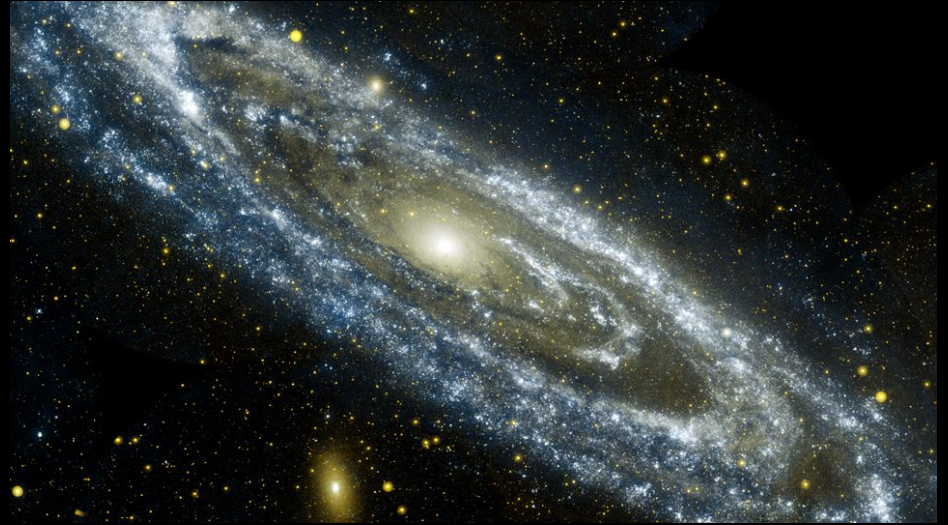


Beyond our Solar System



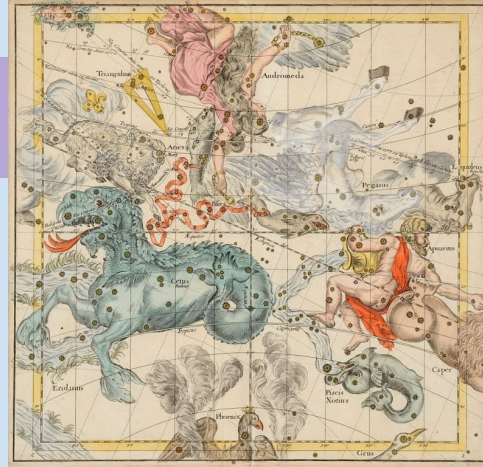
Chapter 25

25.1 Properties of Stars

Constellations: observed patterns of stars named after mythological creatures and heroes.

There are over 88 recognized constellations, which can be used as a map of the sky.

[Summer Sky](#)

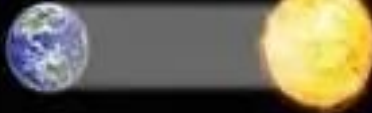


Measuring distances

Speed of Light =
299,792 km/sec



Earth to Moon = 1.3 Light seconds



Earth to Sun = 8 Light minutes



Earth to Mars = 12.7 Light minutes



Earth to Alpha Centauri = 4.4 Light years



Earth to far side of our Milky Way Galaxy = 52,000 Light years

Light year: the *distance* light travels in 1 Earth year (speed of light is 186,000 mi/second)

Color and Temperature

- Star color is determined by the star's surface temperature.

Hottest



Coolest

Blue

Blue-White

White

Yellow-White

Yellow

Orange

Red



Mass

- Least massive are the red dwarf stars.
- Most massive are the hypergiants.
- Bigger stars “burn” brighter and “die” faster than smaller stars.

Properties of Stars

Apparent Magnitude:

The measure of a star's brightness as observed from Earth

Absolute Magnitude:

The measure of a star's brightness when compared to other stars

