



Essentials for Evaluating Calendar Issues

A Discussion of Common Arguments Against
the Hebrew Calculated Calendar and Reasons
Why Alternative Calendars Should Be Rejected

*For a quick summary of current issues, read the new appendix at
the end (pages 47-55) discussing the “Jerusalem Rules” for
calendar determination. Following that is a reply to questions
about using the conjunction or “dark” vs light of the new moon.*

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100 Word Summary

Authors of alternative calendars reject the Hebrew Calculated Calendar (HCC). They believe the HCC and its rules contradict Scripture, alter the date intended for Annual Sabbath observance and cause believers to sin by worshipping on the wrong day.

Each feels they have discovered the only correct method of calculating the Bible calendar. However, they fail to recognize the full extent of their own assumptions, inferences and deductions in arriving at their own extra-biblical calendar rules which also shift the days observed.

Essential calendar requirements are reviewed. Six common arguments are considered with evidence presented why alternative calendars should be rejected.

First, what a wonderful thing it is for so many to embrace the seven annual feast days that originated from God, were practiced by Jesus and which the New Testament Church – Gentile and Jewish Christian alike – was instructed to be observe. We celebrate this better comprehension of God’s mind, desire and purpose that are reflected in the celebration of the feast days and annual Sabbaths of the Lord.

One essential purpose of these festivals was to gather the people of God together at appointed times each year. The Lord revealed this to Israel in Leviticus 23:1-2 “The LORD said to Moses, ² “Speak to the Israelites and say to them: ‘These are my appointed festivals, the appointed festivals of the LORD, which you are to proclaim as **sacred assemblies.**’” (NIV)

The first of these appointed feast days is the weekly Sabbath. There is actually very little controversy over when that appointed feast is to be observed – it is the seventh day of the week, or Friday night to Saturday night. Most Christians who are knowledgeable of the Bible recognize the Sabbath is the seventh day. They also know that the modern observance of Sunday is not observing the Sabbath.

When it comes to the matter of determining the dates for observance of the annual festivals of the Lord, the overwhelming majority of those who observe the feast days follow the Jewish calendar.

Initially the Aaronic Priesthood and then later, the Judean Sanhedrin, was responsible for determining the beginning of the months (the “New Moon”), the new year and when a 13th month (the “Intercalary Month”) would be added. The Sanhedrin was led by the High Priest until 191 BCE when the leadership of the Sanhedrin was given to the “Nasi” or “prince.” ^A. The intercalary 13th month is necessary every few years in order to compensate for the 11-day difference between the 365-day solar calendar and the 354-day lunar calendar. The number of solar and lunar days in a year noted here are approximate.

Historical sources agree that by the time of Jesus, the Aaronic Priesthood had already authorized and empowered the Nasi and the Sanhedrin with the full responsibility for determining the calendar.

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By the fourth century AD it was becoming clear that policies and decisions by the Roman government were going to prevent the determination and publication of the calendar by the Sanhedrin to the Jews in the Diaspora. So, in the last Sanhedrin of 358/9 AD (and prior to its decision to dissolve itself), calendar rules produced by Hillel II for creating a Hebrew Calculated Calendar were approved and published.

The Hebrew Calculated Calendar permitted the observance of the festivals of God in unison among scattered believers who would not have access to the one thing required for a *common* religious calendar: **A single judge to make the calendar decisions of when the months began, the date of the New Year and when the intercalary (13th month) would be added.**

The Sanhedrin used to be that judge each month. It could be that judge in the same way no longer.

The framework of calendar calculations proposed by Hillel and approved by the Sanhedrin, or the Hebrew Calculated Calendar as it will be called here, was established by this last Sanhedrin and the Nasi as the ongoing singular authority for setting dates each year for the Feasts of the Lord. With the future assembly of a Sanhedrin prohibited and access to Jerusalem to observe new moons limited or non-existent for long periods of time, the Hebrew Calculated Calendar has permitted the Jew and Christian observer of the Feasts of the Lord to assemble on the same day for almost 1,700 years.

Without access to Jerusalem or the Sanhedrin as the single calendar judge, one can only wonder how much calendar confusion would have resulted. What would have stopped isolated Jews from developing their own calendar based on their own rules?

Actually, one does not need to wonder. Historically, the calendar has been a wedge issue to gain religious followers and political power. Jewish history records disagreements with the Hebrew Calculated Calendar and asserting a different calendar should be used as the starting point by sages and centers of religious studies seeking to take control over the Jewish religion.^B The modern age is no different - in the past 50 years alone more than a dozen calendar variants have emerged just among the scattered Churches of God who observe the Feasts of the Lord.

Some feel that they had discovered “new truths” or “rediscovered old truths” when it comes to the correct days of observing the Feasts of the Lord. For example, there are those that use the calculated new moon conjunction of the Hebrew Calculated Calendar but not the four “postponements.” Others have created calendars based a visually sighted crescent moon. Even among those who use a visually sighted new moon there are a number of differences as to what calendar rules should be followed and, consequently, on what days the Feasts of the Lord fall.

Some alternative calendars have sought to resolve the problem by using a solution similar to Roman Catholic Church’s calendar for Easter: The Catholic rule is essentially

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that the Easter is observed on the first Sunday after the first full moon that occurs on or after the vernal equinox. (Although the Catholics have a postponement rule for Easter if the full moon occurs on a Saturday, thus reducing the chance Easter and Passover would fall on the same day and ecclesiastical definitions for the new moon and the vernal equinox that can differ from astronomical tables.) ^C It would seem that even such a simple rule has to have exceptions.

And so it goes.

Some who believe they have created or discovered a superior calendar method that is the only correct way to establish the dates of festival observance have been evangelical in their efforts to win converts to their new calendar. The more strident of these authors condemn followers of Christ who use the Hebrew Calculated Calendar (or any calendar other than their own) as sinning or even bearing the prophesied mark of the Beast. ^D

There are many alternative calendars – more versions than we can discuss here. The purpose of this paper is to explore some of the various opinions of those who have an issue with using the Hebrew Calculated Calendar and discern whether their grasp of calendrical facts is correct and examine if they use sound approaches in advancing their calendar arguments.

What are common criticisms of the Hebrew Calculated Calendar alternative calendar authors? Are the calendars they have created “the same calendar that was used when Jesus walked the earth?” Are the calendars they have devised truly the only correct calendar for determining the feast days of God? How sound are the facts, logic and reasoning upon which their calendars are based?

While not an exhaustive list, common objections to the Hebrew Calculated Calendar can be simplified to six common arguments:

Six Common Arguments Against the Hebrew Calculated Calendar:

1. The Hebrew Calculated Calendar contains “postponement rules” that are extra-biblical. These four rules are designed to prevent certain annual Sabbath days from falling on specific days of the week. The new calendar proponents state that any extra-biblical rule that alters the first day (new moon) of the first or seventh months would affect the day when the annual Sabbaths should be observed, thus violating God’s law. Those who follow the calculated calendar and/or postponement rules are incorrect (or even sinning) because they do not observe the feasts on the “correct” day.
2. The reasons attributed for the creation of the four rules of postponement of the Hebrew Calculated Calendar do not appeal to those who object to them. Often this argument adds that there are no reasons that are acceptable justifications for rules to alter the beginning (new moon) of the first and seventh months and subsequent feast days.

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3. Jesus condemned the Pharisees, the Sanhedrin had Pharisees in it, and therefore Jesus would have condemned everything the Sanhedrin did. This includes a Sanhedrin creating the Hebrew Calculated Calendar that was published over 300 years after the death of Jesus. **If they can discredit the Sanhedrin they can incite a sense of betrayal – a powerful emotion.**
4. “We should set the calendar today just like they did when Jesus/Y’shua walked the earth” instead of using a calculated calendar. The argument is that the only correct method of determining the calendar is the one used by the Sanhedrin, Nasi authorized by the High Priest at the time of Jesus – the rules for which the calendar creator asserts he/she knows and carefully follows to the letter.
5. Genesis 1:14 speaks of lights for “seasons, the Hebrew word in Exodus 34:22 (transliterated “tequphah, tequfah or tekufah”) refers to the timing of the Feast of Ingathering at the “year’s end.” Today “tekufah” has the modern Hebrew definition of “equinox.” They allege that the Jews adopted the Babylonian calendar names and therefore the Babylonian calendar rules for starting the New Year with the first new moon on or after the vernal equinox. Therefore the first of the annual Sabbaths must fall after the vernal equinox and the Feast of Tabernacles (part or whole, depending on the argument) must fall after the autumnal equinox in order to stay within the appropriate “season.”
6. The Hebrew Calculated Calendar is invalid because over thousands of years it will eventually drift out of the appropriate seasons.

This paper is not a primer on lunar/solar calculations. There are many sources available to understand the specifics of what is a conjunction, waxing, waning, gibbous, full and new moon. Instead we begin with the essential mechanics of what is required for establishing any calendar for observance of the annual feast days of the Lord.

After establishing the mechanics of creating a festival calendar we will be able to better evaluate the claims of those who reject all or part of the rules for the Hebrew Calculated Calendar or who have created their own alternative calendar.

Seven Essential Calendar Rules:

The mechanics for anyone to create a calendar for observing the seven annual feasts of God include rules for:

1. When the day begins and ends;
2. What defines a new moon;
3. What constitutes the beginning of a new month and the end of a month;
4. When the first month begins;
5. When the seventh month begins;
6. In what years an intercalary (13th) month is added;
7. When decisions on the calendar are required, who is modern equivalent of the Sanhedrin, and the Nasi as its leader (or by the High Priest in earlier times), to act as the official judge in deciding these matters;

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Depending on what approach is advocated by a proponent of an alternative to the Hebrew Calculated Calendar, additional rules may be required. For example, those who want to use the sighting of a crescent moon as part of the calendar, there are additional rules required for deciding the official location for sighting a new moon and what happens when bad weather prevents visual confirmation of a new moon. Also, as noted in the Seven Essential Calendar Rules above, one has to define who qualifies to become the “new Sanhedrin, Nasi and High Priest” to make the decisions when there is a question about how to interpret rules as they apply to specific astronomical events. One would also need rules for how those calendar judges are chosen and how are they replaced.

The Hebrew Calculated Calendar addresses each of these Seven Essential Calendar Rules based on the set of rules developed by the Jewish leadership.

I submit the following as statements of the obvious:

Assertion of Facts:

1. **The Bible gives some information about the calendar, but it does not give sufficient information to allow us to create a calendar solely from explicit Biblical instruction, statements or examples.** Those who claim their calendar is solely and entirely based on explicit Bible statements knowingly or unknowingly include assumptions, make inferences and draw conclusions well beyond what the Bible explicitly states. Herb Solinsky spends 335 pages in his attempt to prove his calendar views. Jim Rudd invests 436 pages defending his alternative calendar. Were all the calendar rules clearly and explicitly stated in the Bible, the issue would be quickly resolved, lengthy arguments based on logic would not be required and everyone would agree – as we agree on the Sabbath.
2. **To operate, every calendar requires rules beyond what is explicitly stated in the written law of God.** Requiring the sighting of a crescent moon in Jerusalem to begin the month is an extra-biblical calendar rule. Some cite scriptures about the law going forth from Zion or that the new month will be celebrated in Jerusalem as proof of their method of requiring a new moon to be sighted in Jerusalem. In fact, extra-biblical rules shaped the observance of the new moon in Jerusalem. **Psalm 81:3-5 makes an unequivocal and explicit Bible claim that *the determination of the new moon was originally based on observations made in Egypt*.** Yet we find that hundreds of years later the first Temple was built and the priests applied the principles of the extra-biblical rules revealed to them by God to change how the new moon was determined in a different location. *The calendar principles didn't change – but the rules did.*
3. **To address these and other necessary but biblically unrevealed calendar rules, calendar creators make their own rules that are not explicit Bible statements but are “extra-biblical.”** They believe they have a good reason for their extra-biblical rule, base their rules on what they believe is a logical conclusion using a chain of Bible references or just make the rules up out of

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whole cloth. In every case, these rules are “extra-biblical” and every calendar has some which change the day on which the Feasts of the Lord fall.

4. **The four postponements are extra-biblical.** The effect of one postponement rule is to make sure the Day of Atonement does not fall on a Friday or a Sunday. Another ensures the first day of the seventh month begins when the new moon might be visible somewhere on the earth. The other two are concerned with ensuring the length of the year is not too long or too short. Though these rules allow for a more accurate observance of the Holy Days (including the full moon occurring on the first days of Unleavened Bread and Tabernacles) every alternative calendar author criticizes these rules as being “extra-biblical” then boldly makes up their own “extra-biblical” calendar rules. Is this religious hypocrisy? Self-contradicting logic and fallacious reasoning?

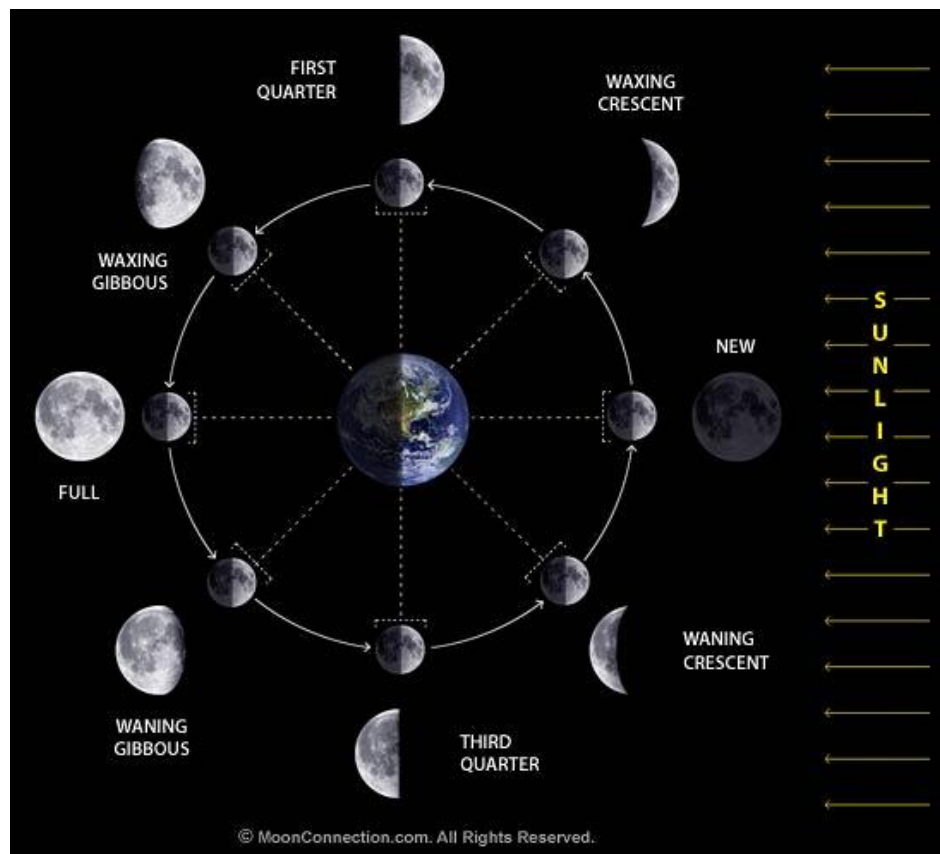


Figure 2: Moon Phases from http://www.moonconnection.com/moon_phases.phtml

Logic, Interpretations, Assumptions & Reasoning – Explicit or “Extra-biblical?”

Not every alternative calendar author would agree that they use any extra-biblical rules. Having read many of their publications, their definition of an “explicit Bible rule” is, to me, very loose. When one looks for it, it becomes clear how often alternative calendar authors depend on logic, interpretations, assumptions and reasoning to create their

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calendar rules. Red flags for extra-biblical rules are statements such as “Therefore ...” and “The conclusion is ...” or “It must be ...” or “The only explanation is ...” or “Without a doubt ...” or “Certainly ...” One does not need such qualifiers when the Bible is explicit.

There are times when it is appropriate to draw conclusions from evidence presented in multiple scriptures and historical sources can be enlightening. However, when one is making an involved and lengthy argument based on repeated inferences, extra-biblical historical sources, interpretations, and extensive use of reasoning, it should be clear that one is NOT basing a doctrine or teaching on explicit Bible statements.

“Remember the Sabbath day by keeping it holy. Six days you shall labor and do all your work, but the seventh day is a Sabbath to the Lord our God” (Exodus 20:8-9) is explicit. So are the commands to observe the Feasts of the Lord in Leviticus 23 or Paul’s instruction to the Corinthian church do likewise in 1 Corinthians 5.

It is troubling when a calendar author does not discern or disclose their use of extra-biblical rules, including inferred conclusions based on logic, interpretations, assumptions and reasoning. Treating such edifices of logic as having the same weight and authority as explicit statements has plagued theology in general for millennia and the calendar in particular.

The point being made here is that explicit Bible statements do not reveal all the rules necessary to create a workable calendar. These additions are extra-biblical rules – beyond what the Bible explicitly states.

Ten Questions for Which There Are No Explicit Bible Passage(s):

As others have noted, ^E a simple list of Ten Questions are examples of extra-biblical rules that occur in the Hebrew Calculated Calendar and/or in the various replacement calendars. **Where does it explicitly state in the written law of God:**

1. That a month begins with the lunar conjunction or sighting a crescent moon at a specific location?
2. From what location is the new crescent to be officially observed?
3. That, if the conjunction takes place before sunset, on which day is the first day of the new month?
4. That, if the new moon is occluded and cannot be observed, how is one to decide the first day of the new month?
5. What actually constitutes the end of a day, because the moment of observation of the crescent may happen while it is still light?
6. In which years should an intercalary month be added?
7. At what time of the year should an intercalary month be added?
8. Who decides calendar questions, such as when a moon sighting is occluded or there is an argument about when – and in what location – the

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new moon is seen or if the barley has “green ears” or when it is ready to be harvested? ^F

9. That the equinoxes should or should not play a role in determining the calendar?
10. Which new moon – before, after, closest, on or a certain number of days before – the vernal equinox is the correct month to begin a New Year?

The Sabbath is simple and explicit. The day of the week on which it falls and the number of days in a week are explicitly stated and little credible controversy exists. The annual calendar for the Feasts of the Lord is not explicitly defined in the scriptures. One could ask alternative calendar authors to list the scriptures from the Law that define the clear and explicit astronomical observations that answer these simple Ten Questions or all of the Seven Essential Calendar Rules. They cannot. Instead, long paths of logic, reasoning, interpretations and assumptions are offered as “Bible proof.”

Anti-Postponement Fallacious Reasoning

To begin the analysis of common arguments against the Hebrew Calculated Calendar, let's begin with the postponements. A typical flow of arguments against the postponements include:

- The four postponements are extra-biblical.
(Which is true.)
- The postponements can alter the day on which a feast day (or an annual Sabbath) is observed.
(Which is true.)
- The reasons stated by later Jewish commentators for the postponements are objectionable to the critic. The typical argument may suggest that the four postponement rules are Pharisaical, are made for silly reasons or that they perpetuate archaic Jewish practices. To the critic, there is no reason given for postponements that justifies altering when an annual Sabbath is observed.
(Regardless of what commentaries have said, **the real issue is whether ANY extra-biblical calendar rules are “authorized” to change the days when annual Sabbaths/Feast days of the Lord are observed – and if so, who could authorize such a rule?**)
- Changing an annual Sabbath because of the postponement rules causes sin because the believer is observing the wrong day. Some go so far as to describe the postponements and the Hebrew Calculated Calendar as the “Mark of the Beast.” ^G
(For those who make such statements, they fail to discern that all calendars – even those based on crescent moon observances – include extra-biblical rules chosen by the author that cause annual Sabbaths to fall on different days. Such statements do not reflect an informed opinion and the facts.)

Attacking justifications for the postponements by Jewish “sages” and scholars who offered opinions even centuries later is simply a distraction. There is no end to such

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opinions. **Whether an alternative calendar author understands it or not, the first issue is the question whether *any* extra-biblical calendar rule is authorized to change the day of annual Sabbath observances.**

Should Extra-biblical Rules Change the Day of an Annual Sabbath?

The four postponement rules are entirely extra-biblical. Not only can postponements change what day is considered the first of the seventh month, they are specifically designed to do so. Therefore, they affect what days are observed as annual Sabbaths.

However, in attacking extra-biblical rules for postponements, are alternative calendar authors even aware that every one of them are guilty of exactly what they accuse the Sanhedrin of doing – using extra-biblical rules that change the days of annual Sabbath observance?

Those who condemn the Jews for using extra-biblical postponement rules in their calendar calculations **are open to the same condemnation if their calendars use extra-biblical rules that affect the selection of the new moon date.** (As we will see in more detail, ALL calendars use extra-biblical rules that impact the selection of the day on which the new month begins.)

After an extensive review of alternative calendar literature and papers, it surprises me how many who argue against the Hebrew Calculated Calendar and/or postponements because they change the days of annual Sabbath observance appear to be honestly unaware that their own replacement calendars are guilty of doing the same thing. When their extra-biblical calendar rules change what day is declared the first day of a first or seventh month, it shifts the days annual Sabbath are observed. Their extra-biblical rules have the same effect as the postponement rules – they change dates of annual Sabbath observance.

Let's look at examples of extra-biblical rules required by alternative calendar authors who advocate the only correct way to determine the new moon is to visibly sight the new crescent moon. For instance:

- The occluded moon, such as where weather or atmospheric conditions prevent or delay a new moon sighting, presents a problem. For those times where the occlusion occurs, extra-biblical rules are created to decide whether to delay, not delay or calculate the day declared as the first of the month. Applying such extra-biblical rules in the first or seventh months *will shift the day of Feasts of the Lord and annual Sabbath observances in that month.*
- There has to be a rule for where an official new moon sighting determines the first day of the month. Some calendar authors say it is Jerusalem, others say their personal location, others say Bethel, PA, ^H and there are others who say anywhere in the world where the crescent moon is first seen. There is no explicit rule in the Bible for the official new moon sighting location. Lacking an explicit Bible calendar rule, alternative calendar authors propose their own extra-biblical

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rules based on assumptions, inferences and their deductions as to what is reasonable based on their selected Bible passage or tradition. (The first new moon seen anywhere, the location closest to Jerusalem, etc.)

- The differences from seeing the new moon at a specific location versus the first possible location anywhere on the planet can differ by two days or more. *Consequently, the delay will shift (postpone) the date of festival/annual Sabbath observance for those advocating a specific location. Figure 1 is an example of the amount of variation in seeing a new moon on any given day.*
- Those who advocate that each person's location is the basis for the new month have the extra-biblical rule is that every location ("habitation") experiences the new moon as it comes to them. Different parts of the world would have different first days of a month and consequently annual Sabbaths on different days.
- Some alternative calendar authors have extra-biblical rules about whether you can or cannot use a telescope or binoculars to see the new moon.
- What is the rule for who should be the "judge" when it comes to deciding "borderline" situations, when the new month begins if early sightings occur in "non-official" locations or when are the "official" dates of the barley harvest, etc.

Her Majesty's Nautical Almanac Office illustrates the impact of location on sighting new moons on their website. An example of which is illustrated in Figure 1.¹

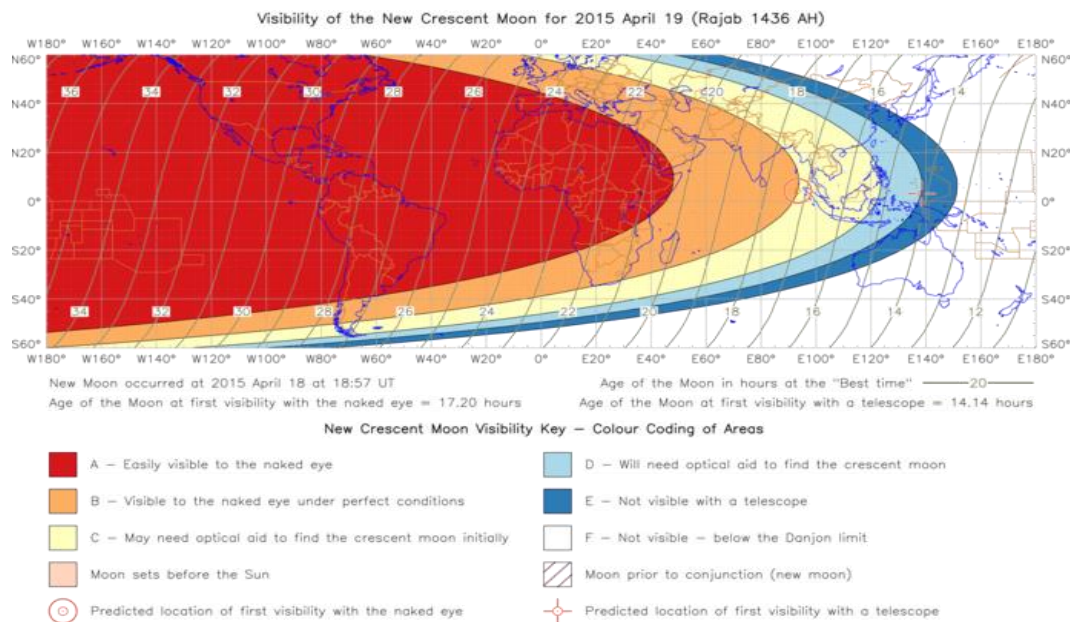


Figure 1: Worldwide visibility of the crescent moon

Interestingly, those in the example month illustrated who live in Israel could only see the new crescent moon under "perfect conditions," while those in the USA with clear skies could see it easily with the naked eye. Parts of Australia could not see the crescent under any conditions. On which day should the new month begin?

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Of course, there are dozens of alternative calendar variations – these few examples illustrate the fact that every alternative calendar author is required to add extra-biblical rules for their calendar to work. Not all are candid enough to admit this.

Many calendar authors recognize that every calendar requires extra-biblical rules and while they don't agree with the Hebrew Calendar rules, they don't condemn the Sanhedrin for using extra-biblical rules. I respect their honesty and candor.

Condemning the Jews for extra-biblical postponement rules while they themselves use extra-biblical rules that change the day of the new month and subsequent Feast days is poor scholarship and self-condemning logic. It is like saying "John Smith is a liar and unreliable witness." Then, a few minutes later quoting John Smith as an authority.

What if an alternative calendar doesn't use a visually sighted moon? What if one uses the calculated conjunction without the postponements? Is one free from the logical fallacy and hypocrisy of condemning the Jews for using extra-biblical rules that postpone the days to observe annual Sabbaths/Festivals of the Lord?

The answer is no. The use of the conjunction calculation is based on extra-biblical rules.

The Problem with Intercalary Months

Every lunar/solar calendar adds a 13th or intercalary month periodically. Without it a lunar calendar would migrate through the solar year. The Islamic calendar is strictly lunar and, for example, their celebration of Ramadan migrates through the seasons.

When it comes to adding intercalary months, do critics of the extra-biblical rules for postponements **apply the same standard of criticism for their intercalary months?**

When an intercalary month is added it moves the observance of ALL the annual Sabbaths for the next year by a full lunar month. So, what is the absolutely explicit Bible rule to decide in what year an intercalary month is added?

The honest student of the calendar will tell you there is no explicit Bible rule for calculating when an intercalary month should be added. Whether one looks at a calculated calendar, the equinoxes, the state of the barley harvest, how fat are the firstlings of the flock, how muddy the roads are or whether the Jews of the Diaspora have left for Jerusalem or some combination, **all rules for adding an intercalary month are purely extra-biblical.**

Here is a clear example of poor scholarship and fallacious reasoning: Most alternative calendar authors criticize the Jews and the extra-biblical postponements in the Hebrew Calculated Calendar for adjusting the first day of the seventh month by one or two days.

In the next breath, these authors of alternative calendars easily justify their own extra-biblical rules that impact when the new month begins, such as where a new moon can

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be officially sighted or when intercalary months are added. As we have noted, both actions can change when a month begins and when annual Sabbaths/Festivals of the Lord are observed.

Adding a 13th month has a greater effect than “postponements” - it changes the days of annual Sabbath observance by 29.5 days. Adding intercalary months by alternative calendar authors is based purely on extra-biblical rules of their own invention.

There is a saying: **“What is sauce for the goose is sauce for the gander.”** Rules for evaluating an argument must be evenly and equally applied.

It concerns me when alternative calendar authors appear to be oblivious that they have chosen to avoid applying the standards of reason and scholarship equally. Perhaps this is an issue for which they have no answer.

More than Hypocrisy – Unsound Reasoning and Unsound Doctrine

Commonly, those alternative calendar authors who stridently seek to discredit the Hebrew Calculated Calendar first attack the four rules of postponements and the credibility of the Sanhedrin for allowing these extra-biblical rules. Then a case is made for the more optimal/correct/truly Biblical method of creating a calendar along with the motivation of avoiding sin by worshipping on the true day, now that the correct calendar is revealed.

Yet extra-biblical rules for official moon sighting locations, adding intercalary months, etc., move – essentially postpone – the dates of annual Sabbath observance. Again, EVERY lunar/solar calendar uses extra-biblical rules.

So many miss this point it is worth repetition: Because the Bible does not contain enough information to establish ALL the necessary calendar rules, every lunar/solar calendar has extra-biblical rules that shift the dates of the annual Sabbaths

Having established that every calendar has extra-biblical rules that affect the dates of the observance of annual Sabbaths/Festivals of the Lord, the question is “who has the authority to make those rules?” However, before we address the issue of calendar authority, there are several more issues to address.

What about the Equinoxes?

Alternative calendar creators sometimes appeal to the vernal and autumnal equinoxes to be “the judge” for the correct timing of the Hebrew calendar. Some point to the “moed” in Genesis 1:14 as meaning uniquely and only the vernal equinox. Because the Babylonian names for months were used in the Bible they state that Israel must have adopted the equinox-driven calendar of the Babylonians while in captivity.

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It should be noted here that more than one author says when the Jews adopted the names of the months in the Babylonian calendar they **MUST** have adopted the Babylonian use of the equinox to determine the first month of the year. They fail to note that the Jews had to maintain two calendars while in Babylonian captivity in order to maintain their Sabbath observance.

For example, the Babylonian week had seven days, but not an unbroken weekly cycle that the Jews observed. The Babylonian “weeks” of a month began with the first day of the new moon, followed by four seven day “weeks”, then an extra day or two until the new moon was sighted and the process would begin all over again. The lunar 29.5 day lunar month was longer than $4 \times 7 = 28$ day Babylonian weekly cycle, so the Babylonian calendar added a couple of days until the cycle restarted with the first day of the new moon. Their “seventh day” would always fall on the 7th, 14th, 21st and 28th day of the month – with one or two “intercalary” days added at the end of each month.^J If the Jews adopted the Babylonian calendar, the weekly cycle of 7 days would have been broken.

It was not a regular weekly cycle like the Jews observed. So the Jews had two calendars – essentially the Babylonian civil calendar and their sacred calendar. While it is clear that there were common names for equivalent months, to say the Jews adopted all of the Babylonian calendar because they started calling the months by the same name is too broad of an assumption. Having common names for months does not mean all the underlying practices were necessarily accepted.

The Hebrew word transliterated “tequphah, tekufah or tequfah” which is used four times in Hebrew Scripture, is cited as explicit proof that the first month and seventh months of the Hebrew calendar are tied to the equinoxes. (There is no such explicit Bible connection.) These authors state that the modern Hebrew the meaning of the “tekufah” is equinox, and therefore this group of alternative calendar authors demand that Exodus 34:22 “And thou shalt observe the feast of weeks, of the first fruits of wheat harvest, and the feast of ingathering at the year's **end**” (**tekufah**) absolutely proves that the ancient Israelites used the equinox in their calendar calculations AND that the Feast of Tabernacles **MUST** begin after the autumnal equinox.^K

Nehemiah Gordon, a Kairite Jew who does not accept the postponements, nevertheless points out three things:

1. As a sub-tropical country, Gordon cites Genesis 8:22 to demonstrate that the Bible describes essentially two seasons for Israel: winter and summer. “While the earth remains, seedtime and harvest, cold and heat, summer and winter, day and night, shall not cease.”
2. Gordon points out that none of the four passages in the Hebrew Scriptures where tekufah is used have anything to do with an equinox.
3. While the modern usage of tekufah is equinox, it is absolutely improper scholarship to assume that the ancient meaning of a Hebrew word is the same as the current meaning of the word. Doing so creates an “anachronism,” defined

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as “an act of attributing a custom, event, or object to a period to which it does not belong.”

Gordon demonstrates the concept of Hebrew anachronisms with the word translated “carbuncle” (KJV) or “sparkling jewels” (NIV) in Isaiah 54:12 meaning “handgun” in the modern Hebrew language.

“The claim has been made by proponents of the equinox calendar theory that the word equinox actually appears in the Tanach. They are referring to the word Tekufah or Teqfah which appears in the Hebrew Bible four times. Tekufah is in fact the post-Biblical word for “equinox”, however, it never has the meaning of “equinox” in the Tanach. In Biblical Hebrew, Tekufah retains its literal meaning of “circuit”, that is something which returns to the same point in time or space [from the root Nun.Quf.Pe. meaning “to go around”]. To claim that Tekufah means equinox in the Tanach, just because it had this meaning in later Hebrew, is an anachronism. **This would be like saying that there were handguns in ancient Israel because the word EKDACH, the post-Biblical Hebrew word for handgun, appears in Isaiah 54:12.** (Emphasis mine)

Let us consider another example of this anachronistic use of language: Before the invention of the electronic computer during World War II, the word “computer” referred to a man who sat at a desk calculating (computing) mathematical equations. Imagine if we found an 18th century document mentioning “computers” and proclaimed to the world that there were really electronic computers in the 18th century. This is exactly what the equinox-followers are doing with the word Tekufah.^L”

Good scholarship watches for anachronisms. Apparently, so do translators of the Bible. In contrast to the claims of equinoxes being a part of the ancient Hebrew calendar, **translators of the Bible completely reject the use of equinox for tekufah. Every one of the 51 English translations of the Bible found on BibleGateway.com rejected the use of “equinox” in ANY instance of the Hebrew Scripture.**

*How many trained translators of ancient Hebrew does it take to establish equating “tekufah” with “equinox” is an improper and anachronistic application of a modern meaning to an ancient word? 51 English translations and not one translator uses “equinox” – but these calendar authors are adamant that Moses based the calendar on the equinoxes? The same goes for those who claim “moed” in Genesis 1:14 means equinoxes and solstices – or the vernal equinox in particular. ^M **No English translation of the Bible agrees.***

What is the only conclusion reasonable from the clear evidence from every English translation? Where is the Scriptural evidence to support their equinox assumptions?

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Jim Rudd, who also rejects the postponements, shares Gordon's view of the poor scholarship of not recognizing anachronisms. For example, he examines the usage of the word in 1 Samuel 1:20:

"The term Tekufah (circuit) also appears in 1Sam 1:20 which says: "And it was at the circuits (Tekufot) of the days, and Hannah conceived and bore a son..." Here the "circuits" of the days refers to "the same time the following year" [or possibly to the completion of the term of pregnancy?]. It is worth noting that Tekufah is plural in 1Sam 1:20 as tekufot 'circuits'. If we apply the anachronistic meaning of Tekufah as equinox then we get the absurd translation: 'And it was at the equinoxes of the days, and Hanah conceived and bore a son...' This emphasizes how important it is to understand Scripture in its historical and linguistic context.

None of the four appearances of Tekufah in the Hebrew Scripture have anything to do with the equinox. Instead, this term is used in Biblical Hebrew in its primary sense of a 'circuit', that is a return to the same point in space or time. Only in Post-Biblical Hebrew did Tekufah come to mean "equinox" and to read this meaning into the Tanach creates an anachronism.^N

In the Appendix: "Tekufah," I have included a full copy of one of Nehemiah Gordon's discussions of the four Biblical passages using tekufah. There are no explicit Bible statements tying the use of equinoxes or solstices to the Bible calendar for feast of the Lord observance. While later religious leaders did want the calendar tied to the equinoxes in some way, the facts from Scripture do not support the ancient use of equinoxes by the ancient Hebrews.

What About Sighted vs Calculated Moons?

Many alternative calendar authors assert that the Sanhedrin, Nasi and High Priest of the Second Temple era used the sighted moon, therefore it is the only appropriate way to determine the new moon. This is fertile ground for extra-biblical rules.

One example is Herb Solinsky, a widely quoted alternative calendar author. As a logical point required in his argument for his version of the calendar, Solinsky goes to great lengths in his effort to prove that the visual sighting is the "light trigger" vs a calculation of a conjunction. He asserts that these "light triggers" from heavenly lights are the only Biblically correct method to determine the new day, equinox, new month and New Year.

"In order to understand what is intended from Gen 1:14 for years, we should look for a consistent pattern in what we already know about the beginning of days and months. Light from the heavenly bodies is a trigger for the events described. The light trigger for distinguishing a new day is the transition from light to dark of the sun. The light trigger for beginning a new month is the new crescent in the western sky. Gen 1:14 declares that the lights themselves determine these matters, not a prediction of these lights, and not an approximate calculation of these lights."^O

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Solinsky expands on the virtue of a sighted light vs a calculated value, such as is used by the Hebrew Calculated Calendar. He is not alone in his viewpoint. Four of my observations:

1. Our “modern” astronomers note (as did the ancient Hebrews) that the conjunction ends the waning (darkening) period of the old moon. The waxing “brightening” period immediately begins after the conjunction.
2. The visible crescent appears when sufficient light is reflected to be able to be seen by the observer looking at the moon at the correct time, in the correct direction, with sufficient visual acuity and absent obstructions, haze, clouds or other factors that would reduce visibility.
3. Technically, Solinsky’s lunar “light trigger” actually begins at the end of the conjunction – the light is reflected by the moon to the earth’s surface from that moment. How long it takes for a human to distinguish it depends on all the visual factors noted above as well as the observer’s location on the planet at sunset. Using his terminology, the “light trigger” for the new moon begins after the conjunction and that “trigger” has already been tripped before anyone observes it. The only difference is the amount of light being reflected.
4. The knowledge that the moon eclipses the sun at the time of the lunar conjunction has been known for thousands of years. ^P In a solar eclipse one can actually watch the moon at the conjunction pass in front of the sun.
5. Most alternative calendar authors admit that, absent a sighting on the 29th day or if weather obscures the sighting, the ancient/modern rule is to count the new moon as the day after the 30th day of the month. (A logical rule – but extra-biblical nonetheless.) This “calculated postponement” would occur even if the new moon should be technically visible, but obscured due to other factors.

In fact, the ancient Hebrews use of the mean (average) conjunction is more accurate than Solinsky in determining when Solinsky’s own “light trigger” was tripped. Their reliance on astronomical knowledge rather than tradition led them to more precisely – and accurately – determine when the light shines on the moon and the new month begins. The moon begins receiving light immediately after the conjunction. It takes a half day or more to have enough light to be visible.

Rather than being the exact beginning of a new month, the visually sighted crescent moon confirmed the conjunction had occurred and technically the new month was already at least a half day old.

The crescent moon is not magical, though pagans have treated it as such. Rather, the new moon begins when the conjunction ends. Ancients knew that the moon was waxing brighter before they could see it. These ancients knew that the visible crescent confirmed the new moon – it was not the “new moon” itself. Calculated new moons recognize more *exactly* what sighted new moons *approximate*. This is not a point of logic or argument – it is simply an astronomical fact. Those who insist that the new month only begins at the moment of the observed crescent are actually saying that the

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“old month” includes the waning (darkening) moon PLUS the lightened “new moon” until the crescent can be observed. Equating the sighted crescent as the absolute beginning of the “new moon” underestimates how bright our ancestors were. It also introduces the idea that the Bible astronomical facts and modern astronomical facts are different.

That is hardly the case.

There is more information on equinoxes and their reliance on extra-Biblical calendar rules in the Appendix.

Searching for Barley

It is popular among some alternative calendars to emphasize the “green ears” of barley for and ripeness for determining the first month of the New Year. They depend on sightings reported by people in Israel of the stage of barley growth. Exodus 9:31 shows in the month of Abib that the barley harvest was destroyed by the plague of hail, but does not account for all the factors in determining intercalary months and when the New Year begins.

Dr. Alfred Edersheim in his book “The Temple, its Ministry and Service” writes:

“Already, on the 14th of Nisan, the spot whence the first sheaf was to be reaped had been marked out by delegates from the Sanhedrim, by tying together in bundles, while still standing, the barley that was to be cut down. Though, for obvious reasons, it was customary to choose for this purpose the sheltered Ashes-valley across Kedron, there was no restriction on that point, provided the barley had grown in an ordinary field— course in Palestine itself— not in garden or orchard land, and that the soil had not been manured nor yet artificially watered (Mishnah, Menach. viii. 1, 2). *

*** The field was to be ploughed in the autumn, and sowed seventy days before the Passover.”**

Edersheim’s view of the historical testimony of second Temple practices in the Mishna was that the priests did not leave the harvest of barley for the Wave Sheaf offering to chance. Passover, intercalary months and the date of the wave sheaf offering had been determined months in advance and barley planted so the harvest would be ready. The astronomical sophistication of the ancients is often overlooked. Historical evidence records that by the 700’s BC the Babylonians understood a calculated intercalary year.^Q

Others who reject the Hebrew Calculated Calendar have pointed out that the New Year has been successfully calculated by Noah during the flood and the Children of Israel while wandering in the desert without consulting the barley harvest in Canaan.^R

It should also be noted that the essential barley “rules” are completely extra-biblical and have changed multiple times. For example, advocates of the state of the barley harvest used to determine the intercalary year advocate the Jerusalem-area barley as their

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standard. Historical sources certainly support this during the late Second Temple era. It is as though the extra-biblical rules reported as being used during the late Second Temple era are the God-given standard for all time.

At issue here is the assumption that their interpretation of the extra-biblical rules put in place during the Second Temple era by the Aaronic Priests, and later the Nasi and Sanhedrin to whom the priests delegated calendar authority, are the only correct extra-biblical rules allowed by God.

This is another example of poor scholarship, ignoring observable facts and treating some extra-biblical rules created and used by those authorized to determine the calendar during a certain period of time as being the singular “Gold Standard” for all times.

For example, let’s look at the claims of those who advocate as the “Gold Standard” for all time the extra-biblical rules created during the time of at least the Second Temple era. Historical records do show that the barley was harvested for the wave sheaf offering in Jerusalem. Some alternative calendar authors have made the state of the barley harvest in Jerusalem a linchpin argument for discrediting the Hebrew Calculated Calendar.

To them, any method of determining the first month that does not agree with their determinations (either by physical barley ripeness sighting or general rules of when a harvest can be made) is a clear indication to them of forbidden tampering of God’s calendar “laws.”

Could this be an example of personal bias toward a conclusion blinding these authors and their supporters to obvious contradictions from explicit Bible facts, facts about the barley harvests in Israel and observable facts about harvests in mountains vs valleys.

Jerusalem was not the first nor the only place the first month has been determined. The first month was determined for hundreds of years elsewhere. First, it was determined in Goshen (Egypt), then in the multiple places in the Sinai, in Jericho and in other areas of Israel during the time of the Judges. David conquered the area that later became the location of the Temple, which his son, Solomon, eventually built.

The extra-biblical rule for using Jerusalem in any calendar determinations was added after hundreds of years of calendar determinations. It was not the first, nor was it the last, extra-biblical rule added or changed by those authorized to do so.

When explicit Bible passages categorically state that other locations were used to determine the first month, what kind of sound reasoning would make the barley harvest in Jerusalem as the sole, singular and only correct extra-biblical rule for determining the beginning of the year?

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Any extra-biblical rule for barley in determining the first month would be affected by the location in which those authorized to do so could observe the state of the barley harvest.

Jerusalem's harvest season is not same as other locations used to determine the first month. Jerusalem is in a mountainous region at an elevation of 2,582 feet above sea level. Cairo (close to Goshen) is 75 feet above sea level. Jericho is at 846 feet BELOW sea level – a difference of 3,428 feet from Jerusalem. Barley harvests in Jericho are two weeks earlier than in Jerusalem.^S Jericho is where the first year was determined by Joshua as recorded in Joshua 5:10-12.

It is also well documented that planting barley in Israel was done multiple times during the year, with the exception of the dead of winter.^T Harvests consequently occurred over a large portion of the year – including the planting by the priests in sufficient time for a harvest to be ready in time for the wave sheaf offering.

It is simply contrary to observable facts that the barley harvest is uniform across all locations explicitly stated as places where the first of the month was correctly determined. Instead, *those who emphasize Jerusalem as the singular location for determining the state of the barley harvest* reject, ignore or simply have never realized that facts detailed in multiple and explicit Bible passages or from physical observations that contradict their claims. They clearly do not recognize that people authorized to do so have changed the rules for determining the first month from the very beginning in Goshen.

Is their fascination with Jerusalem consistent with what is explicitly revealed by the Bible and observable facts?

Jerusalem was not the first nor only location for determining the first month.

The barley harvest in Israel can vary by two or more weeks within a distance of 15 miles. (Jerusalem to Jericho, for instance.)

The historical evidence demonstrates that the priests in the first century AD intentionally planted barley in the area of Jerusalem sufficiently in advance for the wave sheaf offering. As already noted, this is a clear indication they had already calculated when the new year would begin and when barley would need to be ready for the wave sheaf harvest.

The Bible explicitly states that the new year was determined in Jerusalem as well as other locations that had different harvest times. Rules to use Jerusalem barley as a factor in determining the new year is completely extra-biblical and originated hundreds of years *after* Exodus 12. The Bible explicitly states that the new year was determined elsewhere and at times when access to the area around what was to become "Jerusalem" hundreds of years later was blocked.

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It is not that extra-biblical rules are wrong. However, many alternative calendar authors cannot seem to grasp:

1. That every lunar/solar calendar exists only with extra-biblical rules
2. That their own extra-biblical rules about the necessary state of the barley harvest would prove that changes in location (and ripeness) would affect the determination of when the new year begins
3. Extra-biblical rules that were based on location would change as Israel moved from one place to another
4. That the Aaronic priests and those they chose to handle calendar matters were the only ones authorized to change these extra-biblical calendar rules
5. That modern calendar authors are taking upon themselves to make up or decide their own set of extra-biblical rules for calendar determination

On this last point, some authors claim they are simply following the last set of rules prior to the destruction of the Second Temple. As noted elsewhere, this simply is not true. For example, they omit the rules about who is the judge on calendar matters. At the time of Jesus, the priests had authorized the Nasi and Sanhedrin as that judge.

The alternative calendar authors reject the Nasi and Sanhedrin authorized by the priests and have authorized themselves and the rules they choose instead. We will develop this thought later.

Full Moons on the “Right” Holy Days

An explicit Scripture relating to the correct result of the calendar rules is that there should be a full moon on the annual Sabbaths beginning on the 15th day of the first and seventh month. Different translations of **Psalms 81:3** makes this clear:

“Sound the ram’s horn at the New Moon, and when the moon is full, on the day of our festival;” (NIV) and “Blow the trumpet at the time of the New Moon, at **the full moon**, on our solemn feast day.” (NKJV)

For any calendar, having a visibly full moon (weather conditions permitting) land on the annual Sabbaths on the 15th day of the first and seventh months should not be an exception, but rather a biblical expectation. So, do postponements place the full moon on the annual Sabbaths beginning on the 15th day of the first and seventh months? It is relatively easy to verify whether postponement rules work or do they make the full moons less reliable?

Astronomers tell us that the moon is “full” for only a moment. Before that moment it is “waxing gibbous” and after that it is “waning gibbous.”^U To the unaided eye, the moon will appear “full” well before the actual exact minute of perfect astronomical fullness and well after.

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Like when the moon becomes dark leading to the moment of conjunction and afterwards, the waning and waxing periods extend for a considerable amount of time. A “full” moon moves from 98% to 100% to 98% illumination over an extended period of time that can cross multiple days.

Those who define a new month by visually sighting the “crescent” moon are actually seeing a moon that is typically 14-30 (approximately) hours past the exact moment of the conjunction and it is showing a small percentage of illumination. A 2% moon illumination is generally the lowest threshold for the unaided eye to see the new crescent moon. Of course, the actual sighting depends on viewing conditions and time of the day the moon rises and sets in the sky. The same 14-30 hour period occurs before or after the actual moment of the moon being perfectly “full” but, to the unaided eye, the moon appears fully illuminated to the unaided eye.^V

From the viewpoint of the naked eye, the time between the disappearance of the waning crescent and the appearance of the waxing crescent moon covers both the end of the old month and the beginning of the new month – and typically lasts more than 24 hours. The visible crescent of the new moon is an indicator that the new month has begun, though the actual waxing illumination typically began a half day or more before it is visually apparent.

Due to the different times of the day that the moon rises and sets, sighting a visible crescent at a particular location may even occur 48 or more hours after the moment of the actual lunar conjunction. Sighting the visible crescent moon from a single location is not as precise as some would think. What if other parts of the world see the visible crescent for two days before the “official” location does? That requires another extra-biblical rule.

The same is true for the full moon. There is a technically a moment of complete fullness, but the human eye cannot discern the difference between a few percent variation in the illumination. What appears to the naked eye be a “full” moon can span a number of days.

We have modern tools that allow us to know the percent of illumination of the moon at specific locations on the earth. Let’s put the postponement rules to the test and see if they perform. Four web sites were selected from which to collect the data. Some had illumination percentages as of a certain time, others had the full moon times and others had percent illuminations for specific days.

Data was collected and compared from Websites for the US Naval Observatory Fraction of the Moon Illuminated, U.S. Naval Observatory Astronomical Applications Department - Sun and Moon Data for One Day, Time and Date and Astronomy Knowhow.^W

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Because the annual Sabbaths begin the evening before, the highest illumination values of the moon that occurred for any part of the 24-hour annual Sabbath day were used.

% Illumination on the First Day of Unleavened Bread and the First Day of the Feast of Tabernacles				
Year	First DUB	% Illumination	First FOT	% Illumination
1995	15-Apr	100%	9-Oct	100%
1996	4-Apr	100%	28-Sep	100%
1997	22-Apr	100%	16-Oct	100%
1998	11-Apr	99%	5-Oct	99%
1999	1-Apr	100%	25-Sep	100%
2000	20-Apr	100%	14-Oct	100%
2001	8-Apr	100%	2-Oct	100%
2002	28-Mar	100%	21-Sep	100%
2003	17-Apr	100%	11-Oct	100%
2004	6-Apr	100%	30-Sep	99%
2005	24-Apr	100%	18-Oct	100%
2006	13-Apr	100%	7-Oct	100%
2007	3-Apr	100%	27-Sep	100%
2008	20-Apr	100%	14-Oct	100%
2009	9-Apr	100%	3-Oct	99%
2010	30-Mar	100%	23-Sep	100%
2011	19-Apr	100%	13-Oct	100%
2012	7-Apr	100%	1-Oct	100%
2013	26-Mar	99%	19-Sep	100%
2014	15-Apr	100%	9-Oct	100%
20 Year Average:		99.900%		99.850%

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Jamie McNabb did a similar analysis for the calendar years 1982 to 2000.^x He compared the average illumination percentages of the First Day of Unleavened Bread and the First Day of the Feast of Tabernacles with and without the postponements.

McNabb Annual Sabbath Illumination Averages: DUB & FOT			
Year	Illumination Avg. With Postponements	Illumination Avg. Without Postponements	No Postponements: Better/Same/Worse
1982	99.20%	98.00%	Worse
1983	99.60%	97.30%	Worse
1984	98.70%		no postponements this year
1985	99.30%		no postponements this year
1986	99.70%	99.10%	Worse
1987	99.60%	97.50%	Worse
1988	99.20%		no postponements this year
1989	99.10%		no postponements this year
1990	99.60%	99.20%	Worse
1991	99.70%		no postponements this year
1992	99.50%		no postponements this year
1993	98.30%		no postponements this year
1994	99.80%	98.00%	Worse
1995	99.70%	98.90%	Worse
1996	99.60%		no postponements this year
1997	99.60%	99.60%	SAME
1998	99.20%	98.30%	Worse
1999	99.70%	99.00%	Worse
2000	98.70%		no postponements this year
19 Year Average:	99.36%	98.49%	Postponements create a more illuminated Full Moon in 9 out of 10 years.

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Apparently McNab's illumination source apparently never scores 100% illumination for a full moon, so his numbers vary slightly from mine. In both tables it is abundantly clear that data refutes the claim that the postponements cause the annual Sabbaths to fall on the wrong days. The full moon feast days are a "double-check" on new moon dates.

As one of the few explicit Bible statements, Psalm 81:3 should not be ignored. Those who say, "We observe the new moon, not the full moon," are simply dodging the issue.

Because of differing extra-biblical rules, sighted moon dates may vary even more widely when compared to those noted above. The Hebrew Calculated Calendar uses the mean conjunction as the time at which the "new" moon begins – with modifications based on the actual time of the conjunction. All sighted crescent calculations begin at the earliest with a half day old "new" moon and as late as a two+ day old moon. Using a sighted new moon would therefore delay ("postpone") the Feasts that fall on the 1st and 15th of those months by up to two days as compared to using the conjunction.

In 2015, different calendars put the Feast of Trumpets on September 12, 13, 14 and 15. The Hebrew Calculated Calendar, with postponements, places the Feast of Trumpets beginning on the Sunday evening, September 13th. Those using the calculated calendar but not using postponements began Trumpets on Saturday evening, September 12th. Various calendars that rely on visual sightings put the Feast of Trumpets beginning on the evening of September 14th or 15th. The Feast of Tabernacles begins 14 days later and should encompass a full moon.

The % of full moon on September 27th (Hebrew Calculated Calendar without postponements) was 98%, **September 28th (the Hebrew Calculated Calendar with postponements) was 100%**, 99% for September 29th (one version of a visual sighting date) and **95% for September 30th (based on using Jerusalem for sighting new crescent moons.) A 95% "full moon" is visibly deficient – and should be an indicator that other methods are at least equal, better or there is an error in a new moon calendar calculation methodology.**^Y Then there are those who added an intercalary month this year and are observing feast days 29 days later.

In 2014-2015 there were four lunar eclipses ("Blood Moons") – one each on the four annual Sabbaths occurring on the 15th day of the first and seventh month of each year. While the "full moon" extends beyond the moment of the lunar eclipse, it is the most obvious fulfillment of the "full moon." How did the Hebrew Calculated Calendar do? Using Jerusalem time, the eclipse was 5 hours and 25 minutes before the beginning of the 15th the first time and it was exactly on the 15th of the month the next three times.

In 2014 and 2015, calendars based on visually sighted crescent moons were off by as much as two days. The Hebrew Calculated Calendar is more precise and more accurately conforms to the explicit Biblical expectation of Psalm 81:3 "Blow the trumpet at the time of the New Moon, at **the full moon**, on our solemn feast day." Getting the full moon right is a clear indicator that the new moon, 14.75 days earlier, was correctly identified as the beginning of the month. Sighted crescent moons were days off target.

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Calendar Differences Are NOT Unique to the Feasts of God

Other lunar calendars have problems with the rules for their calendars. Islam follows a lunar calendar, but often has different start and end dates for their religious celebrations. For example, there are different dates for the Eid-al-Adha festival that commemorates the offering of Isaac as a sacrifice by Abram and even Ramadan.

“Islamic dates are in a mess because of the ignorance of Muslim clergy who do not know the fact that a date cannot represent 3 or 4 days.

Muslims in one country, India, celebrated Eid-al-Adha 1435 in 2014 on four solar days/dates (instead of one lunar day/date).

1. Saturday, October 4, 2014: Hijri Committee of India
2. Sunday, October 5, 2014: Kerala
3. Monday, October 6, 2014: Most areas in India
4. Tuesday, October 7, 2014: Amini Islands & Kadamat Islands in Lakhsadweep

This is not the first time it has happened.

Muslims around the world started Ramadan 1426 in 2005 on five solar days/dates.

1. Sunday, October 2, 2005: Nigeria [some]
2. Monday, October 3, 2005: Nigeria [Majority]
3. Tuesday, October 4, 2005: Saudi Arabia, Egypt, and most Middle-Eastern countries
4. Wednesday, October 5, 2005: Australia, Indonesia, Malaysia, Africa, Europe and Americas
5. Thursday, October 6, 2005: Bangladesh, India, Pakistan, Central Asia

We have been witnessing this mess for more than thirty years, especially after the communication revolution.”^z

Why the confusion? Muslims disagree over their calendar rules. For example, some think the new month must begin when a new moon (crescent) is sighted anywhere in the world, others think it must be sighted at a specific location. From what location the new moon is sighted is also a subject of disagreement.

These are, in fact, some of the same issues that plague those who strive to have a “simple” new moon sighting-based calendar for the annual feast days of the Lord. Some say the new moon can be sighted anywhere, others say it must be sighted locally, others say Jerusalem and others say Egypt (because that is where the first month of Abib was revealed.)

Where a new moon is sighted can change the day that the month begins and therefore changes the dates of festival observance.

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Like the Muslims, everyone has their own reasons and justifications and believes they are right. ^{AA} Again, like the Muslims, when one rejects a single “judge” or authority, there is no end of disagreements and observances on different days.

Without that single judge or authority, the Lord’s intended “appointed” time for a sacred assembly of His people is defeated.

But Whose Authority?

Truly, advocates of calendar change are in a difficult position if the Bible is their only recognized authority. To the honest observer, the Bible does not give sufficient information to construct a calendar, as noted in the list of the Seven Essential Calendar Rules of a calendar are not explicitly stated, nor does it give sufficient explicit examples.

Alternative calendar authors who have done their homework will admit that explicit Bible passages cannot be the sole source for calendar rules. For those claiming otherwise, one only has to ask them to show the explicit Bible passages that clearly and specifically address the Seven Essential Calendar Rules or that answer the Ten Questions. They either don’t have them, gloss over assumptions and inferences they leave unstated or they will take thousands of words to build complicated scenarios where hints of something they interpret from Scriptures are transformed by their logic into explicit Bible calendar rules.

Some advocates of calendar therefore appeal to religious or historical authorities. For example, they look to the Talmud and other ancient commentaries on how the Second Temple authorities (which included the Sanhedrin) declared new moons, New Years and intercalary months. Perhaps they think that they can replicate those processes today, reasoning that their approach must have been right since Jesus observed feast days and annual Sabbaths.

Of course, one has to admire the intellectual fleet footedness for those new calendar advocates who first discredit the Hebrew Calculated Calendar and the Sanhedrin and Pharisees who created it as unreliable authorities on the calendar – and then appeal to the same Sanhedrin, Pharisees and their religious disciples as reliable authorities for proper calendar rules during the Second Temple era.

The Importance of Priestly Authority

Originally the Feasts were declarations of the Lord, proclaimed by the Levites. For example, God declared to Moses in Exodus 12 when the first month was and gave specific days of that month when to prepare and when to observe the Passover. Moses was similarly instructed in Leviticus 23:1-2 to declare the days of assembly.

“The Lord said to Moses, “Speak to the Israelites and say to them: ‘These are my appointed festivals, the appointed festivals of the Lord, **which you are to proclaim as sacred assemblies.**’” (NIV)

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To whom was the authority to declare the Feast days of the Lord delegated? At first, it would appear that God shared information directly with Moses who then told the Israelites. We know that someone made decisions for the calendar during the time of Moses, the judges, the kings, the captivity and the return. The historical record shows that a central religious authority was responsible for deciding calendar questions and we see Biblical evidence that the priests were connected with these decisions from the instruction given to Moses for the priests to announce the feast days by blowing trumpets. In Numbers 10:8-10:

“And the sons of Aaron, the priests, shall blow with the trumpets; and they shall be to you for an ordinance forever throughout your generations... Also in the day of your gladness, and in your solemn days, and in the beginnings of your months, ye shall blow with the trumpets over your burnt offerings, and over the sacrifices of your peace offerings; that they may be to you for a memorial before your God: I am the Lord your God.”

Bible evidence continues with Ezra the priest assembling the people on days he knew to be the Feast days of the Lord. Extra-biblical history has a further documentation of priestly authority in the era of the second Temple.

Historical (extra-biblical) sources are rich with information about the later role of the Sanhedrin with the Nasi and High Priest in determining the beginnings of the month and adding intercalary months.

There is no positive Biblical precedent for individuals, synagogues, congregations or denominations to establish their own calendar rules or to usurp authority from the priests to decide the calendar.

The Aaronic priesthood that is the last and only authority whose roots trace back to the nation who received the annual feast and Sabbaths of God. In the time of the Second Temple it was these priests leading the Sanhedrin which exercised decision making authority over calendar matters prior to, during and after the life of Jesus.

As we have repeatedly noted, the Bible does not give adequate explicit testimony to establish a functioning calendar without the addition of extra-biblical rules. There is no positive Biblical precedent for individuals, synagogues, congregations or denominations to establish their own calendar rules or to usurp authority to decide the calendar. Acts 15 did not address the creation of any calendar – Hebrew, Christian or otherwise. Nor did the rest of the New Testament.

The Biblical example that comes to mind of someone deciding the calendar rules for himself is of Jeroboam. His decision to make up his own extra-biblical calendar rules was a catastrophe for Israel. (1Kings 12:26-33)

What About Fixing Problems?

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Critics note that the current Hebrew Calculated Calendar has a “drift” in it compared to the solar calendar. Some estimate the Hebrew Calculated Calendar will “drift” a full lunar month in 9,300 years.^{BB} Others say it is less time than that. Jews are completely aware of this and expect that a Sanhedrin will eventually be established to correct the drift well before it accumulates to exceed a month. We will come back to this point of the proper authority correcting any calendar deficiencies.

Advocates of the equinoxes may not be aware that even the equinox/solstice-based seasons have a “drift” in them. In addition to the procession of the equinoxes, according to an article on www.Space.com, rather than each season being equal in the number of days, the spring and summer seasons are growing longer while the winter and fall seasons are growing shorter. The author of the Web article states that Winter is currently 88.994 days, Spring is 92.758 days, Summer is 93.651 days and Autumn is 89.842 days.

Far from the idea that the equinoxes are some inviolate celestial marker with March 21 as the beginning of Spring, the author states:

“... in the years 2008 and 2012, those living in Alaska, Hawaii and the Pacific, Mountain and Central time zones will see spring begin even earlier: on March 19. And in 2016, it will start on March 19 for the entire United States... However, spring is currently being reduced by approximately one minute per year and winter by about one-half minute per year. Summer is gaining the minute lost from spring, and autumn is gaining the half-minute lost from winter.”^{CC}

I am not sure what council could be convened to change the drift in the seasons as measured by the equinoxes and solstices.

So, it boils down to who is the acceptable calendar authority? A modern-day apostle? Someone who believes they have created the “one true Bible calendar” without using any extra-biblical rules? How about a self-proclaimed calendar authority who condemns the Jews for using extra-biblical rules and asserts no one has authority to change days of annual Sabbath observance but then fallaciously and hypocritically inserts extra-biblical rules of his own choice and devising that also move days of observance?

It would appear that the Sanhedrin had its reasons for creating a calculated calendar with its four rules of postponements and intercalation. Others address the mathematical and practical value of the postponements. Since the only authority I can appeal to for judgment is the Bible and it is silent on the necessary detailed rules for calendar calculation, I either accept what the Sanhedrin says or I am left to become my own authority and make up my own rules.

Without explicit Bible statements demonstrating calendar rules, modern calendar creators are creating the same calendar confusion that exists in Islam – feasts falling on different days because there are different “authorities” who make up their own rules.

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New calendar authors reject a singular calendar authority other than themselves and introduce a kind of Islamic calendar chaos.

One could think that the Sanhedrin is the calendar authority, the Roman Catholic Church is the calendar authority, or everyone can be their own calendar authority and do what seems best to them. The Sanhedrin has an historical claim to authority as the last remnant of government from the ancient nation of Israel. The Roman Catholic Church could stake a claim based on numbers of believers and the backing of secular governments. Everybody being an authority and doing what is right in their own eyes even has its own, though dubious, historical claim from Judges 17:6 and 21:25 “In those days there was no king in Israel: every man did that which was right in his own eyes.”

Who Is the Jerusalem Rules’ New Sanhedrin, the New Nasi or the New High Priest?

There are those who confidently state their calendar is exactly like the Jewish calendar of the Second Temple, the calendar used when Jesus was alive. No matter how closely they follow the Talmud, this is not quite true. There are a number of issues that dog their claims.

Who actually follows the Second Temple era rules? While great attention is paid to selecting the appropriate calendar rules from the Talmud and other sources, they do not follow the rule about who judges the new moon sightings, who declares the beginning of the New Year and who determines when the intercalary months are added. *The Sanhedrin and Nasi (as authorized by the High Priest), were the only source for that authority and those judgments “when Jesus walked the earth.”* Having a singular judge of such matters is necessary – and reflects the known historical precedent of the Second Temple era and before. It is plain that calendar authors generally do not accept a Sanhedrin led by Jews to be the singular calendar judge – even though historical sources state the calendar was determined by them “when Jesus walked the earth.”

Lunar/solar calendars cannot function without a calendar judge – whether that judge is a body of people or set calendar rules. Reviewing the literature and claims from alternative calendar authors, there seem to be a number of ways of deciding who is the new Sanhedrin, Nasi and High Priest:

Claims that “I am the new judge – the new Nasi, the new High Priest.” One example is Jacob O. Meyers, now deceased, a leader of the sacred names movement and the Assemblies of Yahweh. He claimed that he had the universal authority to make calendar decisions and that the proper location for deciding the new moon was Bethel, PA. This was selected by Yahweh over Jerusalem because his church and his office was the headquarters of the entire (one-true) Church. As he notes “... and reported to the **headquarters Yahweh has selected for today – Bethel.** (Emphasis by Meyer) ^{DD} Meyers is not alone in claiming the role of being the one, true judge for calendar matters.

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As an alternative, some suggest the family, the congregation or a church denomination can be the new Sanhedrin, the Nasi or High Priest for calendar matters. This is asserted without Scriptural support.

Appeals for an Acts 15 conference to decide the calendar. Others would say that some future Acts 15 conference could be the decision maker. However, it is not clear from the Scripture that the Christian church is authorized to deal with calendar matters, nor that there is a sense of desire to do so among Christian (and Jewish) observers of the Feast days.

High Priest Deconstruction: Then there is the idea that the New Testament states that Jesus is our High Priest and He alone can tell us what calendar to follow. What the New Testament does not state is how Jesus communicates His judgments on when the new moon is correctly sighted, when the New Year begins and when to add an intercalary month – all functions done only by the High Priest and later the Nasi,^{EE} who was the leader of the Sanhedrin ^{FF} “when Jesus walked the earth.”

Among this group they forget that the Apostle Paul, as a Christian, recognized Jesus as his High Priest in heaven and simultaneously he recognized the earthly High Priest, as a leader of the Sanhedrin, as being a Godly authority. It is recorded in Acts 23 that Paul did not realize that he had called the High Priest a “whitewashed wall” and apologized for “speaking evil of the ruler of your people.” Paul’s accusation of inappropriate conduct may have been entirely correct, but even as a Christian with Jesus as his High Priest in heaven, Paul quoted Exodus 22:28 saying that he should not disrespect the High Priest of Israel, *as the ruler of God’s people*.^{GG} This is simply an attempt to make the hearer feel betrayed and angry.

One should also note that at the time of Jesus, historical sources note that calendar decisions were made and announced by the Sanhedrin under the leadership of the Nasi as the official leader of the Sanhedrin. The High Priest (as well as other priests) were a part of the Sanhedrin – but it was the Sanhedrin and its leader that announced new moons, the beginning of each year and intercalary years.

Various Priestly Transfers/Elimination Schemes: Some might say that with the destruction of the Second Temple and the church as the new temple, all the priestly functions of the Old Testament have disappeared – or the opposite – were transferred to the Christian priests or clergy in some manner. The Catholic Church certainly endorses elements of this thinking. However, nowhere in the New Testament are individual Christians, congregations or Christian leaders granted the calendar decision making authority of the Aaronic priests – and the High Priest in particular.

Falsely Claiming or Misusing the Authority of Priests has Consequences.

As we will discussed above, the priests were given certain authority by God to act as judges. Having authority delegated by God brings with it a commensurate amount of accountability before Him and His judgement as to how well we use it. Eli the priest is

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one example whose judgment was one of condemnation for allowing his sons to misuse their priestly authority. As noted in 1 Samuel 2:34-35 “And what happens to your two sons, Hophni and Phinehas, will be a sign to you—they will both die on the same day. I will raise up for myself a faithful priest, who will do according to what is in my heart and mind.” (NIV)

Another instance of going beyond what was authorized by God’s rules for priests was the judgment of the sons of Aaron in Leviticus 10:1-2 “Aaron’s sons Nadab and Abihu took their censers, put fire in them and added incense; and they offered unauthorized fire before the Lord, contrary to his command. So fire came out from the presence of the Lord and consumed them, and they died before the Lord.” (NIV)

The point here is even priests had to respect that God established who was the High Priest and was willing to personally enforce limits placed on those who were not the High Priest.

I used to attend a church where it seemed that anytime someone disagreed with the ministry, the story of Korah, Dathan and Abiram was trotted out to shut down the “rebels.” However, the incident did happen and the reason for God’s condemning judgment on them and their families who supported them is specifically applicable to the question of who is it today that replaces the High Priest (and as the calendar decisions later came to rest in the second century BCE on the Nasi as leader of the Sanhedrin – as it was in the days when “Jesus walked the earth”) when making calendar decisions. **The reason for God’s destruction of Korah and his supporters? God did not approve of non-priests taking over the duties, responsibilities of His authentic priests.**

Now Korah was even a Levite – but not of the priestly line of Aaron. Dathan and Abiram were not Levites, they were from the tribe of Reuben. The 250 other Israelites were community leaders and members of the council. Numbers 16 recounts the events and some points should stand out as they apply to those who desire to make their own calendar decisions.

Korah and his group began by faulting Moses and Aaron. Verse 3 records: “They came as a group to oppose Moses and Aaron and said to them, “You have gone too far! **The whole community is holy, every one of them, and the Lord is with them. Why then do you set yourselves above the Lord’s assembly?**”

In their campaign to replace Moses and Aaron, the first step was to discredit them. (Does this sound like modern efforts to discredit the Sanhedrin and the postponements?) The second step was to elevate themselves. They claimed all of Israel was Holy and the Lord was with them. To Korah’s way of thinking, he and his group were equals with the priesthood and Aaron, the High Priest. Wittingly or unwittingly, are those today who want to make these calendar judgments today doing the same? It is a question they should answer.

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God condemned Korah, Dathan and Abiram for usurping – (“To seize another's place, authority, or possession wrongfully.”^{HH}) the authority of the priests. Numbers 16:10-11 shows “He has brought you and all your fellow Levites near himself, **but now you are trying to get the priesthood too. It is against the Lord that you and all your followers have banded together.** Who is Aaron that you should grumble against him?”

Looking at the explicit statements in the Scripture, isn't it clear that **it is God's will that no one who was not of the priestly line of Aaron was allowed to become priests or to do what priests were entrusted to do? Isn't it clear that God would not even let any priest do what the High Priest was permitted to do?**

Are there parallels among those now who seek to promote themselves and their special understanding of the Bible or the calendar? Today there are a multitude of individuals, congregations and denominations who boldly assert that they “can calculate the calendar just the way it was done when Jesus walked the earth.” Really? Does that include them acting as High Priest or the leader of the Sanhedrin? When there are “borderline” dates for new moons – who decides? When the new moon is sighted in a location other than their chosen “official” location – who decides the official start of the month? Who decides when to add an intercalary month?

Is it any wonder how many different calendars there are when anybody, any congregation or any denomination

can decide what originally only the High Priest or the Nasi, as leader of the Sanhedrin, decided “When Jesus walked on the earth?” The Catholics chose to assume calendar authority at the Council of Nicaea. Others, like Jacob O. Meyer, made the same

Their new High Priest can come in many shapes and guises: “I am the one who decides” or “Let's decide as a denomination” or “We can decide as a congregation or our calendar committee will decide.”

choice to assume what was rightfully the sole responsibility of the High Priest or leader of the Sanhedrin – “when Jesus walked the earth.”

Similar to the reasoning of Korah, most begin their alternative calendar justification by attacking the Sanhedrin – with its High Priest and Nasi – as leading God's people astray. Finally, they assert their own form of authority for calendar decisions.

Their new High Priest or Nasi can come in many shapes and guises: “I am the one who decides” or “Let's decide as a denomination” or “We can decide as a congregation” or “Our calendar committee will decide” Some advocate a more holy approach based on their special knowledge and offer their willingness to act as High Priest or Nasi in calendar decisions.

If one assumes the duties of the High Priest for the calendar, where does it stop? Deciding to become a High Priest or leader of a Sanhedrin can be a heady thing.

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Unlike the alternative calendar authors, those who follow the Hebrew Calculated Calendar don't usurp priestly authority. Rather, they have decided to follow the calendar authority that was entrusted to the High Priest and later, the Nasi of the Sanhedrin, calendar decisions of the last Nasi who made those decisions as leader of the last Sanhedrin.

So, Who Is the Judge?

In the first century, Jews were the last remnant of the nation of Israel. Consisting of the tribes of Judah, Levi and some from Benjamin, they were entrusted with preserving the oracles or words of God. (Romans 3:2) Priests from the tribe of Levi were to be the judges of the land, empowered to seek God about judgements and to bring His decisions to the people:

“Go to the Levitical priests and to the judge who is in office at that time. Inquire of them and they will give you the verdict. ¹⁰ You must act according to the decisions they give you at the place the LORD will choose. Be careful to do everything they instruct you to do. ¹¹ Act according to whatever they teach you and the decisions they give you. Do not turn aside from what they tell you, to the right or to the left. ¹² Anyone who shows contempt for the judge or for the priest who stands ministering there to the LORD your God is to be put to death. You must purge the evil from Israel. ¹³ All the people will hear and be afraid, and will not be contemptuous again. (Deuteronomy 17:9-13)

To whom did God say to go when a decision is not clear and a judgment is required? The Levitical Priests. When Israel divided into two nations, to which of the two divisions of the nation did the Levites flee? To Judah. And who were the Jews of the time of Jesus? The tribes of Judah, Levi and Benjamin. And what body of the Jews made decisions on the calendar?

The Sanhedrin during the time of Jesus was made up of leaders from the Jews – including Levites and Levitical priests. There is no historical or Biblical question that the Sanhedrin had authority to judge religious matters. It is interesting that through all the failings of the Jews and the condemnation of the Jews by Jesus so readily cited by alternative calendar authors, it is those same Jews we trust and are confident of their ability to preserve the writings of the Old Testament.

The alternative calendar creators cite the Jewish Bible for their authority and almost universally assail those same Jews as being completely untrustworthy to preserve the calendar and make binding calendar judgments.

Then, after savaging the reputation of the Pharisees, rabbis and Sanhedrin to induce a feeling of religious betrayal, they establish their calendar rules by citing the writings of the Oral Law or the Talmud.

Do I hear “poor scholarship and logical fallacy,” anyone?

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How Much Can We Trust the Jews? Trust the Scriptures but Not the Calendar?

Some alternative calendar authors make it sound that postponement rules were created so Rabbis can have easier annual Sabbaths or quaint Jewish customs can be preserved. I have examples where such accusations are made and where it is explicitly stated that it was more important to Jews to preserve their comfort than observing the proper annual Sabbaths. Such ad hominem accusations against Jews are not worthy of the testimony of the thousands of years and millions of Jews whose passion for fidelity to their faith – especially their days of worship – resulted in the loss of their lives.

Here is a crux issue: Many authors of alternative calendars recognize that the priests and the Sanhedrin of the first century were the calendar judges who exercised calendar authority. Solinsky spends 23 pages and more than 9,000 words emphasizing the authority of the priests. He states:

“Positive evidence that calendric unity was only to be achieved through the authority of the Aaronic priesthood does exist in Ps 133. In that psalm the unity of the brethren was to be achieved through the anointing oil upon Aaron's beard, which symbolizes the bestowing of authority upon that priesthood to bring about unity.” *Herb Solinsky*

“Positive evidence that calendric unity was only to be achieved through the authority of the Aaronic priesthood does exist in Ps 133. In that psalm the unity of the brethren was to be achieved through the anointing oil upon Aaron's beard, which symbolizes the bestowing of authority upon that priesthood to bring about unity.” ^{II} [Emphasis Solinsky]

“We have no history that preserves exactly how the priesthood functioned during the period of exile, yet the priesthood existed without an ark and without a Temple. When the Second Temple was destroyed in 70, the priests were still known and the priesthood could have continued as it had been during the Babylonian exile when there was neither ark nor Temple. Some inventiveness could have enabled the priesthood to perform their functions because during the Second Temple period, they found some means to function without an ark during the tenth day of the seventh month, the Day of Atonement.” ^{JJ}

“Thus the Aaronic Priesthood is now in a temporary exile, but not made void. During this time of exile there are no two priests to blow the two silver trumpets according to Num 10:10. No one outside the lineage of Aaron is qualified to do this. The best that could be done is to simulate the priesthood in the sense of determining what they would determine and then act accordingly. **If someone would imagine differently, there is the challenge of proving who would have the authority to appoint two priests to perform this function.”** ^{KK} [Emphasis mine.]

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Solinsky notes only the Aaronic Priests have authority to perform priestly duties. Speaking specifically of blowing of the silver trumpets of Numbers 10:10, he observes that “the Aaronic Priesthood is now in a temporary exile, but not made void” and “No one outside the lineage of Aaron is qualified to do this” and “there is the challenge of proving who would have the authority to appoint two priests to perform this function.”

Solinsky also asserts that Aaronic Priests alone have the authority to blow two silver trumpets officially announcing a feast day. Not to make too fine of a point here, but when being concerned not to usurp priestly trumpet duty, wouldn't one would be straining the gnat and swallowing a camel if the unique priestly authority over the calendar were to be ignored? In addition to Leviticus, we have an explicit example of Ezra, a priest, declaring the date of the Feast days. Historical sources consistently note that the High Priest declared the Holy Days in the most ancient times and that authority was transferred to the Nasi as leader of the Sanhedrin in the second century BCE onward, including the time when “Jesus walked the earth.”

Who but the Aaronic Priesthood can claim such authority to decide who would determine the calendar? By the time of Jesus, the priests had determined the Nasi and Sanhedrin would determine the calendar.

The plain and simple fact is that by the fourth century AD, the Roman government was not going to permit observations of crescent moons, barley harvests or any other Judean-based sightings. Nor were they going to allow the Sanhedrin to continue to meet so priests could be judges of those sightings. Faced with expulsion from Judea and forced dissolution, the Sanhedrin, as authorized by the Aaronic Priests, exercised their authority and made a calendar that was portable, required no access to Judah and enabled Jews, regardless of where they lived, to continue to keep the Feasts of the Lord on the same day. They created the rationale and framework of what we are calling the Hebrew Calculated Calendar.

The High Priest and the Sanhedrin they authorized and empowered demonstrated more than many modern, self-appointed, non-Aaronic priest, alternative calendar authors. Hillel's calendar worked in the Diaspora when the alternative calendars advocated today would have failed.

For some today, that is hard to swallow. One can hear the protests: “How could they have done such a thing? But what about sighting the crescent moon? But what about the equinox? But what about ...? Who gave them the authority to do such a thing?”

Explicit Bible examples pretty much say it all: God gave the Aaronic Priests the authority. There is both Biblical and historical evidence in abundance of who the Aaronic Priesthood authorized to determine and declare the feasts of the Lord in the time of Jesus – the Sanhedrin. No one else can – or should – lay claim to calendar authority for determining the Feasts of the Lord. Those who have done so – Jeroboam comes to mind – only wreaked havoc and sowed confusion.

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The High Priest and the Sanhedrin they authorized and empowered demonstrated more foresight than many modern, self-appointed, non-Aaronic high priest, alternative calendar authors. Hillel's calendar worked in the Diaspora when the alternative calendars advocated today would have failed. In fact, the Hebrew Calculated Calendar has been used by Jews since Hillel for about as long as any other calendars were used from Moses to Hillel.

Modern technology makes it easy to get information about new moon sightings or the state of the barley harvest from Israel or whatever factors modern alternative calendar authors require. The question posed by alternative calendar authors is "With all this modern technology and access to information, why not go back to the way it was 'when Jesus walked the earth?'"

It is easy to see their enthusiasm – they see the Hebrew Calculated Calendar as inferior, in error, or wrong and their way is so much better, so much more accurate, so much more "Biblical." Finally, in these last few decades we have the communications so we can know when the crescent moon is visible or watch barley grow on Web cams - what no one could do for the better part of two thousand years. Why not change, NOW?

The answer is: "Unless you are authorized to decide these matters, it is not up to you." To modern Christians who have been steeped in personal rights and self-determination, that may be perceived as a slap in their face. Aren't Christians free from Jewish domination? Isn't submitting to an ancient Jewish Sanhedrin another way of controlling independent Christians and congregations?

Perhaps we should remember the value of reading the whole Bible – Old and New Testaments – for insights into God's mind on this matter. What does the Bible explicitly reveal God's mind to be on usurping priestly roles, responsibilities and authority?

Have we no fear of attempting to do what God has directed the priests alone to do? It is as though having a compelling reason (new technology in this case and modern access to Israel) or superior knowledge trumps waiting for God to work through those He has chosen for certain tasks.

Obviously one cannot use any extra-biblical sources when attempting to "trump" priestly authority. Therefore, those who believe the Bible trumps priestly authority are challenged to show the explicit Bible passages:

- Authorizing them specifically to determine the calendar and announce the Holy Days;
- Detailing which of God's laws the Hebrew Calculated Calendar violates;
- Enumerating in sufficient detail all the necessary (and "correct") calendar rules – without resorting to personal interpretations, inferences, subjective deductions or other "extra-biblical" steps necessary to arrive at a consistently accurate calendar.

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What in fact is offered by alternative calendar authors are their imaginative works of thought based loosely on some Bible passages, but which ultimately depend on assumptions, inferences, opinion, non-biblical historical sources of their choosing and extra-biblical rules of their own devising.

Could modern Jews create a new and legitimate Sanhedrin or a High Priest to address calendar questions, decide new moons and intercalary months? Yes. Obviously that Sanhedrin and High Priest would need to prove that they had legitimacy to Jews from around the world.

Could non-Jews create their own calendar? The Catholic Church already has. Some new calendar authors want another Acts 15 or Council of Nicea among those they believe to be “real Christians” to legitimize their version of the calendar. Yet Biblical authority for Christians to decide the calendar is completely lacking.

It is my impression that there are those who don't know they are usurping the role of the High Priest and there are those who don't care. The former are ignorant - the latter are of greater concern.

What to Do with Unsound Teaching?

Something as clear as the day of the week the Sabbath falls is relatively simple and explicit. The subject of the calendar is much less simple and far less explicit. It is especially sensitive to some because of the fragmentation created from those advocating different calendars has occurred among groups of those who observe the Feasts of the Lord.

From historical sources we can see that the only calendar authority at the time of Jesus was the Sanhedrin, authorized by the High Priest. The last calendar decision rendered by that Sanhedrin resulted in what we see today as the Hebrew Calculated Calendar. Alternative calendar authors deny the Sanhedrin as having authority and seek to assert their own authority for calendar calculations.

On what authority do calendar critics speak? What explicit Bible calendar rules are being broken by the postponements? Contrary to their claims, the postponements still allow for the new and full moons to fall on the correct days. Alternative calendar authors downplay or ignore the fact that sighting of new moons in a specific location can result in some parts of the world visually sighting a new moon one or two days before the “official” new moon is declared. Their calendars are generally LESS accurate and LESS precise than the Hebrew Calculated Calendar – a fact ignored by them.

Many, though not all, calendar authors show themselves to be poor scholars by condemning the extra-biblical rules of the Sanhedrin for changing days of observance while hypocritically overlooking, minimizing or hiding the creation of their own extra-biblical rules that result in changing the days the Feasts of the Lord are observed.

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Alternative calendar authors who are not honest in recognizing and disclosing their use of extra-biblical rules of their own devising should be embarrassed.

It would be refreshing display of candor if those who claim to have discovered new truth in calendar rules would acknowledge that their calendar depends on extra-biblical rules created or selected by the authors. Further, it would be appropriate to disclose that they have taken upon themselves the role of Sanhedrin and High Priest of Israel as decision maker of extra-biblical calendar rules, new moon and intercalary month calculations and the multitude of other necessary rules for calendar decisions.

When one removes the fallacious reasoning, the poor scholarship, and the hypocritical denunciations of the extra-biblical rules of the High Priest's decision to authorize the Sanhedrin to decide calendar issues, what is left? The determination of the calendar should not be left to personal opinion, extra-biblical rules of one's own devising or attempts to assert personal authority over when feasts and annual Sabbaths are observed.

Christians are given much beyond what was offered to Israel. However, one cannot demonstrate from the Bible that the calendar is now under Christian authority. After his conversion, the apostle Paul appeared to follow the calendar of the Sanhedrin. Paul recognized the authority of the High Priest in Jerusalem as the ruler of his people. Until such time that a new and legitimate Sanhedrin is convened, the correct calendar for selecting the new moons and intercalary months remains as the last legitimate calendar authority left it – the Hebrew Calculated Calendar.

When Jesus returns, as High Priest and King of Kings He will certainly make His opinion known about the calendar. Until then, we should not accept alternate calendars that claim:

- Authority they do not have;
- To use only the Bible but instead rely on personal opinion, inference, self-contradictory reasoning, assumptions and anachronistic evidence to fill in where the Bible is silent;
- Their new/correct/"one true calendar" understanding as a reason to reject current associations and instead, to become their disciple.

If one does not have a sound teaching, why should the congregation hear it? Rather, it is the responsibility of Christian leaders to object to those who would bring incomplete, unsound, fallacious and self-contradicting teaching to the congregation. As James cautioned "Not many of you should become teachers, my fellow believers, because you know that we who teach will be judged more strictly." (James 3:1, NIV)

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Appendix: Accuracy of the Jewish Calendar ^{LL}

From <http://www.jewfaq.org/calendr2.htm#Accuracy>

At one time, the accuracy of the Jewish calendar was proverbial. But how accurate is it really?

The average lunar month on the Jewish calendar is 29d 12h 793p. The average lunar month as calculated by modern astronomers is 29d 12h 44m 2.8s, that is, 29d 12h 792.84p so the variation is less than two tenths of the smallest unit of measurement recognized by the system, about half of a second. That is quite remarkably accurate. Of course, those lost half-seconds do add up: within a century, you're off by 10 minutes. [Emphasis mine]

How well does the calendar correspond to the solar year? The rabbis recognized long ago that the calendar gains 1h 485p in every 19-year cycle, adding up to a day every 300 years or so. This was important to the rabbis in scheduling certain rituals that are based on the solar year rather than the lunar year. We can see this effect when we examine the dates of Rosh Hashanah over time.

Rabbi Hillel II developed the Jewish calendar in the Jewish year 4119. Using his calendar methods as described above, and artificially assuming that the Gregorian calendar we use today was in effect at that time, the date of Rosh Hashanah ranged from August 29 to September 28 between the years 4100 and 4200 (the 42nd century). In the present Jewish century (the 58th), the dates of Rosh Hashanah range from September 5 to October 5, a gain of 6 or 7 days. This is considerably more accurate than the Julian calendar used by Christians in Rabbi Hillel's time (which had to be corrected by 11 days a few centuries ago), but you can see that it is gaining some time.

The discrepancy in the Jewish calendar, however, is still less than a lunar month and is therefore as accurate as it is possible to be in a lunisolar calendar. **In fact, it takes about 9300 years for this discrepancy to accumulate to a full month of time. The rabbis were aware of the problem, but were quite confident that a new Sanhedrin will be established long before this discrepancy becomes problematic. We still have more than 3500 years to go.** (Emphasis mine.)

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Appendix: Tekufah^{MM}

Nehemiah Gordon addresses this question in detail at http://www.karaite-korner.org/abib_and_tekufah.shtml. The article is copied here in its entirety.

Abib FAQ: Vernal Equinox and Tekufah

Q: Is the equinox (Tekufah) mentioned in the Tanach (Hebrew Bible)?

The claim has been made by proponents of the equinox calendar theory that the word equinox actually appears in the Tanach. They are referring to the word Tekufah or Tequfah which appears in the Hebrew Bible four times. Tekufah is in fact the post-Biblical word for "equinox", however, it never has the meaning of "equinox" in the Tanach. In Biblical Hebrew, Tekufah retains its literal meaning of "circuit", that is something which returns to the same point in time or space [from the root Nun.Quf.Pe. meaning "to go around"]. To claim that Tekufah means equinox in the Tanach, just because it had this meaning in later Hebrew, is an anachronism. This would be like saying that there were handguns in ancient Israel because the word EKDACH, the post-Biblical Hebrew word for handgun, appears in Isaiah 54:12. Let us consider another example of this anachronistic use of language: Before the invention of the electronic computer during World War II, the word "computer" referred to a man who sat at a desk calculating (computing) mathematical equations. Imagine if we found an 18th century document mentioning "computers" and proclaimed to the world that there were really electronic computers in the 18th century. This is exactly what the equinox-followers are doing with the word Tekufah. To better understand this, let us consider the four appearances of Tekufah in the Tanach.

Tekufah in Exodus 34:22

The first appearance of Tekufah is in the list of Pilgrimage-Feasts (Hagim) in Ex 34:22 which refers to the agricultural character of the Feast of Booths (Sukkot):

"And the Feast of Ingathering at the circuit of the year (Tekufat HaShannah)."

Being mislead by the Post-Biblical Hebrew meaning of Tekufah, some have interpreted "circuit of the year" anachronistically to refer to the Autumnal Equinox (it is doubtful whether the ancient Israelites even knew of the equinox and they certainly had no way of calculating when it would be). This anachronistic reading leads to the suggestion of fixing the beginning of the year so that Sukkot (The Feast of Ingathering) falls out at the time of the Autumnal Equinox. However, a closer investigation shows that "circuit of the year" has nothing to do with the equinox. The list of Pilgrimage-Feasts also appears in a parallel passage in Ex 23:16 which describes Sukkot as follows:

"And the Feast of Ingathering at the going out of the year (Tzet HaShannah), when you have gathered in your work from the field."

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Exodus 34 is actually an almost verbatim paraphrase of Exodus 23 and it is important to compare and contrast these two passages; the differences are often very enlightening. Comparing Exodus 34:22 and Exodus 23:16 it is clear that the "going out of the year" and the "circuit of the year" refer to the same time. The "going out/ circuit" of the year is described in Ex 23:16 as "when you have gathered in your work from the field". This agricultural ingathering is also described in Deuteronomy 16:13:

"You shall keep the Feast of Booths for seven days, when you have gathered in from your threshing floors and from your wine presses."

The Feast of Booths/Ingathering is described as the "going out of the year" because it takes place at the end of the yearly agricultural cycle of planting, harvest, threshing, and ingathering. At the same time, Sukkot is described as taking place at the "circuit of the year" because once the agricultural cycle ends it then immediately recommences (making a circuit, returning to the same point in time) with the planting of the fields after the first rains (sometimes during or shortly after Sukkot itself).

Tekufah in Psalms 19:7

The term Tekufah (circuit) appears in Psalm 19 in reference to the sun, but here too it has nothing to do with the equinox. Psalm 19 describes the heavens and sun, which from their unique vantage point are witness to all things in creation, and thus (metaphorically) testify to the incomparable glory of God. Verses 5-7 describes the sun:

"(5)... He [YHWH] placed a tent among them [the heavens] for the sun. (6) Which is as a bridegroom going out of his chamber, and which rejoices as a strong man running a race. (7) From the end of the heavens is its [the sun's] going out and its circuit (Tekufato) is to their [the heavens] ends, and none is hidden from its heat"

Verse 6 describes the sun as a bridegroom that bursts forth out of his chamber and as a hero that runs along a path. Verse 7 then describes the "going out" of the sun at one end of the heavens and the "circuit" (Tekufato) of the sun at the other end. Clearly what is being described is the daily path of the sun which rises at one end of the heaven (its going out) and sets at the other end (its return), "and none is hidden from its heat" during the course of the day. What has confused some readers is that the *going out* or *exiting* of the sun refers to *sunrise*, but this unusual terminology is used throughout the Tanach. For example, we read in Judges 5:31:

"Thus shall all the enemies of YHWH be destroyed; and all those whom he loves shall be as the going out of the sun (KeTzet HaShemesh) in its might". (Jud 5,31)

Those loyal to YHWH shall shine forth with glory as the "going out of the sun", that is sunrise. It may seem strange that sunrise is referred to as the "going out" of the sun. After all, in Exodus we saw that the *going out* of the *year* was the *end* of the year, whereas the *going out* of the *sun* is the *beginning* of the day. However, this is consistent with Biblical usage and in fact the common Biblical way of saying sunset is the *coming*

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in or *entering* of the sun. This is related to the ancient Israelite conception of the sun which at night was thought of as metaphorically dwelling in a celestial chamber (Ps 19:5). At dawn the sun *goes out* of this metaphorical chamber and the earth is lit while at night the sun *comes into* the metaphorical chamber and it is dark. This is also the thought behind the comparison of sunrise to a bridegroom coming forth from his *chamber*. Ps 19:7 refers to the going out of the sun (sunrise) at one end of heaven and its circuit (return to the same place, to its nightly chamber) at the other end, that is sunset (for a similar thought see Ecc 1:5). We see that here too Tekufah (circuit) has nothing to do with the equinox.

Tekufah in 2Chronicles 24:23

As seen above the "Tekufah (circuit) of the year" in Exodus referred to events in the autumn (the time of the *ingathering*). The same expression (circuit of the year) is also used to refer to events which take place in late spring as we see in 2Chr 24:23:

"And it was at the circuit (Tekufah) of the year that the army of Aram went up and they came to Judah and Jerusalem..."

In this instance the "Circuit (Tekufah) of the year" comes in place of the common expression "Return (Teshuvah) of the year" which appears several times in the Tanach as "the time when kings go out [to war]" as in:

"And it was at the return (Teshuvah) of the year, and Ben-Haddad counted Aram and went up to Afek to war with Israel." (1Ki 20:26).

"And it was at the return (Teshuvah) of the year, at the time the kings go out [to war] and David sent Yoav... and they smote the Amonites and besieged Rabbah..." (2Sam 11:1)

The time that the kings went out to war was the late spring before the oppressive heat of summer and after the winter rains which made the mud roads in the Land of Israel impassable. We see here that Tekufah (circuit) of the year is used interchangeably with the more common Teshuvah (return) of the year. Whenever this annual set time for kings to go out to war comes around it is a "circuit of the year", returning to the same point in time as last year.

Tekufah in 1Samuel 1:20

The term Tekufah (circuit) also appears in 1Sam 1:20 which says:

"And it was at the circuits (Tekufot) of the days, and Hannah conceived and bore a son..."

Here the "circuits" of the days refers to "the same time the following year" [or possibly to the completion of the term of pregnancy?]. It is worth noting that Tekufah is plural in 1Sam 1:20 as tekufot "circuits". If we apply the anachronistic meaning of Tekufah as equinox then we get the absurd translation: "And it was at the equinoxes of the days, and Hanah

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conceived and bore a son..." This emphasizes how important it is to understand Scripture in its historical and linguistic context.

None of the four appearances of Tekufah in the Hebrew Scripture have anything to do with the equinox. Instead, this term is used in Biblical Hebrew in its primary sense of a "circuit", that is a return to the same point in space or time. Only in Post-Biblical Hebrew did Tekufah come to mean "equinox" and to read this meaning into the Tanach creates an anachronism.

Appendix: Kece – the full moon in Psalm 81:3 - <http://biblehub.com/psalms/81-3.htm>

[New International Version](#): Sound the ram's horn at the New Moon, and when the **moon is full**, on the day of our festival;

[New Living Translation](#): Blow the ram's horn at new moon, and again at **full moon** to call a festival!

[English Standard Version](#): Blow the trumpet at the new moon, at the **full moon**, on our feast day.

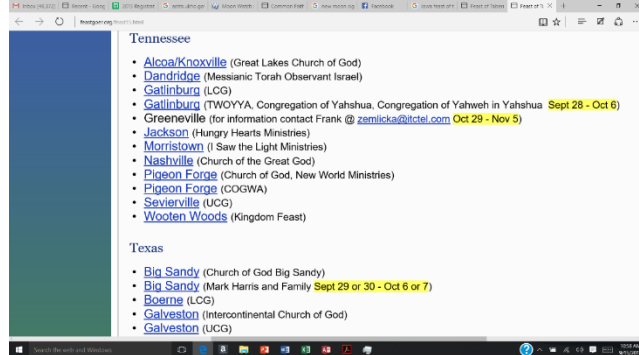
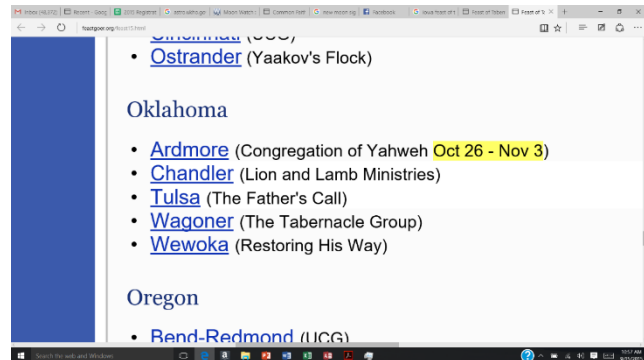
[New American Standard Bible](#): Blow the trumpet at the new moon, At the **full moon**, on our feast day.

[King James Bible](#): Blow up the trumpet in the new moon, in the time appointed, on our solemn feast day.

[Holman Christian Standard Bible](#): Blow the horn on the day of our feasts during the new moon and during the **full moon**.

[JPS Tanakh 1917](#): Blow the horn at the new moon, At the **full moon** for our feast-day.

Appendix: Practical Impact of Various Current Holy Day Calendars



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Appendix: A Few Examples of Extra-Biblical Rules for Equinox Calendars

There are many required rules for calendars that are not defined in the Bible. Calendar creators have to make up their own rules for their calendars to be complete, consistent and viable. Look for those disclosures – the candid calendar author will note them.

1. Must the New Moon or Passover or the First DUB be on or after the vernal equinox? One, none or any?
2. When does the New Year begin? For example, consider the vernal equinox in March, 2016 at Jerusalem:
 - Astronomical conjunction: March 9, 3:54 AM – Moonrise 6:04 AM,
 - Visual Crescent – date and time unknown
 - Equinox: March 20, 6:31 IST (Israel Standard Time)
 - So, when is the New Year? Since the conjunction and visually sighted new moon are expected within 11 – 13 days of the vernal equinox, is the March 9th new moon (or sighted crescent) the beginning of the New Year or should an intercalary month be added?
3. Who is the judge when an intercalary month is to be added and what are the rules? Alternative calendar authors disagree over the following because there is no explicit Bible intercalary rule for equinox calendars:
 - a. Within 13 days of the vernal equinox? (So the 14th of the month is on or after the equinox?)
 - b. Within 14 days of the vernal equinox? (So the 15th of the month is on or after the equinox?)
 - c. The next month, since the new moon does not fall on or before the vernal equinox?
4. Lunar/Equinox extra-biblical rules:
 - a. Lunar Options for when the new moon begins:
 - i. Option 1: Astronomical conjunction?
 - ii. Option 2: Mean conjunction?
 - iii. Option 3: Visible crescent? In one location or the first viewing anywhere on the earth or as it comes to the observer?
 - b. Equinox Options:
 - i. Equinox as the instant it occurred?
 - ii. Equinox as it is “observed” by people in their own location?
 - c. If a location, what location for Lunar and Equinox sighting/determination?
5. Bad case scenario: what if the equinox occurs after the lunar conjunction but before the visible crescent of the new moon. When is the intercalary month? When is the “light trigger” for the intercalary month?

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Appendix: Example of Alternative Calendars Used to Gain Power and Authority

From http://www.chabad.org/library/article_cdo/aid/112319/jewish/Rabbi-Saadia-Gaon.htm

Rabbi Saadia ben Joseph, one of the last and most famous Gaonim, a great Talmudic scholar, Jewish philosopher and inspiring leader, was born in a small village near Fayyum, in Egypt (the site of the ancient city Pithom which together with Raamses was built by Jewish slaves under the Pharaohs). His family traced its origin from Judah, the son of Jacob.

His father, Rabbi Joseph, was a learned man and he was Saadia's first teacher. Saadia had excellent qualities and was a brilliant student. Before he reached the age of twenty years, he already wrote his first work, the Agron, the first Hebrew dictionary and grammar. It was a great help to Hebrew poets and writers of sacred poems. The famous poet and commentator on the Torah, Rabbi Abraham Ibn Ezra, who lived about two hundred years later, praised this work highly, and considered its author as the earliest authority on the Hebrew language.

Rabbi Saadia became even more famous when he began his writings against the Karaites. The Karaites were a sect of Jews which came into being many years before Saadia. Which denied the authority of the Talmud, believing only in the T'NaCh, had become very strong and influential in Saadia's time, especially in Egypt.

The founder of the sect was Anan ben David, a member of the princely family of the Resh Galuta ("Head of the Exile," or "Exilarch"). Who lived in Babylon about 130 years before Saadia was born. When Anan's uncle, the Resh Galuta, died childless, Anan was next in line to inherit the high position. But because he was not as pious and G-d-fearing as the position demanded, the Gaonim (heads of the great Yeshivoth of Sura and Pumbaditha) and most of the Jews in Babylon, refused to recognize him as their leader, and elected a younger heir, Rabbi Shlomo ben Hasdai, in his place. Anan then rebelled against the authority of the Gaonim and of the Jewish tradition as taught and transmitted by the Sages of the Mishnah and Talmud. He then founded a sect of Jews who accepted only the Written Law, that of the Holy Scriptures (Mikra). In many respects they were followers of the sect of Saducees who lived in the period before the destruction of the Second Beth Hamikdosh. Anan ben David began to interpret the Torah in his own way and completely broke with Jewish tradition, thus placing himself and his followers outside the Jewish fold. Moreover, he carried on a bitter fight against the Sages and Rabbis, trying to undermine their authority.

With the spread of the new religion founded by Muhammad, and the rise of various sects among the Muslims, the Karaite sect gained strength. Many rich Jews, influenced by the new Arab culture, became more and more influenced by the Karaites. As the true and faithful Jews would have nothing to do with them, the Karaites organized their own communities and established a "tradition" of their own. During the time of Saadia they had become quite numerous and influential. Young Saadia took up the cudgels against them. His scholarly and logical arguments against the beliefs and customs of the Karaites, dealt a serious blow to their prestige. It required a great deal of courage on the part of young Rav Saadia - he was barely twenty three years old when he declared "war", against the powerful Karaites. Indeed, Saadia's writings which proved the falsity of the whole Karaite doctrine, had a tremendous impact, and many Karaites or would-be Karaites, began to see the light. The leaders of the Karaites, seeing that they could not defeat the young scholar in a battle of wit and scholarship, began to persecute him by open hostility. Fanatical Karaites broke into his home, and ransacked and destroyed his writings and

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books. Rabbi Saadia's very life was in peril, and he could no longer remain in his native land. Soabbi Saadia left Egypt and went to the Holy Land, from there he continued his relentless fight against the Karaite.

Saadia set out to translate and interpret the Torah into Arabic, which was the spoken language of most Jews in the Arab lands. In all his books and writings he endeavored to strengthen the foundations of the Jewish religion and tradition.

While Rabbi Saadia lived in the Holy Land, there arose another crisis which threatened to split the Jewish community. This time it was not a case of an outside attack, but something that came from within.

It came about when Rabbi Aaron ben Meir, the leading Talmud scholar and Rosh Yeshivah in the Holy Land, and a descendant of the princely family which headed the Jewish people in the Holy Land for many generations, **decided to reclaim the leadership which had passed on to the Jewish community of Babylon.** It happened to be a time when the Jewish community in Babylon, especially that of Sura, had suffered a serious relapse. A dispute raged there between the Resh Galuta David ben Zakkai, and the leading Talmud scholars, as to the appointment of the Rosh Yeshivah- in Pumbaditha. The great Yeshivah at Sura had dwindled down, and the rest were about to be transferred to Pumbaditha, which had become the center of Jewish life and learning.

Ben Meir took advantage of the trouble in Babylon, and decided to declare himself the leading authority. The issue was the fixing of the Jewish calendar, which was determined by the Babylonian Sages and accepted by all Jews everywhere. Ben Meir made his own calculations and wished to have it accepted by the Jews. There was the danger of some Jews following one calendar and others another, of **some Jews observing the festival on certain dates, and others a day later.** It is **easy to imagine the confusion that that would have caused.**

Rav Saadia was on a visit to Aleppo at that time. He was a great authority on the question of the Jewish calendar having debated the question with the Karaites, and being also well versed in astronomy. Rav Saadia communicated with Rabbi Aaron ben Meir and pointed out to him his error in calculation, upholding the calculations of the Babylonian Rabbis. At the same time, **Rabbi Saadia began to receive inquiries from various Jewish communities who had been confused by the dispute.** He replied to each inquiry so clearly and convincingly, that the authority of the Babylonian Rabbis was completely restored. **When Ben Meir refused to give in, he was left without a following and the dispute was thus resolved,** thanks to Rabbi Saadia's intervention. [Emphasis mine.]

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Appendix: The Jerusalem Rules

Among the Churches of God are a small number of people advocating what I call the “Jerusalem Rules” for determining the annual Feasts of the Lord. They believe they have the only correct method of determining the Holy Days and you don’t.

Their intent is to change how you determine the annual Holy Days. **These are not those who have come to a different calendar conclusion but are careful to be respectful of the beliefs of others and refrain from using access to the worship services of others to proselytize.** Rather, these are people who are using their interpretation of the calendar to draw away a following for themselves. They inject their opinions as being a universal truth and have caused congregations to split over a calendar controversy they incite.

In a nutshell, the advocates of this particular teaching believe that if they can calculate the calendar just like it was done when Jesus walked the earth they will be observing the Feasts of the Lord on exactly the right day. Any calendar that places the Holy Day on any other day is wrong.

These “Jerusalem Rules” sound good, except for three things:

1. The Jerusalem Rules were not always the calendar rules used by the Israelites.
2. The Bible reveals legitimate calendar dates were created not using the Jerusalem Rules.
3. The Bible makes it clear that there are certain people who are authorized to decide what calendar rules are appropriate – and the advocates of the Jerusalem Rules are not among those authorized.

It is exciting to discover a new truth. However, those advocating the Jerusalem Rules as the only correct way of calculating the Holy Days have been misled, have accepted erroneous teachings and sometimes self-contradicting reasoning. They may have discovered something they did not understand before, but not a universal truth.

The Jerusalem Rules:

While there are number of variations of this alternative calendar, the version being evaluated here makes these claims:

1. The only correct/legitimate way to determine the new moon is sighting the first visible crescent from Jerusalem (or the immediate area around Jerusalem.) Any other method violates the Law of God.
2. The only correct/legitimate way to determine the beginning of the new year is to evaluate the state of the barley harvest in Jerusalem (or the immediate area around Jerusalem) at the time of the closest new moon. Any other method violates the Law of God.

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3. The Sanhedrin which determined the calendar in the late Second Temple era (including when Jesus lived) was only a body appointed by man and not authorized in any way by God to determine the new moon or the new year.
4. Any declarations by the Sanhedrin regarding the calendar, including the Hebrew Calculated Calendar, are without Godly authority. In addition, proponents demonize the role of the High Priest and Sanhedrin by noting their role in the deaths of Jesus and Stephen, threats to the apostles and finally raise objections to the Pharisaical traditions in the “oral law.”
5. The Hebrew Calculated Calendar violates the law of God because the determination of the new moon by the calculated calendar does not always agree with the sighting of the new moon in Jerusalem. As already noted, any calendar that does not use the sighted new crescent moon in Jerusalem to determine the new month violates the law of God.

Let's examine these claims and note where they deny Biblical evidence, they overstate their case, and they claim calendar authority that does not exist.

They say the Bible gives all the calendar rules necessary. It does not.

For example, there is no Scripture that says Jerusalem is the only place to make calendar determinations. Instead, the Bible explicitly states that it was not.

Another example is the new moon is the beginning of the month, but no Scripture states where or exactly how the new moon must be determined. The same can be said for determining when an intercalary month is added to “sync” the shorter lunar year with the longer solar year. All the rules necessary for determining when an intercalary month is added are not in the Law of God – nor explicitly stated anywhere in the Scripture.

They don't explain that calendar rules that are not stated in the Bible are “extra-biblical” rules – made by a calendar judge authorized to do so.

Some rules are explicitly stated in Scripture. Some, like the maximum length of a lunar month, can be empirically deduced. The rest are decisions made by the ones responsible for the calendar.

But contrary to what some alternative calendar advocates state, every sacred calendar creates and uses “extra-biblical” rules. Some of these extra-biblical rules affect how or where the new month is determined. Others apply to the formula for determining when the new year begins, or an intercalary year is added.

It can only be said that those who assert that every rule they use for determining their calendar comes from the Scripture are ignorant, self-deceived or know better but are intent on misleading others.

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How they Explain the “Jerusalem Rules.”

- A new month can only be correctly determined by sighting a new crescent moon in Jerusalem. (The exception would be if the moon was not observable within 30 days, in which case the new month would be declared regardless of whether the new crescent moon was sighted or not.)
- Historical evidence from both non-religious and from the Oral Law/Talmud sources indicates sighting the new crescent moon in Jerusalem was done when Jesus lived. This is proof that it is the only correct way to determine the calendar.
- Whether an intercalary (13th month) needs to be added is determined by evaluating the sighted new crescent moons in Jerusalem and comparing whether barley is in an advanced enough state of ripeness in Jerusalem to be edible if parched in fire and therefore ready to be harvested two to three weeks later for the wave sheaf offering during the Days of Unleavened Bread.
- Anyone not following the Jerusalem calendar rules cause the observant Jew or Christian to sin because they are not observing the correct day.
- Christians observing other calendars need to be “converted” to observe the correct day(s).

What they don’t tell you: Jerusalem was not the first or only place where the new month and the new year were determined.

Goshen was the first in Exodus 12. Kardesh Barnea, Jericho, Shiloh, Gilgal, Babylon were also among many places where the new month and new years were determined.

In fact, between Moses and Jesus there were periods totaling almost six hundred years when the sacred calendar was determined in locations other than Jerusalem. For centuries, Jerusalem was held by the Jebusites, a Canaanite tribe that Joshua could not defeat. For hundreds of years, until King David, Jerusalem held no significance to Israel.

In the Babylonian captivity, the Jews were 500 miles away from Jerusalem as the crow flies. By road, they were more than 800 miles away. There was no way to communicate a new moon observed in Jerusalem in a timely manner to the Jews in Babylon.

At those times the Priests made decisions about what rules would be followed to determine the calendar. There is no Biblical evidence that it was left to the individual to decide for themselves or their community what calendar rules would be used.

They do not tell you that new year determinations depending on harvest conditions are not uniform over distances of even a few miles, much less hundreds of miles or thousands of feet of elevation.

The distance between Jerusalem and Jericho is 15 miles, but the difference in elevation is 3,428 feet. It is well documented that the ripeness of crops can be two or more weeks different just due to the difference in elevation. Both were locations where the Bible states new moons and new years were determined.

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Why is that a problem for the “Jerusalem Rules?” If the determination of the new year was done in a different location, an intercalary month based on the state of the harvest may be added or omitted because the state of the harvest will be different. The fact from Bible evidence is that for hundreds of years the Jerusalem Rules were not followed by those responsible for determining the calendar – and over time the harvest state in non-Jerusalem locations would generate a different calendar. Which would be the only correct calendar?

If the Jerusalem Rules are the only correct way of determining the sacred calendar, what Israel did for hundreds of years was likely to be wrong. Yet there is no indication in Scripture of Israel failing to observe the correct days because they did not follow the Jerusalem Rules.

They tell you that the Sanhedrin were corrupt and evil. They don’t tell you that the Sanhedrin were given calendar authority by the Priests.

As we have noted, it is clear that the national leaders and the priests delegated the determination of the calendar to the Nasi and the Sanhedrin. In order to discredit the Hebrew Calculated Calendar, these Jerusalem Rule calendar advocates have to eliminate any authority entrusted to the Sanhedrin by the priests. Intimating that the Sanhedrin betrayed the faith engages the emotions of their audience, overwhelming the rational process necessary to arrive at sound doctrine.

The creation of a calculated calendar was necessary because of the “Diaspora” or the dispersion of the Jews away from Judea by the Roman government. For long periods of time the Jews were to be cut off from access to Jerusalem. The Sanhedrin did what every previous body entrusted with determining the calendar had done: apply the principles of calendar determination to fit the location of the brethren and fulfill the need to observe the feasts of the Lord in unity on a single, common day. In this case, the location of the Jews was to be anywhere in the world. The calendar would have to accommodate this new situation and work anywhere in the world.

They don’t tell you that God made the Priests responsible for determining the calendar rules – not the average Israelite, Jew or Christian.

From the Exodus to the time of the Maccabees (around 200 BC), the priests were the calendar judges. In 191 BC, the nation of Israel and the priests decided to empower the Sanhedrin and the Nasi, its leader, with additional responsibility, including the determination of the calendar. *When Jesus walked the earth, it was the Nasi and Sanhedrin who determined the new months and the new year – not a synagogue, town, self-appointed calendar expert or a “congregation.”*

They recite the role of the High Priest and Sanhedrin in the deaths of Jesus and Stephen as evidence none of their decisions have authority – but they don’t tell you what Paul said about them.

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Even though he disagreed with how he was treated, the Apostle Paul recognized the authority of the High Priest and Sanhedrin. In Acts 23:5. Paul corrected himself for calling the High Priest a "whitewashed wall." Paul quoted Ex. 22:28 saying, "Paul replied, "Brothers, I did not realize that he was the high priest; for it is written: 'Do not speak evil about **the ruler** of your people.'"

As a Christian, Paul recognized the authority of the High Priest and Sanhedrin within the limits God allowed. God did not authorize them to stop the spread of the Christian faith – as Gamaliel wisely advised in Acts 5:38-39.

However, there is not a single Biblical example of any Christian leader rejecting the authority of the Sanhedrin to determine the Holy Days. Instead, there are Biblical examples of Christians observing the Holy Days as determined by the Sanhedrin.

They don't tell you that the Bible is filled with examples of righteous and unrighteous kings and priests – without eliminating their authority.

Watch what almost every alternative calendar advocate says about the Priests, Nasi and Sanhedrin. Virtually every one belittles and attacks their credibility. Before they can establish themselves as the new calendar authority, they have to discredit the priests and those whom the priests entrusted to determine the calendar.

Some try to persuade their audience with a false choice fallacy. If the Sanhedrin, its leader the Nasi and the High Priest did wrong (which they did), then their office and authority was abolished. If their reasoning reflected God's mind, then the evil reign of King Ahaz would never be followed by the righteous reign of his son, King Hezekiah. The same thing concerning Eli the priest..

The premise that bad behaviors by religious leaders end the position and authority for that position as given to the national leaders of Israel is proven false by explicit Bible passages. There were bad priests and good priests. Bad kings and good kings. A bad priest or king did not eliminate the position or its authority.

While God certainly can and does judge His people, it is contrary to the abundant evidence of Scripture that the failure of a civil or religious leader does not automatically mean the office is eliminated. Yet, that is the conclusion many alternative calendar advocates want you to believe the Sanhedrin was without Godly authority.

They don't tell you that the Oral Law, Sanhedrin, Rabbis and Sages they say are so corrupt and lacking authority are the very *source of their Jerusalem Rules*.

There are Jerusalem Rule advocates who discredit the legitimacy of the Priests, Sanhedrin, Pharisees, Rabbis and Sages in one breath and then quote the "Oral Law" – the Talmud – as a credible source for their Jerusalem calendar rules in the next. Why

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cite calendar rules from a “corrupt man-made body without authority?” By what standard do they pick and choose nuggets of truth from the “authorities” they disgrace?

They tell you that the Postponements in the Hebrew Calculated Calendar are wrong because they change the days of Feast observance. What they don't tell you that their Jerusalem Rules move the date of the new moon up to 2½ full days from the first sighting of the crescent moon.

In 2015, the Jerusalem Rules placed the new moon of the Feast of Trumpets 2½ days after the first observed crescent moon was visible. This is not unusual for a new crescent moon to have been observed elsewhere 2½ days before it is observed in any single specific location.

The first observance of the crescent moon in the seventh month of 2015 was accurately predicted by the Hebrew Calculated Calendar. A rule of postponement was applied, and the observance of the Feast of Trumpets was set from Sunday night to Monday night. The Jerusalem Rules placed the Feast of Trumpets two nights later, from Tuesday night to Wednesday night.

Why is this important?

They don't tell you that the Scriptures explicitly state that the first day of the Feast of Tabernacles should fall on a full moon.

Everyone seems to agree that the new month begins with the new crescent moon. Whether that crescent moon can only to be observed in Jerusalem is a point of disagreement. However, the Jerusalem Rule calendar advocates don't want to include all the explicit Scriptures in their “proofs.” The one they universally omit is Psalm 81:3-5

“Sound the ram's horn at the New Moon, and when the moon is full, on the day of our Feast; this is a decree for Israel, an ordinance of the God of Jacob. He established it as a statute for Joseph when he went out against Egypt, where we heard a language we did not understand. (NIV)

A lunar month is approximately 29.5 days long. The time from the new moon to the full moon is approximately half that time, or 14.75 days. The first holy day of the first and seventh months (the first day of the Days of Unleavened Bread and the Feast of Tabernacles, respectively) should fall on a full moon.

In 2014 to 2015, a series of four lunar eclipses (popularly called “Blood Moons”) occurred. Lunar eclipses are visual evidence of what is called the “full moon.” That is the time when the side of the moon we see is 100% “full” of light. What a great time to test the accuracy of both means of calculating the holy day calendar.

What was the result?

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The Hebrew Calculated Calendar, with postponements, placed the full moon on the appropriate Holy Day every time. The Jerusalem Rules were not as precise – in some cases, missing the full moon by 2 days. The Jerusalem calendar placed the holy day on a noticeably waning moon only 95% full. It is more than misleading to accuse the Hebrew Calculated Calendar of being inaccurate, capricious or changing the Holy Days from the appointed times. Instead, the Hebrew Calculated Calendar is a marvel of the ancient world. It is accurate, predictable and correctly delivers the Holy Days at the appointed times.

Is it any wonder why advocates of the Jerusalem Rule don't want to consider the explicit statements of Psalm 81 in the Bible passages they quote? Listen to the tone of their diatribes against the Sanhedrin, then consider how accurate the Hebrew Calculated Calendar really is. The problem they have isn't because the Sanhedrin was incompetent. Rather, ask yourself "Do they have a problem with Jewish authority?"

The extra-biblical rules in every calendar "fixes" the dates of Holy Day observance. They don't always agree because the rules are different. The point here is that, over time, even applying the Jerusalem Rules in another location will yield different Holy Day dates.

It is more than a gross exaggeration to claim the Jerusalem Rules are the only way the calendar was determined. It reflects poor Biblical scholarship, an ignorance of historical facts and a rejection of the way God administered the calendar from Moses to Jesus.

They tell you about Jerusalem being "the chosen location" for sighting a new crescent moon, but they don't tell you that those God gave the responsibility for determining the calendar rules based them on where the Israelites (and later, the Jews) were located.

When the Israelites were in Goshen, God used the conditions in that location to determine the calendar. (Exodus 12, Psalm 81:4-5) When they were in the Wilderness, the priests used those locations. Same thing for when the Israelites were in Jericho, Jerusalem or later the Jews when they were in Babylon.

By 358/9 AD the Sanhedrin had been carrying out the responsibility for the calendar for more than 500 years. By both Roman decree and persecution, Jews were being scattered all over the known world. Just like all their predecessors who were responsible for the calendar, the Sanhedrin made a calendar determination that would allow uniform and consistent observance of the Holy Days by the faithful Jews where they lived.

The calendar rules produced by the Sanhedrin needed to guarantee that every Jew could observe the Holy Days on the same day, anywhere in the world. No longer would a large number of them live in Judah – nor would they be allowed access to that land.

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Were the Jerusalem Rules the only universal truth and only acceptable method, the overwhelming majority of all Jews could not know when the Holy Days were, when intercalary months were added and would not be able to observe the Feasts of the Lord on the same day. Access to Jerusalem was eliminated. Distances prevented the communication of calendar decisions.

God makes it possible for His days to be observed. He does not command something that cannot be observed. The exaggerated emphasis of one location by the Jerusalem Rules advocates would have made it impossible to have consistent observances of the Feasts of the Lord for more than a thousand years.

By attempting to make calendar decisions made by the Priests during a specific time period and for a single location **the universal rules for all locations and all time**, they:

1. Contradict the explicit testimony of the Bible regarding the calendar rule judgments made as the leadership of Israel/Judah moved from one location to another.
2. Would make it impossible for Jews and Christians alike to determine a Holy Day calendar for centuries when access to Jerusalem was blocked and forbidden.
3. Take to themselves a role that was reserved for the Priests or those the priests and the nation delegated calendar authority – the Nasi and the Sanhedrin.

They don't tell you that they want to be your High Priest, Nasi and Sanhedrin.

The Bible has abundant testimony that the religious leadership of Israel, and later Judah by itself, was responsible for judgment in matters of the law. At various times that religious leadership included the priests and finally the Nasi and Sanhedrin. There are also numerous examples of Levites, Reubenites and Kings who attempted to usurp that religious leadership. In every case, it ended badly.

It is a heady thing to imagine oneself as having a new truth. Saying that only the Jerusalem Rules can be used when virtually all the Jews do differently can be intoxicating. Having this special understanding and making the decision on the barley harvest is a demonstration of special authority. *Despite protestations to the contrary, the one who decides to become a judge determining the calendar rules has stepped into the role of Priesthood and Sanhedrin.*

If you read what is written and listen to what is said, the ignorant or less honest will deny that they have taken over a priestly role. They may say the calendar doesn't need any priest or Sanhedrin to determine the new moon or the new year. Yet even today people with the same rules disagree over the sighting of new moons, the condition of the barley harvest, where it can be observed, etc.

The ones making calendar decisions are acting as calendar judges – acting in the role of the Priesthood and Sanhedrin. The honest statement is “The rules for determining the calendar would produce different feast days, depending on the location used. I have

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personally decided to apply calendar rules using Jerusalem as that location.” There may be others, but I have only read one alternative calendar author who was that honest.

The Biblical evidence and historical documentation is in universal agreement that these days were determined and announced by the priests or those to whom the priests delegated their authority. It is abundantly clear that those who have taken to themselves calendar authority arrive at different dates because they do not agree on the rules or how even shared calendar rules are to be correctly applied.

The Bible doesn't give enough information for every needed calendar rule. God intended that there would be judges to make those decisions. It was not left to a farmer in Shiloh to come to one conclusion and a farmer in Jericho to arrive at another. *Simply put, the advocates of the Jerusalem Rules have assumed the role of High Priest, Nasi and Sanhedrin rolled up into one.*

We have seen that the Jerusalem Rules were not universally applied before the First Temple. Those rules could not be applied during the Babylonian Captivity. Likewise, they could not be consistently applied after the destruction of the Second Temple and diaspora (dispersion) of the Jews.

Hillel II, as Nasi of the Sanhedrin was the last remnant of the national and religious leadership of Israel. He oversaw the last Sanhedrin to whom the calendar responsibilities were given some 500 years before by the Priests and the national leaders of Judah. When Hillel II published the calendar rules, he did so with the Priestly authority given to the Sanhedrin.

Who gives the modern-day alternative calendar authors of the Jerusalem Rules the authority to teach what they say has been and always will be THE universal truth? Why are these rules given priority when they were observed, in some fashion, for about ¼ of the history of Israel, Judah and the Jews? Do we believe self-appointed judges?

When the Bible and history make it clear that the calendar rules were changed multiple times, why should the Jerusalem Rules be treated as the universal calendar truth? Certainly, Jesus will decide what the calendar rules will be when He returns. As ruler of the whole earth He may choose some version of the Jerusalem Rules, the first sighted moon on earth or a calculated calendar. Nobody knows and the Scriptures are silent.

Changes in the calendar rules for the Jews and observant Christians can be done by an authority approved by God. That could be a new Sanhedrin or High Priest, generally accepted by the Jews, or when Jesus returns.

Until then, be careful of people claiming that they have special knowledge about the calendar and how it should be calculated. They may be enthusiastic about their beliefs, but the error in their teaching is ultimately divisive. For many, their resistance to reason and desire to make converts is as a consequence of taking upon themselves authority and privilege God never intended them to have.

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Appendix:

Does factoring in the "conjunction" mean one is counting months from "dark to dark" vs "new moon to new moon?"

A few comments here. It appears to me that you are thinking the Hebrew Calculated Calendar uses the dark moon (the conjunction) as the beginning of the new month. This is a common belief, though it is technically untrue. In my paper I also refer to the "conjunction" as a kind of shorthand for the beginning of the new month. Technically, the postponement rules #2, #3 and #4 for the molad of Tishri, require that at least 6, 15 and 9 hours, respectively, must be left in the day (before 6 PM) before the new moon can be declared. The day must have had at least 6 hours of "waxing" time or the declaration of the new moon is postponed to the next day. (Of course, pending other postponement rules coming into effect.)

A day that is short of the required hours of the brightening moon cannot be declared as the beginning of the new month. I grant that a new moon only 6 hours hold will likely not be visible to the naked eye. However, it is not the "dark" moon that begins the new month - it is always a waxing moon, even if the naked eye cannot see it.

Seeing the new moon with the naked eye is not an absolute requirement. Even for those who use a sighted new moon, when there is a cloudy period of time and no moon visible, the old month is never allowed to go more than 31 days. (Using 29.5 days as the average lunar month. I say average because the actual length of the shortest vs the longest lunar month in 2018 was 12 hours and 43 minutes.)

Regarding a common time for the observance of the Feasts of the Lord, I acknowledge your conclusion that you do not see the value in coordinating the observance of a day with the rest of the world and only need to observe the feast days with local brethren. I suggest that this is not consistent with what is revealed in the Bible about expectations of same day observance extending beyond local borders. Zechariah 14 comes to mind. **"16 Then everyone who survives of all the nations that have come against Jerusalem shall go up year after year to worship the King, the Lord of hosts, and to keep the Feast of Booths."** The specific statement is "all the nations." Would you agree that the explicit expectation is that all the nations that came against Jerusalem will be expected to show up on the same date? There are other examples as well.

The days proclaimed to be the Feasts of the Lord are singular, in the sense that it is a day that begins at even and ends at even on a single day as that day comes to the entire world.

I am chuckling at one response that claimed my use of Psalm 81:3 as being a "canard." This is an explicit statement regarding the expectation that feasts of the 15th fall on a full moon. The days mentioned in verse 3 specifically relate to the Feast of Trumpets (new moon) and the first day of the Feast of Booths ("at the full moon, on our feast

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day.") As you saw in my paper, Feast calendars that do not include the postponements, that rely on sighted moons and other variations I mention regularly misplace the feasts of the 15th on days that are not full moons. Even to the naked eye, they are deficient. This is an explicit expectation from scripture for a calendar that claims to be able to "proclaim the Feasts of the Lord."

As you probably have noted, I use the term "explicit" to define calendar expectations that do not require conjecture or that are not subject to variations in word usage over time.

Exodus 34:22, interpreted with what I take to be the Bible's definition of *tekufah* at Psalm 19:6: it is a time when nothing is hidden from the heating rays of the sun, and on every day of the year, except the two equinoxes, some part of the earth receives no sunlight.

You're right: I have made assumptions. One has to do that in the absence of complete information. I think the preceding outline contains fewer assumptions than many calendars I have seen, including the rabbinical calendar, but that may just be another assumption of mine.

I understand your attempt to interpret Psalm 19 as referring to the equinox and your logic for doing so. My paper illustrates the deficiency of using *tekufah* in an anachronistic way. I agree the modern usage of *tekufah* includes "equinox." As of the date of my research, no English Bible translation available on BibleGateway.com translated any of the instances of "tekufah" as equinox. (I looked at 51 at that time.) In 51 English translations, including all the Hebrew scholars who translated/reviewed the translations, zero translated any of the instances into "equinox." I do not speak Hebrew. But when not a single translator will use "equinox," I have to question the credibility of any argument that does.

There is a certain sense that fitting the Feasts of the Lord into the cycle of equinoxes seems logical and the way it should be done. There is no explicit Biblical basis for doing so and no English translation of the Bible supports it. One can choose to reason to a conclusion, but my approach is to reason using explicit statements to set the boundaries of what can be said.

A day that is short of the required hours of the brightening moon cannot be declared as the beginning of the new month. I grant that a new moon only 6 hours hold will likely not be visible to the naked eye. However, it is not the "dark" moon that begins the new month - it is always a waxing moon, even if the naked eye cannot see it.

Do you have any notion as to how the ancients (in the Wilderness camp, for example) determined the invisible waxing of the moon?

From my reading, the study of the cycles of the moon and sun go way back. Stonehenge (2,000-3,000 BC) is an example of the level of awareness and ability to

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calculate cycles by ancient people. It has elements where there is a rough alignment with the solstices. There were geniuses in every generation, some of whom were fascinated by astronomy. As to determining the waxing of the moon, the rough 29.5 days for each cycle (29.5 + or -, from one full moon to the next, 29.5 days from one visible crescent to the next) would give an approximate time/calculation for the new moon for any civilization.

The Babylonians and Greeks both demonstrated a competency in tracking long-cycles of the moon and sun. They developed an awareness of the 19 year lunar cycles and eventually the ability to predict eclipses, using what we call in the modern day the "Saros Cycle". Of course, predicting an eclipse requires some level of accurate time keeping and understanding of when the conjunction and orbit of the moon intersects with the plane of the earth, moon and sun. The written records I could find put these in the 500's BC, though some think the Babylonians had the 19 year lunar cycle before the Greeks.

This is all to say that we have sparse records dating back to the Greek (400-500's BC) and Babylonian (700-900 BC) time periods, but we do see an ability to calculate lunar and solar events with some level of sophistication. Livy (1st century BC) says the Roman king Numa Pompilius (6-700's BC) had a form of the 19 year/"Metonic" cycle. .

Long way of saying that the interest and ability to calculate lunar and solar events was important to many cultures for a long time before Jesus. Historians infer the level of sophistication and intelligence from sparse records, but there is evidence of growing understanding and precision in the BC time period.

I think I understood you correctly, but I did not explain myself clearly. Regarding tekufah, I included a lengthy treatment of the question in the appendixes of my paper.

I assert that your approach is to find a possible link to Ps.19:6 being the equinox, to me, this is an example of reasoning to a conclusion. Could the passage refer to an equinox where the whole earth receives sunlight? Yes, one could use a very technical and the most literal use of the English expression to reason to that conclusion. Let me raise a number of issues with doing that:

1. I have found no translators who agree with that conclusion. Zero. When zero translators, who have training, experience, training, education ... come to a different conclusion, then one would have to demonstrate on what sound basis you can assert such a new and different understanding. Since this is a substantial basis of your argument, merely asserting that it could be a suitable translation does not make it so. Why are the translators wrong?
2. Hence, one should ask the question "Why do translators NOT translate tekufah as equinox?" If EVERY translator refuses to translate it as "equinox" in every instance, why are they absolutely consistent? That is not to say that somebody, somewhere, might translate tekufah as "equinox." I just cannot find anybody who has done a Hebrew to English translation uses equinox. Rather,

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they consistently translate it in the sense of a circuit/course of time. What fault do you find in their practice? It seems to me that when EVERY scholar involved in Hebrew to English Bibles disagrees with your assertion of an incorrect translation of tekufah, there is a burden of proof and evidence demonstrating why you know better. Saying someone could view a part of a passage as "equinox" and not substantiating it with credible evidence that refutes the consistent way every scholar translates tekufah is reasoning to a conclusion apart from linguistic evidence.

3. Changing the meaning to "equinox" does not make sense in the other passages in which "tekufah" appears, nor it is not consistent with the concepts in similar passages. I refer you to the appendix beginning on page 40 of my paper.
4. **Finally, Ps 19 is a poem.** The sun is likened to a bridegroom, a champion, running a complete circuit or course with joy, warming the entire earth. Using your definition, the poem would be tied to the two equinoxes. It would be saying **"On only TWO days each year - on the equinoxes - is this poem true or applicable."** Only two days when the heavens declare the glory of God. Only two days when their voice goes through all the earth. Only two days when the sun comes out. Only two days when the law is perfect. Only two days when ... That is clearly not the meaning of the poem. This poem is not an ode to the equinoxes. EVERY day the heavens declare the glory of God. Every day the law is perfect. Every day the fear of the Lord is clean, enduring forever. **On how many days does the sun come out of his tent? (Ps 19:4-5) It comes out EVERY day.** Does your interpretation that the sun's appearance must be only on the equinox fit? I grant that interpreting poetry is somewhat subjective. But making an unequivocal statement about the mandatory and unique meaning of tekufah being "equinox" would seem to require that it is consistent with the meaning of the entire poem. Emphatically, the sun appearing on the equinoxes is in conflict with the rest of the poem. **The sun appearing every day and completing a circuit is in complete harmony with the rest of the poem.** Making this an equinox poem destroys the obvious symmetry of the poem. Does this help make sense as to why the translators do not use the modern translation of tekufah, but instead use circuit of time or space/course/a turning/a coming around? If your presumed meaning destroys the validity of the immediate context, then creating a highly technical definition of tekufah as meaning "equinox" is incorrect.

Your assertion of tekufah = equinox in the Hebrew is essential to your argument. If you do not refute the linguistic/other usage evidence, then on what basis could your assertion stand?

This is addressed in part in my note above.

While you feel that you can define the correct definition of Hebrew words based your interpretation of the only possible meaning, that does not make it so. If you want to make that case, it appears to me that you need to argue with those who know and

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understand ancient Hebrew and its accurate translation. Does it bother you that Hebrew scholars know the modern Hebrew meaning of tekufah includes "equinox," but they decided - unanimously - not to use it anywhere in the Old Testament?

You are essentially saying that "equinox" is the only possible meaning for tekufah while no other translator else does. I suggest you should reconsider whether your idea of precluding other meanings of the Ps. 19:6 is the correct approach. While it seems reasonable that one defines a word from its usage, it seems to me that this requires the usage determined must be absolutely correct. If the usage is not credible elsewhere, then this approach fails. Do you have evidence that your interpretation that the only possible meaning of Ps. 19:6 is the equal distribution of sunlight (equinox) the **only** correct translation/usage? On what facts or evidence do you refute the usage that every scholar translating the Hebrew into English has determined?

Using your method, it seems that every other usage = definition in other passages must be discarded as incorrect. They all must mean "equinox." If your usage = definition of equinox fails in another passage, can you still promote "equinox" as being the correct one? Again, my paper addresses the failings of "equinox" as a credible translation.

I have a section that addresses this: "The Jerusalem Rules" beginning on page 47. In addition, there is evidence that the testing of the required witnesses reflected a capability of knowing, in advance, where the new moon should appear, how the crescent should be shaped and the approximate time of its appearing. The rules of Hillel, as we have them today, do not conflict with the actual appearance of a new moon. They do allow for the declaration of a new moon before it is visible in Jerusalem. They do permit the accurate declaration of new moons without needing to have a visual sighting in Jerusalem or any other place. They do permit the universal observation of the Feasts of the Lord on the same day, everywhere in the world. They allowed those who observed the annual Sabbaths to continue to observe them on the same day when Israel was not accessible.

As you know, I assert that the Hebrew Calculated Calendar places the annual Sabbaths of the 15th of the month on a full moon more accurately and more consistently than any other calendar. If the calendar methodology cannot do that consistently, then why would one consider that method to be superior - or even correct? Again, I often use the term "explicit" when referring to Psalm 81:3 and the feasts of the 15th falling on a full moon. The strongest form of Biblical support for a position is an explicit statement, requiring no interpretation. It was particularly convicting to me when I went to astronomy tables and looked up the full moon data for myself and compared the Hebrew Calculated Calendar with the others. (Pages 20-24, with the conclusions on page 24.) The others were demonstrable inferior to the explicit expectations of Ps. 81:3.

People evaluate data and reach conclusions differently. I present the data that convicted me.

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Sources Cited:

^A "During the Second Commonwealth (c. 530 BCE - 70 CE), the nasi was the highest-ranking member and president of the Sanhedrin or Assembly, including when it sat as a criminal court. The position was created in c. 191 BCE when the Sanhedrin lost confidence in the ability of the High Priest to serve as its head."

[https://en.wikipedia.org/wiki/Nasi_\(Hebrew_title\)#Late_Roman_empire_to_medieval_period](https://en.wikipedia.org/wiki/Nasi_(Hebrew_title)#Late_Roman_empire_to_medieval_period) quoting Goldwurm, Hersch and Holder, Meir, History of the Jewish People, I "The Second Temple Era" (Mesorah Publications: 1982) ISBN 0-89906-454-X.

^B "The right to intercalate the year or the month was far more consequential than might, at first, be assumed. Controlling the Jewish calendar and thus deciding which days would be holy was of cardinal importance for anyone with aspirations to religious leadership. Calendar controversies were not unknown in Jewish history, and very often involved issues of political significance as well. Calendrical issues appear to have played an important role in secessionist movements, be they the breakaway of the northern tribes in the tenth century or the Essenes in the second. These movements were motivated in part by, and expressed their opposition through, calendrical issues. Later on, in the Middle Ages, the Saadia-ben-meir controversy similarly focused on a calendar question. The Jewish Patriarch (Nasi) in the Third Century Palestine, page 669. (Aufstieg und Niedergang der römischen Welt Geschichte und Kultur Roms ... Part 2, Volume 19)

^C "The ecclesiastical rules are:

- Easter falls on the first Sunday following the first ecclesiastical full moon that occurs on or after the day of the vernal equinox;
- this particular ecclesiastical full moon is the 14th day of a tabular lunation (new moon); and
- the vernal equinox is fixed as March 21."

"There are three major differences between the ecclesiastical system and the astronomical system.

- The times of the ecclesiastical full moons are not necessarily identical to the times of astronomical Full Moons. The ecclesiastical tables did not account for the full complexity of the lunar motion.
- The vernal equinox has a precise astronomical definition determined by the actual apparent motion of the Sun as seen from the Earth. It is the precise time at which the apparent ecliptic longitude of the Sun is zero. (Yes, the Sun's ecliptic longitude, not its declination, is used for the astronomical definition.) This precise time shifts within the civil calendar very slightly from year to year. In the ecclesiastical system the vernal equinox does not shift; it is fixed at March 21 regardless of the actual motion of the Sun.
- The date of Easter is a specific calendar date. Easter starts when that date starts for your local time zone.

The vernal equinox occurs at a specific date and time all over the Earth at once."

<http://aa.usno.navy.mil/faq/docs/easter.php>

^D "Postponements – Another Mystery of the Ages," Edition 4, Church of God In Truth, page 31

^E "Ron Dart's calendar challenge deserves a short reply" by Frank W. Nelte", The Journal, Issue 63, retrieved from <http://www.thejournal.org/issues/issue63/nelte.html>

^F "What About 1999? Two different sources confirmed that the barley had green ears in the head by wave sheaf time in Israel this year, or April 4. One report claims the barley was green even by March 18. Not believing these reports and choosing to rely on barley growing in the United States, some observed Passover on April 29 this year, making the wave sheaf day May 2. The law provides that the wave sheaf be of the first fruits of the barley. Whatever barley field produced green ears first, from that crop the wave sheaf was taken. Once the wave sheaf was offered to Yahweh, the harvest could begin. Harvesting of barley typically begins in early April near Jericho and in early May in the mountains around Jerusalem. We find a serious flaw with the keeping of an April 29 Passover and a May 2 wave sheaf this year based on barley:" http://ym.org/equinox_or_barley.htm -

^G "Postponements – Another Mystery of the Ages," Edition 4, Church of God In Truth, page 31

^H <http://assembliesofyahweh.com/wp-content/uploads/2013/10/C-5-Yahwehs-Calendar-in-the-Heavens.pdf>

^I This graphic was captured from <http://astro.ukho.gov.uk/assets/F2015Apr19.png>

^J "The seven-day cycle makes its earliest appearance in Babylonian documents of the 7th century BCE. It is not quite yet the week as we know it, however. In origin, it seems to have been one fourth of the approximate time in a month the moon was visible. In short, it does not include the days around the new moon, and is not therefore a continuous cycle. To picture what this "week" was like, imagine one of our months with four regular weeks, and

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then a few epagomenal days at the end of the month, which do not belong to any week.”

<http://www.polysyllabic.com/?q=calhistory/earlier/babylonian> and

“Counting from the [new moon](#), the Babylonians celebrated every seventh day as a "holy-day", also called an "evil-day" (meaning "unsuitable" for prohibited activities) . On these days officials were prohibited from various activities and common men were forbidden to "make a wish", and at least the 28th was known as a "rest-day" . On each of them, offerings were made to a different god and goddess, apparently at nightfall to avoid the prohibitions: [Merodach](#) and [Ishtar](#) on the 7th, [Ninlil](#) and [Nergal](#) on the 14th, [Sin](#) and [Shamash](#) on the 21st, and [Enki](#) and [Mah](#) on the 28th. Tablets from the sixth-century BC reigns of [Cyrus the Great](#) and [Cambyses](#) indicate these dates were sometimes approximate. The [lunation](#) of 29 or 30 days basically contained three [seven-day weeks](#), and a final week of eight or nine days inclusive, breaking the continuous seven-day cycle.^[1]”

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

^K “A CALENDAR FOR THE CHURCH OF GOD TODAY,” November 1999, Frank W. Nelte, page 8;

^L Retrieved from http://www.karaite-korner.org/abib_and_tekufah.shtml

^M “When one considers that Gen 1:14 points to the lights in the heavens to determine the festivals and knowing that only the vernal equinox is related to the time of the year under consideration, Moses would naturally think of the vernal equinox in relation to Ex 12:2. That would be Egyptian training, Egyptian thinking, Egyptian context, and in harmony with Gen 1:14, the only explicit Scripture that directly addresses the determination of the festivals.” Treatise on the Biblical Calendar, second edition (abbreviated TBC2) by Herb Solinsky, 4/03/2009, pages 142-143, retrieved from <http://www.thebiblicalcalendar.org/>

^N “The Calculated Jewish Calendar, An Examination of Postponements, New Moons, Seasons and More,” Jim Rudd, page 63

^O Abridged Biblical Calendar (abbreviation: ABC2) by Herb Solinsky, 1/04/2013, pages 41-42, retrieved from <http://www.thebiblicalcalendar.org/>

^P “Ancient observations of solar eclipses have a long history among many different cultures and civilizations which stretches back to at least 2500 BC in the writings that have survived from ancient China and Babylon. Ancient Chinese astrologers, by 2300 BC, already had sophisticated observatory buildings and as early as 2650 BC, Li Shu was writing about astronomy. Observing total solar eclipses was a major element of forecasting the future health and successes of the Emperor, and astrologers were left with the onerous task of trying to anticipate when these events might occur. Failure to get the prediction right, in at least one recorded instance in 2300 BC resulted in the beheading of two astrologers. Since the pattern of total solar eclipses is a very erratic one in time at a specific geographic location, many astrologers no doubt lost their heads. By about 20 BC, surviving documents show that Chinese astrologers understood what caused eclipses, and by 8 BC some predictions of total solar eclipse were made using the 135-month reoccurrence period. By 206 AD they could predict solar eclipses by analyzing the motion of the moon itself. In the western world, meanwhile, Babylonian clay tablets that have survived since the time of this civilization in the Mesopotamian region, record the first total solar eclipse seen by observers in Ugarit on May 3, 1375 BC. Like the Chinese observers, Babylonian astrologers kept careful records about celestial goings-on including the motions of Mercury, Venus the Sun and the Moon which survive from tablets dating from 1700 to 1681 BC. Later records identified a total solar eclipse on July 31, 1063 BC that 'turned day into night', and the famous eclipse of June 15, 763 BC recorded by Assyrian observers in Nineveh. Babylonian astronomers are credited with having discovered the 223-month period for lunar eclipses.”

<http://image.gsfc.nasa.gov/poetry/ask/a11846.html>

^Q “Originally, the king decided which month had to be added ("intercalated"), and when. Because this happened at random, this was not very satisfying, and the Babylonian astronomers ("Chaldaeans") started to look for some kind of regularity. The key was the discovery, in the mid-eighth century, that 235 lunar months are almost identical to 19 solar years. (The difference is only two hours.) The Chaldaeans concluded that seven out of nineteen years ought to be leap years with an extra month. From now on, intercalary months were still announced by the king, but he was advised by an astronomer. After Babylon had been captured by the Persian king Cyrus the Great in 539, priestly officials took over. The Chaldaeans now started to look for a standard procedure for the intercalation of months. It was introduced in 503 BCE by Darius I the Great (if not earlier).”

<http://www.livius.org/articles/concept/calendar-babylonian/>

^R “Although barley ripens in the spring, the following considerations indicate that the barley harvest does not establish the first day of YEHOVAH God’s year --

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1) For two successive growing seasons (the Sabbath and Jubilee years), no grain was to be planted and, therefore, no maturing barley was available to consult for the beginning of the year -- see Leviticus 25:1-24. While it is true that barley sometimes sprouts and grows by itself with no cultivation, this was far less likely in the second year. It was illegal under YEHOVAH's law to voluntarily reap grain in the 50th year, so Israel probably allowed their flocks to graze the fields. This was perfectly legal -- see Leviticus 25:7, 11.

2) During the Flood, Noah was apparently quite able to determine the first day of the year without consulting the barley harvest.

3) During the forty years that the Israelites wandered in the wilderness (a desert), they kept a careful record of the months and years -- apparently without consulting the barley harvest in Canaan!" John D. Keyser,

<http://www.hope-of-israel.org/barley.htm>

^S "Palestine: the Physical Geography and Natural History of the Holy Land, Illustrated with Woodcuts. - London, Knight 1841, John Kitto, page ccxxix

^T ibid

^U <http://www.space.com/24511-moon-myths-lunar-new-year.html>

^V <http://aa.usno.navy.mil/faq/docs/crescent.php> "Although the date and time of each New Moon can be computed exactly, the visibility of the lunar crescent as a function of the Moon's "age"—the time counted from New Moon—depends upon many factors and cannot be predicted with certainty. During the first two days after New Moon, the young crescent Moon appears very low in the western sky after sunset, must be viewed through bright twilight, and sets shortly after sunset. The sighting of the lunar crescent within one day of New Moon is usually difficult. The crescent at this time is quite thin, has a low surface brightness, and can easily be lost in the twilight. Generally, the lunar crescent will become visible to suitably located, experienced observers with good sky conditions about one day after New Moon. However, the time that the crescent actually becomes visible varies quite a bit from one month to another. Naked-eye sightings as early as 15.5 hours after New Moon have been reliably reported while observers with telescopes have made reliable reports as early as 12.1 hours after New Moon. Because these observations are exceptional, crescent sightings this early in the lunar month should not be expected as the norm."

^W <http://aa.usno.navy.mil/data/docs/MoonFraction.php>; <http://aa.usno.navy.mil/rstt/onedaytable?>;

<http://www.astronomyknowhow.com/month-percentage.php>;

<http://www.timeanddate.com/calendar/moonphases.html?>

^X <http://www.t-cog.net/CalendarPart3.pdf>

^Y http://aa.usno.navy.mil/cgi-bin/aa_moonill2.pl?form=2&year=2015&task=00&tz=2&tz_sign=1

^Z <http://www.moonsighting.com/hijri-calendar.html#mess> "Muslims around the world started Ramadan 1426 in 2005 on five solar days/dates.

1. Sunday, October 2, 2005: Nigeria [some]

2. Monday, October 3, 2005: Nigeria [Majority]

3. Tuesday, October 4, 2005: Saudi Arabia, Egypt, and most Middle-Eastern countries

4. Wednesday, October 5, 2005: Australia, Indonesia, Malaysia, Africa, Europe and Americas

5. Thursday, October 6, 2005: Bangladesh, India, Pakistan, Central Asia

We have been witnessing this mess for more than thirty years, especially after the communication revolution."

^{AA} <http://churchofgodworldwide.com/holy-days-calendar/gods-holy-days/> VS

<http://assemblyofyahweh.com/calendar-of-feast-days/>

^{BB} <http://www.jewfaq.org/calendr2.htm>

^{CC} Retrieved from <http://www.space.com/881-date-changed-start-spring.html>

^{DD} <http://assembliesofyahweh.com/wp-content/uploads/2013/10/C-5-Yahwehs-Calendar-in-the-Heavens.pdf>

^{EE} "Of the greatest significance, however, was the proclamation of New Moon ("Kiddush ha-Hodesh") by the president of the Sanhedrin (R. H. ii. 7)—originally, of course, by the high priest—just as in Rome the Pontifex Maximus fixed New Moon by proclamation (whence the name Calendar). The Sanhedrin was assembled in the courtyard ("bet ya'azek") of Jerusalem on the 30th of each month from morning to evening, waiting for the reports of those appointed to observe the new moon; and after the examination of these reports the president of the Sanhedrin, in the presence of at least three members, called out: "The New Moon is consecrated"; whereupon the whole assembly of people twice repeated the words: "It is consecrated" (R. H. ii. 5-7; Sanh. 102).

<http://www.jewishencyclopedia.com/articles/11493-new-moon>

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^{FF} [https://en.wikipedia.org/wiki/Nasi_\(Hebrew_title\)](https://en.wikipedia.org/wiki/Nasi_(Hebrew_title)); <http://www.jewishencyclopedia.com/articles/11330-nasi>

^{GG} <https://www.biblegateway.com/passage/?search=Acts%2023&version=NIV>, verse 5 “Paul replied, “Brothers, I did not realize that he was the high priest; for it is written: ‘Do not speak evil about **the ruler** of your people.’”

^{HH} <http://www.thefreedictionary.com/usurping>

^{II} Treatise on the Biblical Calendar, second edition (abbreviated TBC2) by Herb Solinsky, 4/03/2009, pages 52-75, retrieved from <http://www.thebiblicalcalendar.org/>

^{JJ} Treatise on the Biblical Calendar, second edition (abbreviated TBC2) by Herb Solinsky, 4/03/2009, page 612, retrieved from <http://www.thebiblicalcalendar.org/>

^{KK} Treatise on the Biblical Calendar, second edition (abbreviated TBC2) by Herb Solinsky, 4/03/2009, page 62, retrieved from <http://www.thebiblicalcalendar.org/>

^{LL} <http://www.jewfaq.org/calendr2.htm#Accuracy>

^{MM} http://www.karaite-korner.org/abib_and_tekufah.shtml

Any typographical errors or errors in factual statements are welcomed to be directed to the author at the email address noted below.