Week 4
Addendum

Determining the Hebrew Year

- The Spiritual Year begins at the moment of sunset at Jerusalem, on the evening of the first potentially visible crescent moon beginning **Day 1** of **Month 1**.
- A Spiritual Year can begin before or after the spring equinox.
- The rule of the equinox always places **Day 15** of **Month 1** ***on or after*** the Hebrew Day of the spring equinox.
- A Hebrew Year always contains **12** Hebrew Months in a ***regular year*** or **13** Hebrew Months in a ***leap year***.
- The Spiritual Year begins on **Day 1** of **Month 1** based on the rule of the equinox and the typical Civil Year begins on **Day 1** of **Month 7**.
- Once every 50 years the special Jubilee Year begins on **Day 10** of **Month 7**.

The Equinox in Contrast to The Equilux

- The date at which the time between sunset and sunrise crosses 12 hours is known as the **equilux**.

- Because sunset and sunrise times vary with an observer's geographic location (longitude and latitude), the **equilux** likewise depends on location and does not exist for locations sufficiently close to the equator.

- The **equinox**, however, is a ***precise moment in time*** which is common to all observers on earth.

- The Creation Calendar **does not use** the **equilux** to determine the seasons as it is not a precise moment in time - it uses the **equinox**.

- On the day of an **equinox**, the center of the sun spends a roughly equal amount of time above and below the horizon at every location on the earth, night and day being of roughly the same length.

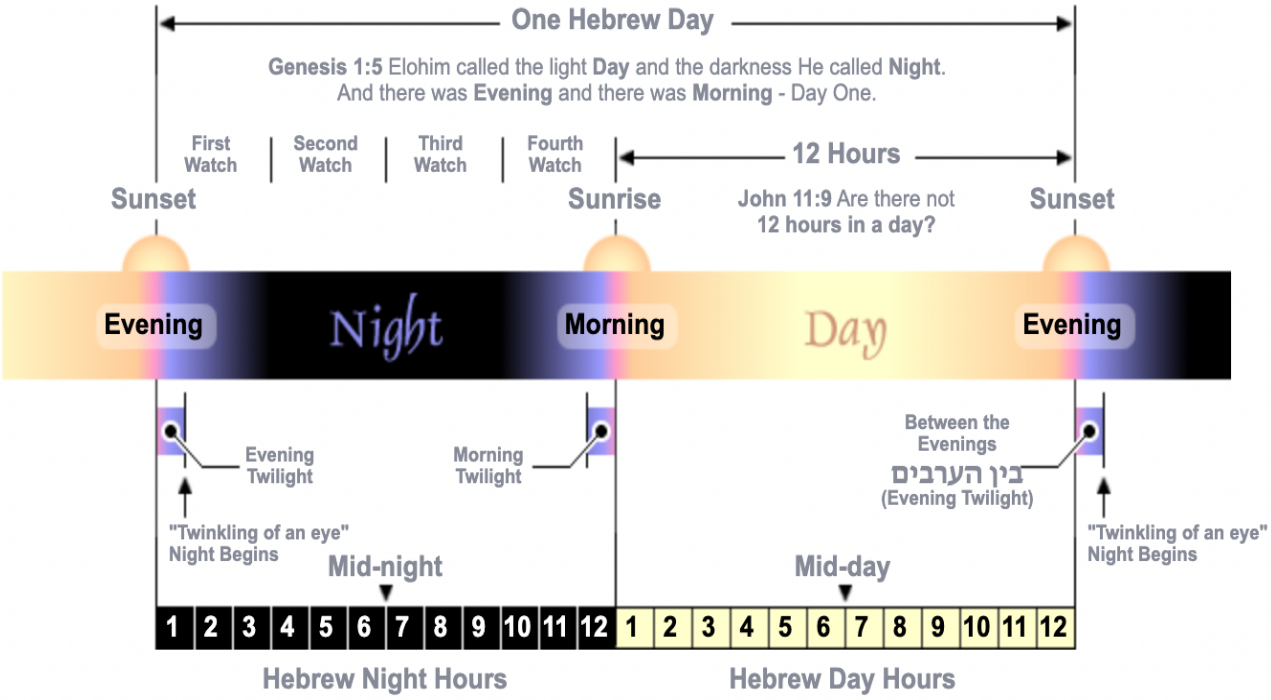
- Although the word **equinox** derives from the Latin words **aequus** (equal) and **nox** (night); in reality, the day is longer than the night at an **equinox**.

- A **day** is commonly defined as the period when sunlight reaches the ground in the absence of local obstacles.
- From the earth, the sun appears as a disc rather than a single point of light, so when the center of the sun is below the horizon, its upper edge is visible.

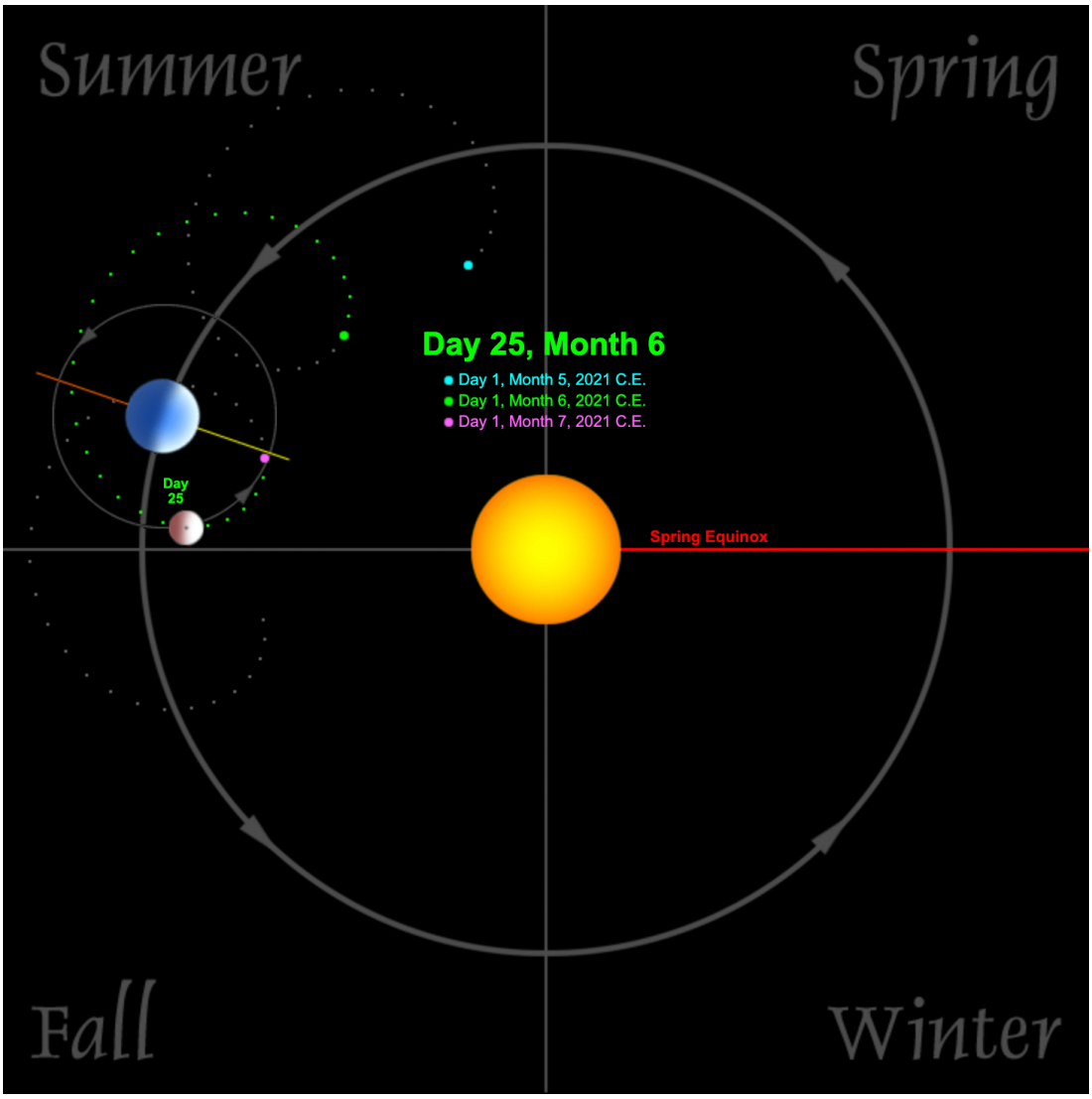
- The Torah, the Prophets and the Writings do not number specific Hebrew Hours.
- Only the Messianic Scriptures number specific Hebrew Hours in Matthew, Mark, Luke and Acts.
  - The **third hour** of the **day** is referred to in **Matthew 20:3-4**, **Mark 15:25** and **Acts 2:15**.
  - The **third hour** of the **night** is referred to in **Acts 23:23-24**.
  - The **sixth hour** of the **day** is referred to in **Matthew 20:5**, **27:45**, **Mark 15:33**, **Luke 23:44** and **Acts 10:9**.
  - The **ninth hour** of the **day** is referred to in **Matthew 20:5**, **27:45**, **27:46**, **Mark 15:33**, **15:34**, **Luke 23:44**, **Acts 3:1**, **Acts 10:3** and **Acts 10:30-31**.
  - The **eleventh hour** of the day is referred to in **Matthew 20:6** and **Matthew 20:9**.
- **A Hebrew Day consists of 12 Hebrew Night Hours and 12 Hebrew Day Hours.**
- **The midpoint of the 12 Hebrew Night Hours is called Mid-night.**
- **The moment of Mid-night occurs exactly halfway between sunset and sunrise separating the sixth and seventh Hebrew Night Hours.**
- **The midpoint of the 12 Hebrew Day Hours is called Mid-day.**
- **The moment of Mid-day occurs exactly halfway between sunrise and sunset separating the sixth and seventh Hebrew Day Hours.**

- **An easy way to measure Day Hours is by using an equiangular sundial marked with 12 divisions.**
- **Sunset** occurs and the **First Watch** begins exactly at the beginning of the **first** Hebrew Night Hour.
- The **Second Watch** begins exactly at the beginning of the **fourth** Hebrew Night Hour.
- **Mid-night** occurs and the **Third Watch** begins exactly at the beginning of the **seventh** Hebrew Night Hour.
- The **Fourth Watch** begins exactly at the beginning of the **tenth** Hebrew Night Hour and ends at **sunrise** at the end of the **twelfth** Hebrew Night Hour.
- **Sunrise** is always exactly at the beginning of the **first** Hebrew Day Hour.
- **Mid-day** occurs exactly at the end of the **sixth** Hebrew Day Hour.
- **Sunset** occurs exactly at the end of the **twelfth** Hebrew Day Hour.
- The duration of a Hebrew Hour varies with the season.
- A Hebrew Day Hour is ***shorter*** in duration during **winter** when a Hebrew Night Hour is ***longer*** in duration.
- A Hebrew Day Hour is ***longer*** in duration during **summer** when a Hebrew Night Hour is ***shorter*** in duration.

A Typical Hebrew Day



The Creator's Clock



- The earth once every lunar cycle. From a heliocentric perspective, the earth travels around the sun once every solar cycle.
- The diagram above shows the position of the moon and the earth, in relation to the sun, for any date.
- Equinoxes and solstices are designated by long lines dividing the year into its four seasons.

- Arrows on the gray circles show the direction of travel for the motions of the moon and earth.
- The dots mark the daily positions of the moon throughout the month. Three months are shown, one on either side of the Hebrew Month indicated.
- This graphic illustrates how the Creation Calendar uses both the sun and the moon to calculate days, months and years.
- More specifically, it is helpful for visualizing how the rule of the equinox is used to intercalate a leap month.
- The ***spring equinox*** is represented by a **red line** in this diagram.
- The rule of the equinox states that if by **Day 15** of the Hebrew Month ***following*** **Month 12**, the center of the earth is ***on*** or has ***already crossed*** the **red line** of the ***spring equinox***, then the month following **Month 12** is **Month 1**.
- If by **Day 15** of the Hebrew Month following **Month 12** the earth has ***not yet crossed*** the red line, then the month following **Month 12** is **Month 13**.
- The rule of the equinox is a perfect judgment of Elohim for determining the Hebrew Year.

Deuteronomy 32:3-4 *For I proclaim the name of* **יהוה** *: Ascribe greatness to our Elohim. He is the Rock,* ***His work is perfect, for all His ways are judgment****, an Elohim of truth and without iniquity, righteous and upright is He.*

- This diagram is a simplified representation of the motions of the earth and the moon.
- Although depicted as circles, the orbits of the earth and moon actually have an elliptical shape which looks more like an oval.
- Likewise, the speed of travel at points along these orbits varies throughout the year.

- For example, the earth travels slightly faster when it is closer to the sun than when it is further away.
- For this diagram, the orbits are shown as circles since visually, their elliptical aspect is minimal.
- However, the relative positions of the earth and moon as time progresses are rendered correctly.
- Therefore, in this diagram, the passage of the earth across the equinox and solstice lines will always occur on the correct dates.
- The daily positions of the moon, shown as dots on this diagram, appear to form a spiral pattern suggesting that the moon occasionally overlaps its path.
- However, this does not occur in the physical solar system.
- The spiral pattern results because the objects and relative distances shown in this diagram are not drawn to scale.
- For example, the average distance between the earth and sun is nearly 400 times the distance between the earth and the moon.
- Although this graphic is not drawn to scale, it correctly represents the orientations of the earth and the moon with respect to time.

The Equinoxes

- An **equinox** occurs twice a year, when the tilt of the earth's axis is inclined neither away from nor towards the sun, the sun being vertically above a point on the equator.
- An **equinox** is defined as the time when the apparent geocentric longitude of the sun (that is, calculated by including the effects of aberration and nutation) is either 0 degrees (the spring equinox) or 180 degrees (the fall equinox).

- At an **equinox**, the sun is at one of two opposite points on the celestial sphere where the **celestial equator** (i.e. declination 0) and **ecliptic** intersect.
- These points of intersection are called **equinoctial points**: the **vernal point** and the **autumnal point**. By extension, the term **equinox** may denote an **equinoctial point**.
- An **equinox** happens each year at two specific moments in time (rather than two whole days),
- When there is a location on the earth's equator where the center of the sun can be observed to be vertically overhead, occurring around March 20 and September 22 on the Gregorian Calendar.