

# Cosmic Rhythms & Planting Calendar

Working with Rhythms is a major area where BD improves on other streams of organic practices

# Introduction

- Conscious incorporation of rhythms into our agricultural activities is one of the major areas where Biodynamic Farming distinguishes and improves over other forms of organic practices

# In These Sessions

- Session I
  - Introduction to Cosmic Rhythms
- Session II
  - Connection To Farming Activities
- Session III
  - Planting Calendar

# Rhythm

- What is a Rhythm
  - A regular recurrence of an action
    - Examples - heartbeat/breath
- Activities done in tune with rhythms yield maximum benefit
- Earth and the Cosmos have rhythms too
  - We are already aware of and in tune with some rhythms (e.g. Sun's rhythms)
  - Others we are unaware & hence lose out on potential benefits

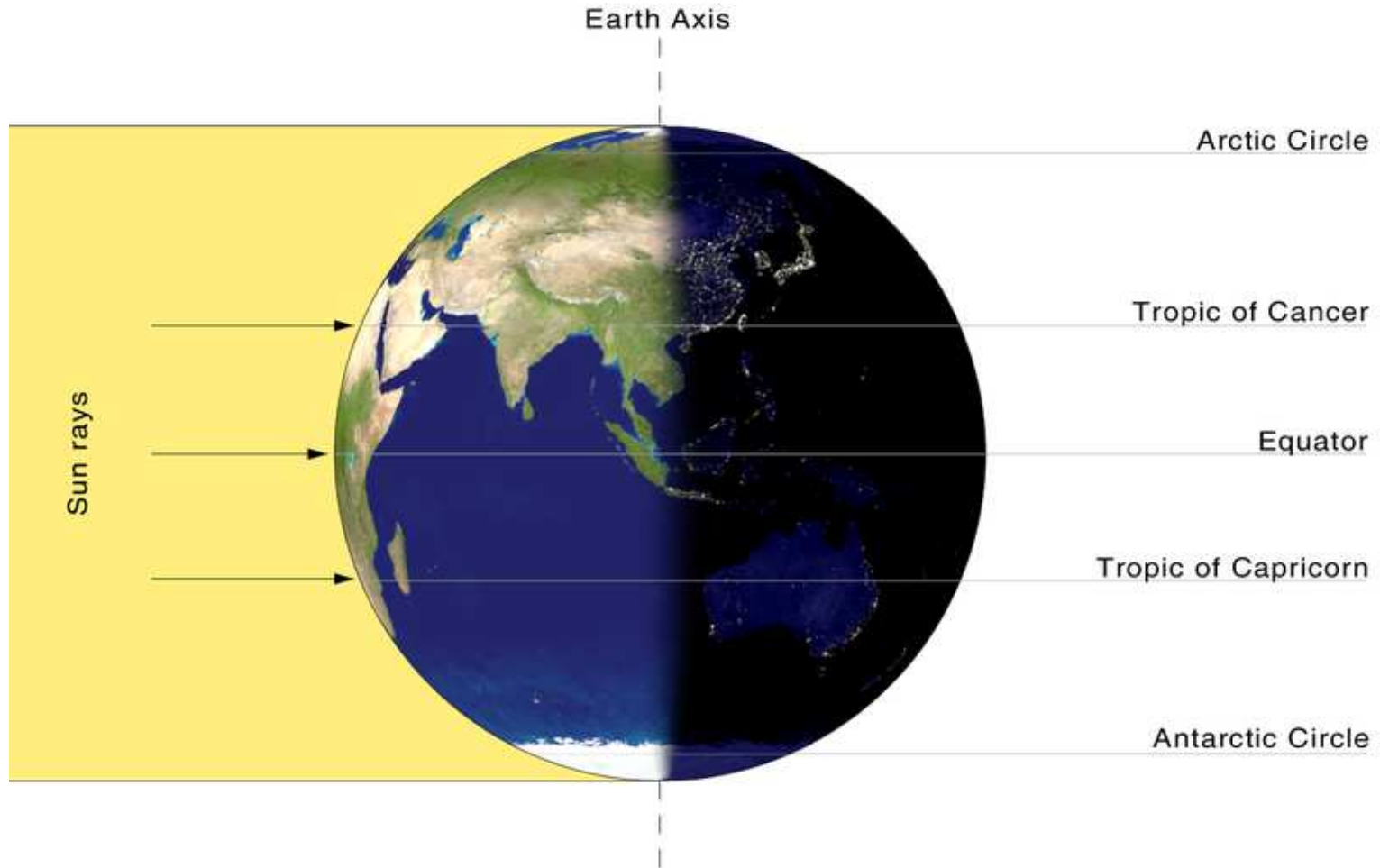
# Benefits of Working With Cosmic Rhythms

- At a minimum they provide a broad framework/ set of principles to plan and do our farm activities.
  - They introduce a discipline into the farming activities
- The real major benefit is that they allow the cosmic energies to revitalize our soil
  - Food produced from such a living soil has not only more nutrition but increased life force and vitality
- Can be looked upon as a free bonus/subsidy available to the organic farmer
- Weeds follow Cosmic Rhythms
  - Weeds specialize in extracting every possible subsidy available in nature

# The Different Cosmic Rhythms

- Sun Rhythms
  - Day/Night
  - Seasons
- Moon Rhythms
  - Full Moon/New Moon
  - Nodes/Eclipses
  - Perigee/Apogee
  - Ascending/Descending
  - Moon opposite Saturn
  - Moon in Zodiac Constellations

# Sun's Day/Night Rhythm

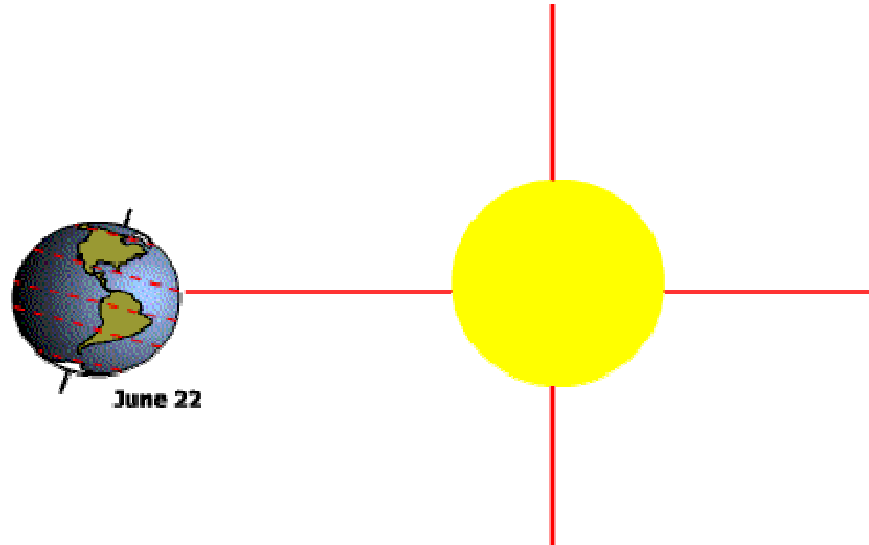


# Sun's Day/Night Rhythm

- Caused by earth's (West to East) rotation on it's axis in 24 hours
  - Part of the earth facing the sun receives sunlight and it is day time in that part
  - The portion that is away from the sun receives no sunlight and it is night time in that part
- Most of us are already in tune with this rhythm
  - We sleep at night and do all agricultural activities during the day
- This is the Earth's daily breath
  - Earth breathes in during the night and breathes out during the day



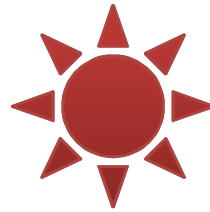
# Sun's Seasons



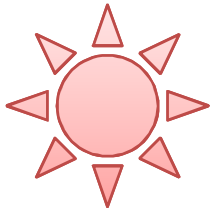
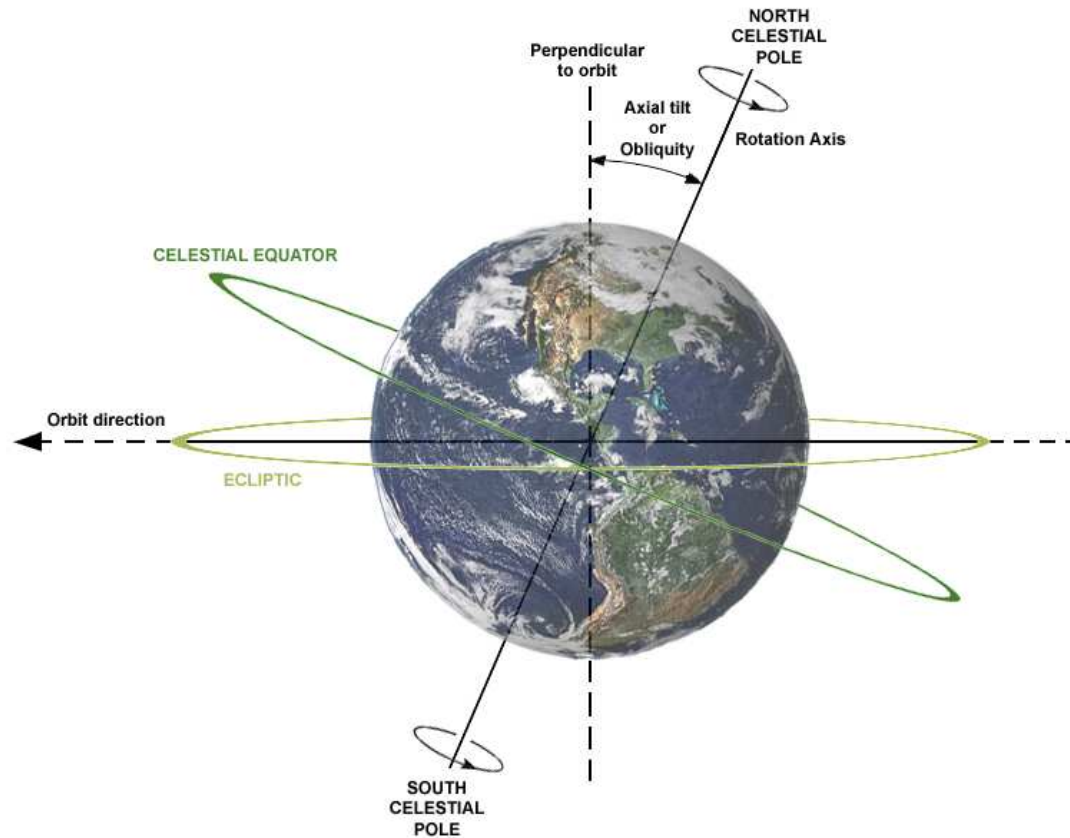
# Sun's Seasons

- Caused by Earth going round the Sun
  - Takes 365.25 days to complete one revolution
  - Path is elliptical (but this has only slight effect on the seasons)
  - The earth's axis is not perpendicular to the orbital plane but is at 23.5 degree angle to it and always points to the North Star
- Winter Sun is more southwards and its path is a smaller/lower arc in the sky
  - hence slanted/milder rays; short days and cool climate
- Summer Sun is more northwards and its path is a higher/bigger arc in the sky
  - hence perpendicular/harsher rays; long days and hot climate
- Agricultural activities generally follow this rhythm
- This is the Earth's yearly breath
  - Earth breathes in during winter and out during summer

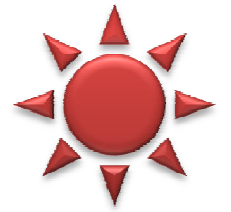
# Solstice & Equinox



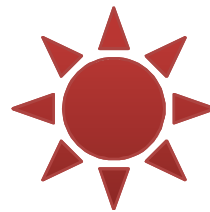
**Equinox**  
(21<sup>st</sup> March)



**Winter Solstice**  
(21<sup>st</sup> Dec)



**Summer Solstice**  
(21<sup>st</sup> June)

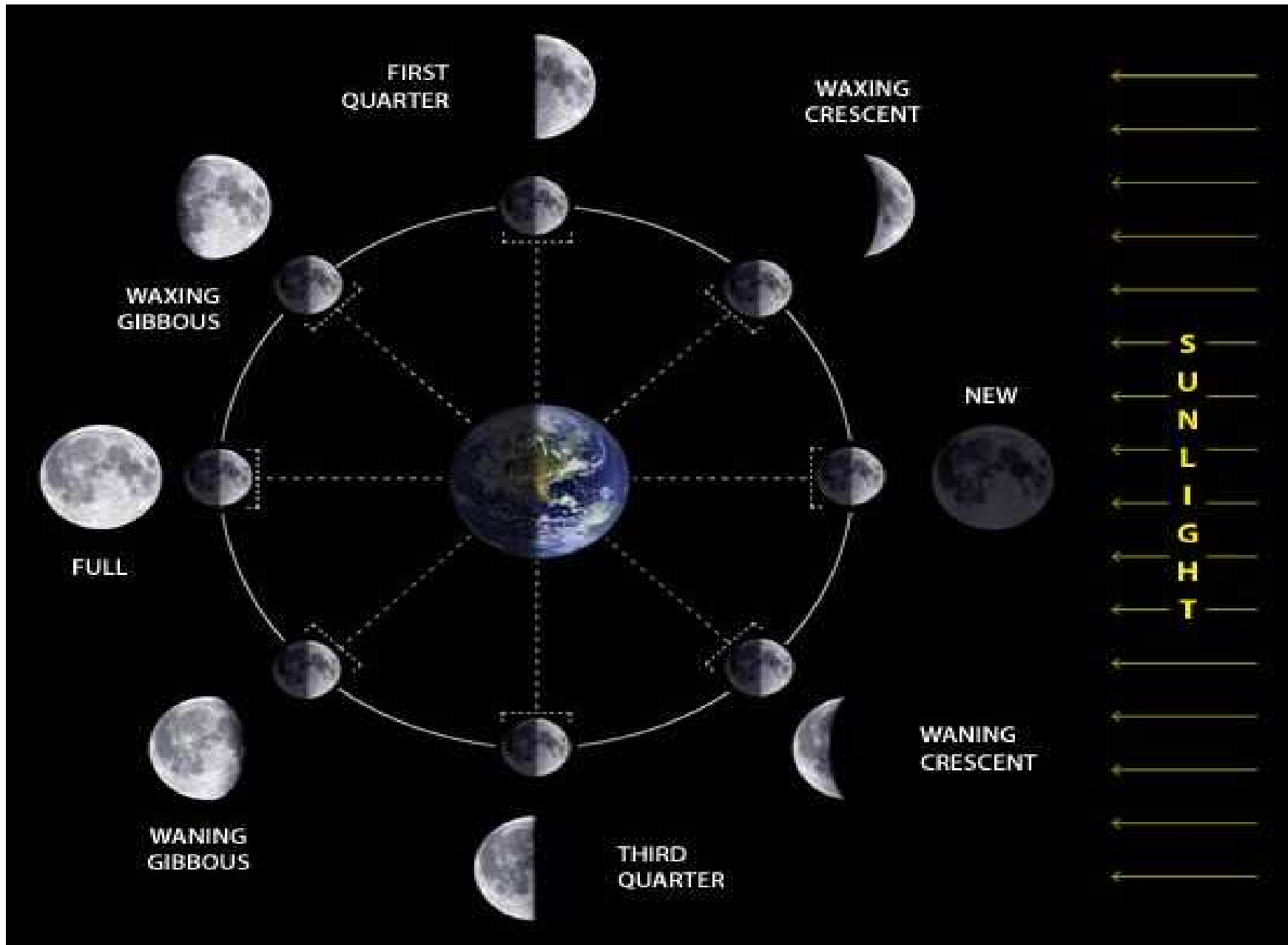


**Equinox**  
(21<sup>st</sup> Sept)

# Sun's Seasons - Solstice & Equinox (N. Hemisphere)

- 21<sup>st</sup> June - Summer Solstice
  - Tropic of Cancer – Longest day; Sun directly overhead.
  - Equator – Sun has a 66.5 degree northerly path above horizon
  - North Pole - 24 Hours sunlight. Sun 23.5 degrees above horizon
- 21<sup>st</sup> Sept – Equinox
  - Tropic of Cancer –Equal day and night
  - Equator – Sun directly overhead.
  - North Pole - Sun always at the horizon
- 21<sup>st</sup> December – Winter Solstice
  - Tropic of Cancer – Shortest day; Sun has a 23.5 degree southerly path above horizon
  - Equator – Sun has a 66.5 degree southerly path above horizon
  - North Pole – 24 hours darkness.
- 21<sup>st</sup> March – Equinox
  - Tropic of Cancer –Equal day and night
  - Equator – Sun directly overhead
  - North Pole - Sun always at the horizon

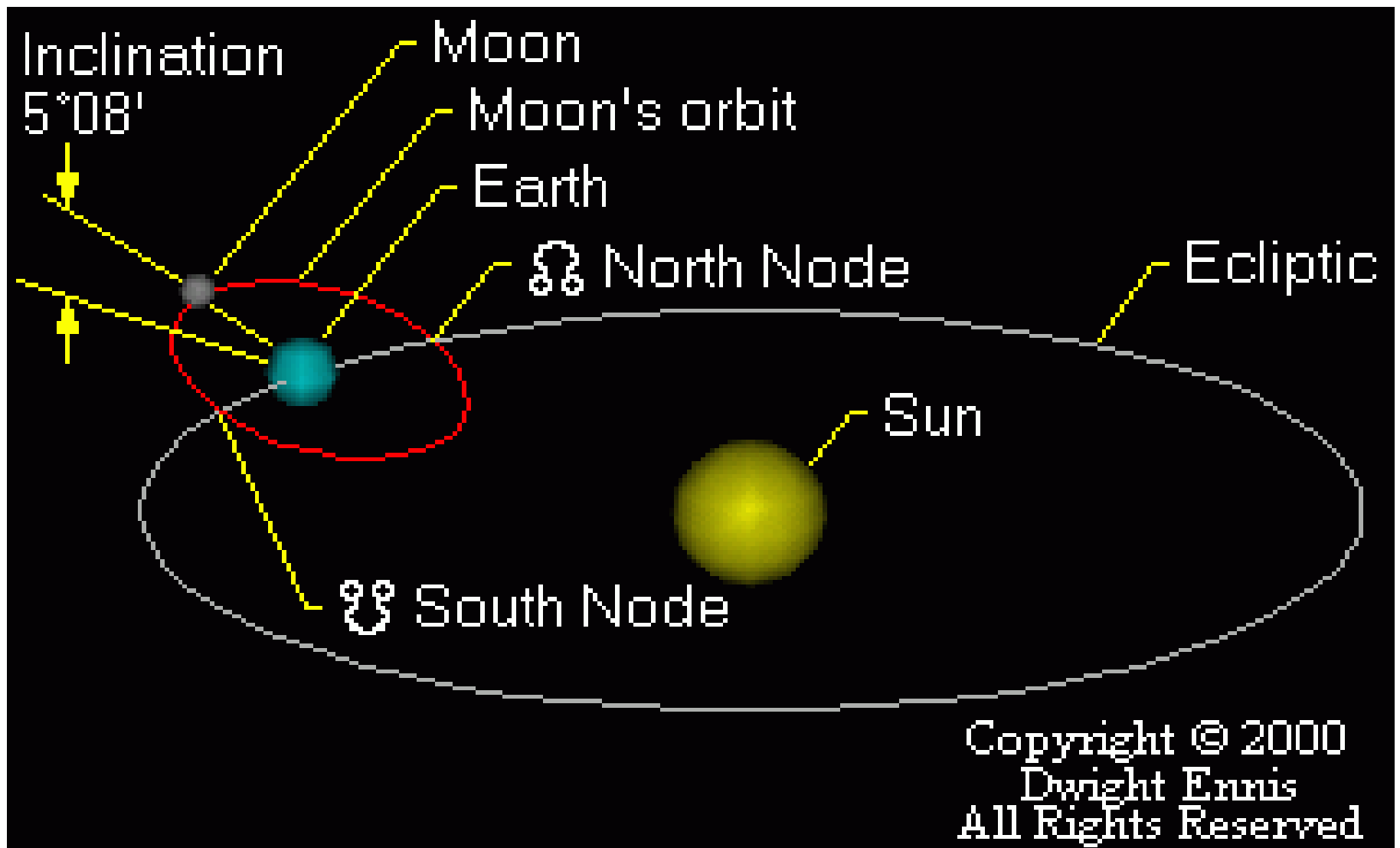
# Full Moon/New Moon



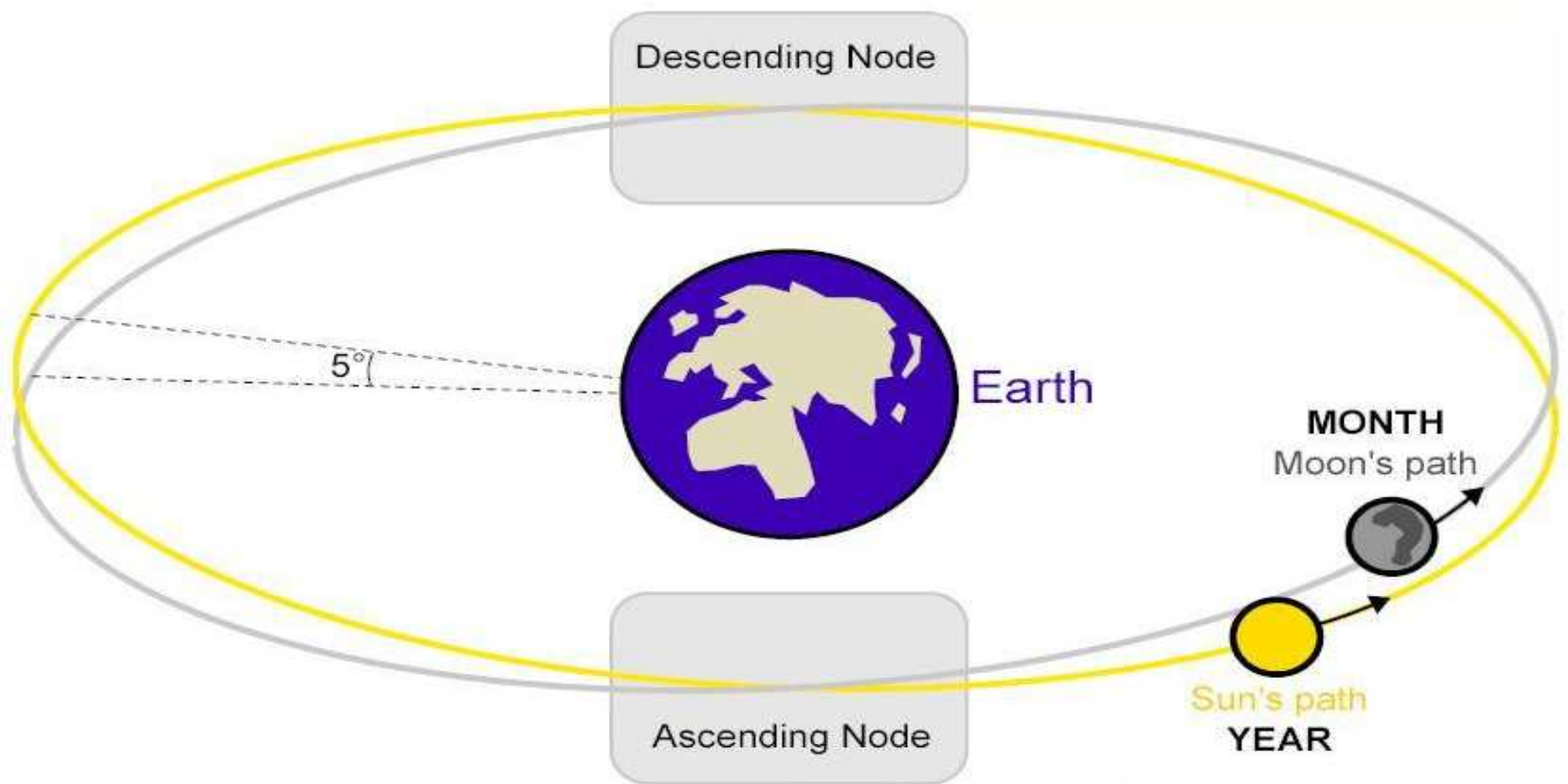
# Full Moon/New Moon

- Caused by Moon's revolution around the earth in 27.3 days
  - We see the moon because of light reflected from Sun
  - When Moon is opposite the Sun (with Earth in between), the sun's rays are reflected from full face of the moon and we have full Moon.
  - When Moon is between the Sun and Earth, no light is reflected and we have the No or the New Moon.
  - In all other positions, light gets reflected from a part of the moon and hence we have the waxing (becoming bigger) and the waning (becoming smaller) of the moon.
  - This is a 29.5 day rhythm [Synodic Period]

# Nodes



# Moon Nodes

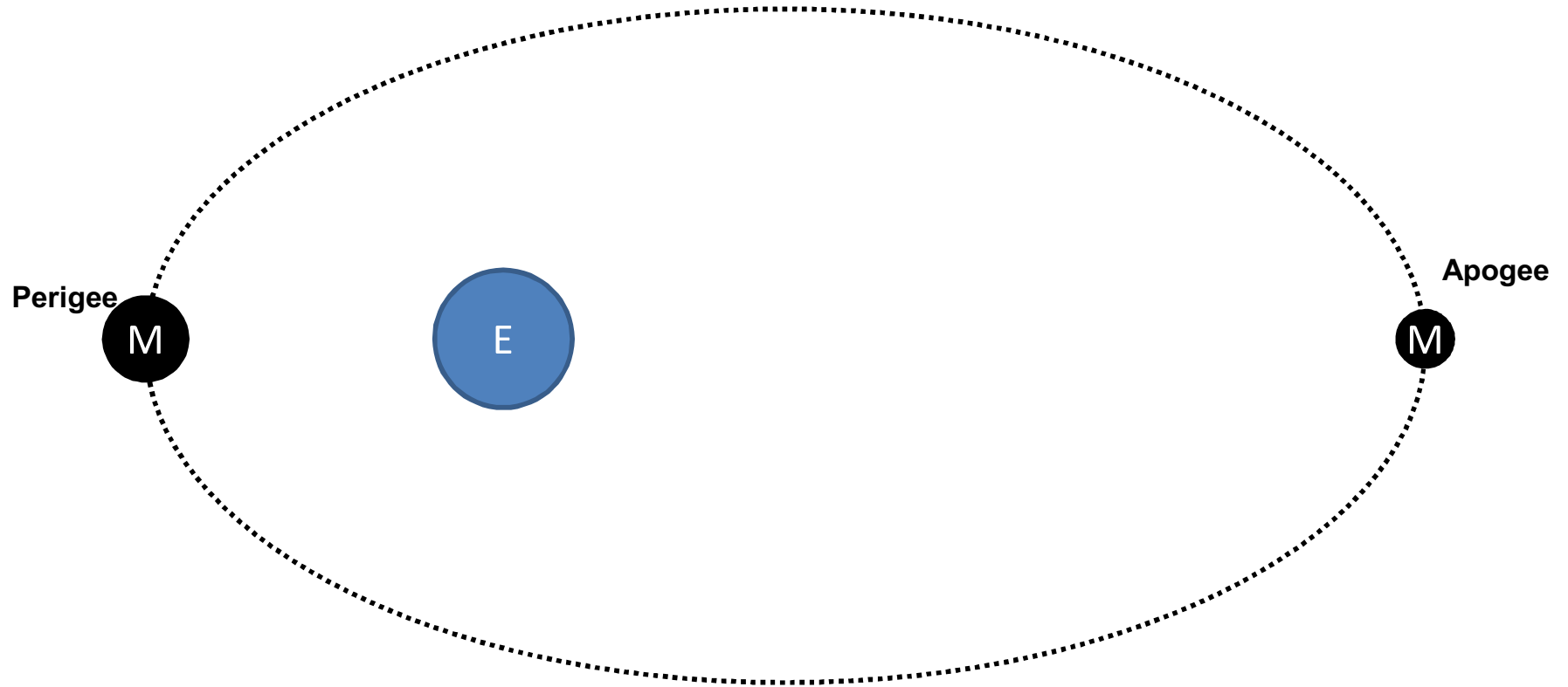




# Moon Nodes

- Caused by intersection of the Moon's & Earth's orbital planes
  - Moon's orbital plane is at 5 degrees to Earth's orbital plane
  - Approx. every 13.5 days their paths cross
  - When the node occurs on a new Moon we experience the solar eclipse
  - When the node occurs on a full Moon we experience the lunar eclipse
  - Nodes can be considered mini eclipses in terms of their effect
  - This is a 27.2 day rhythm

# Perigee/Apogee



# Perigee/Apogee

- This happens because the Moon's orbit is elliptical
  - Perigee is the Moon's closest point to the Earth
  - Apogee is the Moon's farthest point from the Earth
  - The Moon's distance varies by as much as 50000 kms. between these points
  - This is a 27.5 day rhythm

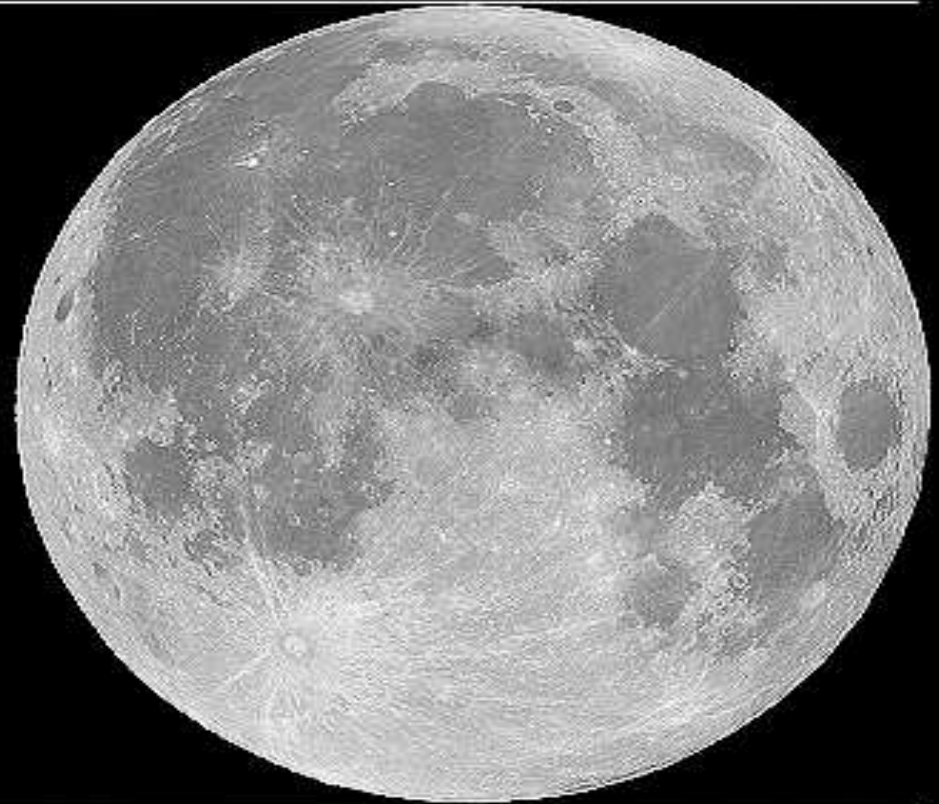
# Perigee/Apogee

Apogee



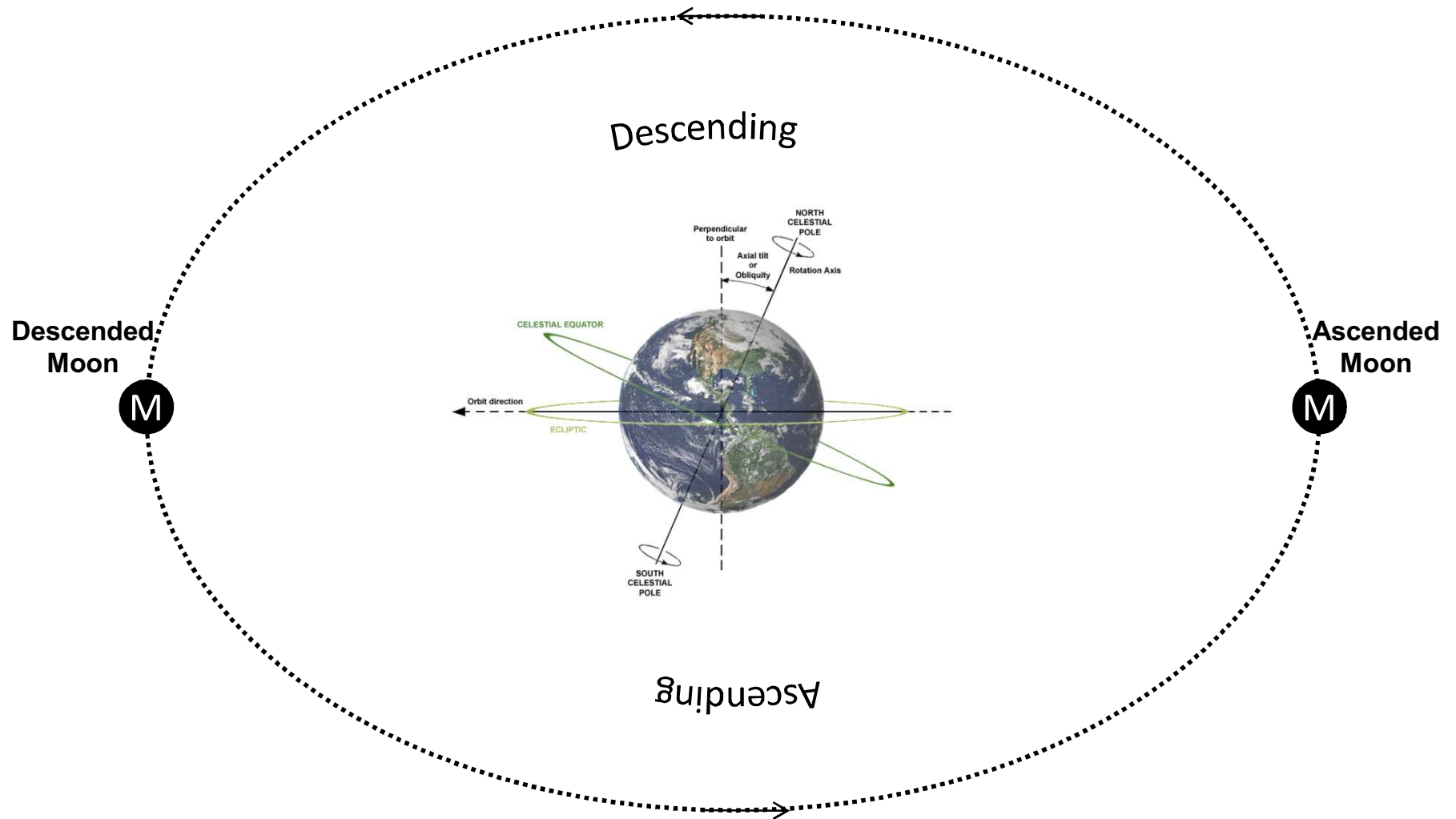
2006-02-13  
405,978 km  
29.87 arc-mins  
Altitude @ 69.17°

Perigee



2006-09-08  
357,210 km  
33.89 arc-mins  
Altitude @ 45.36°

# Ascending/Descending Moon



# Ascending/Descending Moon

- Caused by Earth's axis not being perpendicular to the planetary orbital plane but being at 23.5 degrees to it
  - Very similar to the sun's seasons
    - Ascending moon – moon's summer
    - Descending moon – moon's winter
  - Descended moon rises at the southern most point and its path across the sky is very low
  - Ascended moon rises at the northern most point and its path across the sky is higher
  - This is a 27.3 day cycle
  - Most important rhythm for agriculture
  - This is the Earth's monthly breath
    - Asc – Earth breathes out; Desc – Earth breathes in

# Moon Opposite Saturn

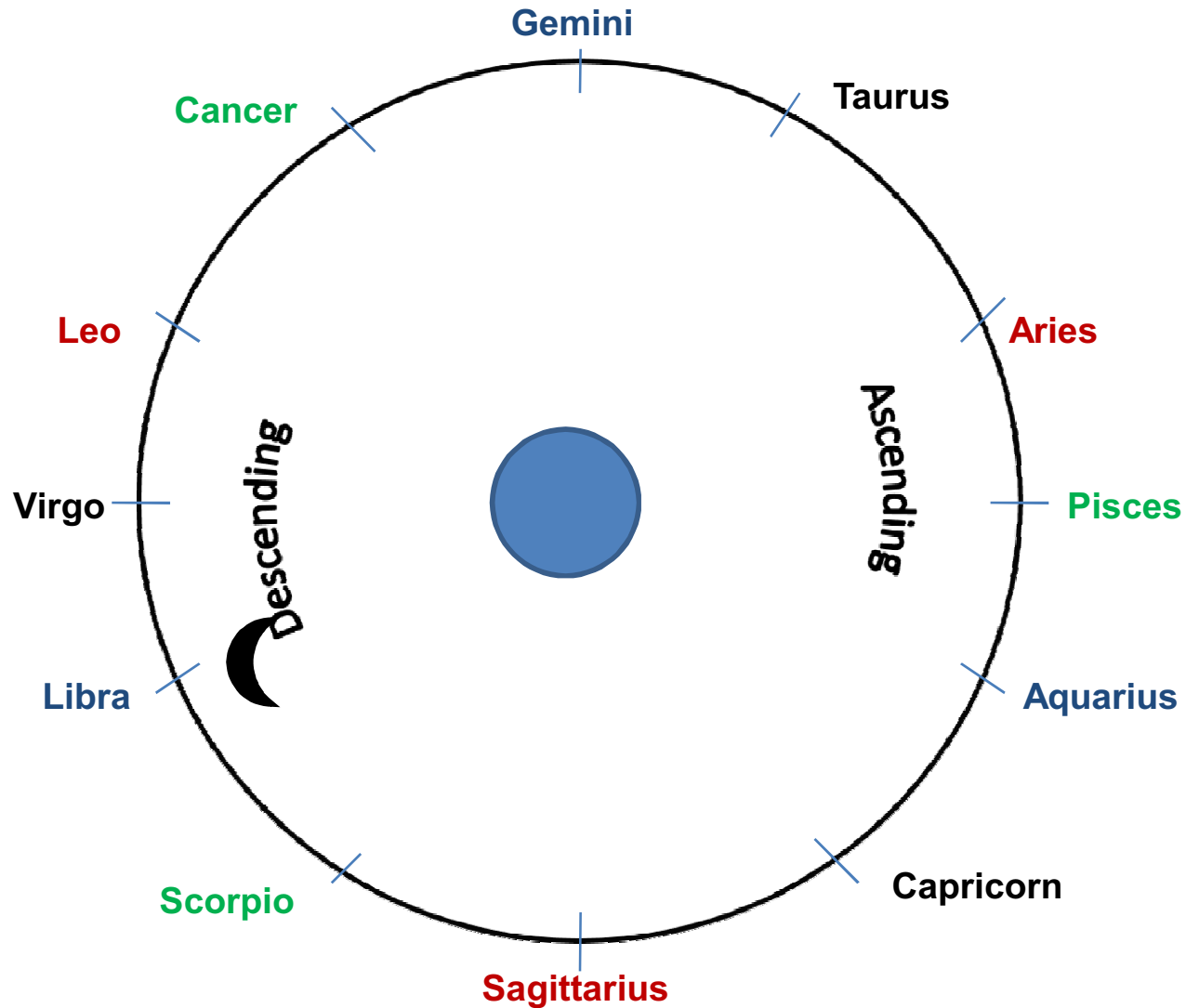


# Moon Opposite Saturn

- Occurs when Moon is exactly opposite Saturn
  - Occurs once in 27.3 days
  - Very important rhythm for agriculture



# Moon In Zodiac Constellations



# Moon in Zodiac Constellations

- The Moon passes in front of the zodiac constellations during it's orbit around Earth
  - So does the sun and all the planets
- Each zodiac constellation radiates certain favourable conditions which the Moon focuses on to the Earth as it resides in each constellation