

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 years 2014-2015 (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

2014-2015

MONTH	JEWISH	CRESCENT VISIBILITY	POTENTIAL
March	Nisan	Eve Monday 31 st March	Borderline
April		Eve Tuesday 1 st April	Certain
	Iyar	Eve Wednesday 30 th April	Certain
May	Sivan	Eve Friday 30 th May	Certain
June	Tammuz	Eve Sabbath 28 th June	Certain
July	Av	Eve Monday 28 th July	Certain
August	Elul	Eve Wednesday 27 th August	Certain
September	Tishri	Eve Thursday 25 th September	Borderline
		Eve Friday 26 th September	Certain
October	Chesvan	Eve Sabbath 25 th October	Certain
November	Kislev	Eve Sunday 23 rd November	Certain
December	Tevet	Eve Tuesday 23 rd December	Certain
January	Shevat	Eve Wednesday 21 st January	Certain
February	Adar	Eve Thursday 19 th February	Borderline
		Eve Friday 20 th February	Certain

2014 Spring Festivals

<p>New Moon Borderline Possible. LUNACAL Forecast:- The New Moon first appears on Monday 31st March 2014 between 19:08 and 19:46 provided that it is not cloudy. It is difficult to see, ease of visibility 0.4. Probability of visibility, 43% of testimony 76%.</p>	<p>New Moon Certain. LUNACAL Forecast:- The New Moon first appears on Tuesday 1st April 2014 between 14:05 and 19:00 and fades between 20:31 and 20:52 provided that it is not cloudy. It is very easy to see, ease of visibility 3.4. Probability of visibility, 100.00% of testimony 100.00%.</p>
Eve Monday 31 st March	Eve Tuesday 1 st April
Nisan 1 – Tuesday 1 st April	Nisan 1 – Wednesday 2 nd April
Nisan 14 – Monday 14 th April	Nisan 14 – Tuesday 15 th April
Nisan 15 – Tuesday 15 th April	Nisan 15 – Wednesday 16 th April
Nisan 16 – Wednesday 16 th April	Nisan 16 – Thursday 17 th April
Nisan 21 – Monday 21 st April	Nisan 21 – Tuesday 22 nd April
Pentecost – Wednesday 4 th June	Pentecost – Thursday 5 th June

2014 Autumn Festivals

<p>New Moon Borderline Possible. LUNACAL Forecast:- The New Moon first appears on Thursday 25th September 2014 between 18:35 and 19:11 provided that it is not cloudy. It is difficult to see, ease of visibility 0.3. Probability of visibility, 32% of testimony 67%.</p>	<p>New Moon Certain. LUNACAL Forecast:- The New Moon first appears on Friday 26th September 2014 between 11:55 and 18:41 and fades between 19:14 and 19:48 provided that it is not cloudy. It is very easy to see, ease of visibility 1.4. Probability of visibility, 99.4% of testimony 99.97%.</p>
Eve Thursday 25 th September	Eve Friday 26 th September
Tishri 1 – Friday 26 th September	Tishri 1 – Sabbath 27 th September
Tishri 10 – Sunday 5 th October	Tishri 10 – Monday 6 th October

Tishri 15 – Friday 10 th October	Tishri 15 – Sabbath 11 th October
Tishri 22 – Friday 17 th October	Tishri 22 – Sabbath 18 th October

2014 FIXED Jewish Calendar Significant & Holy Days

Nisan 1 – Tuesday 1 st April
Nisan 14 – Monday 14 th April
Nisan 15 – Tuesday 15 th April
Nisan 21 – Monday 21 st April
Pentecost – Wednesday 4 th June
Tishri 1 – Thursday 25 th September
Tishri 10 – Sabbath 4 th October
Tishri 15 – Thursday 9 th October
Tishri 22 – Thursday 16 th October