

March 20, 2012

## The Earth

Earth tilts about  $23.5^\circ$  to vertical, an angle from which it can vary about  $1.5^\circ$  on either side over periods of 41,000 years. It completes a full precessional cycle once every 25,776 years. 13,000 years ago the North Pole pointed toward Vega, as it will again in about 12,500 years. Today, it points toward Polaris. In 3,000 BCE Draconis was in the pole position.

## The Zodiac

A  $360^\circ$  circle with  $30^\circ$  for each constellation: Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquarius, and Pisces. At present, Spring Equinox, the sun rises between Pisces and Aquarius. The effect of precession is to cause the equinox to be reached fractionally earlier in the orbit each year, gradually shifting through all 12 houses of the Zodiac spending 2160 years in each sign, completing the circuit in 25,920 years. The Age of Leo lasted from 10,970 — 8810 B.C.E.

— Jennifer 