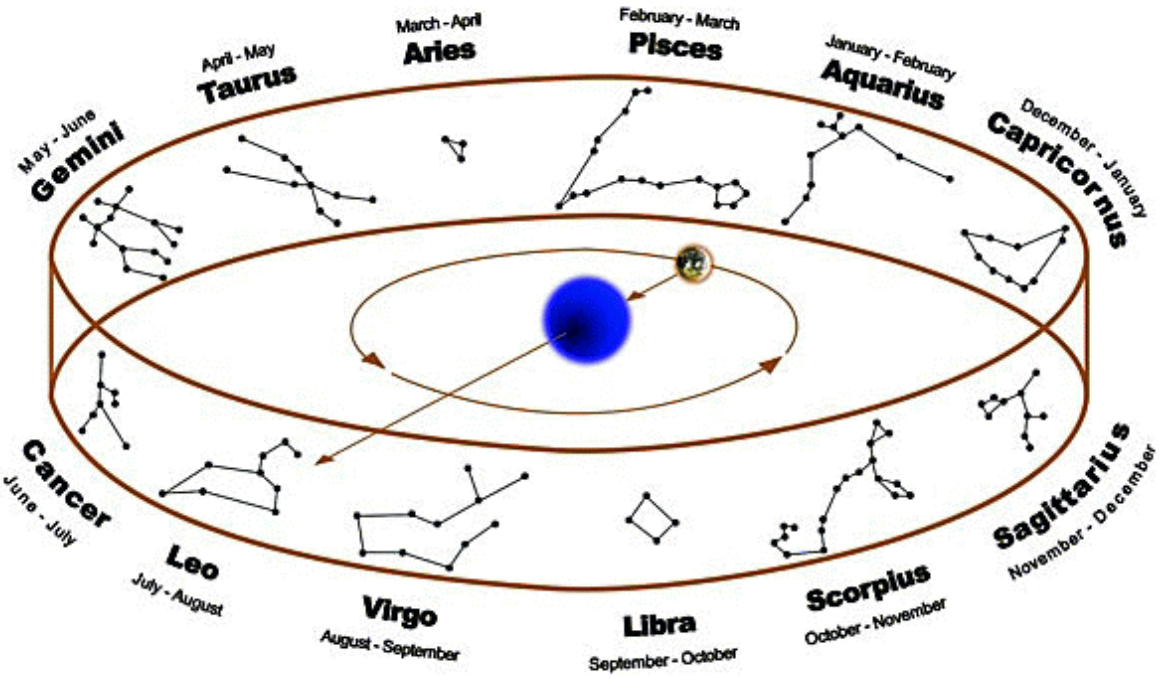
There was a time when humans believed that the earth was flat. Evidence suggested that the earth was a sphere (disappearing ships). Following that, humans thought that all things in the "heavens" orbited around the earth, which was clearly the centre of the universe! This provided the "geocentric model" of the solar system.

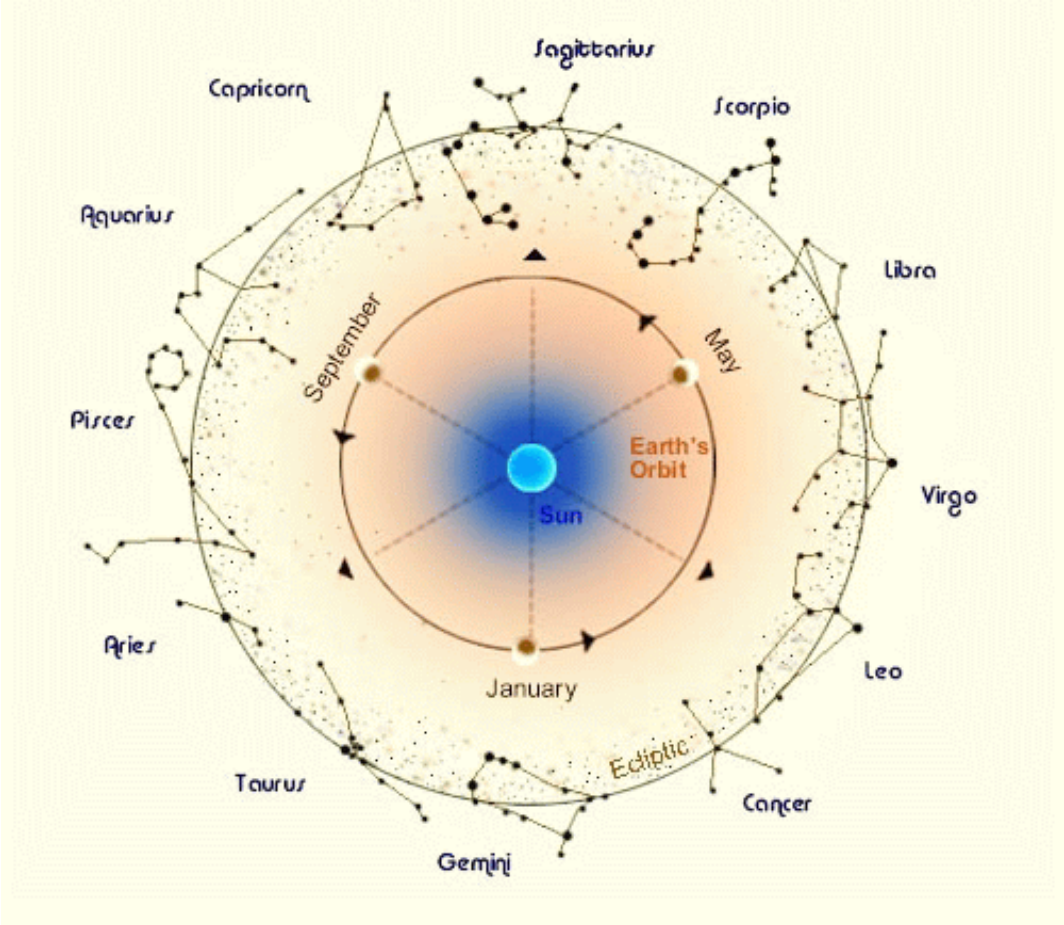
Planets are objects in our solar system that were observed to "wander" through the background of stars. The word planet means wanderer. The that the planets Mars, Jupiter, Saturn (Uranus and Neptune) all show as strange retrograde behaviour, such that the planet moves forwards through the stars and then for a short period of time stops, goes backwards and then continue forward. Why??

In 1542 Nicolaus Copernicus put forth the "heliocentric model" of the solar system, in which all planets orbit the sun. This model was able to fully explain all details of planetary

motion (with the addition of elliptical orbit – Johannes Kepler). The strange retrograde motion was easily explained by the fact that the earth orbits the faster than Mars, Jupiter etc and therefore passes them in their orbit. When earth passes these planets, it makes them appear to move backwards against the background of stars.




March - April
Aries
February - March
Pisces
April - May
Taurus
January - February
Aquarius
May - June
Gemini
December - January
Capricornus
Cancer
June - July
Leo
July - August
Virgo
August - September
Libra
September - October
Scorpius
October - November
Sagittarius
November - December


Sagittarius
Capricorn
Scorpio
Aquarius
Libra
September
May
Pisces
Earth's
Orbit
Virgo
Sun
Aries
Leo
January
Ecliptic
Taurus
Cancer
Gemini