

## Eccentric Motion

CM – Eccentricity

S – Sun

A – Apogee

P – Perigee

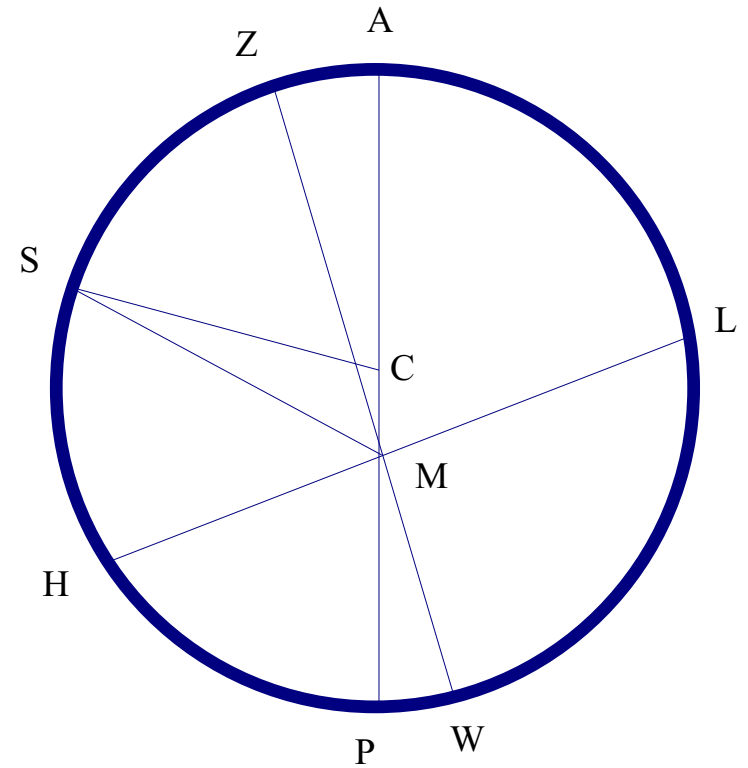
L – Vernal Equinox

Z – Summer Solstice

H – Autumnal Equinox

W – Winter Solstice

Explains Seasonal Inequalities in Sun's or Planet's Motion



## Epicyclic Motion

P – Planet

Small Circle - Epicycle

Large Circle – Deferent

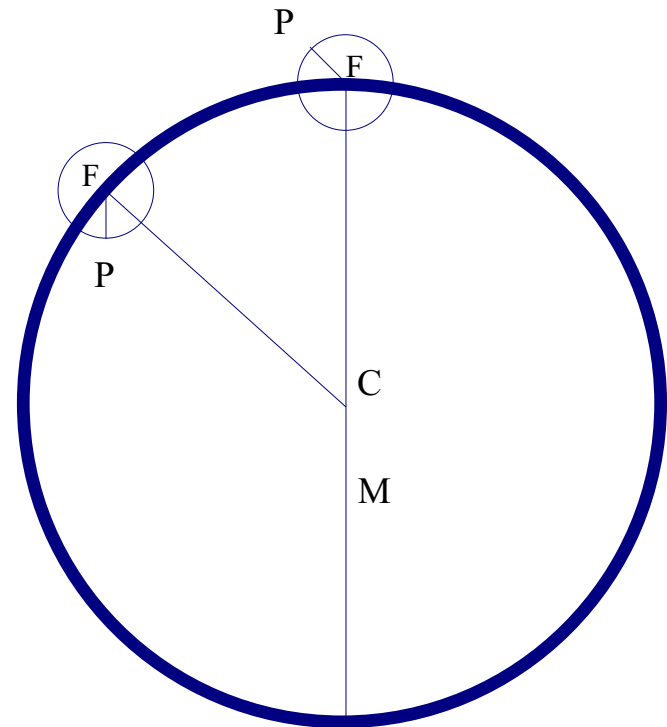
C - Center of the Deferent

F - Center of the Epicycle

Epicycle Revolves around C on the Deferent

Planet Revolves around F

Explains Retrograde Motion



## Motion with an Equant

P – Planet

V – Equant Point

C – Geometrical Center of the Orbit

Radius VA Moves with Constant Angular Speed

Radius CS Moves with Variable Speed

Explains Apparent Variation in Planet's Speed

