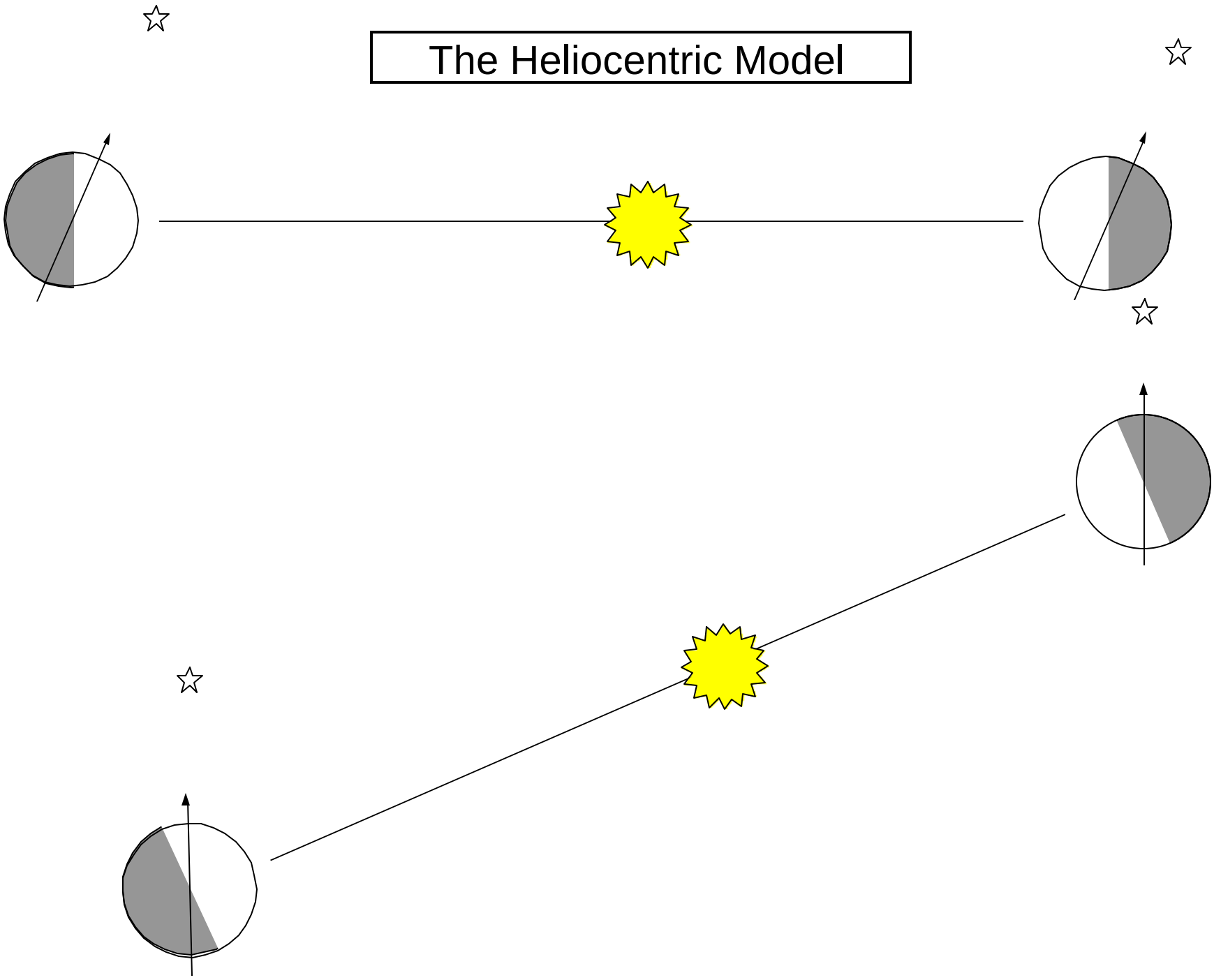
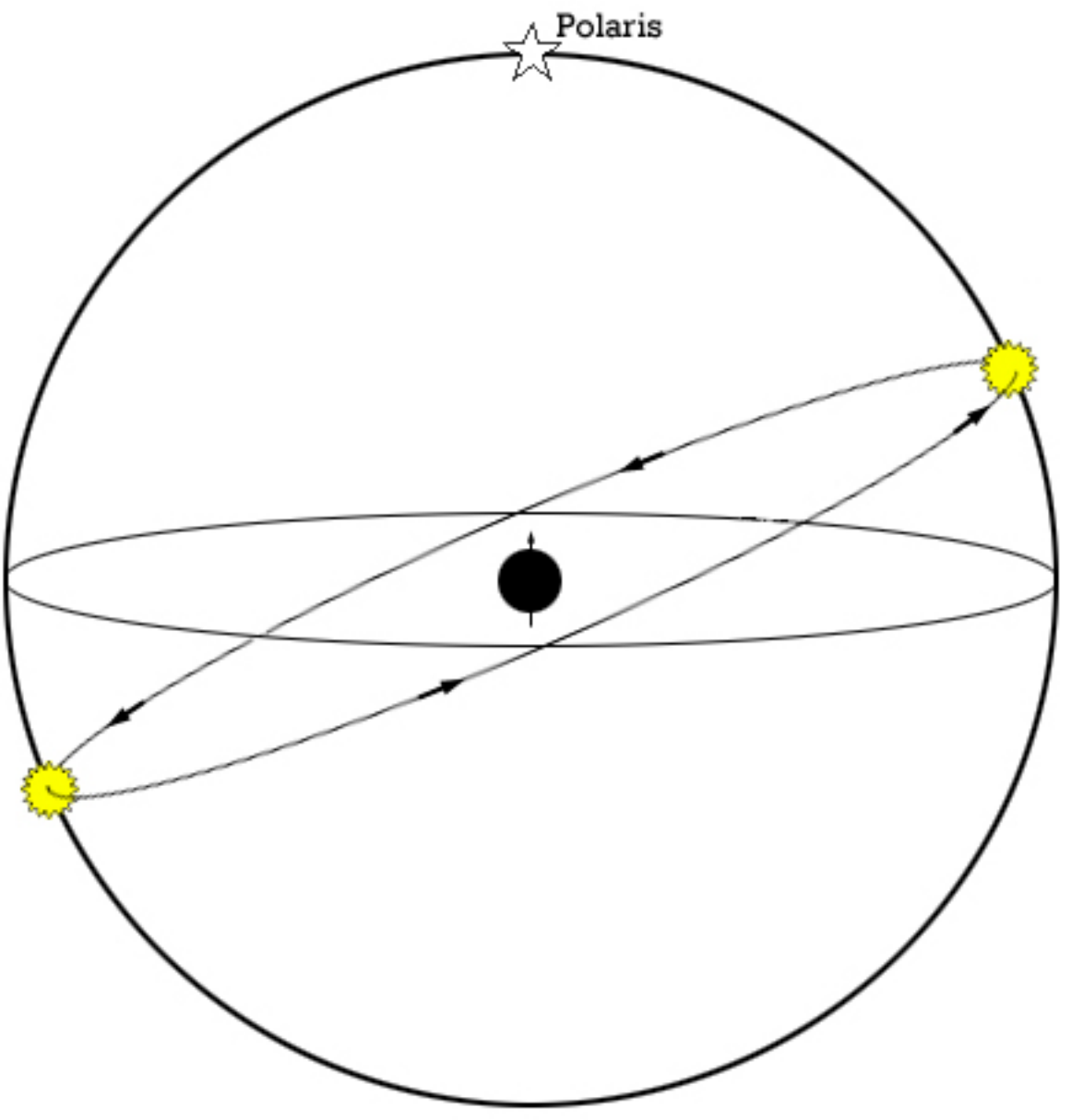
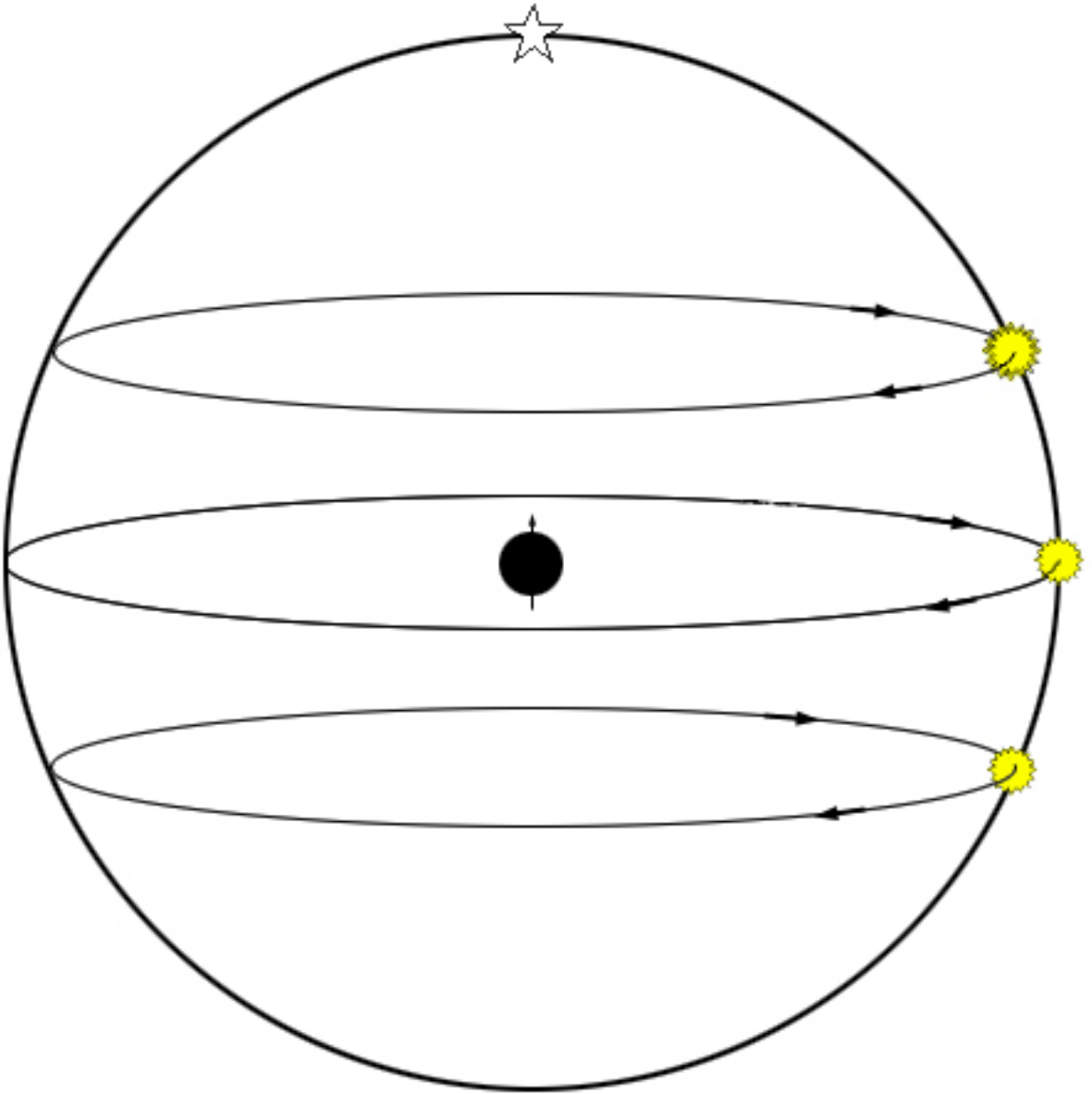
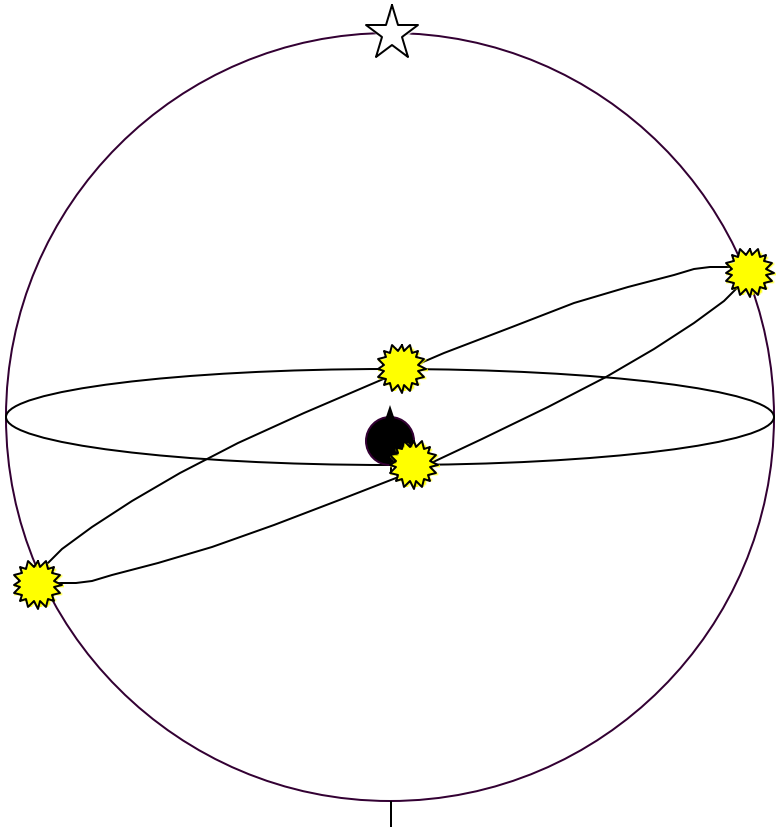
The Heliocentric Model

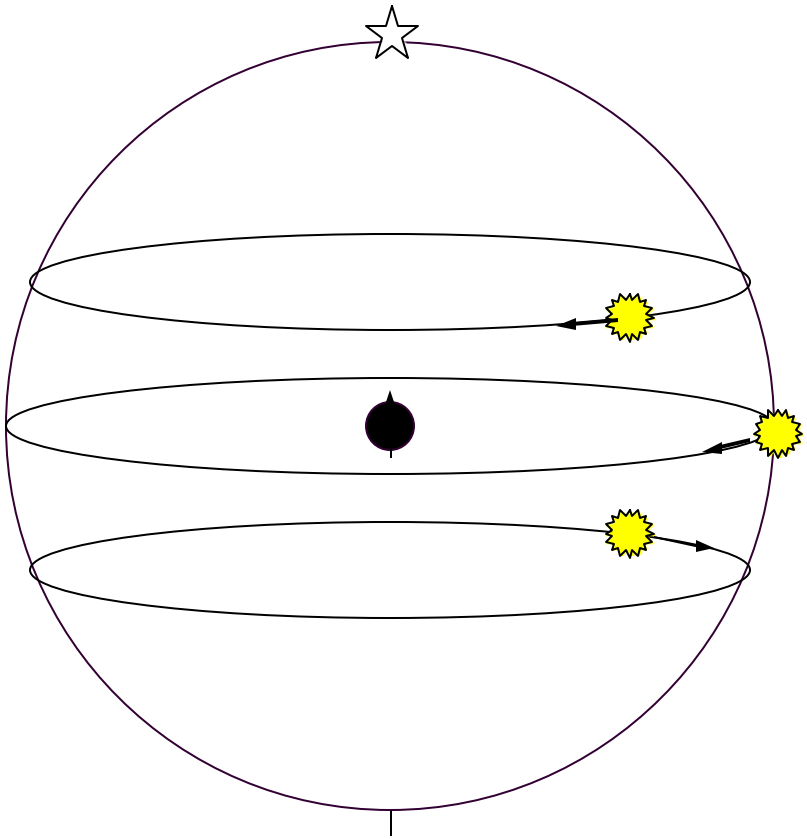



Polaris



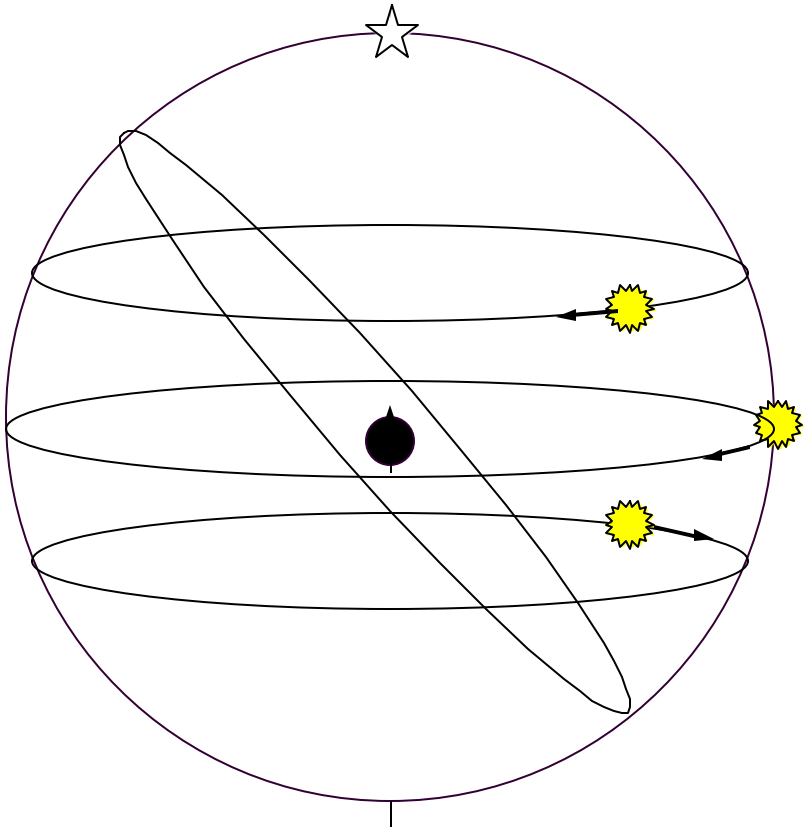
the celestial sphere and the path of the sun

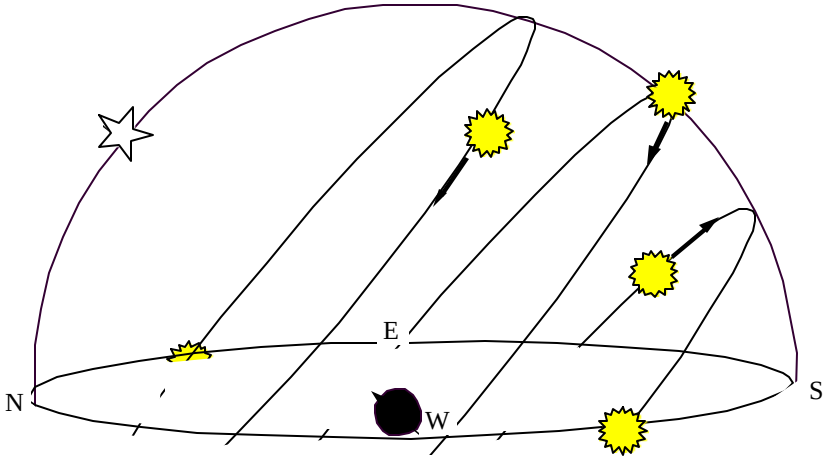




The Geocentric Model -

The Path of the Sun in New York State

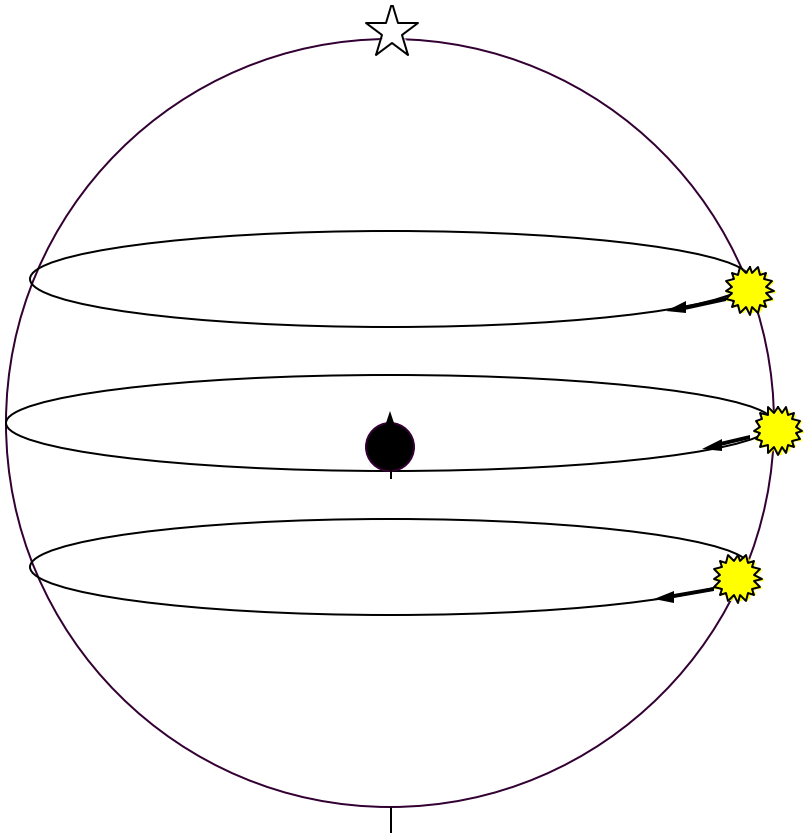


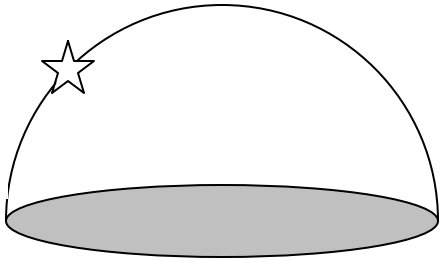


Earth Science Regents
Path of the Sun Lab

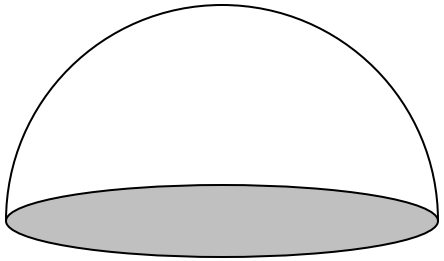
NAME_____

Draw in the path of the sun at the solstices and equinoxes at each of the latitudes indicated. Include the following on each diagram:
Polaris
Compass directions on the horizon
Arrows indicating the sun's direction

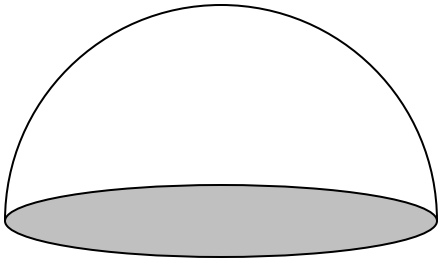




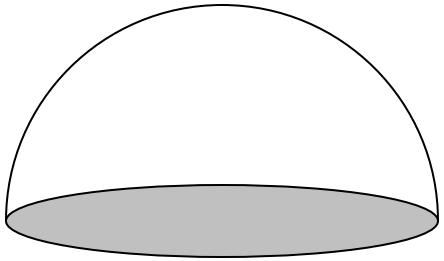
41 N



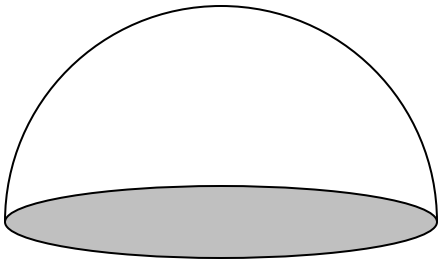
90 N



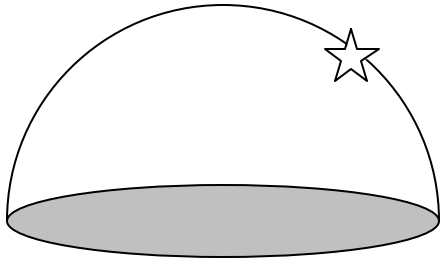
Equator



66.5 N

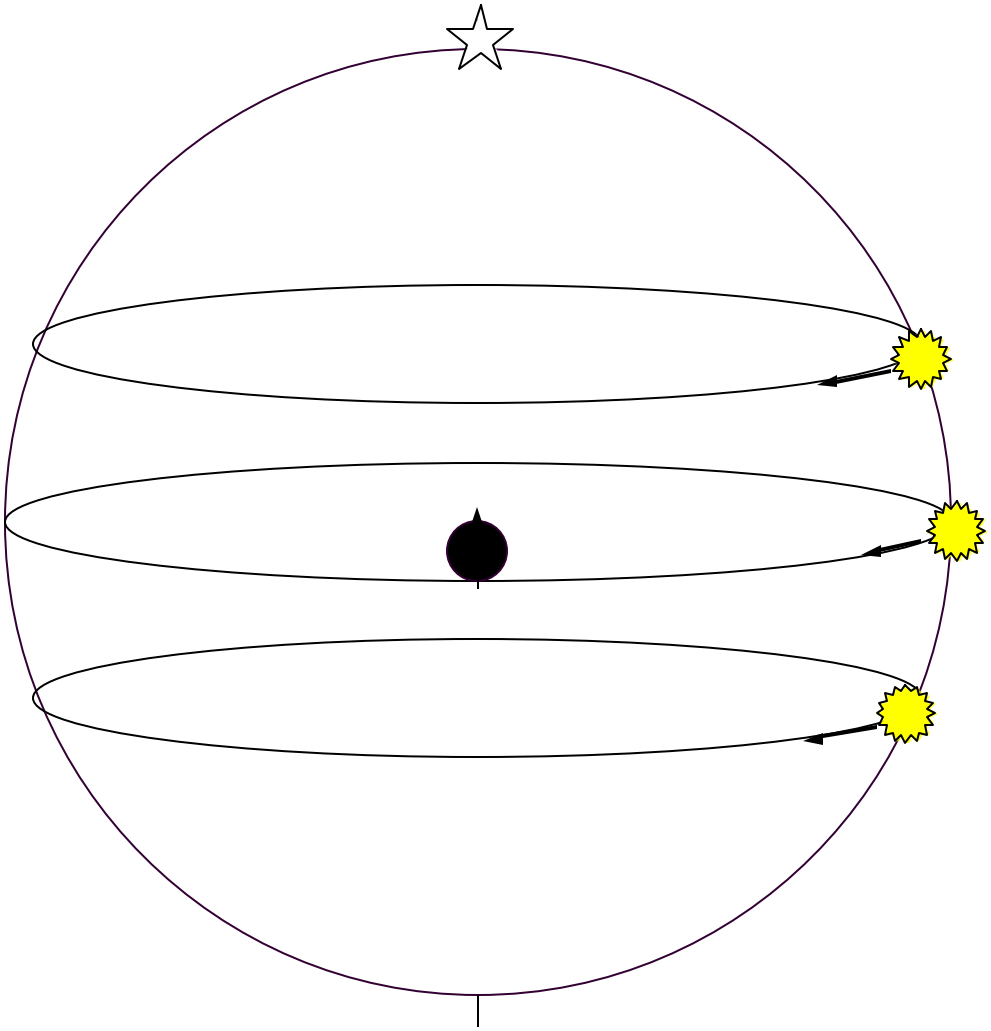


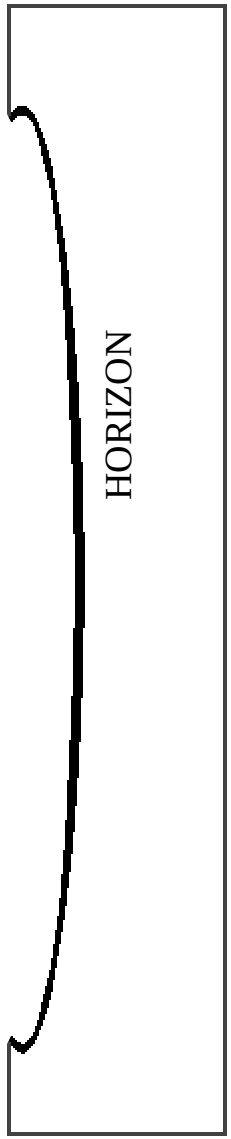
41 S



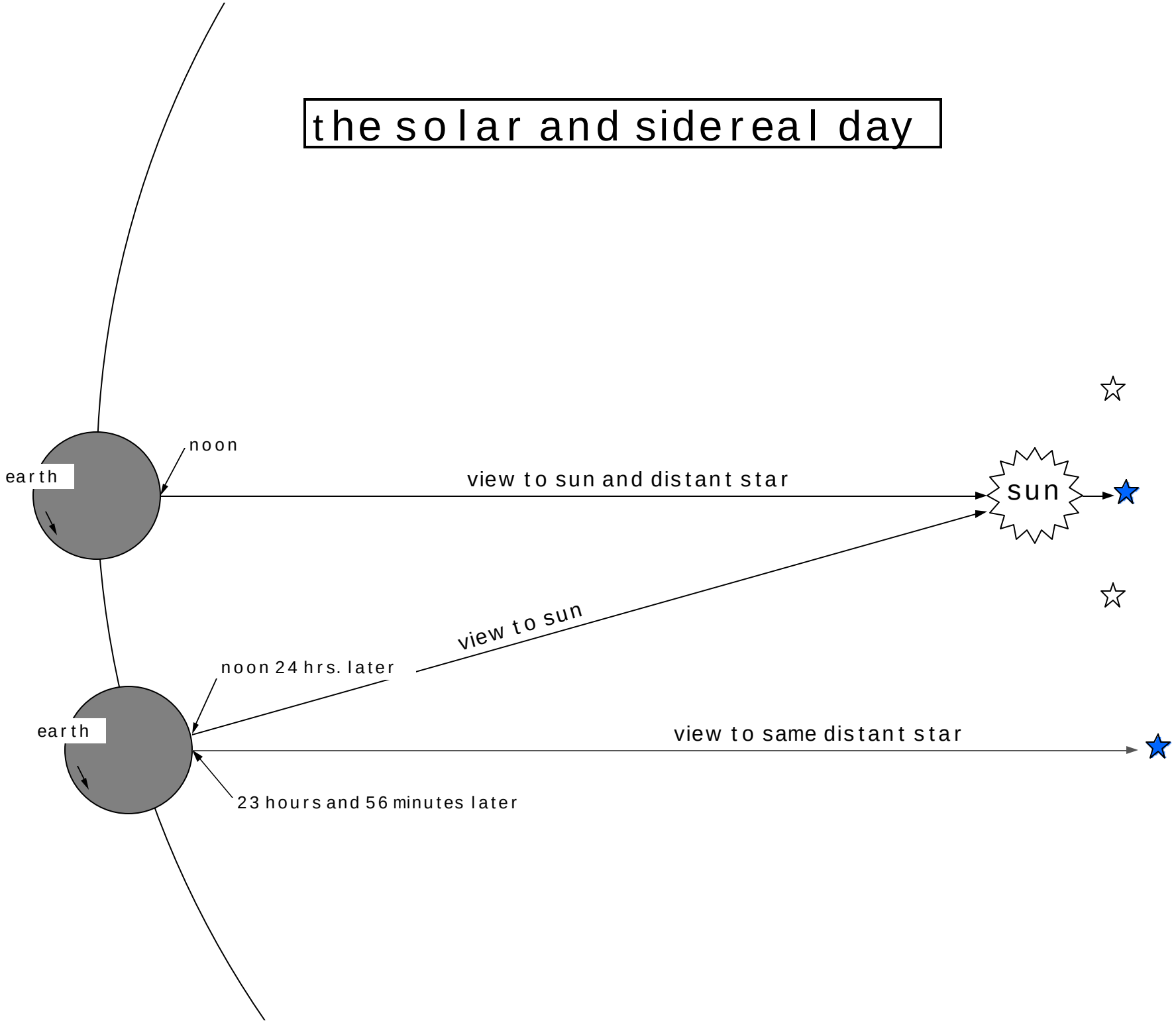
41 N

CUT THIS FIGURE OUT TO USE
AS YOUR “HORIZON”

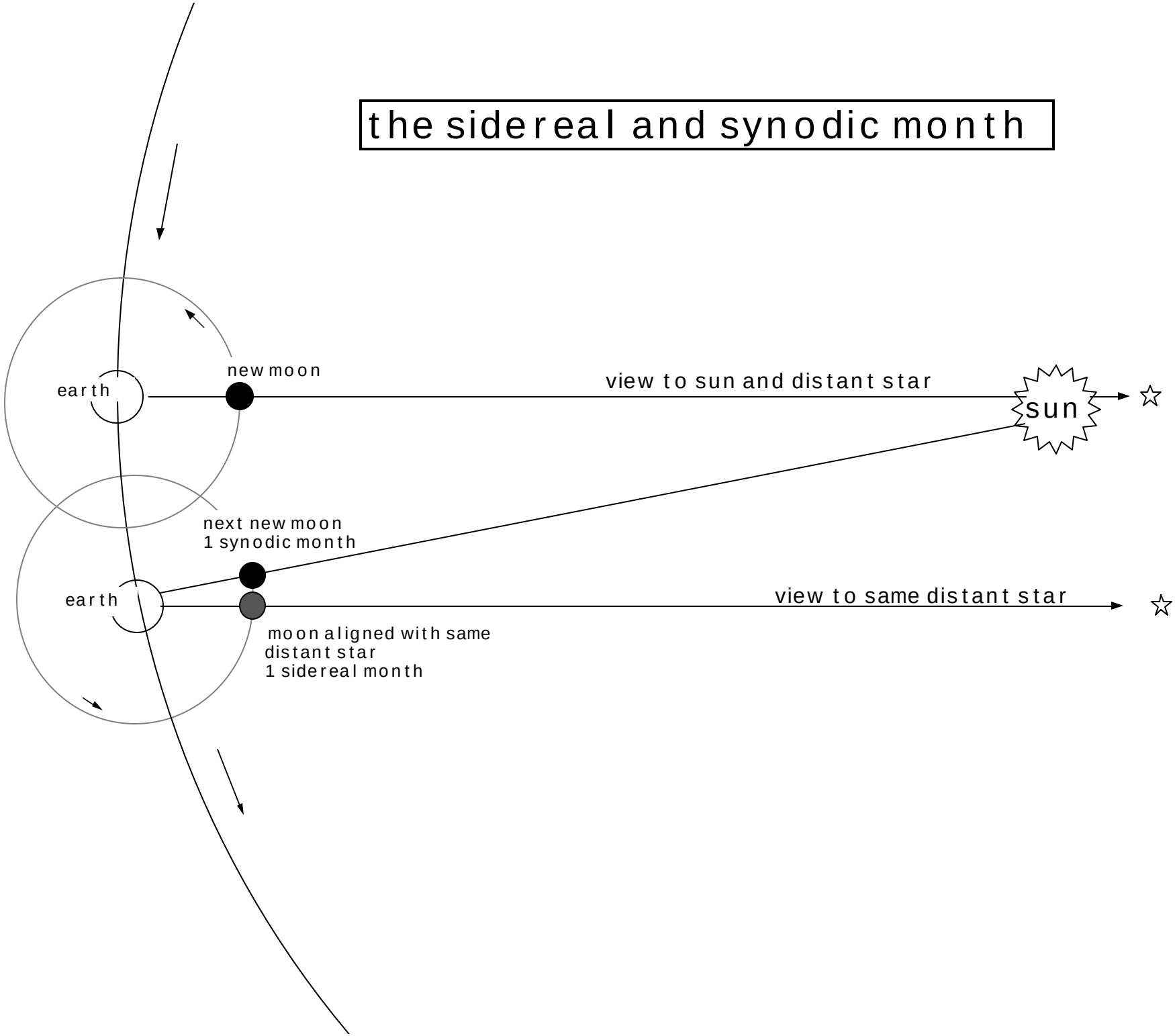




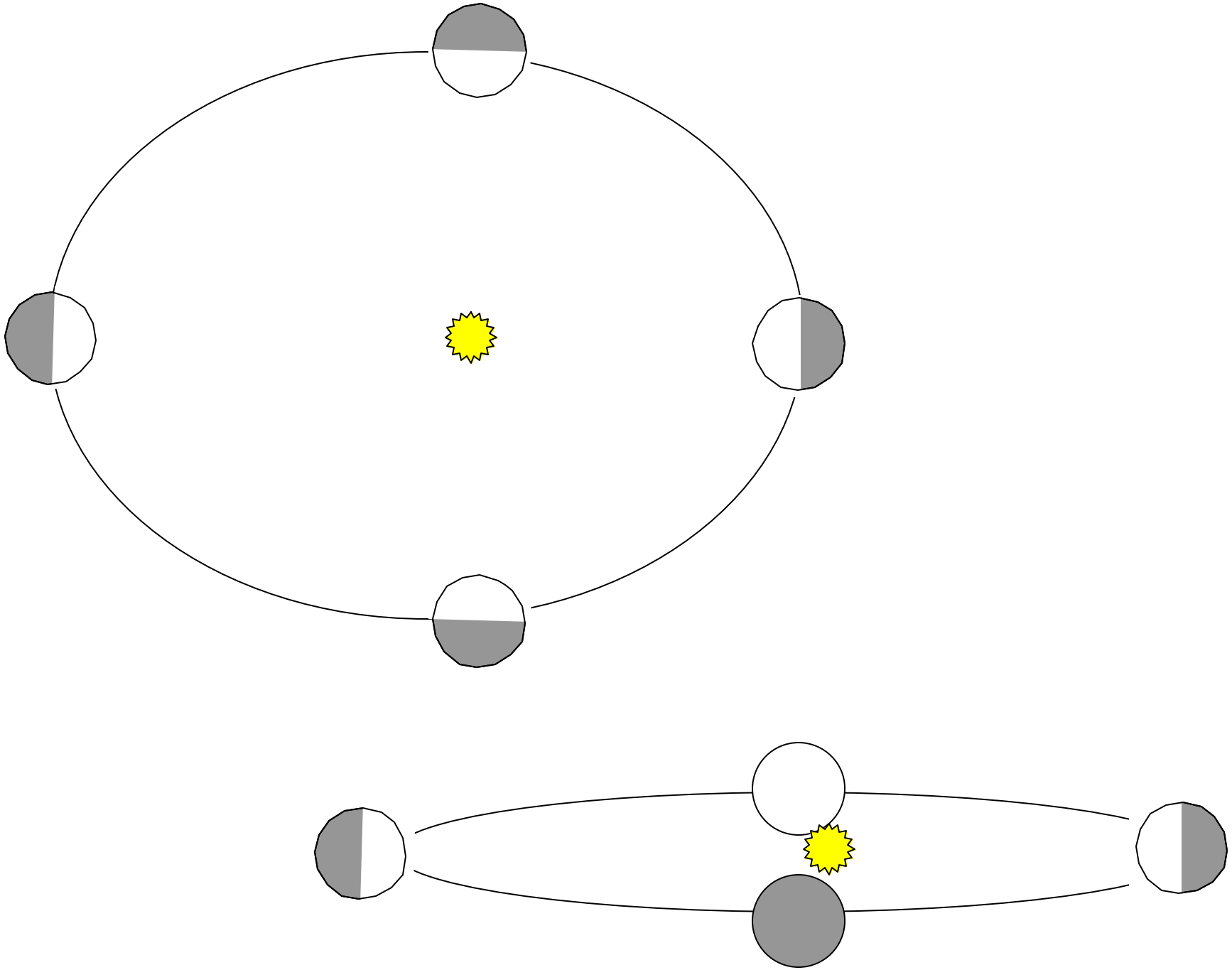
the solar and sidereal day



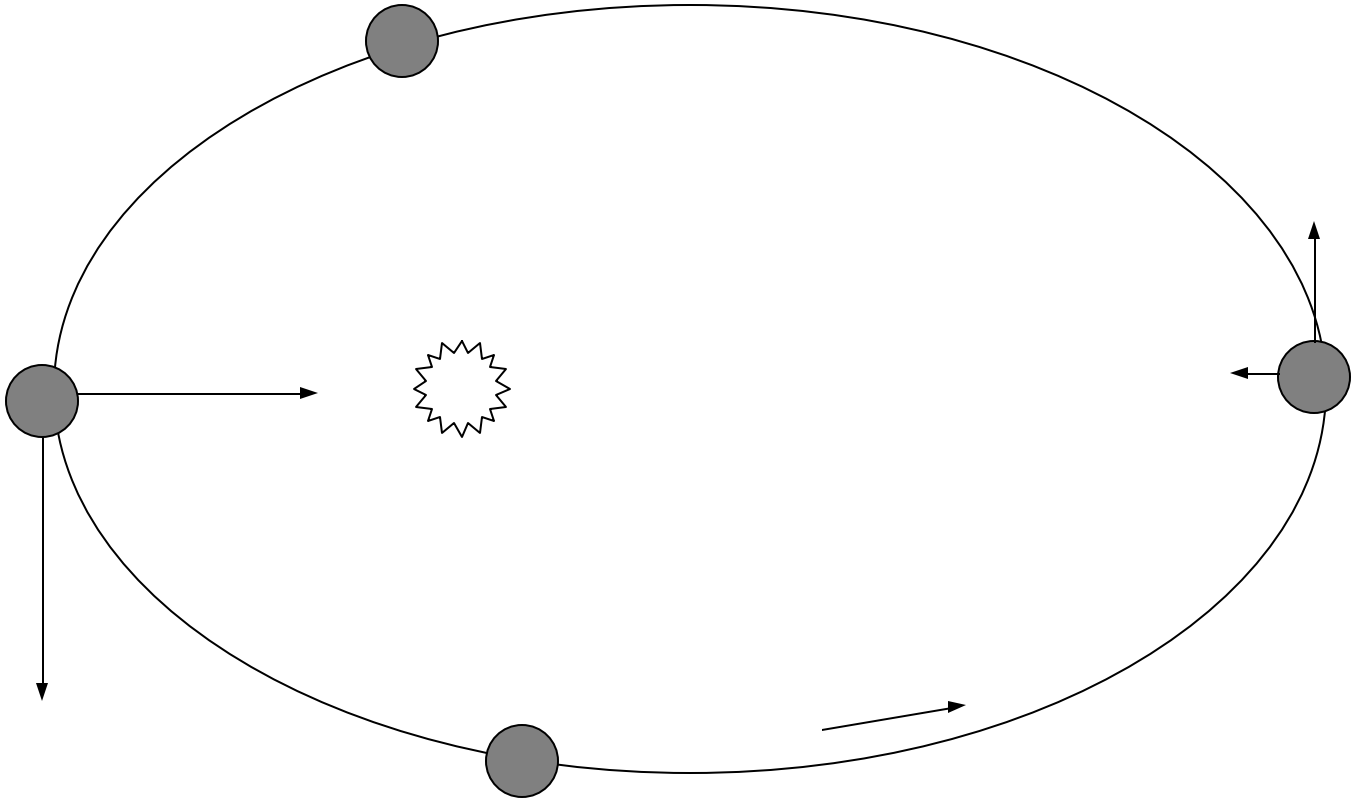
the sidereal and synodic month



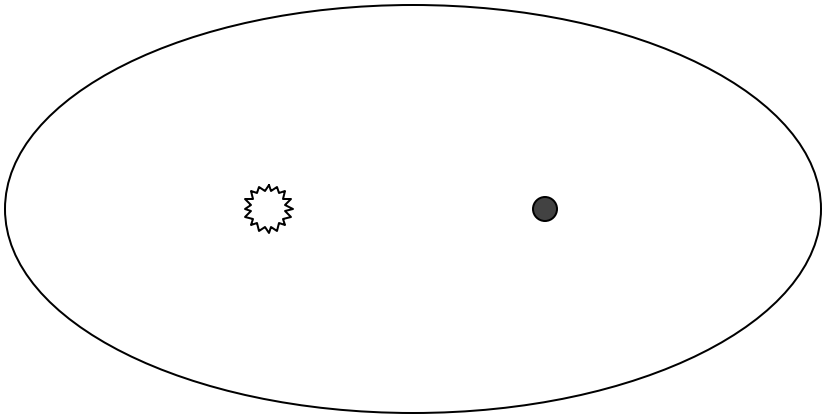
The Earth's seasons

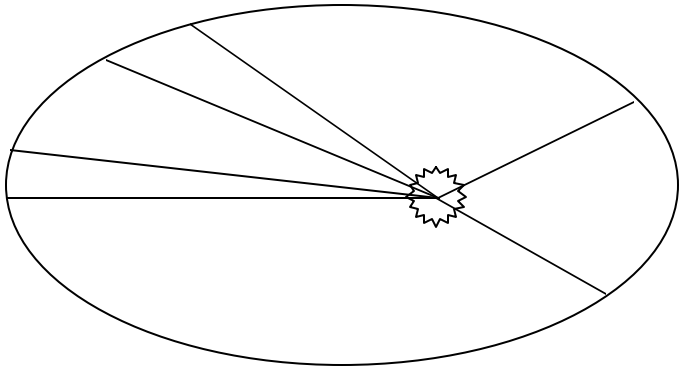


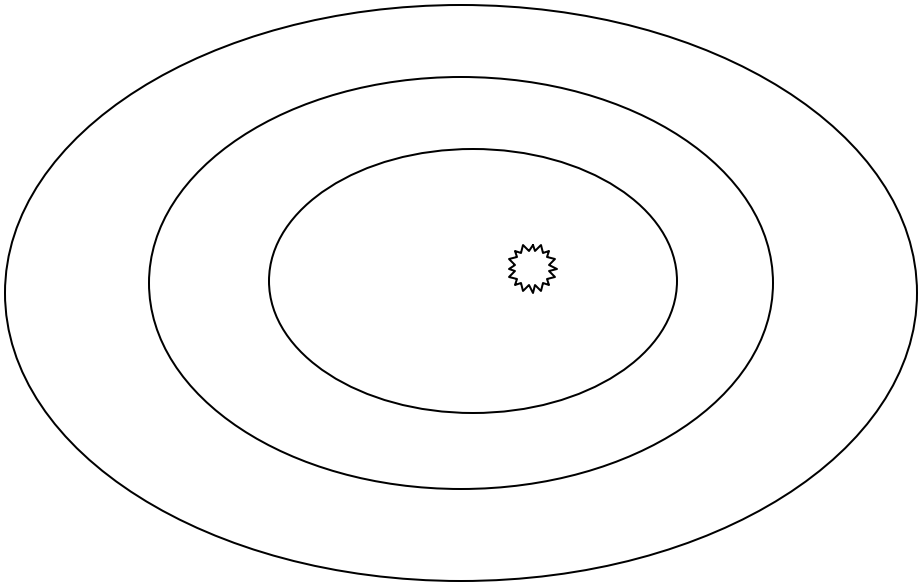
How Orbits Work



Kepler's laws of Planetary Motion

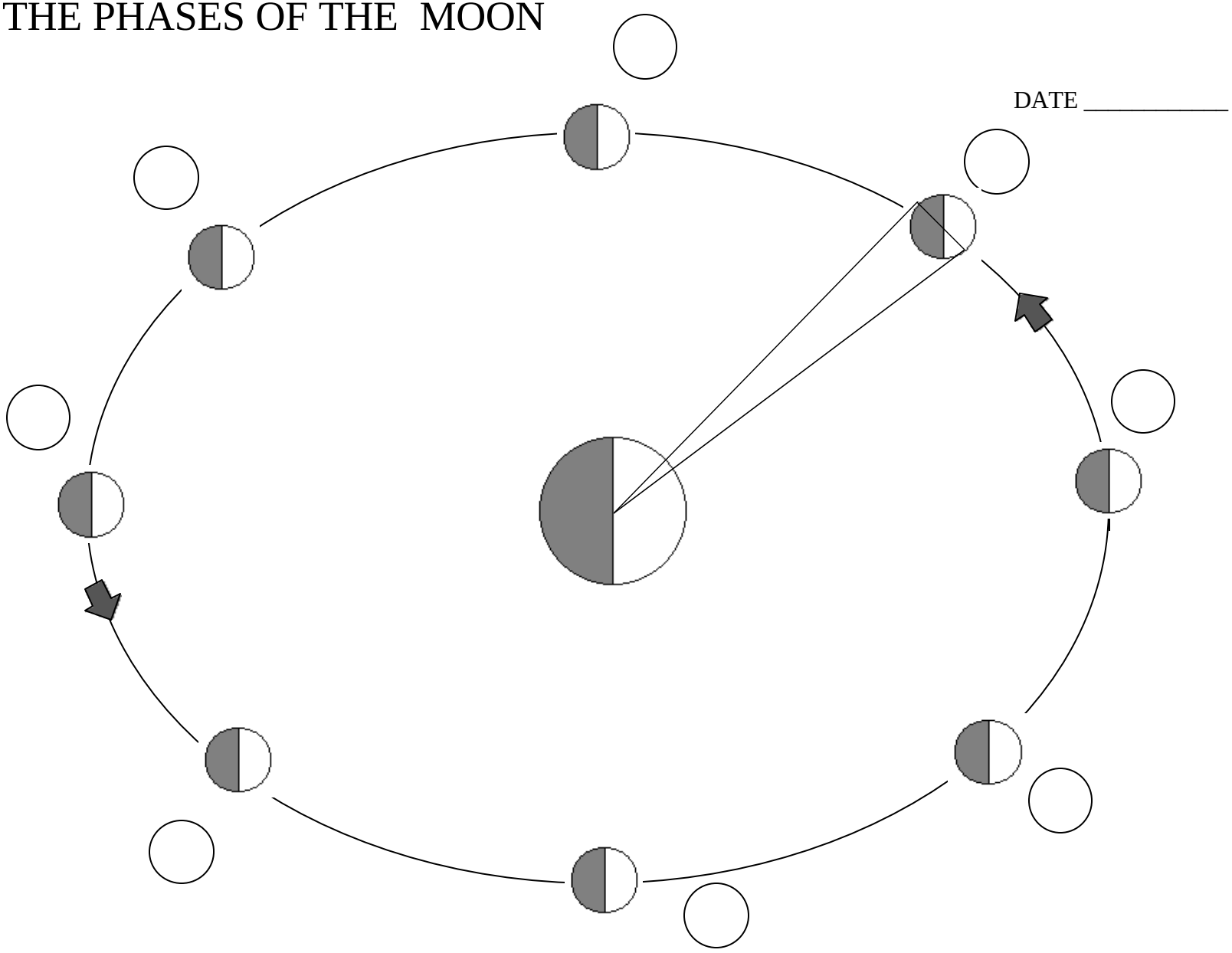




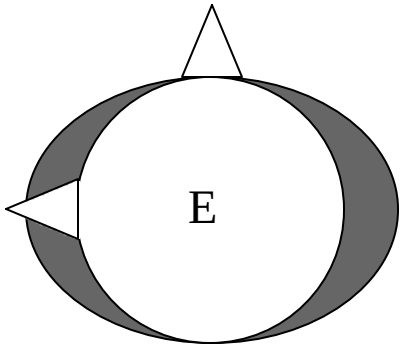


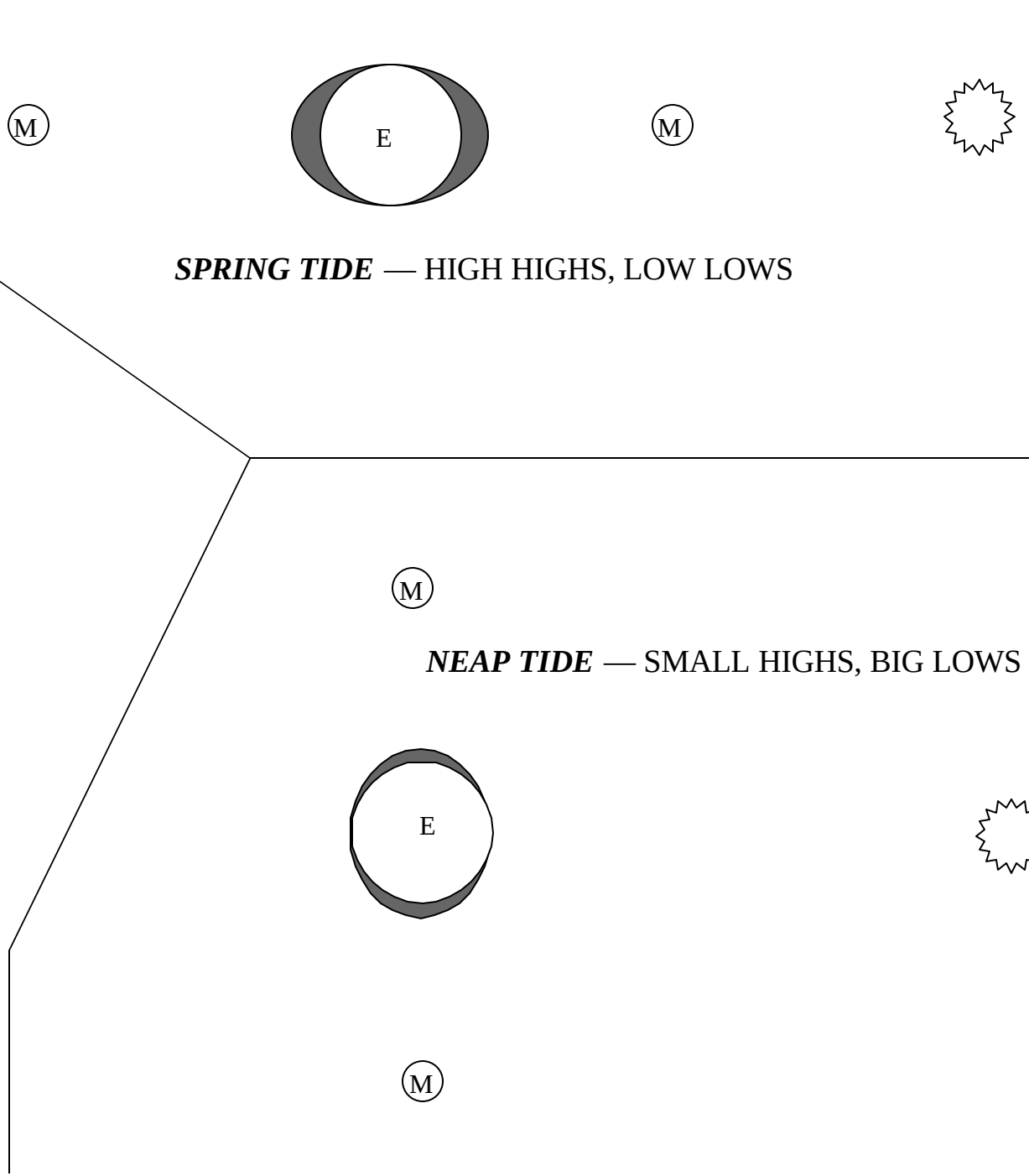
THE PHASES OF THE MOON

DATE _____



THE CONCEPT OF TIDES





SPRING TIDE — HIGH HIGHS, LOW LOWS

NEAP TIDE — SMALL HIGHS, BIG LOWS

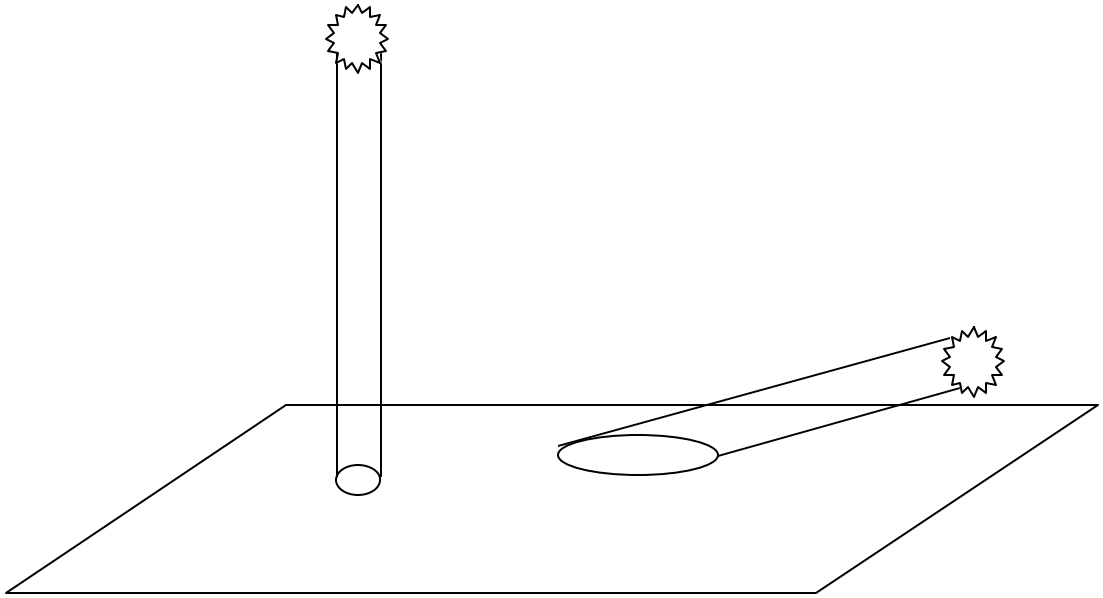


FIG 1. ANGLE of INSOLATION affects the INTENSITY of INSOLATION

The most direct, or 'VERTICAL RAY" of the Sun strikes the Earth at a _____

degree angle, and is _____

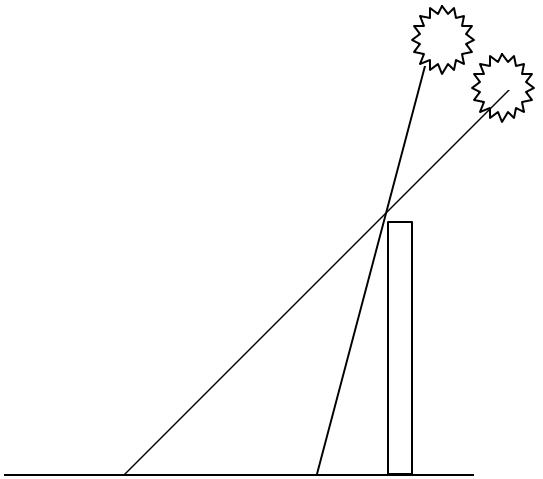


FIG 2. LENGTH OF THE SHADOW cast by a vertical stick is affected by the angle of insolation.
HIGH SUN = _____SHADOW!

N

W ● E

FIG 3. The direction of the shadow cast by a vertical stick changes throughout the day. At sunrise, the shadow points generally to the _____, and at sunset, the shadow points generally to the _____. The NOON shadow always points to the _____ and is shorter in the _____
season and longer in the _____.

S