

The Copernican Revolution—7 Sept



Nicholas Copernicus
(1473-1543)



Tycho Brahe
(1546-1601)

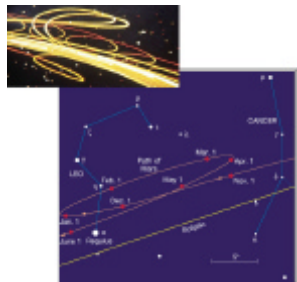


Johannes Kepler
(1571-1630)

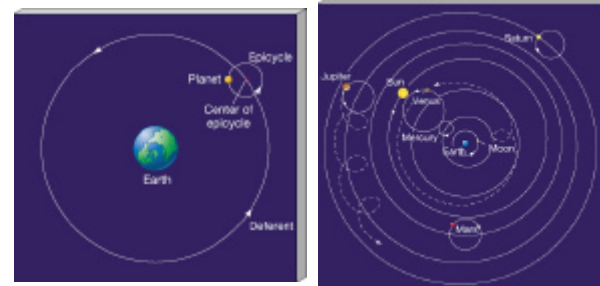
1. Aldebaran rises at 8:00 pm tonight. When does it rise two months from now?
2. Using our model of the earth, sun, and stars, determine how the sun moves with respect to the stars. East to west? West to east?

Motion of Planets

- What is the motion of the sun with respect to the stars? West to east about 1 degree per day.
- Planets usually move west to east with respect to the stars.
- When Venus is nearly between the sun and earth, it moves backwards.
- When the earth is nearly between the sun and Mars,



Ptolemy's Model in *Syntaxis* (*Almagest*), 140AD



How did Ptolemy explain

- Night & day
- Retrograde motion
- Venus is never seen far from the sun. Never seen at midnight

How did Copernicus explain

- Night & day
- Venus is never seen far from the sun. Never seen at midnight
- Retrograde motion

