

HOW TO ESTIMATE WHICH DAY IS THE TRUE NEW MOON

Estimating the observable New Moon crescent from Jerusalem
for each month using the best available Astronomical Data
from the U.S. Naval Observatory and H.M. Nautical Office.

- 1). Get the New Moon conjunctions for **(LATE AVIV)** 2019-2020 (Spring To Spring) in G.M.T. (Greenwich Mean Time) or Universal Time.
- 2). Two hours must be added to bring the conjunction to Jerusalem Time.
- 3). Another twenty four hours must be added, because according to the U.S. Naval Observatory, the first visible crescent of the New Moon cannot be seen for about 24 hours after the conjunction, but sometimes slightly less or slightly more. There are visibility graphs available and also computer software called "LUNACAL", which can help in determining whether or not a "*Possibility of Sighting*" or "*Potential Visibility*" exists on a given night from a given place (Jerusalem). However it is not simply the amount of time which has passed since the conjunction, but other technical factors such as "*Declination*", "*Lagtime*", "*Altitude*" and "*Azimuth*", MUST be taken into account.

N.B. Even if 24+ hours have passed since the conjunction, a high Southerly Declination could well mean that the New Moon would NOT be visible from Jerusalem until the following evening. This is why we must use the best available data from both the U.S. Naval Observatory and H.M. Nautical Office.

Declination:- The angular distance of the Moon either North or South of the Equator.

Lagtime:- The span of time between Sunset and Moonset.

Altitude:- The height of the Moon above the visible horizon.

Azimuth:- The angular distance of the Moon from True North.

- 4). The New Moon crescent is usually visible just above the Western Horizon during Dusk (Between Sunset and Total Darkness) and VERY RARELY a few minutes before Sunset. In either case the "*New Moon*" is declared the day just beginning.
- 5). In Temple Times, according to Alfred Edersheim, "*It was ruled that a year should neither have less than FOUR nor more than EIGHT Full Months of Thirty Days*". (A Lunar Month can only have either 29 or 30 Days.)
- 6). A Year should neither have less than TWELVE Months nor more than THIRTEEN Months.

7). On certain occasions, a New Moon may be declared without a sighting, if for instance the skies over Jerusalem and the Land of Israel happen to be overcast. This would happen in the case of “*Potential Visibility*”, where there was no doubt that the New Moon crescent would be visible given clear skies. On other occasions however, a “*Borderline*” case could exist, where it cannot be absolutely certain that the New Moon crescent will be seen on a given evening.

NOTE:- As we grow in grace and knowledge, this material may need refining in the future, but we are doing the very best we know how, to get back to “*The Faith Once Delivered To The Saints*”.

Interestingly, in some years if both NISAN and IYAR have 29 days, then PENTECOST will be on SIVAN 7. Alternatively, in some years both NISAN and IYAR may have 30 days, in which case PENTECOST will be on SIVAN 5. Although these scenarios for PENTECOST can happen occasionally, the most common occurrence for PENTECOST is to be on SIVAN 6.

Unger’s Bible Dictionary under the article heading “*Festivals*” – sub-heading “*Pentecost*” states:- “...*the Jews, who during the SECOND TEMPLE kept Pentecost fifty days after the 16th Nisan, rightly interpreted the injunction in Lev. 23:15-22. The fiftieth day, according to the Jewish canons, may fall on the 5th, 6th or 7th of Sivan...*”

The month of NISAN or ABIB is declared according to the state of the barley crop in the fields around Jerusalem. If the barley is not in an ABIB condition then the month should be ADAR II. There can be little doubt that this is the primary determining factor regarding the declaration of the “*New Moon of Abib*”. If the barley is not ready then obviously no “*Wave Sheaf Offering*” would be possible, and a thirteenth month would be inserted.

There is however another important factor to be considered, and this is that the Holy Days must be kept in their correct seasons. According to Josephus in “*Antiquities of The Jews – Book 3 – Chapter 10 – Section 5*” we read;

“.....*In the month of Xanthicus, which is by us called Nisan, and is the beginning of our year, on the fourteenth day of the lunar month, when THE SUN IS IN ARIES, (for in this month it was that we were delivered from bondage under the Egyptians), the law ordained that we should every year slay that sacrifice which I before told you we slew when we came out of Egypt, and which was called the PASSOVER.....*”

Note that the Sun is in ARIES from 21st March through to 20th April and for the Passover to be in the Springtime, it must fall either on or after the Spring Equinox. If the Passover fell earlier than this it would still technically be in the winter, but it would also pull the Autumn/Fall Holy Days out of their season and into the Summer. Conversely if the Passover fell more than 30 days after the Spring Equinox, this would also push back the Autumn/Fall Holy Days further away from the Autumnal Equinox.

An interesting point to note is that the “*Fixed*” Jewish calendar sometimes declares a New Moon day beginning, EVEN BEFORE the time of conjunction. This is obviously a

nonsensical notion, and another simple proof of the errors and inaccuracies of the “Fixed” mathematical Jewish calendar. In actual fact the “Fixed” Jewish calendar cannot be used in its present form indefinitely. The further into the future the “Fixed” calendar is projected, the Passover moves slowly but inexorably further away from the Spring Equinox and towards the Summer Solstice. Given a few thousand more years, Passover would move through the Summer and towards the Autumn Equinox, while Tabernacles would move through the Winter towards the Spring Equinox. This is not supposition, but an irrefutable fact of the “Fixed” mathematical Jewish calendar.

An easy way to keep track of the TRUE calendar throughout the year, is to mark the Hebrew days onto our standard Roman Calendar. In other words when we know that the New Moon of a particular month has been declared then we can mark off 29 days in succession, because we know that a lunar month has either 29 or 30 days. This should bring us up to the 29th day. All we now need to do is wait and see if the New Moon crescent is sighted in Jerusalem that evening, in which case the following day will be marked as New Moon Day of the next Month. If the New Moon crescent is not sighted in Jerusalem that evening, then the following day will be the 30th day and then the day after that will be marked as New Moon Day. As we can see there is sometimes an element of uncertainty over the exact appearing of a New Moon, which should help to train us all to WATCH very carefully and STAY ALERT.

God’s TRUE calendar is so simple a child can understand it. No need for esoteric and complicated mathematical formulae which only the “initiated” can understand fully.

“This month (ABIB) shall be your beginning of months, it shall be the first month of the year to you.” Exodus 12:2.

“Remember this day in which you went out of Egypt, out of the house of bondage; for by strength of hand the LORD brought you out of this place. No leavened bread shall be eaten. On this day you are going out, in the month ABIB.” Exodus 13:3-4.

“Observe the month (Hebrew CHODESH - NEW MOON) of ABIB, and keep the Passover to the LORD your God, for in the month of ABIB the LORD your God brought you out of Egypt by night.” Exodus 16:1.

“These are the FEASTS of the LORD, holy convocations which you shall proclaim at their APPOINTED TIMES (i.e. IN THEIR CORRECT SEASONS).” Leviticus 23:4.

VISIBILITY PREDICTIONS FOR THE NEW CRESCENT MOON AT JERUSALEM

THE DATA IS FROM HER MAJESTY'S NAUTICAL ALMANAC OFFICE

2019-2020 (LATE AVIV)

MONTH	JEWISH	CRESCENT VISIBILITY	POTENTIAL
March	Adar 2	Eve Thursday 7 th March	Borderline B
		Eve Friday 8 th March	Certain A
April	Aviv	Eve Sabbath 6 th April	Certain A
May	Iyar	Eve Monday 6 th May	Certain A
June	Sivan	Eve Tuesday 4 th June	Certain A
July	Tammuz	Eve Wednesday 3 rd July	Borderline B
		Eve Thursday 4 th July	Certain A
August	Av	Eve Friday 2 nd August	Certain A
	Elul	Eve Sabbath 31 st August	Certain A
September	Tishri	Eve Sunday 29 th September	Borderline B
		Eve Monday 30 th September	Certain A
October	Chesvan	Eve Tuesday 29 th October	Certain A
November	Kislev	Eve Wednesday 27 th Nov	Borderline B
		Eve Thursday 28 th Nov	Certain A
December	Tevet	Eve Friday 27 th December	Certain A
January	Shevat	Eve Sunday 26 th January	Certain A
February	Adar	Eve Monday 24 th February	Borderline B
		Eve Tuesday 25 th February	Certain A
March	Aviv	Eve Wed 25 th March	Certain A

A = Easily Visible

B = Visible Under Perfect Atmospheric Conditions

C = May Need Optical Aid To Find Crescent Moon

2019 Spring Festivals

NEW MOON CERTAIN.

LUNACAL Forecast:-

The New Moon first appears on Saturday 6th April 2019 between 19:01 and 20:06 provided that it is not cloudy. It is **NOT DIFFICULT TO SEE**, ease of visibility 0.9. Probability of visibility, 86% of testimony 98%.

GVM (Global Visibility Map) below shows crescent easily visible from Israel and as far East as China.

AVIV New Moon - Eve Sabbath 6th April

Aviv 1 – Sunday 7th April

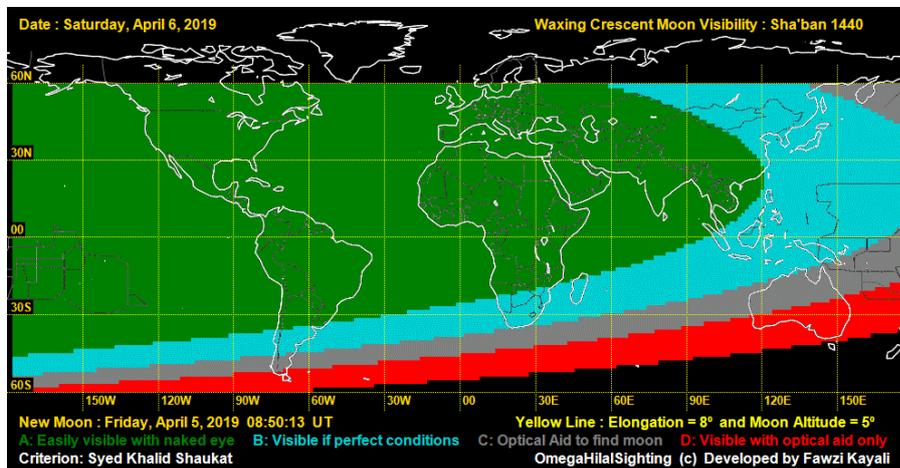
Aviv 14 – Passover Seder – Sabbath Evening 20th April

Aviv 15 – 1st Day Unleavened Bread – Sunday 21st April

Aviv 16 – Omer Count Begins – Monday 22nd April

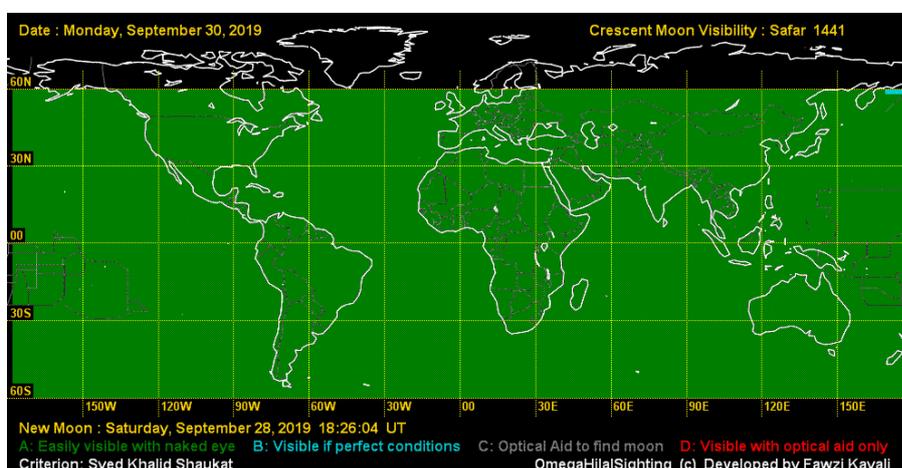
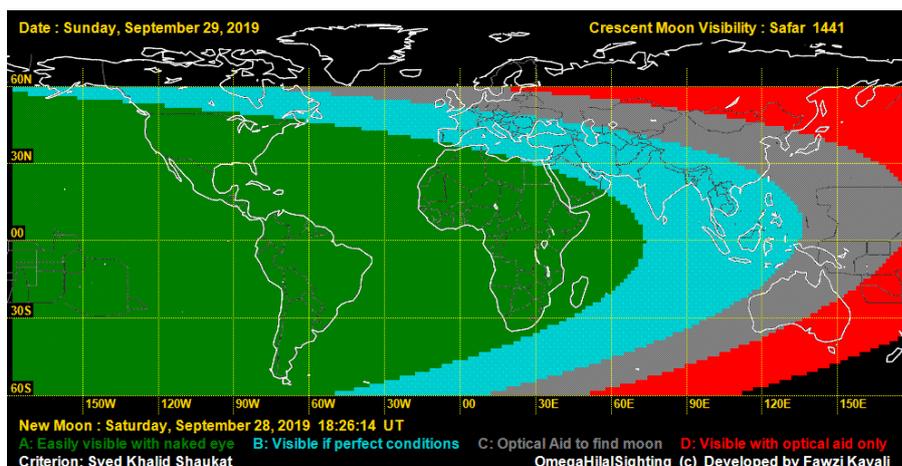
Aviv 21 – 7th Day Unleavened Bread – Sabbath 27th April

Pentecost – Shavuot – Monday 10th June



2019 Autumn Festivals

<p>NEW MOON BORDERLINE. LUNACAL Forecast:- The New Moon first appears on Sunday 29th September 2019 between 18:32 and 19:13 provided that it is not cloudy. It is DIFFICULT TO SEE, ease of visibility 0.5. Probability of visibility, 51% of testimony 82%.</p> <p>GVM (Global Visibility Map) below shows crescent visible from Israel ONLY under perfect atmospheric conditions.</p>	<p>NEW MOON CERTAIN. LUNACAL Forecast:- The New Moon first appears on Monday 30th September 2019 between 11:39 and 18:29 and fades between 19:25 and 19:55 provided that it is not cloudy. It is VERY EASY TO SEE, ease of visibility 2.2. Probability of visibility, 100.00% of testimony 100.00%.</p> <p>GVM (Global Visibility Map) below shows crescent easily visible around the world.</p>
<p>TISHRI New Moon - Eve Sunday 29th September</p>	<p>TISHRI New Moon – Eve Monday 30th September</p>
<p>Tishri 1 – Trumpets – Monday 30th September</p>	<p>Tishri 1 – Trumpets – Tuesday 1st October</p>
<p>Tishri 10 – Atonement – Wednesday 9th October</p>	<p>Tishri 10 – Atonement – Thursday 10th October</p>
<p>Tishri 15 – 1st Day Tabernacles – Monday 14th October</p>	<p>Tishri 15 – 1st Day Tabernacles – Tuesday 15th October</p>
<p>Tishri 22 – Shemeni Atzeret – Monday 21st October</p>	<p>Tishri 22 – Shemeni Atzeret – Tuesday 22nd October</p>



2019 FIXED Jewish Calendar Significant & Holy Days

Nisan 1 – New Moon Day – Sabbath 6 th April
Nisan 14 – Passover Seder – Friday 19 th April
Nisan 15 – 1 st Day Unleavened Bread – Sabbath 20 th April
Nisan 21 – 7 th Day Unleavened Bread – Friday 26 th April
Pentecost – Shavuot – Sunday 9 th June
Tishri 1 – Trumpets – Monday 30 th September
Tishri 10 – Atonement – Wednesday 9 th October
Tishri 15 – 1 st Day Tabernacles – Monday 14 th October
Tishri 22 – 8 th Day – Monday 21 st October