
Parashat Kedoshim - קדושים

"holy ones"

Torah portion:

Leviticus 19:1 - 20:27

Haftarah portion:

Amos 9:7-15

Brit Chadashah/New Testament portion:

1 Peter 1:13-16

1 Corinthians 6:9-20

We often read surrounding N.T. scripture because it is such a blessing to do so.

* *In 2015, 2017, 2018 and 2020 Kedoshim was read with Acharei Mot

1 Peter 1:1 Peter (an) apostle of-Jesus Messiah to-chosen resident-aliens of-dispersion of-Pontus, of-Galatia, of-Cappadocia, of-Asia and of-Bithynia,

v2 According-to knowledge-before of-God Father, in holiness of-spirit, with-reference-to obedience and sprinkling of-blood of-Jesus Messiah; may favor to-YOU and peace be-multiplied.

v3 Blessed the God and Father of our Lord Jesus Messiah, namely-the-one having-been-begotten us again according-to his much mercy with-reference-to (a) living hope through resurrection of-Jesus Messiah out-of dead(s).

v4 With-reference-to (an) inheritance imperishable and undefiled and unfading, having-been-kept-and-still-being-kept in (the) heavens with-reference-to YOU

v5 The (ones) being-protectively-guarded in power of-God through trust with-reference-to (a) salvation prepared to-be-uncovered in (the) last season.

v6 In which YOU-are-exulting, (a) little-bit just-now if it-is-essential having-been-grieved in Various trials,

v7 In-order-that the means-of-proving YOUR trust much-more-price [than] gold being-perished, but through fire being-proved, it (your trust) might-be-found with-reference-to laudation and glory and honor (price) in uncovering of-Jesus Messiah;

v8 Whom not having-seen YOU-are-cherishing, with-reference-to whom just-now not seeing but trusting, YOU-are-exulting with-joy unspeakable and with-having-been-and-still-glorified.

v9 Obtaining-for-yourselves the finish of-the trust salvation of-souls.

v10 Concerning of-which salvation prophets sought-out and searched-out, the (ones) having-prophesied concerning of-the favor with-reference-to YOU,

v11 Searching with-reference-to whom or what-sort (of) season was-being-made-evident the spirit of-Messiah in them testifying-beforehand the sufferings with-reference-to Messiah and the glories after these-things.

v12 To-whom it-was-uncovered that not to-themselves but to-YOU they-were-ministering the-things, which now were-told to-YOU through the (ones) having-brought YOU good-news in

Holy Spirit having-been-dispatched from heaven, with-reference-to which (things) angels are-desiring to-stoop-alongside.

v13 On-this-account having-girded-up the loins of YOUR intellects, being-sober, YOU-hope perfectly on the favor being-brought to-YOU in uncovering of Jesus Messiah.

v14 As children of-obedience not configuring-yourselves to-the desires formerly in YOUR ignorance,

[Note: 1 Peter is perhaps primarily written to Hebrew Christians, so their former ignorance was in regards to the Gospel of Jesus Messiah. They were not ignorant concerning the Sinai Covenant, i.e. "Torah"/law, commandments, statutes, decrees, etc.]

v15 BUT according-to the holy-(one) having-called YOU also YOU yourselves become holy in all conduct,

v16 For-the-reason-that it-has-been-written-and-is-still-written: YOU-shall-be holy because I (am) holy.

v17 And if YOU-are-calling-on (a) Father the-one judging without-respect-to-persons according-to the work of-each, YOU-turnabout in fear the time of YOUR dwelling-abroad,

v18 Knowing-absolutely that YOU-were not redeemed with-perishable-things, silver-coin or gold-objects, out-of YOUR aimless conduct given-over-from-(your)-father,

[Note, these Hebrew Christians are not redeemed by the works/sacrifices of the law. This speaks of a higher holiness than that provided by the law, which was a shadow of this thing to come. Heb.10:13.]

v19 BUT with-precious blood as of-a-lamb-sacrifice unblemished and without-spot, Messiah,

v20 On-the-one-hand having-come-to-be-known-before-and-still-known before casting-down of (the) world, on-the-other-hand having-been-manifested on last of-the times because-of YOU

v21 The (ones) through him trusting with-reference-to God the (one) having-raised him out-of dead(s) and having-given glory to-him, so-that **YOUR trust** and hope be with-reference-to God.

v22 Having-purified-and-still-purifying YOUR souls in the obedience of-the truth with-reference-to brotherly-love without-hypocrisy, YOU-cherish one-another out-of (the) heart earnestly.

[Note: this is the Law of Messiah.]

v23 Having-been-begotten-again-and-still-begotten not out-of (a) perishable thing-sown BUT imperishable, through (the) living and remaining word of-God.

v24 For-the-reason-that all flesh as grass, and all its glory as flower of-grass; the grass was-dried-up, and the flower fell-away;

[Note; the works of the flesh are temporary.]

v25 But the saying of-Jehovah is-remaining into the age. But this is the saving, namely-the good-news-having-been-brought with-reference-to YOU.

Separating the Holy from the Profane:

The Sinai Law has been rendered inactive by the New Covenant.

This is detailed in the book of Hebrews.

It is profane for a Christian to attempt to follow the Sinai Law.

And so, again:

Digression A

http://www.cotopaxi-colorado.com/Passover/haggadah-digressions/digression_A_NOT-sanctified-by-commandments.htm

Sanctification? Atonement? Propitiation? Remission? Forgiveness?

And Why all the Blood?

The Body of Messiah is the N.T. Assembly. A body cannot marry its own head.

We are not sanctified by our keeping of commandments;

Further - How the commandments are kept.

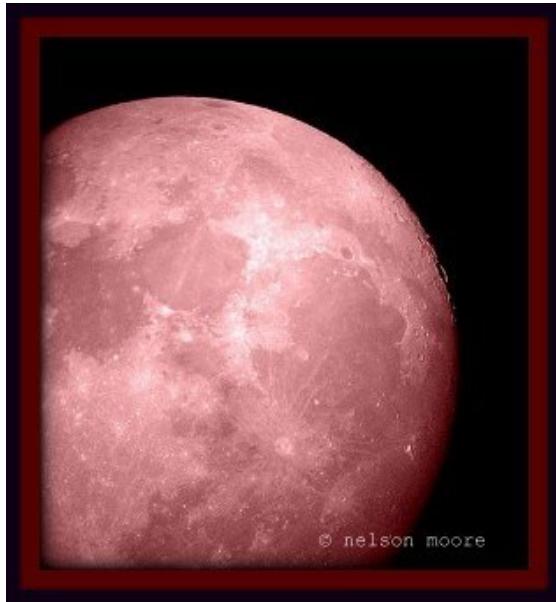
And so, again:

Jesus saves.

1 Corinthians 1:30 But out-of him YOU yourselves-are in Messiah Jesus, who became wisdom to-us from God, both righteousness and holiness and redemption.

v31 In-order-that according-as it-has-been-and-is-still-written: The (one) boasting let-him-be-boasting in Jehovah.

Blood Red Moon?



There was much "to do" about the April 15, 2014 "Blood Red Moon". This is often linked "as a sign" to Luke 21:25,-26 and Mark 13:24-25.

What happens if it's cloudy?

fact: [this lunar eclipse won't be visible at all in Israel.](#)
<http://danspace77.com/2014-eclipses-2/>

And this applies to the April, 4, 2015 eclipse,

It is often claimed that these are signs to the Gentiles/nations, (at least when they can see them).

Well, I suppose the red moons could be a sign (Luke 21:25). But **these eclipses are certainly not a sign that causes men to literally get scared to death** (Lu.21:26). The nations are not worried about this red moon stuff:

A quote from the Farmer's Almanac: "**Full Pink Moon – April-** This name came from the herb moss pink, or wild ground phlox, which is one of the earliest widespread flowers of the spring. Other names for this month's celestial body include the Full Sprouting Grass Moon, the Egg Moon, and among coastal tribes the Full Fish Moon, because this was the time that the shad swam upstream to spawn."

Jesus didn't speak these things to the nations. He said these things primarily to Jews and then privately to his disciples (& about their relationship to/with Gentiles/nations) as he taught in the temple (Lu.20:1; 21:37; Mk.13:3). Of course, gentiles should listen too. I'll share some further thoughts...

Of course, Jesus often spoke in parables. Scripture says he *always* spoke in parable to the crowds. Again, these crowds were likely predominately Jewish:

Matthew 14:34 The Jesus spoke all these-(things) in parables to-the crowds, and **separate-from parable he-was not speaking to-them;**

v35 In-which-case the-(thing) having-been-said through the prophet might-be-fulfilled, saying, **I-shall-open my mouth in parables:** I-shall-blurt-out (things)-having-been-and-still-hidden from casting-down of-(a)-world.

This is part of a 2000 year prophecy by Yeshua:

Luke 21:24 And they-will-fall by-mouth of-dagger, and they-will-be-led-captive into all the Gentiles; and Jerusalem will-be being-trodden by nations until seasons of-nations might-be-fulfilled.

[Jerusalem falls AD.70: - June 1967 Israel regains control of the Temple mount. The season of the gentiles "might-be-filled". Yes, a "diaspora" (dispersion) continues, but it is no longer a mandatory "galut" (exile).]

Luke 21:25 And signs will-be in sun and moon and stars, and over the earth (a) holding-together of-nations in perplexity, (as) sea and surf (is) sounding,

[According to Joseph's dream, **the sun, moon and stars are Jacob, Rachel, and his eleven brothers.**

Genesis 37:9 And he dreamed yet another dream, and told it to his brethren, and said, Behold, I have dreamed yet a dream: and, behold, the sun and the moon and eleven stars made obeisance to me.

10 And he told it to his father, and to his brethren; and his father rebuked him, and said unto him, What is this dream that thou hast dreamed? Shall I and thy mother and thy brethren indeed come to bow down ourselves to thee to the earth?

11 And his brethren envied him; but his father kept the saying in mind.

Since Rachel was dead, how was this verse understood? It spoke of the resurrection. Certainly when the dead in Messiah come out of the graves, the nations will be perplexed -and when unbelievers see YHVH Yeshua return in glory, in wrath, it is quite possible to imagine that some will be scared to death...

Mark 13:26 And then they-will-see the son of-the MAN coming in clouds with much power and glory.

Luke 21:26 (As) MEN (are) stopping-breathing from fear and anticipation of-the-(things) coming-on for-the inhabited-earth, for the powers of-the heavens will-be-stirred.

Considering the related **Mark 13:24,25:** "BUT in those days, after that tribulation, the sun will-be-made-dark, and the moon will not give her radiance;v25 And **the stars of-the heaven will-be falling-away**, and the powers, the (ones) in the heavens will-be-stirred".

The nearest star, Proxima Centauri, is around 25 trillion miles away, and that stars move up to 100 miles per second. At 100 miles per second, 8,640,000 miles per day, it would take it over 7900 years to get here.

100 x 60 = 6000 miles traveled per minute

6000 x 60 = 360000 miles traveled per hour

360000 x 24 = 8640000 miles traveled per day

8,640,000 x 365.25 = 3,155,760,000 miles traveled per year

25,000,000,000,000 / 3,155,760,000 = 7,922.022 years for this star to reach the sun/earth.

This star is actually moving much slower towards earth, 13.484mi/s, so at that rate it will take it over 58,000 years to get to the sun. (The sun is about 93 million miles away from earth, but if there were two suns that close to earth, we would be toast!)

13.484 x 60 sec = 809.04 miles traveled per minute

809.04 x 60 = 48,542.4 miles traveled per hour

48,542.4 x 24 = 1,165,017.6 miles traveled per day

1165017.6 x 365.25 = 425,522,678.4 miles traveled per year

25,000,000,000,000 / 425,522,678.4 = 58,751.275241080076826288372977115 years for this star to reach the sun/earth.

The sun, moon and stars here in Luke and at Mk.13:24,25 would therefore appear to be figurative. Note that "will-be falling-away" is a periphrastic future, the stars will be continuously falling away, not all at once - again, figuratively speaking of Israel, because **God uses the permanency of the literal stars as a guarantee of Israel's existence:**

Jeremiah 31:35 Thus saith Jehovah, who giveth the sun for a light by day, and the ordinances of the moon and of the stars for a light by night, who stirreth up the sea, so that the waves thereof roar; Jehovah of hosts is his name:

36 If these ordinances depart from before me, saith Jehovah, then the seed of Israel also shall cease from being a nation before me for ever.

37 Thus saith Jehovah: If heaven above can be measured, and the foundations of the earth searched out beneath, then will I also cast off all the seed of Israel for all that they have done, saith Jehovah.

Perhaps with "sea and surf sounding" consider Jude v13 "Wild waves of (a) sea foaming-up the shames of-themselves, stars leaders-astray, for-whom the gloom of-the darkness has-been-kept-and-is-still-kept with-reference-to (an) age."

Concerning how they viewed the stars in Jesus' day, consider the Antikythera Mechanism:

https://en.wikipedia.org/wiki/Antikythera_Mechanism

Briefly, with more to follow: Absolutely amazing! The Antikythera mechanism proves that the mankind of Jesus' day (and much earlier) were quite knowledgeable concerning the movement of the celestial bodies.

Cont. Luke 21:26 (As) MEN (are) stopping-breathing from fear and anticipation of-the-(things) coming-on for-the inhabited-earth, for the powers of-the heavens will-be-stirred.

The red moons MAY be a fig leaf to Israel, but at any rate they are not causing men (anthropos, mankind) to be literally scared to death. Unless this is happening in some Messianic circles? More likely the Word of God is being blasphemed by false prophets and false teachers. That is, because nothing happens as the "false" ones predict, the world mocks the Word of God.

Regarding τῆς οἰκουμένης τᾶς οἰ-κü-μe'-nā) - the inhabited-earth" - Satan is "leading-astray the total inhabited -earth" (Rev. 12:9). This term refers to the Roman Ecumenical Assembly, see [Theological Dictionary of the New Testament](#), Vol 5, p159: "***There is within the NT no disputing of the political oikoumenee understanding of the Roman Empire, not even in Rev.***" That is to say, in scripture, the "inhabited-earth" is NOT the whole earth, much less "all creation"...Note [Matt. 24 :14](#) And this good-news of-the kingdom will-be-preached in the total inhabited-earth with-reference-to (a) testimony to-all the Gentiles and then the finish will-be-present. "will be preached - future: yet compare "having been preached" @[Col.1:23](#): "If in fact YOU-are-continuing in-the trust having-been-and-still-founded and immovable and not being-moved-away from the hope of-the good-news which YOU-heard, namely-the (good-news) having-been-preached in all creation namely-the (creation) under the heaven, of-which I Paul became (a) minister."

Cont. Luke 21:27 And then they-will-see the son of-the MAN coming in (a) cloud with power and much glory.

[note - at the last trump, believers are instantly changed incorruptible (1Cor.15:51-52. 1 Thess. 4:13-18 - gives a rundown/sequence for three distinct groups 1. Those that sleep in Jesus. 2. Those dead in Messiah. 3. We (speaks of believers) that are alive and remain.

The dead in Messiah - Jews trusting towards Messiah and those blinded by God so as to not see Messiah, and the latter will look on him they pierced and mourn - this dictates that some time passes - maybe not much - until "all Israel is saved (Ro.11:26)]

v28 But (as) these-(things) (are) beginning to-be-coming-to-pass YOU-stand-erect and YOU-elevate YOUR heads, for-the-reason-that YOUR redemption-back is-drawing-near.

[For 2000 years the salt (Israel) has "become stupid" (Luke 14:34), but will again in Messiah be seasoned.]

v29 And he-said (a) parable to-them, YOU-see the fig-tree and all the trees;

["and all the trees" - a reference to gentiles/nations. Israel the fig tree.]

v30 At-the-time-that they-might already cast-forward, (while) looking from yourselves, YOU-be-coming-to-know, that the summer is already near.

v31 Thus also YOU, at-the-time-that YOU-might-see these-(things) coming-to-pass, YOU-be-coming-to-know, that the kingdom of-the God is near.

v32 Amen I-am-saying to-YOU, that by-no-means might this race go-past, till all-(things) might- come-to-pass.

[This speaks of the permanence of the Jew.]

v33 **The heaven and the earth will-go-past**, but by-no-means might my words go-past.

[Jesus gave future prophecy and also is saying to pay attention, and to live right presently:]
v34 But YOU-be-paying-attention to-yourselves, lest-at-any-time YOUR hearts might-be-weighted with debauchery and drunkenness and anxieties pertaining-to-this-life, and that day might-stand-by sudden upon YOU;

v35 For it-will-come-on as (a) snare upon all the-(ones) sitting upon face of-all the earth.
v36 Therefore YOU-be-being-sleepless petitioning in every season, in-order-that YOU-might-be-deemed-worthy to-flee-out-of all these-(things), the-(ones) being-about to-be-coming-to-pass, and to-be-stood in-front of-the son of-the MAN.

[Watch.]

v37 But he-was the days in the temple teaching, but the nights going-out he-was-lodging-outside with-reference-to the mountain namely-the-(one) being-called of-olives;

There are many prophecies regarding the end times which require a lot of bible study to begin to understand. Bible prophecy is not to allow us to become fortune tellers, but rather to show God's glory as prophetic truths unfold. I suspect that men's ignorance of biblical prophecies, coupled with their vanity, leads them to seek attention via means of the "blood red moon" hype. It is easier to make something up than it is to study the bona fide ("in good faith") prophecies that God, The Word, has given.

However, these red moons are fun to observe!

Additional Support:

List of eclipses that were not or will not be seen in Israel:

Total lunar eclipse April 15, 2014. No eclipse seen at all anywhere in Israel. **Pink moon in some USA areas.**

Annular solar eclipse April 29, 2014. No eclipse seen at all anywhere in Israel.

Total lunar eclipse October, 2014. No eclipse seen at all anywhere in Israel.

Partial solar eclipse October 23, 2014.. No eclipse seen at all anywhere in Israel.

Total Lunar eclipse April 4, 2015. No eclipse seen at all anywhere in Israel. Pink moon in some USA areas.

From NASA, a list of past and future **solar** eclipses viewable from Jerusalem, Israel:

<http://eclipse.gsfc.nasa.gov/JSEX/JSEX-AS.html>

From NASA, a list of past and future **lunar** eclipses viewable from Jerusalem, Israel:

<http://eclipse.gsfc.nasa.gov/JLEX/JLEX-AS.html>

There are no solar or lunar eclipses, partial or full, viewable in 2014 from Jerusalem, Israel.

Isaiah 1:3 Bring no more vain oblations; incense is an abomination unto me; the new moons and sabbaths, the calling of assemblies, I cannot away with; it is iniquity, even the solemn meeting.

4 Your new moons and your appointed feasts my soul hateth: they are a trouble unto me; I am weary to bear them.

Calendars and years:

Calendar year. The Gregorian calendar, as used for civil purposes, is an international standard. It is a solar calendar, meaning that it is designed to maintain synchrony with the tropical year. It has a cycle of 400 years (146,097 days). Each cycle repeats the months, dates, and weekdays. The average year length is $146,097/400 = 365+97/400 = 365.2425$ days per year, a close approximation to the tropical year. (Seidelmann, 1992, pp. 576–81)

Tropical Year

https://en.wikipedia.org/wiki/Tropical_year

A tropical year (also known as a solar year), for general purposes, is the length of time that the Sun takes to return to the same position in the cycle of seasons, as seen from Earth; for example, the time from vernal equinox to vernal equinox, or from summer solstice to summer solstice. Because of the precession of the equinoxes, the seasonal cycle does not remain exactly synchronized with the position of the Earth in its orbit around the Sun. As a consequence, the tropical year is about 20 minutes shorter than the time it takes Earth to complete one full orbit around the Sun as measured with respect to the fixed stars (the sidereal year).

The Gregorian calendar is a reformed version of the Julian calendar. By the time of the reform in 1582, the date of the vernal equinox had shifted about 10 days, from about March 21 at the time of the First Council of Nicaea in 325, to about March 11. According to North, the real motivation for reform was not primarily a matter of getting agricultural cycles back to where they had once been in the seasonal cycle; the primary concern of Christians was the correct observance of Easter. The rules used to compute the date of Easter used a conventional date for the vernal equinox (March 21), and it was considered important to keep March 21 close to the actual equinox. (North, 1983, pp. 75–76)

If society in the future still attaches importance to the synchronization between the civil calendar and the seasons, another reform of the calendar will eventually be necessary. According to Blackburn and Holford-Strevens (who used Newcomb's value for the tropical year) if the tropical year remained at its 1900 value of 365.24219878125 days the Gregorian calendar would be 3 days, 17 min, 33 s behind the Sun after 10,000 years. Aggravating this error, the length of the tropical year (measured in Terrestrial Time) is decreasing at a rate of approximately 0.53 s per 100 tropical years. Also, the mean solar day is getting longer at a rate of about 1.5 ms per 100 tropical years. These effects will cause the calendar to be nearly a day behind in 3200. A possible reform would be to omit the leap day in 3200, keep 3600 and 4000 as leap years, and thereafter make all centennial years common except 4500, 5000, 5500, 6000, etc. The effects are not sufficiently predictable to form more precise proposals. (Blackburn & Holford-Strevens, 2003, p. 692)

Borkowski (1991, p. 121) states "because of high uncertainty in the Earth's rotation it is premature at present to suggest any reform that would reach further than a few thousand years into the future." He estimates that in 4000 the Gregorian year (which counts actual solar days) will be behind the tropical year by 0.8 to 1.1 days. (p. 126)

Sidereal year

https://en.wikipedia.org/wiki/Sidereal_year

A sidereal year is the time taken by the Earth to orbit the Sun once with respect to the fixed stars. Hence it is also the time taken for the Sun to return to the same position with respect to the fixed stars after apparently travelling once around the ecliptic. This differs from the solar or tropical year which has length equal to the time interval between vernal equinoxes in successive years. It was equal to 365.256363004 SI days[1] at noon 1 January 2000 (J2000.0). This is 6 hours and 9.1626 minutes longer than the standard calendar year of 365 SI days, and 20m24.5128s longer than the mean tropical year at J2000.0.[1] The word "sidereal" is derived from the Latin *sidus* meaning "star".

Precession of the equinoxes:

[https://en.wikipedia.org/wiki/Axial_precession_\(astronomy\)](https://en.wikipedia.org/wiki/Axial_precession_(astronomy))

Earth's precession was historically called the precession of the equinoxes, because the equinoxes moved westward along the ecliptic relative to the fixed stars, opposite to the yearly motion of the Sun along the ecliptic. This term is still used in non-technical discussions, that is, when detailed mathematics are absent. Historically,[2] Hipparchus has been credited with discovering precession of the equinoxes, although evidence from cuneiform tablets suggest that his statements and mathematics relied heavily on Babylonian astronomical materials that had existed for many centuries prior. The exact dates of his life are not known, but astronomical observations attributed to him by Ptolemy date from 147 BC to 127 BC.

Etymologically, precession and procession are terms that relate to motion (derived from the Latin *processio*, "a marching forward, an advance"). Generally the term procession is used to describe a group of objects moving forward, whereas, the term precession is used to describe a group of objects moving backward. The stars viewed from Earth are seen to proceed in a procession from east to west daily, due to the Earth's diurnal motion, and yearly, due to the Earth's revolution around the Sun. At the same time the stars can be observed to move slightly retrograde, at the rate of approximately 50 arc seconds per year, a phenomenon known as the "precession of the equinox".

The precession of the Earth's axis has a number of observable effects. First, the positions of the south and north celestial poles appear to move in circles against the space-fixed backdrop of stars, completing one circuit in approximately 26,000 years. Thus, while today the star Polaris lies approximately at the north celestial pole, this will change over time, and other stars will become the "north star".[2] In approximately 3200 years, the star Gamma Cephei in the Cepheus constellation will succeed Polaris for this position. The south celestial pole currently lacks a bright star to mark its position, but over time precession also will cause bright stars to become south stars. As the celestial poles shift, there is a corresponding gradual shift in the apparent orientation of the whole star field, as viewed from a particular position on Earth.

Secondly, the position of the Earth in its orbit around the Sun at the solstices, equinoxes, or other time defined relative to the seasons, slowly changes.[2] For example, suppose that the Earth's orbital position is marked at the summer solstice, when the Earth's axial tilt is pointing directly toward the Sun. One full orbit later, when the Sun has returned to the same apparent position relative to the background stars, the Earth's axial tilt is not now directly toward the Sun: because of the effects of precession, it is a little way "beyond" this. In other words, the solstice occurred a little earlier in the orbit. Thus, the tropical year, measuring the cycle of seasons (for example, the time from solstice to solstice, or equinox to equinox), is about 20 minutes shorter than the sidereal year, which is measured by the Sun's apparent position relative to the stars. Note that 20 minutes per year is approximately equivalent to one year per 25,772 years, so after

one full cycle of 25,772 years the positions of the seasons relative to the orbit are "back where they started". (Other effects also slowly change the shape and orientation of the Earth's orbit, and these, in combination with precession, create various cycles of differing periods; see also Milankovitch cycles. The magnitude of the Earth's tilt, as opposed to merely its orientation, also changes slowly over time, but this effect is not attributed directly to precession.)

For identical reasons, the apparent position of the Sun relative to the backdrop of the stars at some seasonally fixed time slowly regresses a full 360° through all twelve traditional constellations of the zodiac, at the rate of about 50.3 seconds of arc per year (approximately 360 degrees divided by 25,772), or 1 degree every 71.6 years. The constellation or house of the zodiac in front of which the Sun rises at the vernal equinox is therefore changed, and this is described as "the age of (the zodiac sign or house)," (e.g.; The Age of Aquarius). Various trends in mythological and religious beliefs are associated with the change of Ages and the different nature of the astrological sign associated with the zodiac constellation.[6]

Hipparchus' discovery: Hipparchus gave an account of his discovery in *On the Displacement of the Solstitial and Equinoctial Points* (described in Almagest III.1 and VII.2). He measured the ecliptic longitude of the star Spica during lunar eclipses and found that it was about 6° west of the autumnal equinox. By comparing his own measurements with those of Timocharis of Alexandria (a contemporary of Euclid, who worked with Aristillus early in the 3rd century BC), he found that Spica's longitude had decreased by about 2° in about 150 years. He also noticed this motion in other stars. He speculated that only the stars near the zodiac shifted over time. Ptolemy called this his "first hypothesis" (Almagest VII.1), but did not report any later hypothesis Hipparchus might have devised. Hipparchus apparently limited his speculations, because he had only a few older observations, which were not very reliable.

Why did Hipparchus need a lunar eclipse to measure the position of a star? The equinoctial points are not marked in the sky, so he needed the Moon as a reference point. Hipparchus already had developed a way to calculate the longitude of the Sun at any moment. A lunar eclipse happens during Full moon, when the Moon is in opposition. At the midpoint of the eclipse, the Moon is precisely 180° from the Sun. Hipparchus is thought to have measured the longitudinal arc separating Spica from the Moon. To this value, he added the calculated longitude of the Sun, plus 180° for the longitude of the Moon. He did the same procedure with Timocharis' data (Evans 1998, p. 251). Observations such as these eclipses, incidentally, are the main source of data about when Hipparchus worked, since other biographical information about him is minimal. The lunar eclipses he observed, for instance, took place on April 21, 146 BC, and March 21, 135 BC (Toomer 1984, p. 135 n. 14).

Hipparchus also studied precession in *On the Length of the Year*. Two kinds of year are relevant to understanding his work. The tropical year is the length of time that the Sun, as viewed from the Earth, takes to return to the same position along the ecliptic (its path among the stars on the celestial sphere). The sidereal year is the length of time that the Sun takes to return to the same position with respect to the stars of the celestial sphere. Precession causes the stars to change their longitude slightly each year, so the sidereal year is longer than the tropical year. Using observations of the equinoxes and solstices, Hipparchus found that the length of the tropical year was $365+1/4-1/300$ days, or 365.24667 days (Evans 1998, p. 209). Comparing this with the length of the sidereal year, he calculated that the rate of precession was not less than 1° in a century. From this information, it is possible to calculate that his value for the sidereal year was $365+1/4+1/144$ days (Toomer 1978, p. 218). By giving a minimum rate he may have been allowing for errors in observation.

To approximate his tropical year Hipparchus created his own lunisolar calendar by modifying those of Meton and Callippus in *On Intercalary Months and Days* (now lost), as described by Ptolemy in the Almagest III.1 (Toomer 1984, p. 139). The Babylonian calendar used a cycle of

235 lunar months in 19 years since 499 BC (with only three exceptions before 380 BC), but it did not use a specified number of days. The Metonic cycle (432 BC) assigned 6,940 days to these 19 years producing an average year of $365+1/4+1/76$ or 365.26316 days. The Callippic cycle (330 BC) dropped one day from four Metonic cycles (76 years) for an average year of $365+1/4$ or 365.25 days. Hipparchus dropped one more day from four Callippic cycles (304 years), creating the Hipparchic cycle with an average year of $365+1/4-1/304$ or 365.24671 days, which was close to his tropical year of $365+1/4-1/300$ or 365.24667 days.

We find Hipparchus' mathematical signatures in the Antikythera Mechanism, an ancient astronomical computer of the second century BC. The mechanism is based on a solar year, the Metonic Cycle, which is the period the Moon reappears in the same star in the sky with the same phase (full Moon appears at the same position in the sky approximately in 19 years), the Callippic cycle (which is four Metonic cycles and more accurate), the Saros cycle and the Exeligmos cycles (three Saros cycles for the accurate eclipse prediction). The study of the Antikythera Mechanism proves that the ancients have been using very accurate calendars based on all the aspects of solar and lunar motion in the sky. In fact, the Lunar Mechanism which is part of the Antikythera Mechanism depicts the motion of the Moon and its phase, for a given time, using a train of four gears with a pin and slot device which gives a variable lunar velocity that is very close to the second law of Kepler, i.e. it takes into account the fast motion of the Moon at perigee and slower motion at apogee. This discovery proves that Hipparchus mathematics were much more advanced than Ptolemy describes in his books, as it is evident that he developed a good approximation of Kepler's second law.

The Antikythera Mechanism!

https://en.wikipedia.org/wiki/Antikythera_Mechanism

Absolutely amazing! **The Antikythera mechanism proves that the mankind of Jesus' day (and much earlier) were quite knowledgeable concerning the movement of the celestial bodies.** This was made about 100 bc, and this gives a scientific "sighting" of the new moon to the time of Messiah, and earlier. Instructions were included and it was set up so that a layperson could operate it. It is interesting that the technology is placed in Babylon; that is, the Greeks got it from the Babylonians.

Some highlights:

"Moreover, the divisions on the inside of the dial at the cardinal points indicate the start of a new full moon cycle."

"The scientists who have reconstructed the Antikythera mechanism also agree that it was too sophisticated to have been a unique device."

"In 2006 Wright completed what he believed to be an almost exact replica of the mechanism"

"The Moon mechanism, using an ingenious train of gears, two of them linked with a slightly offset axis and pin in a slot, shows the position and phase of the Moon during the month. The velocity of the Moon appears to vary according to the theory of Hipparchus, and to a good approximation follows Kepler's second law for the angular velocity, being faster near the perigee and slower at the apogee."

"Nature published another study in November 2010,[86] which suggests that the mechanism may be based on computation methods used in Babylonian astronomy, not ancient Greek astronomy, implying that Babylonian astronomy inspired the Greek counterpart; including the mechanical constructs"

Equinox

<https://en.wikipedia.org/wiki/Equinox>

Date

When Julius Caesar established his calendar in 45 BC he set 25 March as the spring equinox. Because a Julian year (365.25 days) is slightly longer than an actual year the calendar drifted with respect to the equinox, such that the equinox was occurring on about 21 March in AD 300 and by AD 1500 it had reached 11 March.

This drift induced Pope Gregory XIII to create a modern Gregorian calendar. The Pope wanted to restore the edicts concerning the date of Easter of the Council of Nicaea of AD 325. (Incidentally, the date of Easter itself is fixed by an approximation of lunar cycles used in the Hebraic calendar, but according to the historian Bede the English name "Easter" comes from a pagan celebration by the Germanic tribes of the vernal (spring) equinox.) So the shift in the date of the equinox that occurred between the 4th and the 16th centuries was annulled with the Gregorian calendar, but nothing was done for the first four centuries of the Julian calendar. The days of 29 February of the years AD 100, AD 200, AD 300, and the day created by the irregular application of leap years between the assassination of Caesar and the decree of Augustus re-arranging the calendar in AD 8, remained in effect. This moved the equinox four days earlier than in Caesar's time.

Consider how this might affect the actual date of the last Passover of Jesus. **If you don't trust the Word** in Luke 22, which says he kept the Passover, **these things - may - help explain how Jesus could keep/eat the Passover on one day and be the Passover on the next.**

All things consist by and in Jesus: **Colossians 1:16** Because in him [the] all things were created in the heavens and on the earth, the (things) visible and the (things) invisible, whether thrones or lordships or rulers or authorities; [the] all-things have-been-and-still-are-created through him and with-reference-to him;

v17 And he himself is before all (things) and in him [the] all-things have-stood-and-still-stand-together,

Yeshua, as the creator of time and space and everything therein, knew precisely the day and times of Passover. Perhaps as in similitude of man he kept man's passover on one day and then kept His passover on the next...

Romans 8:1 So (there-is) now not-one condemnation's-punishment to-the (ones) in Messiah Jesus.

v2 For **the law of-the spirit of-the life in Messiah Jesus made me free** from the law of the sin and of-the death.

v3 For **the impossible (thing) of-the law**, in which it-was-being-weak through the flesh, the God having-sent the son of-himself **in similitude of-flesh** of-sin and concerning sin he-condemned the sin in the flesh,

v4 In-order-that **the just-act** of-the law might-be-fulfilled in us, the (ones) walking-around not according-to flesh BUT **according-to spirit.**

Philippians 2:5 YOU-be-having this opinion in YOU which also (is) **in Messiah Jesus,**

v6 Who **existing in form of-God** considered not the **being equal with-God** (a thing for seizure,

v7 BUT **he-emptied himself having-taken form of (a) slave, having-become in similitude of-MEN:**

v8 And having-been-found **in-figure as MAN** he-humbled himself having-become obedient as-far-as death, but death of-(a)-cross.

v9 and on-this-account the God exceedingly-exalted him and bestowed-a-favor to-him **the name, namely-the-one above every name,**

Note that the Hebrew for “the name” is “HaShem”.

v10 In-order-that **in the name of-Jesus every knee might-bend** of-(those)-in-(the)-heavenly and of-(those)-earthly and of-(those)-subterranean,

v11 And **every tongue might-acknowledge that Jesus Messiah (is) Jehovah** with-reference-to glory of-God (the) Father,

I have very limited understanding in the study of astronomy, but I can sense that there are more than two ways to keep track of time, and yet just these two conflict by 20 minutes per year (the difference between the sidereal and tropical year, which works out to about 55.5 days in 4000 years (from creation to the cross). These things come up as I contemplate how Jesus, the creator of time and space and everything therein (Col.1:16,17), could say he kept the Passover (Lu.22:11,15,20 – God – Jn 10:30-can not lie) and yet also be our Passover (1 Cor.5:7). Again, perhaps he was, as in similitude of man (Rom.8:3, Phil2.7), keeping one Passover and as YHVH keeping HIS Passover (Ex.12:11)? Perhaps he was making a correction to the calendar? Consider on our leap year how we add February 29 to the calendar; any following holidays have been in effect moved one day forward, yet that is indeed the holiday. Kind of interesting that the calendar was changed in AD 8...man was tinkering with the calendar in Yeshua’s day. **At any rate a miracle happened: YHVH Yeshua made propitiation for our sins (Ro.3:24-25)! Praise Yah!**

Another's word on Blood Moons:

[Be Strong and of Good Courage](#)

http://www.hebrew4christians.com/Meditations/Chazak_v_ematz/chazak_v_ematz.html

by John Parsons

See also: [Parashat Shemini](#)

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