

Chapter VII

The Sanctification of the Sacred Year

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Beyond the observance of annual Sabbaths for the purpose of maintaining that portion of a covenant relationship with Yahweh, a correct knowledge of how to determine the elements of the Sacred Year greatly assists in our ability to determine and understand prophetic material. Without specifically adding to or taking away from the ancient sources, it becomes necessary to uncover the rules that describe the functioning of the Sacred Year by inference. Without placing the available sources within the context of a workable astronomical model, one cannot fully understand the gist of the source material nor can one deduce a set of rules that comprehends the make-up of the Sacred Calendar. To a certain degree, it has all remained hidden waiting to be uncovered. We must, therefore, use the minds Yahweh gave us to participate in comprehending this topic from the vantage point of an assigned place on Earth relative to our position to the Sun, Moon, and Stars that surround and encircle us. The resultant method shall be referred to as the Ancient and Aristocratic method. (1)

To begin with, the correct functioning of the Biblical Sacred Year rests upon the understanding of one major verse in its proper context and how it relates to the motions of the Sun and the annual Sacred Feast Days. What must be decided is when the earliest occurrence of the Sacred Year is to be allowed. The pivotal verse is *Exodus 34:22*. Let us have a literal look at the relevant section in Scripture:

Exodus 34:1-17 - (Yahweh commands that His covenant with Israel be memorialized in writing. He extols the benefits of this relationship and warns against cutting a covenant among the heathen)

Exodus 34:18 - *The Feast of Unleavened Bread you shall keep. Seven days you shall eat unleavened bread as I commanded you in the time of the month Abib, for in the month Abib you came out of Egypt.*

Exodus 34:19-20 - (The firstlings of all creatures are Yahweh's).

Exodus 34:21 - *Six days you may work but on the seventh day you shall rest - in plowing and in harvest, you shall rest.*

Exodus 34:22 - *And a Feast of Weeks you shall observe for yourself, the firstfruits of the harvest of wheat and the Feast of Ingathering - Equinoxes of the year.*

(LXX) - *And a Feast of Weeks you shall observe unto Me, the first of the parched harvest and the Feast of Ingathering - at the middle of the year.*

Exodus 34:23-24 - (Yahweh will procure the way in the land for you to appear before Him three times a year - in the first, third, and seventh months).

Exodus 34:25 - *You shall not offer the blood of my sacrifice on leavened bread, neither shall the sacrifice of the Feast of Passover remain over night until morning.*

Exodus 34:26 - The first of the First-fruits of your land you shall bring unto the House of Yahweh Eloahi (your God).

v. 27-28 - (The foregoing was what Yahweh commanded Moses to write unto Israel)

The first mention of anything calendric is the Feast of Passover and Unleavened Bread (v. 18, 25) along with the mention of firstlings (v.19-20). Then, at *verse 21*, the injunction of six days for work and the seventh day as set apart for the weekly Sabbath (Fri./Sat.) is given (a Sacred Day first comprising a nighttime and then a daytime portion as per *Gen. 1ff.*, also *Rosh Hoshana 20b*). And at v. 22 we pick up with the mention of the Feast of Weeks or Shabuath (always occurring on a Sat. /Sun). There definitely appears to be an orderly and sacred sequence for the days of the week mentioned in these passages, which, I think, is a very important point that contributes more understanding to the discussion (*see Anatolius below*). The Passover, Sacred Week, and Shabuath are shown to begin concurrently.

Exodus 34:22 mentions that the Firstfruits of the harvest or the first of the parched harvest connected to the Feast of Weeks and also the Feast of Ingathering have a respective relationship to the **Tekufath** (Equinoxes) and are considered to be at the middle (the meridian or midpoint(s)) of the year.

As a commonly occurring feature of Semitic linguistic forms, it is obvious that there is a pairing or equivalence of expression herein with the mention of these Feasts and their close relationship with the Equinoxes. This is the quintessential starting point unfolding the topic under discussion.

At *Jubilees 6:23* they (*Tekufath*) are considered to be Days related to appointed times (Feasts). Furthermore, the mention of “the First-fruits of the harvest of wheat” is paired by the LXX translation which says it is “the first of the parched harvest”. The passages here cover the idea of the whole harvesting process from the day of the wave sheaf ceremony of the first of the First-fruits (*Lev. 23:10*) to the fiftieth day of First-fruits which concludes the harvest of both barley and wheat (*Lev. 23:15-17*). In ancient Israel, the barley harvest which started at the wave sheaf ceremony, typically by around the first of April, was followed a few days or weeks later by the harvest of wheat and both simultaneously completed at the Day of Pentecost around the first part of the 3rd month. At *Lev. 23:14* we see that before any partaking of parched grains occurred, the wave sheaf ceremony was to first take place. The Wave Sheaf Day was the first day of First-fruits (*Ex. 34:26*) were presented before Yahweh (*Lev. 23:10-14*). Therefore, we see that the first pivotal idea of *Ex. 34:22* covers the entire fifty day period between the Wave Sheaf day (1st day of Shabuath) to Pentecost day by context and the surrounding passages (which also encompasses Passover and Unleavened Bread by definition, *Ex. 34:18,25*). What the passages are telling us is that the former Feasts are tied to the Vernal Equinox and the latter Feasts (specifically the Feast of Ingathering) are tied to the Autumnal Equinox.

There are four *Tekufath* within a year - two Scriptural and astronomical Equinoxes and two other astronomical Solstices. A Solstice day is when the sun reaches its furthest point to the North or South from the Earth at rising and setting. An Equinox day is when the Sun passes the point on the celestial sphere where the ecliptic intersects (at conjunction with) the equator at rising and setting - which is precisely between the Solstice points.

As a result, the length of day and night are approx. equal on these days. Knowing this, the Ancients measured these days by utilizing shadow readings on sundials and poles. The Hebrew word - *Tekufah* (pl. *Tekufath*) indicates the 0*0' declination points of the Sun's astronomical position during the days of the Equinoxes (and Solstices), and in the more general sense, (Ps.19:6 - the days of the solar *Tekufath* are said to be at the ends of the Heavens); also the Seasons that usher in after, are sometimes considered to be subjoined to them (Jubilees 6:23, DSS Community Rule, I Enoch 72-82, Sanhedrin 11b). In Ps. 74:17, we see that scripture mainly concerns itself with two seasons, *Qayits* - Spring-Summer and *Khoreph* - Fall-Winter. At *Ex. 34:21*, plowing and harvest time are given as the times to observe Sabbaths (the weekly Sabbath; i.e. kept the whole year). Elsewhere, Scripture informs us that the former and latter rains with their associated harvests and Feasts occur in Season (*Ayth* - *Jer. 5:24*). At *I Kings 20:22, 26* we are given the reference to the return (*teshubah*) of the year at Spring and Ingathering (*b'asaph*) is connected with the outgoing (*b'tsath*) of the year at Fall (*Ex. 23:16*).

Similarly, the main study verse - (*Ex. 34:22*) and the associated Feasts that are mentioned are concerned with the two major *Tekufath* - the Equinoxes - Vernal and Autumnal, because the Feasts that occur at the time of these Equinoxes are directly mentioned and also because the rest of Scripture primarily concerns itself with these two main Seasons. With this data in mind, the last thought provided in the *Ex. 34* sequence is at v. 26 before the topic changes to a description of Moses, thereby completing the chapter (v.28 ff.). At *verse 26*, the concluding calendric thought provided is a mention of the first of the First-fruits and their presentation at the House of

Yahweh which would have been on the Day of the Wave Sheaf (*Omer*) ceremony (*Lev. 23:10-15*).

The Scriptural year is a lunar-solar calendar with the Moon regulating the months. However, because there is only an avg. of approx. 29.5 days in a lunar month (taking up approx. 354 days annually) it becomes necessary to intercalate (add) a 13th month every 3rd year or so to balance out the lunar months with the solar year. The year becomes balanced by adherence to the rules concerning the placement of the Feasts within their respective *Tekufath*. Accordingly, all the Feasts must be within the same solar year. It is important to note that the statements of *Ex. 34:22* and correlary Scripture are concerned with the relationship between the *Tekufath* and the Feasts themselves and not the beginning of the months per say. So, it is an erroneous practice to place the entire Sacred Year behind the Vernal Equinox as was done by the ancient Babylonians and the Northern Tribes under Jeroboam who were in rebellion (*I Kings 12:32*) and again by the Jews at Elephantine (*Journal of Near Eastern Studies, vol.8, no.1, 1954*). In contrast to these records, Yahushua and his disciples kept their Feasts in accordance to the Aristocratic practice and at the same Seasons as the Jews of their day throughout the N.T. from Matthew through Acts. The rules by which the Jews of Yahushua's day used to intercalate are well documented in Josephus, Philo, Jubilees, the Dead Sea Scrolls, and other references - many of which are cited here in connection to the *Tekufath* wherein the Feasts themselves (and not necessarily the entire year) were placed after the Equinoxes.

Since the *Tekufath* (Equinoxes) are solar events, they are governed from Jerusalem (*Micah 4:2, Isa. 2:3*) just as the Moon, and by the rules of *Gen. 1:14-18* which state that the Sun (*maoroth* - luminaries of the Moon and Sun) rules the day and the Moon rule the night. Unlike the day of the conjunction of the Moon (referred to as a lunar (minor) *Tekufah* - *Ecclesiasticus 43:6*) which phase must pass in order to rebuild and of necessity must belong to the old month, the Sun (the major celestial body governing the year) and the day of the solar (*sing.* Equinox) itself is, by its usage, considered to be both the last day of the old Season and the first day of the new Season (a border marker day - I Enoch 75:1) and not just the 1st day of the new Season as is considered by most today. This is similar to the method used to count jubilee cycles, with the 50th year of the old cycle also being the 1st year of the new cycle (*see Book of Jubilees, Lev. 25, The Sabbath and Jubilee Cycle - Qadesh La Yahweh Press; Handbook of Biblical Chronology - Finegan).*

According to *Anatolius*, the Spring Equinox that occurs on a weekly Sabbath as per Ex. 34:21-22 would enable the following first day of the week - Sat. /Sun., if it were *Abib 14*, to be the evening Passover and the daytime Omer offering of the first of the Firstfruits (1st day of *Shabuath*) of the new Season that begins the count of the Feast of Weeks (*Shabuath*) leading to Pentecost (v.22, 26). Therefore, the first opportunity for the annual occurrence of Passover (*Abib 14*) and the Wave Sheaf (*Omer*) Day, on such a Sat. /Sun., was also the same day of the week that the resurrection of Yahushua occurred. The Omer Day was originally called *Bikkurim* in Hebrew and also known as the first of *Shabuath* - the first day to count to Pentecost. Later, it became known as “Easter”.

Anatolius (a Quartodeciman of the mid-3rd cent.C.E.) writes in his Paschal Canon, XVI: “If it proves to be both the Lord’s Day and the Moon’s 14th, Easter is to be celebrated on the 14th”. (2)

This construct was vigorously held to and argued for by the renowned Aidan of the Celts in the 7th century (*see Bede, Ecclesiastical History*).

Continuing in Anatolius IV: “These writers, in solving some questions which are raised with respect to the Exodus, say that all alike ought to sacrifice the crossing-festival (*Phasekh*) after the Vernal Equinox, in the middle of the first month. And that this is found to be when the Sun passes through the first segment of the solar, or, as some among them have named it, the zodiacal circle. But, this Aristobulus (3rd cent. BCE) also adds, that for the festival of the *Phasekh*, it was necessary not only that the Sun should pass the equinoctial segment but the Moon also. For there are two equinoctial segments, the Vernal and the Autumnal, and these are diametrically opposite each other, and since the Day of *Phasekh* is fixed for the 14th of the month, at twilight, the Moon will have the position diametrically opposite the Sun as is seen in Full Moons. And the sun will thus be in the segment of the Vernal Equinox and the Moon will necessarily be found at the Autumnal Equinox.”

Now, Josephus (at Ant. 3:10:5) also recognized that for *Phasekh* to occur it had to be in the spring season and the sun had to be in the first zodiacal segment called Aries. The Scriptures also teach that *Phasekh* is to be kept after the Vernal Equinox in the first month *Abib*. Socrates Scholasticus 5:22 likewise records:

“For they (the Quartodecimans) said it ought to be celebrated when the sun is in Aries, in the month called Xanthicus by the Antiocheans, and April by the Romans.”

There can be little doubt that the early Quartodeciman Christians kept the Phasekh accordingly and we also know that they kept the Feast of Tabernacles in the Fall (*Chrysostom Adv.Jud.1*).

Anatolius further writes in VI: “Accordingly, it is enjoined that the Festival be kept after the Equinox, because the moon of the 14th, if before the Equinox or at the Equinox, does not fill the whole night. But after the Equinox, the Moon of the 14th, with one day being added because of the passing of the Equinox, although it does not extend to the true light, that is, the rising of the sun and the beginning of day, will nevertheless leave no darkness behind it. And, in accordance with this, Moses is charged by the Lord (Yahweh) to keep seven days of unleavened bread for the celebration of the Passover, that in them no power of darkness should be found to surpass the light.”

According to Anatolius Paschal Canon XIV - the chart for calculating the morning of Easter (wave sheaf day or 1st day of *Shabuath*) places it on March 27 - April 23 within its 19 year cycle. At XVI, Anatolius, noting his record for the calendric canon (XIV), places the Vernal Equinox occurring about March 25. This would have been in accordance to the drifting motions of the Heavens at around the time of Aristobulus (3rd cent. B.C.E., one of the Israelite elders who first translated the LXX under Ptolemy Philadelphus) who is Anatolius’ chief source. In Anatolius’ time

the vernal equinox would have been about March 22. The canon effectually double-dates the 1st of Shabuath or the Omer (wave sheaf) Day later becoming known to Anatolius' audience (Audians) as Easter.

If we allow a day to pass for the Vernal Equinox of March 25th due to the Passover (as it says we should in VI and XVI) then March 26/27 as an early occurrence for Easter (1st day of *Shabuath*) makes sense. It fits if we view Anatolius' canon as derived from about Aristobulus' time (due to the later Equinox date). According to Anatolius' statement at XVI, if March 26th (the day *after* the equinox) ends up as both the 14th of the month and the Lord's day (Sunday), then Easter is to be celebrated on the 14th. This places the 14th Passover, *Bikkurim* (the 1st of *Shabuath* or Wave Sheaf day), and Easter all concurrently on the same first day of the week which, as we have seen above, is in agreement with the flow and indications of *Exodus 34*. Anatolius' opposition, quoting from less ancient documents, discussed the Calendric canon, with differing cycles and periods, in terms of a Vernal Equinox that fell around March 24th (Anatolius I, XV). (3)

It should be understood that the Passover (*Phasekh*) was a night-time ritual beginning after the Equinox and immediately after sunset at evening (lending to why the entirety of Abib 14 must be placed after the Vernal Equinox) while the separate omer offering of the first of the First-fruits (1st day of *Shabuath*), just as Easter and the *Atsarth* (8th Day closing Assembly), occurred during the daytime. From this information we can see that both Passover and the first of the First-fruits (1st day of *Shabuath* or *Bikkurim*) occur, at their earliest possibility, in Season, at least one full day following the Vernal Equinox (*Tekufah*) on a Sat./Sun. of the 14th of *Abib* (Nisan).

At *I Sam 1:20-21* it says, *And it happened at the day of the equinox, that Hannah conceived...And the man Elkanah and all his house went up to sacrifice to Yahweh the yearly sacrifice...* The same root word - *Tekufah*, is used here to designate what by context (due to the proximity of *Phasekh*) refers to the Spring Equinox.

And as we have already seen, the first part of *Ex. 34:22* likewise has to do with the *Tekufah* of the Spring. However, *Ex. 34:22* also concerns itself with the relationship between the Feast of Ingathering (*Sukkot*) and its respective Autumnal Equinox. For the respective *Tekufah* to govern this Feast (*Tishri 15-21*), the next annual Sabbath - the 8th Day (*Tishri 22* - the *Atsarth* - a daytime Closing Assembly, *Lev. 23*) must always fall after the Autumnal Equinox as is pointed out in the following:

“The difference between the Spring and the Autumn is due to the fact that the Omer ritual (Wave Sheaf day, the 1st day of *Shabuath*) must fall after the Spring Equinox, but only the eighth day of *Sukkot* need fall after the Autumnal Equinox.” (*Vet. Testa., vol. 7, 1957; Tos. Sanhedrin II.7*)

Also, “A year is not to be made embolismic (intercalated) unless the *Tekufah* is short of completion by the greater part of the month. In which case, there is a long discussion concerning the greater part of the month in respect to the 21 days to the end of Ingathering, and in the case of Spring, the beginning of Passover, etc.” (*Vetus Testamentum, vol. 7, 1957; JT Sanhedrin I.2; BT Sanhedrin 11a-13b, BT Rosh Hoshana 21a*)

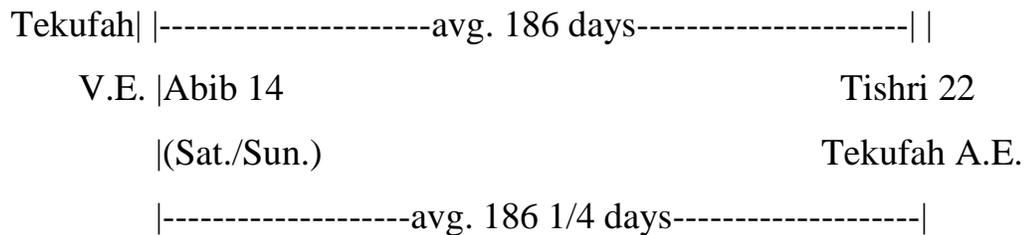
The 8th Day or the end of Ingathering is on the 22nd of Tishri, which, in the earliest of cases, naturally occurs after a minimum of 21 days that are before

the Autumnal Equinox. Also, the Passover is likewise subsequent to the Equinox - in Spring. The arrangement is well attested. (4) It should be pointed out that the 8th day is a separate Sabbath and Assembly (*Lev. 23:22-44*) from the first 7 Days of Ingathering (15th-21st), though all 8 days are also in the less precise sense considered together (*Jn. 7:37*).

At the time the Torah was given there was almost certainly a shorter year before changes in the orbital patterns of the Sun and Moon gave us our present arrangement (*Gen.7:24, Josh. 10:12, II Kings 20:11, also see Velikovsky, Worlds in Collision*). The Qumran Covenanters, who in reconstructing the by-gone age, described an ancient 364 day year considering the Equinoxes and Solstices to be 4 border days, thereby leaving 360 regular days to comprise the year (*I Enoch 75*). At that time, there would have been an equal round number of days between Vernal and Autumnal Equinoxes paired with the same amount of round days between Passover and Tabernacles. Therefore, this would have undoubtedly reflected the rule for sanctifying the Sacred Year at that time, that is, with each seasonal feast falling the day after its respective *Tekufah*. It is possible that we will someday return to this more precise arrangement (*Acts 3:21*).

However, today (as it has been for at least three Millenia) there is always an average of 186 days from Passover (*Abib 14*) to the 8th Day (*Tishri 22*). In a 365 1/4 day year, there is always an average of 186 1/4 days from the Vernal to the Autumnal Equinox. Therefore, the action of the Equinoxes as outer markers, keeping the Spring and Fall Sacred Feasts in their Seasons, flanked by their respective *Tekufath*, emerges as the key to unlocking the motions of the Heavens as they relate directly to Yahweh's Sacred Calendar and

festivals. Thus, once noticed, the rules for sanctifying the year stand plainly revealed. The following model emerges from this study and illustrates the orderly function of the relationship between the Feasts and their *Tekufath*. Accordingly, the Spring Feasts of the first month and the Fall Feasts of the seventh month circulate about March/April and September/October respectively. The Anatolian illustration reflects the very earliest allowable occurrence of the sacred calendar within any given year. If the rules were shifted as little as a day or two, the complimentary functioning of the Feasts and their respective *Tekufath* would be skewed.



The 8th Day, a separate Sabbath and Assembly from the 7 days of Ingathering, is at the outer limit of *Exodus 34:22* because it is after the Fall *Tekufah*. The 7 days of *Phasekh* and the 7 days of Ingathering stand in parallel opposites. Passover/*Shabuath* (*Abib 14*) and the Last Great Day (*Tishri 22*) are regulated directly by the *Tekufath* which stand, at their earliest occurrences, just before each Feast respectively, in uniform function. It should be noted that all the other feasts in their deeper meaning apply to this Heaven and Earth during the first approx. 7000 years since Adam, whereas, the 8th Day is reserved to point us toward an unspecified period

that lies ahead - a new Heavens and a new Earth (Rev. 21). Certainly then, as all things begin with Yahushua the Messiah pictured by *Phasekh*, the 8th Day becomes an appropriate end marker that pictures an eternity beyond.

With any sound theory, it is a good idea to test it to make sure it is accurate. In the year 2000 for example, the relative positions of the Sun's Equinoxes were too close to sanctify the year early. Thus, it became necessary to intercalate a month because *Phasekh* would have fell just before the vernal season rather than after, which in turn would have also placed the 8th day just before Autumn. Such should also be the case for the year 2038.

If the moon's position were advanced a day or two in those years then an early sacred year in accordance to our illustration would be possible. For historic years that are in accordance to the illustration above for the earliest occurrence of the Sacred Year we may look at the following examples:

In 167 A.D.: The Vernal Equinox occurred before sunset on Mar. 22nd as the Feast of *Phasekh* (*Abib 14*) resulted on Mar. 22nd/23rd - a Sat./Sun. and therefore also the Day of the Wave Sheaf and Easter - the first of the Firstfruits of *Shabuath* (in accordance with Aidan). The Autumnal Equinox occurred by sunset on Sept. 24th as the 8th Day occurred on Sept. 24th. (5)

In 262 A.D.: The Vernal Equinox occurred by sunset on Mar. 21st as the Feast of *Phasekh* (*Abib 14*) resulted on Mar. 21st/22nd. (The New Moon of Mar. 8th had begun to gather light by sunrise and was by sunset above the horizon as a new crescent). The Autumnal Equinox occurred by sunset on Sept. 23rd as the 8th Day resulted on Sept. 24th. (6)

In 2008 A.D.: The Vernal Equinox will occur by sunset on Mar. 20th as the Feast of Phasekh (Abib 14) will result on Mar. 21st/22nd. (7) The Autumnal Equinox of 2008 will occur by sunset on Sept. 22nd as the 8th Day (Closing Assembly) will result on Sept. 23rd. (6)

In 2046 A.D.: The Vernal Equinox will occur before sunset on Mar. 21st as the Feast of Phasekh (Abib 14) will result on Mar. 21st/22nd. The Autumnal Equinox of 2046 will occur by sunset on Sept. 22nd as the 8th Day (Closing Assembly) will result on Sept. 23rd. (6)

Most years end up with the Feasts occurring many days after the Equinoxes. In the years above (though they are given intentionally as examples of the rarest cases falling on an as tight as possible basis), the Day of Phasekh occurs (at least) a day after the Vernal Equinox while the 8th Day correspondingly occurs after the Autumnal Equinox as per the rules that we have found in the Scriptural and Historical data. Undoubtedly, other examples could be uncovered, but these should be sufficient for conceptual purposes. Taken together, the evidence shows that in minimum years when BOTH Abib 14 is at least one full Sacred Day (*ereb to ereb*) after the occurrence of the Spring Equinox AND the greater part of the 8th day (Tishri 22) occurs after the Fall Equinox - that year qualifies to be sanctified as the Sacred Year.

It is theoretically possible to have one criteria fulfilled while the other criteria does not fit, creating a scenario wherein one or the other Sacred Days of Passover in the Spring or the *Atsarth* (the LGD, 8th day and Closing Assembly) would fall erroneously before the outer marker of the Equinox

with the other criteria (supposedly) safely after its respective outer marker or equinox. No actual occurrences like this are known but, if it occurred, it would not be an acceptable model. That is to say, BOTH criteria are necessary, otherwise the entire year must be intercalated by a 13th month.

Within the Ancient and Aristocratic method, the rules for synchronizing the Clock of Yahweh to the Heavens, is found to be specific and precise. The Moon just above the horizon marks the blip on the month hand of the Clock. The year hand of the Clock of Yahweh is determined by the *Tephufath* (Equinoxes) and the positioning of the Sacred Festivals of Yahweh *after* the Equinoxes. From the historical and astronomical analysis, we have seen the evidence functionally demonstrated.

End Notes

1. I Enoch 73.

2. It is duly noted that Ceolfrid, of the Anglo-Saxon and Roman position, argued the construct insisting that the day of Easter (which was always the same day as the first day of Firstfruits; *Heb. Shabuath*) must itself always occur on the Sat/Sun. that falls after the 14th Passover day occurring between the 15th-21st, regardless as to if the Passover week was to be from the 14th-20th. However, it seems apparent that he was erroneously influenced by the Roman Church and the Rabbinic Jews of the Period. The correct timing of *Shabuath* (the Omer Day) is preferred to be between the 14-20th along with the entirety of the Passover/ULB Festival (in accordance to Aidan). Further, in 29 A.D., during the ministry of Yahushua, at Luke 6:1ff, the timing of a 14th Sunday Passover/First-fruits Day has been verified by the astronomy as analyzed on Voyager II software. The year 29 A.D. shows a Sat/Sun. Passover Day on which the start of the Omer ritual was occurring among Yahushua and his disciples, in opposition to the extant legal practice of the Pharisees.

3. Due to the drifting precession of the Equinoxes, after 325 A.D., the Roman Calendar began periodically intercalating an extra day in February in order to fix the Equinox to around March 21 so that Easter computations would retain a more precise and common relevance to future generations. Apparently, the source documents under discussion were periodic tables from Aristobulus' time that averaged the recurrence of the Calendar. Anatolius' cycle is known to be mathematically correct in theory, as there are 7 repetitive intercalations within every 19 years that must occur in order to balance out the lunar-solar years (aka: the Metonic cycle). Likewise, in the period from 365-233 B.C. (7 columns of 19 rows), as analyzed on the Voyager II retro-calculation platform, yields the best match to the data provided in the Anatolian Canon (compare 348 B.C. (row 18), 304 B.C. (row 5), 301 B.C. (row 8), 298 B.C. (row 11), 257 B.C. (row 14), 252 B.C. (row 19), 250 B.C. (row 2)). The Equinox data matches closely, with a number of Easter Sundays and lunar dates matching as well. Some inconsistencies within the Canon occur due to lacunae and/or errors promulgated by emendators as noted by the later scribe Rufinus. Anatolius was in possession of a computer-like method for resolving calendric minutia. Hence, he was Aidan's authority on these matters.

4. The observance of the 8th Day (Heb. *Atsarth*), or Last Great Day as some refer to it, has as its main feature a Closing Assembly that takes place during the daytime portion of Tishri 22 officially ending the Sacred Festival Year. As such, it becomes necessary for the greater (day) part of the 8th Day (Tishri 22) to take place after the occurrence of the *Tekufah* or Autumnal Equinox; the rule being perfunctorily inferred from within the motions of the Heavens themselves. Lending itself to the fact that the interval between Equinoxes is an average of 186 1/4 days and the average interval between Passover (Abib 14) and the 8th Day (Tishri 22) is 186 days, at least some part of Tishri 22 will always be held after the *Tekufah* (A.E.) itself.

5. It is likely that for erroneous theological reasons, 167 A.D. was intercalated on the basis that the Agathobuli, Aristobulus and Anatolius himself, were largely considered in error by the Romans about Easter Sunday being permitted to fall on the 14th. For, the Romans held to the position that there must be separate days for both the death and resurrection of the Lord. Dominical days were calculated as falling exclusively between the 15th and 21st. Therefore, in the particular example of 167 A.D. if we were to accept the Roman premise, then *Phasekh* would have occurred in April and the 8th Day would have occurred in October - the Festival Season being therefore, offset a month later. The year in question occurs during a time of great persecution of the Quartodecimans and is in proximity to the martyrdom of Polycarp under Marcus Aurelius (occurring in 170 A.D., *FSDY, Qadesh La Yahweh Press*, 2002). Lastly, Pionus was martyred in 181 A.D.. Notably, both were martyred on a "Great Sabbath", which figures to be Abib 20 (the 7th day of Unleavened Bread and therefore, an annual Sabbath). During these years there was a great deal of anti-Quartodeciman activity - the sentencing of "Judaizers" and labeling of "April Fools", according to the Histories. As with all Sacred Day observances, the New Moon is taken from the environs of Jerusalem - from where the Law of Yahweh issues forth (*Isa. 2:3; Micah 4:2*). For New Moon (*yerakh chodesh*) observance see *Isa. 66:23 and Ezek. 45:17*. As per *Genesis 1:14, Jer. 31:35* and at *Philo, De Opificio Mundi 18:56* we are told the Moon is set aside to rule the night and for marking statutory (*Khoquth*) Appointed Times (*Moedim*). Accordingly, a New Moon crescent must occur above the horizon after sunset at evening (*ereb*) before night in order to mark the first day of the Sacred month. In cases where the crescent altitude above the horizon at sunset is not high enough to be visible (that is, if it is less than about 5 to 8 degrees), then a Sacred New Moon must have been completing its conjunction (0 day) phase and beginning to gather the waxing light of the Sun (approaching its day 1 phase) as it rises with the

morning Sun, traveling then around the Earth and rebuilding itself for the greater part of a day; it must then occur positioned as an illumined crescent fully above the horizon shortly after the subsequent sunset (I Enoch 73 and 78). Thus, the Moon renews and rebuilds (*Heb. chodesh*) as a waxing crescent to bring in the month. The Moon remains at 0% illumination for about 24 hours during conjunction as it becomes necessary for it to transition toward illumination well before it occurs as a crescent at sunset, generally taking around 6 hours to transition through each percentile of illumination following the *molad*. Additionally, without quantities derived from satellite and computer technology, one could only determine conjunctions within several hours of accuracy. Thus, it is expected that a New Moon be gaining illumination about the hour of sunrise prior to the subsequent sunset. In this way any Sacred New Moon can be ascertained. The ancients were able to determine the approximate hour of the transition of the Moon coming out of conjunction (*molad*) by counting the hours from the last waning crescent as well as by surprisingly advanced mathematical calculation, (see Maimonides). The method utilized and discussed here is attested to within scriptural sources and is clarified in *Philo, De Specialibus Legibus* 1:35, 178; 2:11, 41; 2:26, 140, *Rosh Hoshana* 20b, and at *I Enoch* 73, 78.

6. In all the years 262 (Sept. 23), 2008 (Sept. 22), and notably 2046 (Sept. 22) the Autumnal Equinox occurs 0*.0' equal with the hour of sunset or before. The Ancients utilized long intersecting lines and poles to measure the occurrences of equinoxes to within several hours of accuracy (Hipparchus of the 2nd century B.C. stated 6 hours, inferring at least + or - several hours; *The Almagest by Claudius Ptolemaeus, trans. by R. Catesby Taliaferro, vol. 111, pp. 77-83*). In the years 262 (Sept. 23/24), 2008 (Sept. 22/23), and in the prophetic year 2046 (Sept. 22/23) the occurrences of the Autumnal Equinox, in each case, effectually places the entire 8th Day (Tishri 22) after the *Tekufah*. Under the eighth persecution (*Foxes Book of Martyrs*), during Emperor Valerian, the Quartodeciman Anatolius praised by Eusebius as an admirable scholar and bishop, saved many of his early Quartodeciman brethren from martyrdom when from about 257-262 A.D. he is said to have garnered enough learnedness so as to command the greatest of respect from among even the most powerful of Romans and of the people at large *specifically* for his calendric work. There can be little doubt that the Quartodecimans and all of Rome followed his computation above for the year 262 A.D.

7. The resultant New Moon for 2008 is Sept. 1. In accordance with the Classical Approach of 262 A.D. hence, 2008 would be kept with *Rosh Hoshana* on Sept. 1/2, in contrast to the Technological Approach, which would place the year in intercalation as a result of an Aug. 31/Sept. 1 *Rosh Hoshana* occurring too early for, the presumably correct, Equinox result. However, in accordance with the Classical Approach, the Moon on Aug. 31 is disqualified as it occurs very low in altitude, only slightly above the horizon at sunset, and does not begin re-gathering the Sun's light until the Noon hour, therefore, requiring more time to become *chodesh* (rebuilt). Additionally, for those ascribing to the dogma of the Visibility (by Witness) Approach, the New Moon must transition through conjunction and re-gather the Sun's light forming a new crescent taking approx. 12 hours or more to be theoretically visible at sunset at low altitudes (*Rab. Eliezar*, 7; also *Quarterly Journal of the Royal Astronomical Society*, 34, p.53, 1993). However, potential visibility itself is a usual by-product of the inferred rules for new moons rather than the main governing factor for their determination. An example of a tightest possible scenario within the Classical Approach for a New Moon can be noted in the Fall of 2009 wherein the Sept. 19th New Moon crescent begins to gather its light rebuilding by sunrise and then occurs with its full disk precisely over the horizon at the moment of sunset, not necessarily in visible fashion, but *chodesh*. The Ancients would likewise watch the altitude of the last waning crescent in order to estimate the approximate expected altitude of the coming New Moon crescent at sunset. If a new moon was visible it would universally mark the beginning of a month however, as it closely approached, a New Moon could also be detected by calculation and was never intended to be sanctified based on visibility alone. These findings are borne out in I Samuel 20:5, 18, 27, 34 where there is set aside, in advance, the possibility for one of either two upcoming days wherein the new moon would be counted. Visibility computation was re-formalized in the early mid-20th century by the German scholar Karl Schoch who designed tables based on information collected from ancient Babylonian cuneiform data. The tables expressed the direct proportion between the azimuth difference of the Sun and Moon versus the altitude of the crescent Moon at sunset and were said by Schoch to be constructed within a + or - one degree of accuracy. Though criticized for using limited data, those same scholars agree that his range of 5 to 8 degrees is the accurate minimum threshold for crescent visibility as the greater the azimuth difference, the more likely the visibility (see *Proceedings of the American Philosophical Society*, vol. 95, Neugebauer, pp. 115-116; also *Ancient Planetary Observations and the Validity of Ephemeris Time*, Newton, pp. 36-38). The possibility of visibility could likewise

be enhanced by the altitude of the observer and with the use of a convex glass lense. With the availability of space telescopes and computers, some argue for a strictly Technological Approach recognizing any new moon above the horizon at sunset, even if it has only 1000th of 1 percent illumination and reasoning that the Heavens function as the precise mechanical Clock of Yahweh. Whereas, this practice is duly noted, it seems to strain the original intentions given within the ancient sources while also isolating modern times from all prior generations. Just because a new moon is technically *maor* (or luminous) by a mathematically miniscule fraction, it does not necessarily qualify it as *chodesh* (rebuilt). Taken together, where a new moon cannot be confirmed by reasonable visibility, the ancient sources attest that a sacred new moon above the horizon at sunset must at least be gathering light from the Sun from the time of the sunrise/morning prior - it is in these cases that the new moon can (at all historical times) be clearly read as the month-hand on the Clock of Yahweh. Rather than argue the Visibilty Approach touted by rabbinic-type groups, the ancient setting of the Classical Approach has been presented thoughtfully throughout. Rather than rely on these or upon the Technological Approach, a recommendation for a Modern Classical Approach with regard to timing and calendric matters.