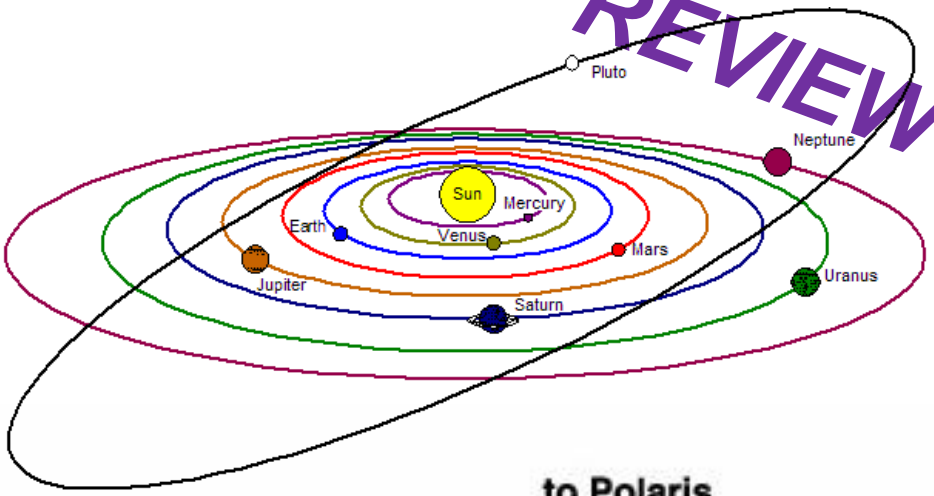
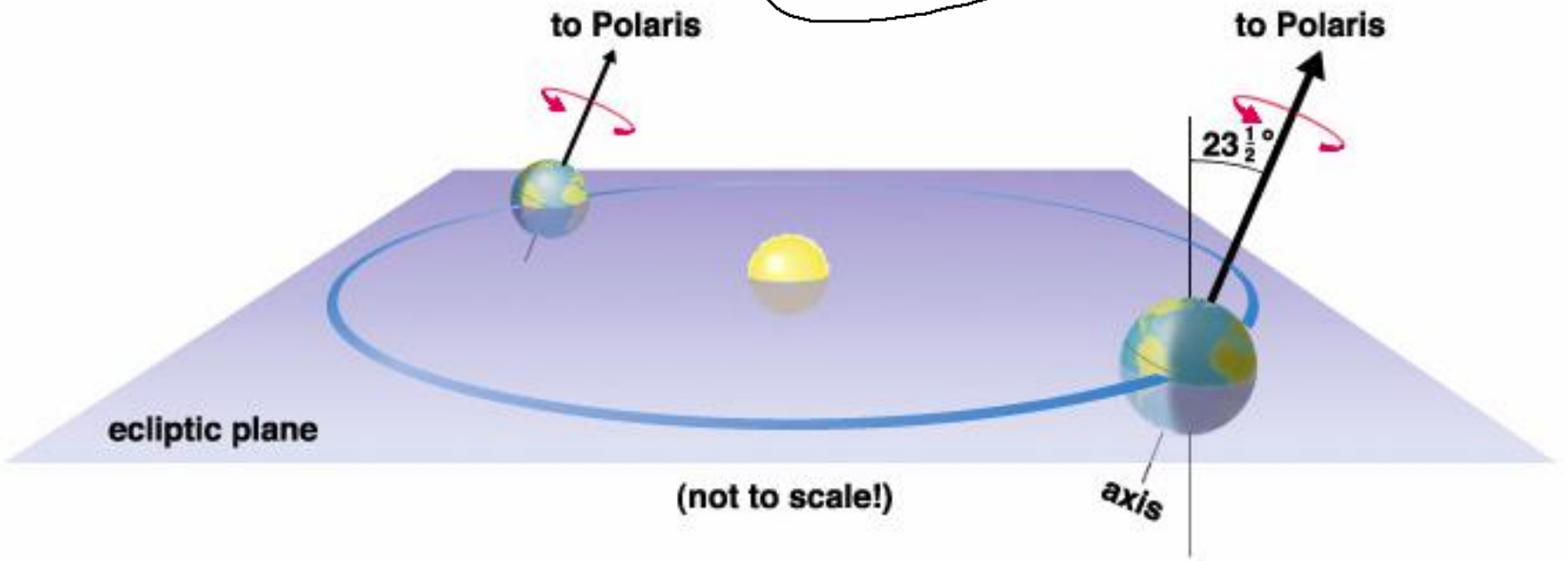
Ecliptic *Plane*

REVIEW

Imaginary plane containing the Earth's orbit around the Sun.

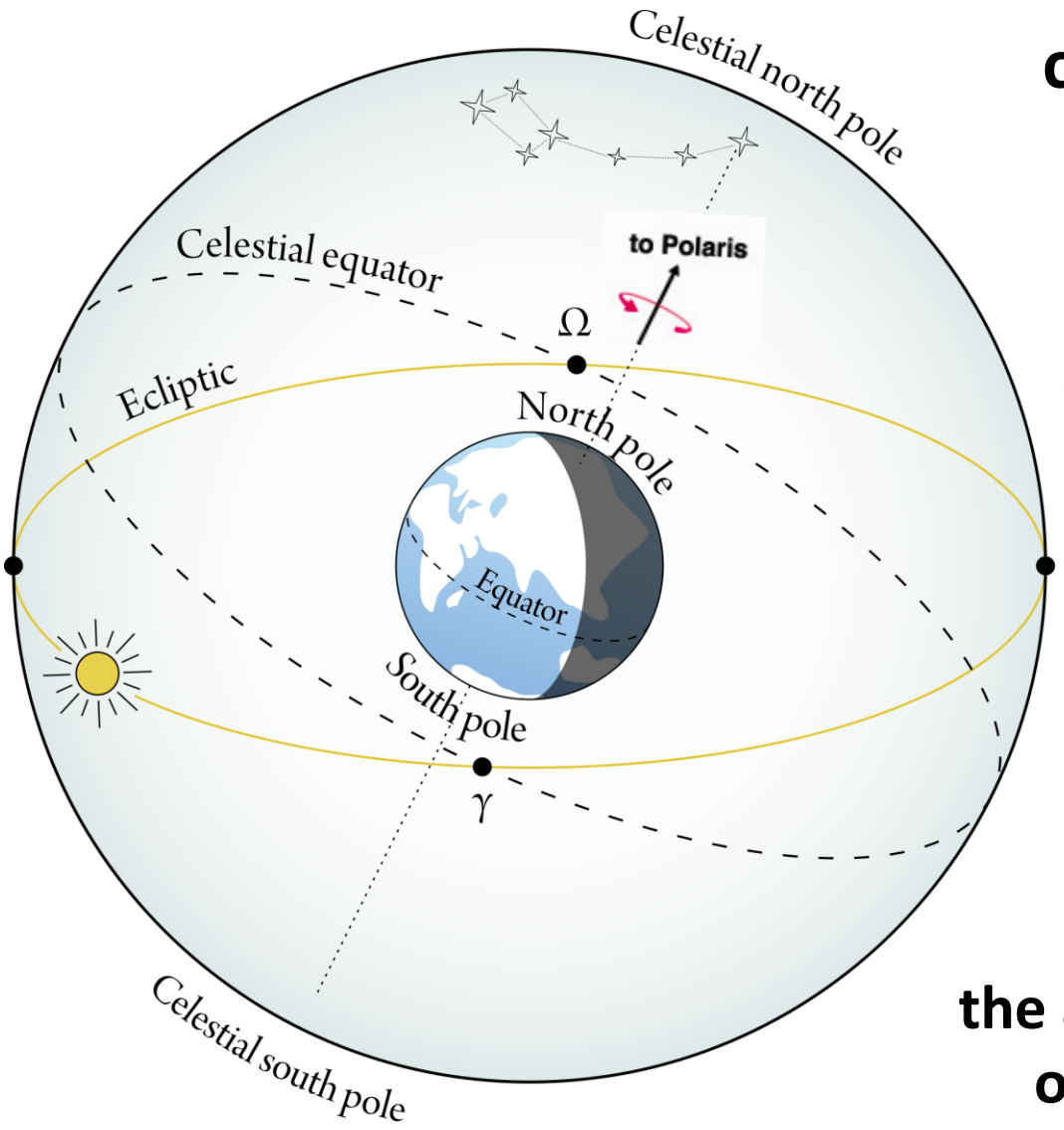




The major planets (and many of the asteroids) orbit the Sun within 10^{o} of ecliptic plane, their movement echoing the original shape and spin of the Sun's proto-planetary disc.

Celestial Sphere

is an apparent sphere around Earth which contains "fixed" stars forming 88 official constellations.

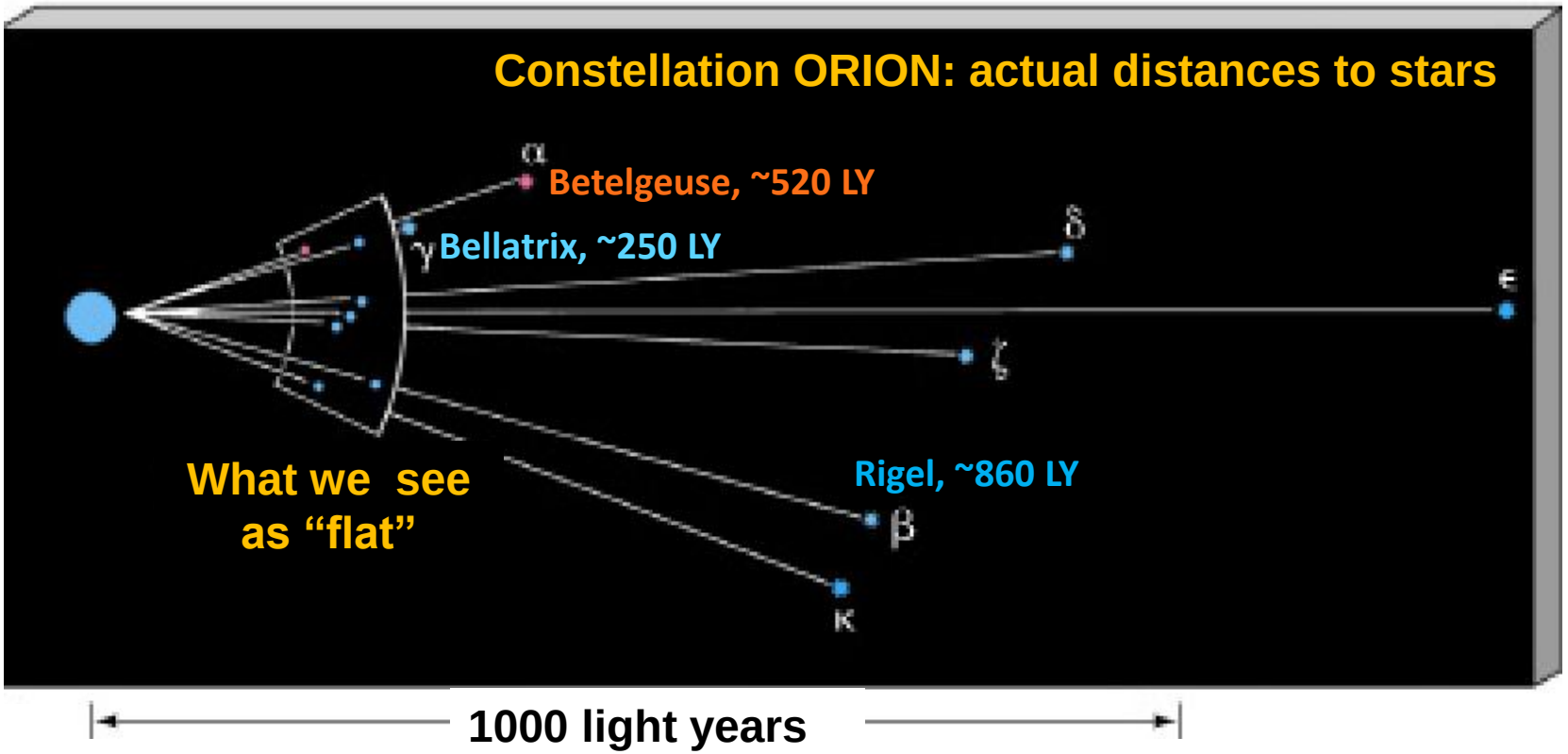


- **Celestial equator -** the projection of the Earth's equator onto the celestial sphere, dividing the sky into two hemispheres.

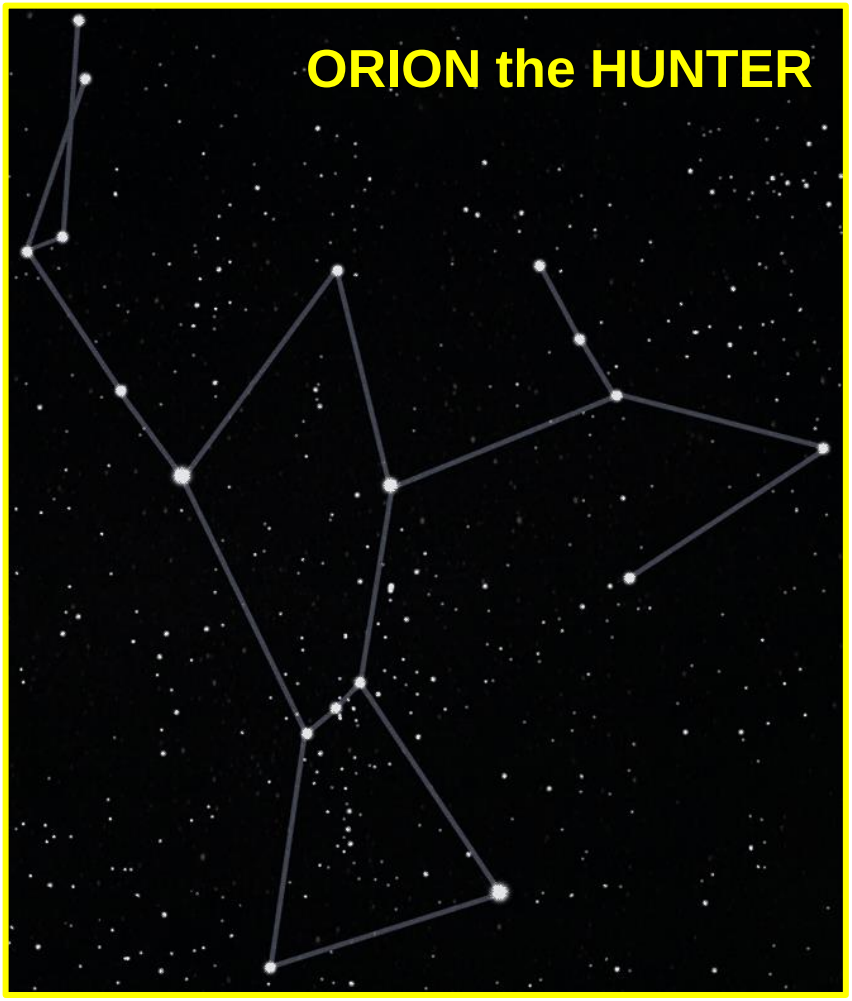
- **The *Ecliptic* -** the apparent path of the Sun on the celestial sphere.

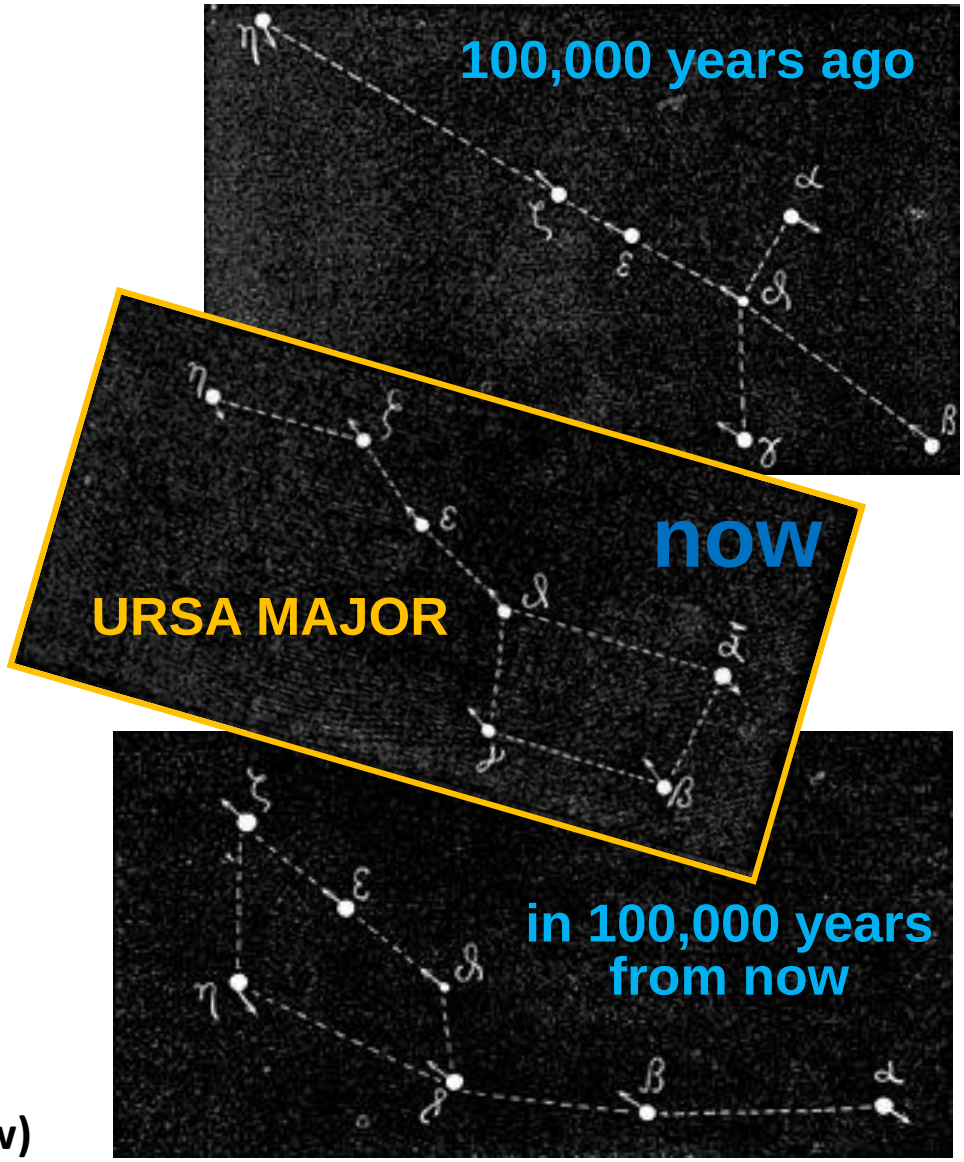
Constellations

- **Constellation is a group of stars that form a pattern in the sky.**
- **The shapes you see all depend on your point of view!**
- **Stars in a constellation are NOT close to each other, but when viewed from Earth they *seem to be grouped* together.**



Constellations change over (very long) time



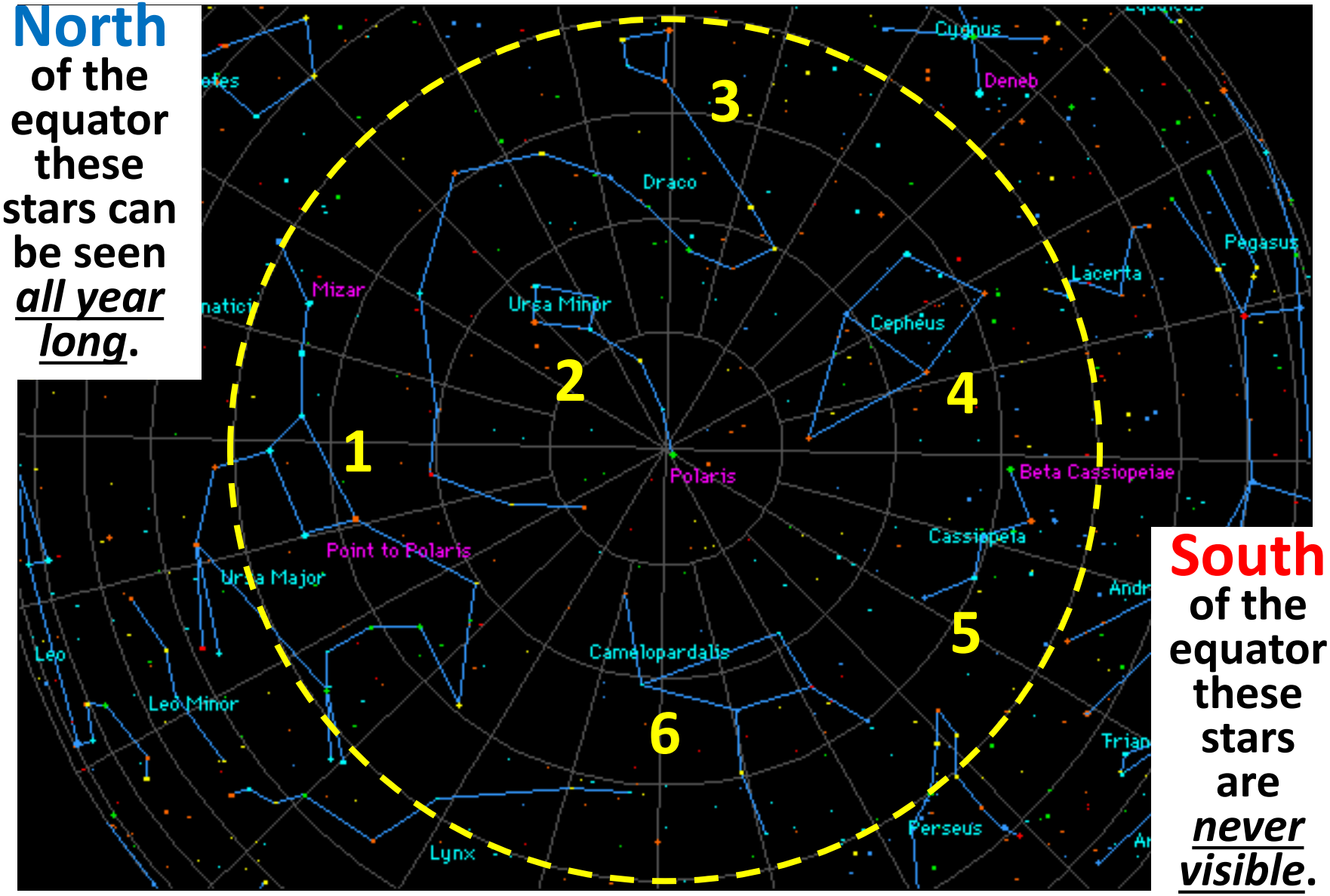


Watch Orion's head and bow!

(from 50,000 years ago to 100,000 from now)

Northern circumpolar constellations

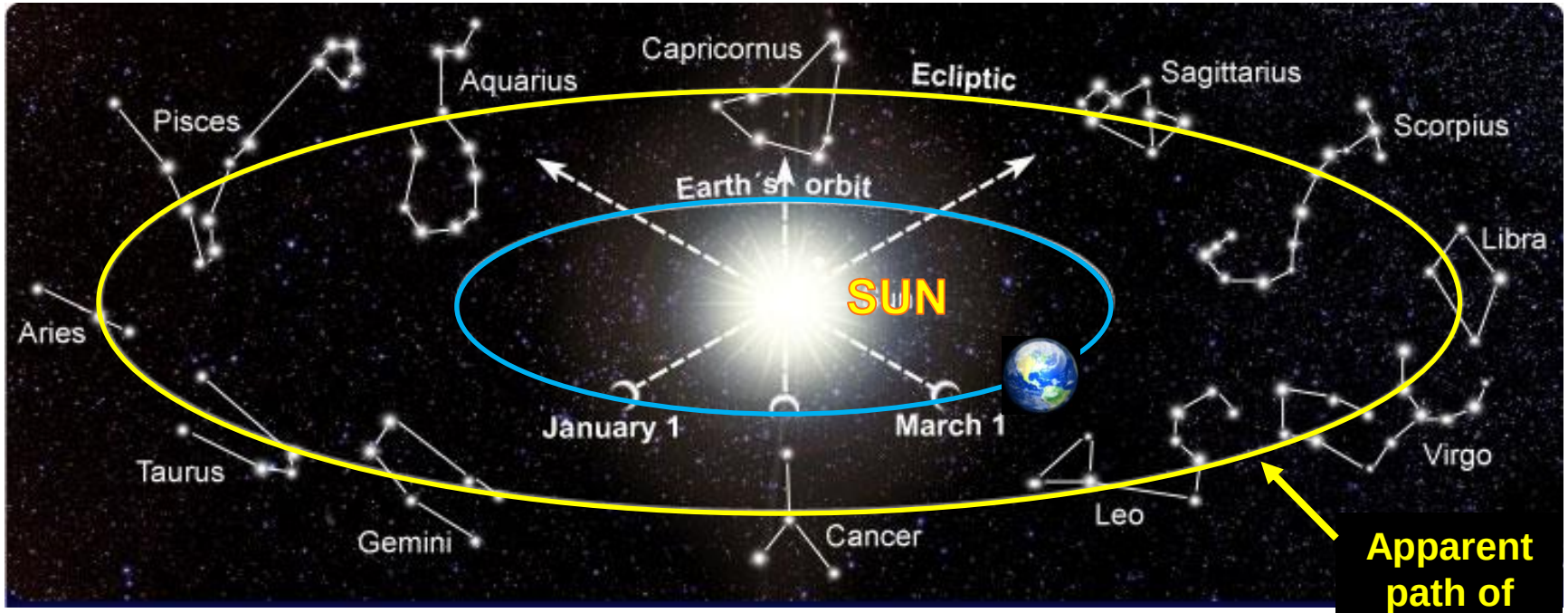
North of the equator these stars can be seen ***all year long***.



South of the equator these stars are ***never visible***.

Zodiac

(from a Greek phrase that means "circle of animals")



- **An ecliptic coordinate system: an 8-9º-wide band of twelve 30° divisions historically called signs.**
- **Those divisions do not correspond exactly to the *twelve constellations* after which they are named!**

Modern Astronomy Zodiac

Due to the Earth's *axis precession (it wobbles!)*, we now have thirteen, not twelve, zodiac constellations!