

The Equinox; the elaborate Misunderstanding

Before getting into this study, I want to make clear the fact that “truth” is not prejudice; it doesn’t single out anyone or anything, it is for instruction. The truth can hurt especially if we find out that the truth we thought we were living was based on untruth. To those that read this article and are seeking a relationship with our Creator need to read this with open eyes and ears to hear. Truth is a trait unto our Creator and is revealed by the Holy Spirit but is it the truth you seek? (*Psalms 45:4, John 8:32*)

- *Psalms 45:4*; And in thy majesty ride prosperously because of truth and meekness [and] righteousness; and thy right hand shall teach thee terrible things.
- *John 8:32*; And ye shall know the truth, and the truth shall make you free.

Since before our Messiah walked the Earth the “Equinox” has been a part of man’s calendar system but is it a part of our Creator’s? Why is it that no matter what religion you adhere to most point to the Equinox as the starting point of spring for their calendar year, but is it truly the Creator’s beginning day for the month of Abib? (*Ref: Ex 13:4*)

As a 7th day Sabbath keeper and a 4th commandment follower, being in sync with our Father in Heaven is of the utmost importance. In today’s world even to acknowledge that there is a Sabbath day and to observe it is the work of the Holy Spirit. The question then becomes has that spirit fallen on fertile ground so it can grow and fulfill the purpose it has for you? Let’s read that Messiah says about this subject starting in Matthew 13:19-23

- *v19*; When any one heareth the word of the kingdom, and understandeth [it] not, then cometh the wicked [one], and catcheth away that which was sown in his heart. This is he which received seed by the way side.
- *v20*; But he that received the seed into stony places, the same is he that heareth the word, and anon with joy receiveth it;
- *v21*; Yet hath he not root in himself, but dureth for a while: for when tribulation or persecution ariseth because of the word, by and by he is offended.
- *v22*; He also that received seed among the thorns is he that heareth the word; and the care of this world, and the deceitfulness of riches, choke the word, and he becometh unfruitful.
- *v23*; But he that received seed into the **good ground** is he that heareth the word, and understandeth [it]; which also beareth fruit, and bringeth forth, some an hundredfold, some sixty, some thirty.

When studying out controversial issues one must understand that learning the truth becomes unpopular especially when peer pressure from family, friends or church brethren is involved. I always say, if everyone is going to jump off the bridge are you going too? Knowing the truth can save your life, not their life your life. Our Father in Heaven calls us to be teachable, that is the privilege of being

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human coupled with the Holy Spirit and Messiah living through us can equate to Eternal everlasting life.

Brethren ask questions, dig deep do not be afraid to step out and seek the truth in any matter. Do not take others words for granted, just because someone else believed in they were right doesn't mean they are! As believers you were not given a spirit of fear but of power, of love and a sound mind. (2 Timothy 1:7)

Now getting back on point, where did the Equinox come from and who discovered it and when was it implemented into today's Roman/Gregorian calendar?

To get this study started we need to go back to the Hellenistic World starting in the 2nd Century B.C, where you will be introduced to the Greek mathematician Hipparchus of Nicaea, [/hi'pɑ:rkəs/](#); [Greek: Ἱππάρχος, Hipparkhos](#); c. 190 – c. 120 BC. Hipparchus was an [astronomer](#), [geographer](#), as well as a [mathematician](#). He is considered the founder of [trigonometry](#) but is *most famous for his incidental discovery of [precession of the equinoxes](#)*. (Ref: Wikipedia)

➤ *Beginning History:*

There are some writers that indicate that the ancient Egyptians knew about the precession of the equinoxes but if they did know their knowledge is not recorded as such in any of their surviving astronomical texts. Hipparchus is generally recognized as discoverer of the precession of the equinoxes in 127 BC. His two books on precession, *On the Displacement of the Solstitial and Equinoctial Points* and *On the Length of the Year*, are both mentioned in the *Almagest* of Claudius Ptolemy. According to Ptolemy, Hipparchus measured the longitude of Spica and Regulus and other bright stars. Comparing his measurements with data from his predecessors, Timocharis and Aristillus, he concluded that Spica had moved 2° relative to the autumnal equinox. He also compared the lengths of the tropical year (the time it takes the Sun to return to an equinox) and the sidereal year (the time it takes the Sun to return to a fixed star), and found a slight discrepancy. Hipparchus concluded that the equinoxes were moving ("precessing") through the zodiac, and that the rate of precession was not less than 1° in a century. <http://www.crystalinks.com/precession.html> (Resources) (Ref: Wikipedia)

➤ *Other Authors*

Most ancient authors did not mention precession and perhaps did not know of it. Besides Ptolemy, the list includes Proclus, who rejected precession, and Theon of Alexandria, a commentator on Ptolemy in the 4th century, who accepted Ptolemy's explanation.

➤ *Babylonians*

Various assertions have been made that other cultures discovered precession independent of Hipparchus. At one point it was suggested that the Babylonians may have known about precession.

According to Al-Battani, the Chaldean astronomers had distinguished the tropical and sidereal year (the value of precession is equivalent to the difference between the tropical and sidereal years). He stated that they had, around 330 BC, an estimation for the length of the sidereal year to be $SK = 365$ days 6 hours 11 min (= 365.258 days) with an error of (about) 2 min. It was claimed by P. Schnabel in 1923 that Kidinnu theorized about precession in 315 BC. Otto Neugebauer's work on this issue in the 1950s superseded Schnabel's (and earlier, Kugler's) theory of a Babylonian discoverer of precession. Here the Babylonians are equated with the understanding of a 365 day year, which in most cases influenced the Roman based Julian/Gregorian calendar in its earliest form. (Ref: Wikipedia)

➤ *The Cultic Name "Equinox"*

The prefix [Nox](#) at the end of the word "Equinox" is the Roman translation of ancient Greek [Nyx](#), (*Nύξ*, or *Night*), and the primordial goddess of the night in Greek mythology. She was a child of Khaos ([Chaos](#), [Air](#)), and coupling with [Erebus](#) (*Darkness*) she produced Aither (Aether, Light) and Hemera (Day). Alone she spawned a brood of dark spirits including the three Fates, Sleep, Death, Strife and Pain. In Greece, Nyx was only rarely the focus of cults. According to [Pausanias](#), she had an oracle on the acropolis at [Megara](#).^[9]

More often, Nyx lurked in the background of other cults. Thus there was a statue called "Night" in the [Temple of Artemis](#) at [Ephesus](#).^[10] The [Spartans](#) had a cult of Sleep [Hypnos](#) and Death, [Thanatos](#) conceived of as twins.^[11] Cult titles composed of compounds of *nyx-* are attested for several deities, most notably [Dionysus Nyktelios](#) "nocturnal"^[12] and [Aphrodite Philopannyx](#) "who loves the whole night". In ancient art [Nyx](#) was depicted as either a winged goddess or charioteer, sometimes crowned with an aureole of dark mists

➤ *Man's Equinox*

When [Julius Caesar](#) established the [Julian calendar](#) in 45 BC, he set March 25th as the date of the spring equinox. Because the Julian year (365.25 days) is slightly longer than the [tropical year](#), the calendar "drifted" with respect to the two equinoxes — such that in [300 AD](#) the spring equinox occurred on about 21 March. By 1500 AD, it had drifted backwards to the 11th of March.

This drift induced [Pope Gregory XIII](#) to create a modern [Gregorian calendar](#). The Pope wanted to continue to conform to the edicts concerning the [date of Easter](#) of the [Council of Nicaea](#) of AD 325, which means *he wanted to move the vernal equinox to March 21st*, which is the day allocated to it in the Easter table of the Julian calendar. However, the leap year intervals in his calendar were not smooth (400 is not an exact multiple of 97). This causes the equinox to oscillate by about 53 hours around its mean position. This in turn raised the possibility that it could fall on 22 March, and thus Easter Day might theoretically commence before the equinox. *The astronomers chose the appropriate number of days to omit so that the equinox would swing from the 19th to 21st of March* but never fall on

the 22nd (although it can in a handful of years fall early in the morning of that day in the Far East).
(Reference: Wikipedia)

Another factor that rules out the Equinox from having anything to do with Alohym's true calendar is the ruling star is called Hamal, (HamEl), in constellation Aries. This star is the Gregorian calendar's "Equinox Star," which gives a year 365 days and gives a day 23 hours, 56 minutes and about 5 seconds in its circuit. Later in this study guide you will learn what a "sidereal day" is and that the star Hamal replaced the sun as the perfect time keeper.

Here again we see the influence of Satan working through man, thinking they can do things better than our Creator leading those who are truly seeking Alohym down another path of deception. Our adversary is a counterfeiter; he portrays himself as a light deceiving the whole world. (Rev 12:9)

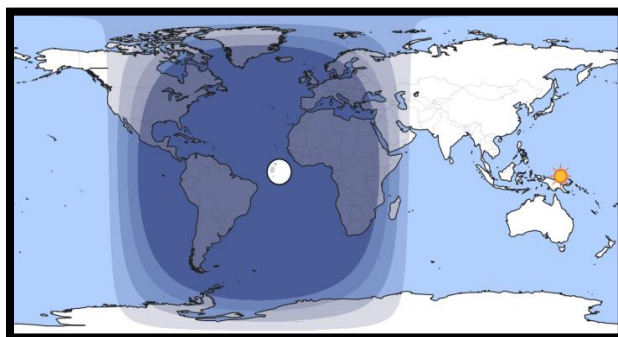
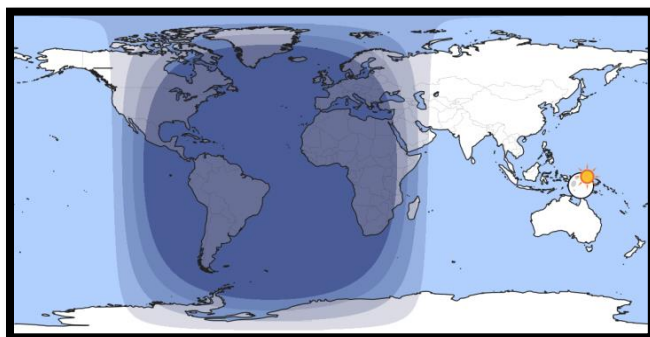
➤ **Alohym's Equilux**

Our Creator is perfect and Yahusha came into this world as a light as scripture states in the Book of John, 8:12, and 12:46. As believers we are to seek the light of our Messiah, this has both a physical and a spiritual implication that we are to follow. So just what is this sign in the physical world, one that is perfect from year to year and never floats like the equinox, "the Equilux". This is an astronomical event of the sun that happens twice a year, on March 16th and Sept 26th. These are the true days of equal day and equal night as talked about in the Book of Enoch. The spring and fall Equilux happen perfectly every year without the intervention of man's calculation. The Equinox unlike the Equilux which are calculated by man swing 2 days in the spring and fall seasons, is this truly Alohym's perfection? The word "Lux" means "illumination" and is a unit of measurement for light intensity. (See chart "A & B" in the back of article, taken from the website <http://www.timeanddate.com>) [Science tells the truth]

The maps below show the current position of the Sun and the Moon. It shows which areas of the Earth are in daylight and which are in night.

UTC time = Saturday, March 16, 2018 at 02:27:00.
+ 2 IDT = 4:27am "**Spring Equilux day**"

UTC time = Thursday, September 26, 2018 at 03:08:00
+2 (DST) IDT = 5:08am "**Fall Equilux day**"



Keep in mind the true beginning of the day starts at Astronomical light.

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Now the next day following the spring Equinox, March 17th is the fulfillment and misunderstood scripture Job 38:31, which is the westward shift of the stars for the spring season due to Earth's motion in orbit around the sun. Let's read Job 38:31-32 from the Interlinear Scriptural Analyzer and get the real meaning of which Job is saying hear.

interlinear						
Job 38:31	WLC	WLC_v	WLC_t	WLC_tm	Strong	CHES
AV	Canst thou bind the sweet influences of Pleiades, or loose the bands of Orion?					
הַתְּקַשֵּׁר	מַעֲדָנוֹת	כִּימָה	אוֹ	מִשְׁכוֹת -	אוֹ	כִּסִּיל תַּפְתָּח
הַתְּקַשֵּׁר	מַעֲדָנוֹת	כִּימָה	אוֹ	מִשְׁכוֹת -	אוֹ	כִּסִּיל תַּפְתָּח
ethqshr	modnuth	kime	au	- mshkuth		ksil thphthch
e·thqshr	modnuth	kime	au	- mshkuth		ksil thphthch
H7194	H4575	H3598	H176 -	H4189		H3685 H6605
?·you-are-making-tie-up	luxuries-of	Pleiades	or	attractions-of	Orion	you-are-"unloosing

interlinear						
Job 38:32	WLC	WLC_v	WLC_t	WLC_tm	Strong	CHES
AV	Canst thou bring forth Mazzaroth in his season? or canst thou guide Arcturus with his sons?					
הַתְּצִיא	מִזְרוֹת	בְּעֵתוֹ	וְעֵישׁ	עַל -	בְּנֵיהָ -	תִּנְחֵם
הַתְּצִיא	מִזְרוֹת	בְּעֵתוֹ	וְעֵישׁ	עַל -	בְּנֵיהָ -	תִּנְחֵם
ethztzia	mzruth	bothu	uoish	ol	- bnie	thnchm
e·thztzia	mzruth	b·oth·u	u·oish	ol	- bni·e	thnch·m
H3318	H4216	H6256	H5906	H5921 -	H1121	H5148
?·you-are-"bringing-forth	zodiac-signs	in·season-of·him	and·Great·Bear	on	sons-of·her	you-are-"guiding·them

[Editor's Note:] I always go to the Interlinear Scriptural Analyzer for better clarification as we can see the English translation from the Hebrew doesn't always match, so let's read the revised scriptures to make it easier to read:

v31; you tie up^{H7194} the bonds^{H4575} of Pleiades^{H3598} or^{H176} with draw^{H4189} Orion to loosen -

v32: bringing forth^{H3318} the zodiac (sign)^{H4216} in his season^{H6256} and the Great Bear^{H5906} on^{H5921} guiding^{H5148} her sons^{H1121}

Here Job *thirty-eight* clearly shows that Orion brings forth his season and that season is spring. Now let's couple scripture with scientific evidence to see if this is true. On March 17th from the constellation Orion (*the light bringer*) the stars make a Westward shift due to Earth's position in its orbital rotation around the sun. The equinoctial line passes nearly through the middle of Orion bringing the sun between Orion and Earth; this is the true seasonal shift day and has nothing to do with man's Equinox. This perfect seasonal shift happens on March 17th every year perfectly without fail. Isn't it interesting that the first day of our Creator's calendar is also on the front side of this westward star shift which is the first Sabbath day of the New Year?

One of the very important things to note about March 17th and September 27th is that the hourly structures of the seasons change at this time in the year. On March 17th which is first day of the year is also the first day where daylight exceeds over 12 hours (12:01:16) and on September 27th is the first day within the year that declines under 12 hours (11:58:18). These times again are due to the Earth's motion and rotational angle around the sun.

➤ *In Conclusion*

The Calendar that most of the world observes is not the true calendar that the ancient Israelites observed or our Messiah. Observing the Equinox as the starting point of one's year insures that you will most definitely be misaligned with our Creators cycles of time, i.e. calendar. In knowing the truth about this misunderstood day will hopefully set you free. Explaining the truth and digging into the original language that our forefathers understood bring eye opening hidden truths to believers and followers of our Messiah hidden for centuries. Be Berean, dig in and ask for the Holy Spirit of truth to bless your lives and understanding. I leave you with this thought. Hosea 4:6

- Hosea 4:6; My people are destroyed for lack of knowledge: because thou hast rejected knowledge, I will also reject thee, that thou shalt be no priest to me: seeing thou hast forgotten the law of thy God, I will also forget thy children.

May Grace and peace be with you all!

Covenant Media

Chart "A" 16th Equinox, 17th First Day of Abib

2018	Sunrise/Sunset		Daylength		Astronomical Twilight		Nautical Twilight		Civil Twilight		Solar Noon	
	Sunrise	Sunset	Length	Difference	Start	End	Start	End	Start	End	Time	Mil. mi
1	6:06 am ↑ (98°)	5:36 pm ↑ (262°)	11:30:14	+1:54	4:45 AM	6:57 PM	5:13 AM	6:29 PM	5:42 AM	6:01 PM	11:51 am (50.7°)	92.103
2	6:05 am ↑ (98°)	5:37 pm ↑ (262°)	11:32:09	+1:54	4:44 AM	6:58 PM	5:12 AM	6:30 PM	5:40 AM	6:02 PM	11:51 am (51.1°)	92.126
3	6:04 am ↑ (98°)	5:38 pm ↑ (263°)	11:34:04	+1:54	4:43 AM	6:59 PM	5:11 AM	6:31 PM	5:39 AM	6:02 PM	11:51 am (51.5°)	92.149
4	6:03 am ↑ (97°)	5:39 pm ↑ (263°)	11:35:59	+1:55	4:42 AM	7:00 PM	5:10 AM	6:31 PM	5:38 AM	6:03 PM	11:50 am (51.8°)	92.172
5	6:01 am ↑ (97°)	5:39 pm ↑ (264°)	11:37:55	+1:55	4:41 AM	7:00 PM	5:09 AM	6:32 PM	5:37 AM	6:04 PM	11:50 am (52.2°)	92.196
6	6:00 am ↑ (96°)	5:40 pm ↑ (264°)	11:39:51	+1:55	4:39 AM	7:01 PM	5:08 AM	6:33 PM	5:36 AM	6:04 PM	11:50 am (52.6°)	92.22
7	5:59 am ↑ (96°)	5:41 pm ↑ (264°)	11:41:47	+1:56	4:38 AM	7:02 PM	5:06 AM	6:33 PM	5:35 AM	6:05 PM	11:50 am (53.0°)	92.244
8	5:58 am ↑ (95°)	5:41 pm ↑ (265°)	11:43:43	+1:56	4:37 AM	7:02 PM	5:05 AM	6:34 PM	5:33 AM	6:06 PM	11:49 am (53.4°)	92.269
9	5:57 am ↑ (95°)	5:42 pm ↑ (265°)	11:45:39	+1:56	4:36 AM	7:03 PM	5:04 AM	6:35 PM	5:32 AM	6:07 PM	11:49 am (53.8°)	92.293
10	5:55 am ↑ (94°)	5:43 pm ↑ (266°)	11:47:36	+1:56	4:34 AM	7:04 PM	5:03 AM	6:36 PM	5:31 AM	6:07 PM	11:49 am (54.2°)	92.318
11	5:54 am ↑ (94°)	5:44 pm ↑ (266°)	11:49:33	+1:56	4:33 AM	7:05 PM	5:02 AM	6:36 PM	5:30 AM	6:08 PM	11:49 am (54.6°)	92.343
12	5:53 am ↑ (93°)	5:44 pm ↑ (267°)	11:51:30	+1:57	4:32 AM	7:05 PM	5:00 AM	6:37 PM	5:29 AM	6:09 PM	11:48 am (55.0°)	92.369
13	5:52 am ↑ (93°)	5:45 pm ↑ (267°)	11:53:27	+1:57	4:31 AM	7:06 PM	4:59 AM	6:38 PM	5:27 AM	6:09 PM	11:48 am (55.4°)	92.394
14	5:50 am ↑ (93°)	5:46 pm ↑ (268°)	11:55:24	+1:57	4:29 AM	7:07 PM	4:58 AM	6:38 PM	5:26 AM	6:10 PM	11:48 am (55.8°)	92.42
15	5:49 am ↑ (92°)	5:46 pm ↑ (268°)	11:57:21	+1:57	4:28 AM	7:08 PM	4:57 AM	6:39 PM	5:25 AM	6:11 PM	11:48 am (56.1°)	92.445
16	5:48 am ↑ (92°)	5:47 pm ↑ (269°)	11:59:19	+1:57	4:27 AM	7:08 PM	4:55 AM	6:40 PM	5:24 AM	6:11 PM	11:47 am (56.5°)	92.471
17	5:47 am ↑ (91°)	5:48 pm ↑ (269°)	12:01:16	+1:57	4:26 AM	7:09 PM	4:54 AM	6:41 PM	5:22 AM	6:12 PM	11:47 am (56.9°)	92.496
18	5:45 am ↑ (91°)	5:49 pm ↑ (270°)	12:03:13	+1:57	4:24 AM	7:10 PM	4:53 AM	6:41 PM	5:21 AM	6:13 PM	11:47 am (57.3°)	92.522
19	5:44 am ↑ (90°)	5:49 pm ↑ (270°)	12:05:11	+1:57	4:23 AM	7:11 PM	4:51 AM	6:42 PM	5:20 AM	6:14 PM	11:46 am (57.7°)	92.547
20	5:43 am ↑ (90°)	5:50 pm ↑ (271°)	12:07:08	+1:57	4:22 AM	7:11 PM	4:50 AM	6:43 PM	5:18 AM	6:14 PM	11:46 am (58.1°)	92.573
21	5:42 am ↑ (89°)	5:51 pm ↑ (271°)	12:09:06	+1:57	4:20 AM	7:12 PM	4:49 AM	6:43 PM	5:17 AM	6:15 PM	11:46 am (58.5°)	92.598
22	5:40 am ↑ (89°)	5:51 pm ↑ (271°)	12:11:03	+1:57	4:19 AM	7:13 PM	4:48 AM	6:44 PM	5:16 AM	6:16 PM	11:45 am (58.9°)	92.624
Note: hours shift because clocks change forward 1 hour. (See the note below this table for details)												
23	6:39 am ↑ (88°)	6:52 pm ↑ (272°)	12:13:00	+1:57	5:17 AM	8:14 PM	5:46 AM	7:45 PM	6:15 AM	7:16 PM	12:45 pm (59.3°)	92.649
24	6:38 am ↑ (88°)	6:53 pm ↑ (272°)	12:14:58	+1:57	5:16 AM	8:14 PM	5:45 AM	7:46 PM	6:13 AM	7:17 PM	12:45 pm (59.7°)	92.675
25	6:36 am ↑ (87°)	6:53 pm ↑ (273°)	12:16:55	+1:57	5:15 AM	8:15 PM	5:44 AM	7:46 PM	6:12 AM	7:18 PM	12:45 pm (60.1°)	92.701
26	6:35 am ↑ (87°)	6:54 pm ↑ (273°)	12:18:52	+1:56	5:13 AM	8:16 PM	5:42 AM	7:47 PM	6:11 AM	7:18 PM	12:44 pm (60.5°)	92.727
27	6:34 am ↑ (86°)	6:55 pm ↑ (274°)	12:20:48	+1:56	5:12 AM	8:17 PM	5:41 AM	7:48 PM	6:09 AM	7:19 PM	12:44 pm (60.9°)	92.752
28	6:33 am ↑ (86°)	6:55 pm ↑ (274°)	12:22:45	+1:56	5:11 AM	8:17 PM	5:40 AM	7:48 PM	6:08 AM	7:20 PM	12:44 pm (61.3°)	92.779
29	6:31 am ↑ (86°)	6:56 pm ↑ (275°)	12:24:42	+1:56	5:09 AM	8:18 PM	5:38 AM	7:49 PM	6:07 AM	7:20 PM	12:43 pm (61.7°)	92.805
30	6:30 am ↑ (85°)	6:57 pm ↑ (275°)	12:26:38	+1:56	5:08 AM	8:19 PM	5:37 AM	7:50 PM	6:06 AM	7:21 PM	12:43 pm (62.0°)	92.831
31	6:29 am ↑ (85°)	6:57 pm ↑ (276°)	12:28:34	+1:56	5:06 AM	8:20 PM	5:36 AM	7:51 PM	6:04 AM	7:22 PM	12:43 pm (62.4°)	92.858

* All times are local time for Jerusalem. Time is adjusted for DST when applicable. Dates are based on the Gregorian calendar.

March 20th, the "Equinox" is 7+ minutes over the 12 hour equal time

Chart "B" 26th Fall Equinox, 27th the first true day of Fall and the first day under 12 hours of light

2018 Sep	Sunrise/Sunset		Daylength		Astronomical Twilight		Nautical Twilight		Civil Twilight		Solar Noon	
	Sunrise	Sunset	Length	Difference	Start	End	Start	End	Start	End	Time	Mil. mi
1	6:14 am ↑ (80°)	7:03 pm ↑ (280°)	12:48:51	-1:51	4:50 AM	8:27 PM	5:20 AM	7:57 PM	5:49 AM	7:28 PM	12:39 pm (66.5°)	93.813
2	6:15 am ↑ (80°)	7:02 pm ↑ (280°)	12:46:59	-1:51	4:50 AM	8:25 PM	5:20 AM	7:56 PM	5:50 AM	7:26 PM	12:38 pm (66.1°)	93.791
3	6:15 am ↑ (81°)	7:00 pm ↑ (279°)	12:45:08	-1:51	4:51 AM	8:24 PM	5:21 AM	7:54 PM	5:50 AM	7:25 PM	12:38 pm (65.7°)	93.769
4	6:16 am ↑ (81°)	6:59 pm ↑ (279°)	12:43:15	-1:52	4:52 AM	8:23 PM	5:22 AM	7:53 PM	5:51 AM	7:24 PM	12:38 pm (65.4°)	93.747
5	6:16 am ↑ (81°)	6:58 pm ↑ (278°)	12:41:23	-1:52	4:53 AM	8:21 PM	5:23 AM	7:51 PM	5:52 AM	7:22 PM	12:37 pm (65.0°)	93.725
6	6:17 am ↑ (82°)	6:56 pm ↑ (278°)	12:39:30	-1:52	4:54 AM	8:20 PM	5:23 AM	7:50 PM	5:52 AM	7:21 PM	12:37 pm (64.6°)	93.702
7	6:18 am ↑ (82°)	6:55 pm ↑ (277°)	12:37:37	-1:53	4:54 AM	8:18 PM	5:24 AM	7:49 PM	5:53 AM	7:20 PM	12:37 pm (64.2°)	93.679
8	6:18 am ↑ (83°)	6:54 pm ↑ (277°)	12:35:44	-1:53	4:55 AM	8:17 PM	5:25 AM	7:47 PM	5:54 AM	7:19 PM	12:36 pm (63.9°)	93.656
9	6:19 am ↑ (83°)	6:53 pm ↑ (277°)	12:33:50	-1:53	4:56 AM	8:15 PM	5:25 AM	7:46 PM	5:54 AM	7:17 PM	12:36 pm (63.5°)	93.632
10	6:19 am ↑ (84°)	6:51 pm ↑ (276°)	12:31:56	-1:53	4:57 AM	8:14 PM	5:26 AM	7:45 PM	5:55 AM	7:16 PM	12:36 pm (63.1°)	93.608
11	6:20 am ↑ (84°)	6:50 pm ↑ (276°)	12:30:02	-1:54	4:57 AM	8:12 PM	5:27 AM	7:43 PM	5:55 AM	7:15 PM	12:35 pm (62.7°)	93.584
12	6:21 am ↑ (85°)	6:49 pm ↑ (275°)	12:28:07	-1:54	4:58 AM	8:11 PM	5:27 AM	7:42 PM	5:56 AM	7:13 PM	12:35 pm (62.4°)	93.56
13	6:21 am ↑ (85°)	6:47 pm ↑ (275°)	12:26:13	-1:54	4:59 AM	8:10 PM	5:28 AM	7:41 PM	5:57 AM	7:12 PM	12:35 pm (62.0°)	93.535
14	6:22 am ↑ (85°)	6:46 pm ↑ (274°)	12:24:18	-1:54	5:00 AM	8:08 PM	5:29 AM	7:39 PM	5:57 AM	7:11 PM	12:34 pm (61.6°)	93.509
15	6:22 am ↑ (86°)	6:45 pm ↑ (274°)	12:22:23	-1:54	5:00 AM	8:07 PM	5:29 AM	7:38 PM	5:58 AM	7:09 PM	12:34 pm (61.2°)	93.484
16	6:23 am ↑ (86°)	6:43 pm ↑ (273°)	12:20:28	-1:55	5:01 AM	8:05 PM	5:30 AM	7:36 PM	5:59 AM	7:08 PM	12:33 pm (60.8°)	93.458
17	6:24 am ↑ (87°)	6:42 pm ↑ (273°)	12:18:33	-1:55	5:02 AM	8:04 PM	5:31 AM	7:35 PM	5:59 AM	7:07 PM	12:33 pm (60.4°)	93.433
18	6:24 am ↑ (87°)	6:41 pm ↑ (273°)	12:16:38	-1:55	5:02 AM	8:02 PM	5:31 AM	7:34 PM	6:00 AM	7:05 PM	12:33 pm (60.0°)	93.407
19	6:25 am ↑ (88°)	6:40 pm ↑ (272°)	12:14:42	-1:55	5:03 AM	8:01 PM	5:32 AM	7:32 PM	6:00 AM	7:04 PM	12:32 pm (59.7°)	93.381
20	6:25 am ↑ (88°)	6:38 pm ↑ (272°)	12:12:47	-1:55	5:04 AM	8:00 PM	5:33 AM	7:31 PM	6:01 AM	7:03 PM	12:32 pm (59.3°)	93.354
21	6:26 am ↑ (89°)	6:37 pm ↑ (271°)	12:10:51	-1:55	5:05 AM	7:58 PM	5:33 AM	7:30 PM	6:02 AM	7:01 PM	12:32 pm (58.9°)	93.328
22	6:27 am ↑ (89°)	6:36 pm ↑ (271°)	12:08:56	-1:55	5:05 AM	7:57 PM	5:34 AM	7:28 PM	6:02 AM	7:00 PM	12:31 pm (58.5°)	93.302
23	6:27 am ↑ (90°)	6:34 pm ↑ (270°)	12:07:00	-1:55	5:06 AM	7:56 PM	5:35 AM	7:27 PM	6:03 AM	6:59 PM	12:31 pm (58.1°)	93.276
24	6:28 am ↑ (90°)	6:33 pm ↑ (270°)	12:05:05	-1:55	5:07 AM	7:54 PM	5:35 AM	7:26 PM	6:04 AM	6:57 PM	12:31 pm (57.7°)	93.25
25	6:28 am ↑ (90°)	6:32 pm ↑ (269°)	12:03:09	-1:55	5:07 AM	7:53 PM	5:36 AM	7:24 PM	6:04 AM	6:56 PM	12:30 pm (57.3°)	93.223
26	6:29 am ↑ (91°)	6:30 pm ↑ (269°)	12:01:14	-1:55	5:08 AM	7:51 PM	5:36 AM	7:23 PM	6:05 AM	6:55 PM	12:30 pm (56.9°)	93.197
27	6:30 am ↑ (91°)	6:29 pm ↑ (268°)	11:59:18	-1:55	5:09 AM	7:50 PM	5:37 AM	7:22 PM	6:05 AM	6:53 PM	12:30 pm (56.6°)	93.171
28	6:30 am ↑ (92°)	6:28 pm ↑ (268°)	11:57:23	-1:55	5:09 AM	7:49 PM	5:38 AM	7:20 PM	6:06 AM	6:52 PM	12:29 pm (56.2°)	93.145
29	6:31 am ↑ (92°)	6:26 pm ↑ (268°)	11:55:27	-1:55	5:10 AM	7:47 PM	5:38 AM	7:19 PM	6:07 AM	6:51 PM	12:29 pm (55.8°)	93.119
30	6:32 am ↑ (93°)	6:25 pm ↑ (267°)	11:53:32	-1:55	5:11 AM	7:46 PM	5:39 AM	7:18 PM	6:07 AM	6:49 PM	12:29 pm (55.4°)	93.093

* All times are local time for Jerusalem. Time is adjusted for DST when applicable. Dates are based on the Gregorian calendar.

September 23rd, The Fall Equinox, no equal day of night by 7 + minutes.