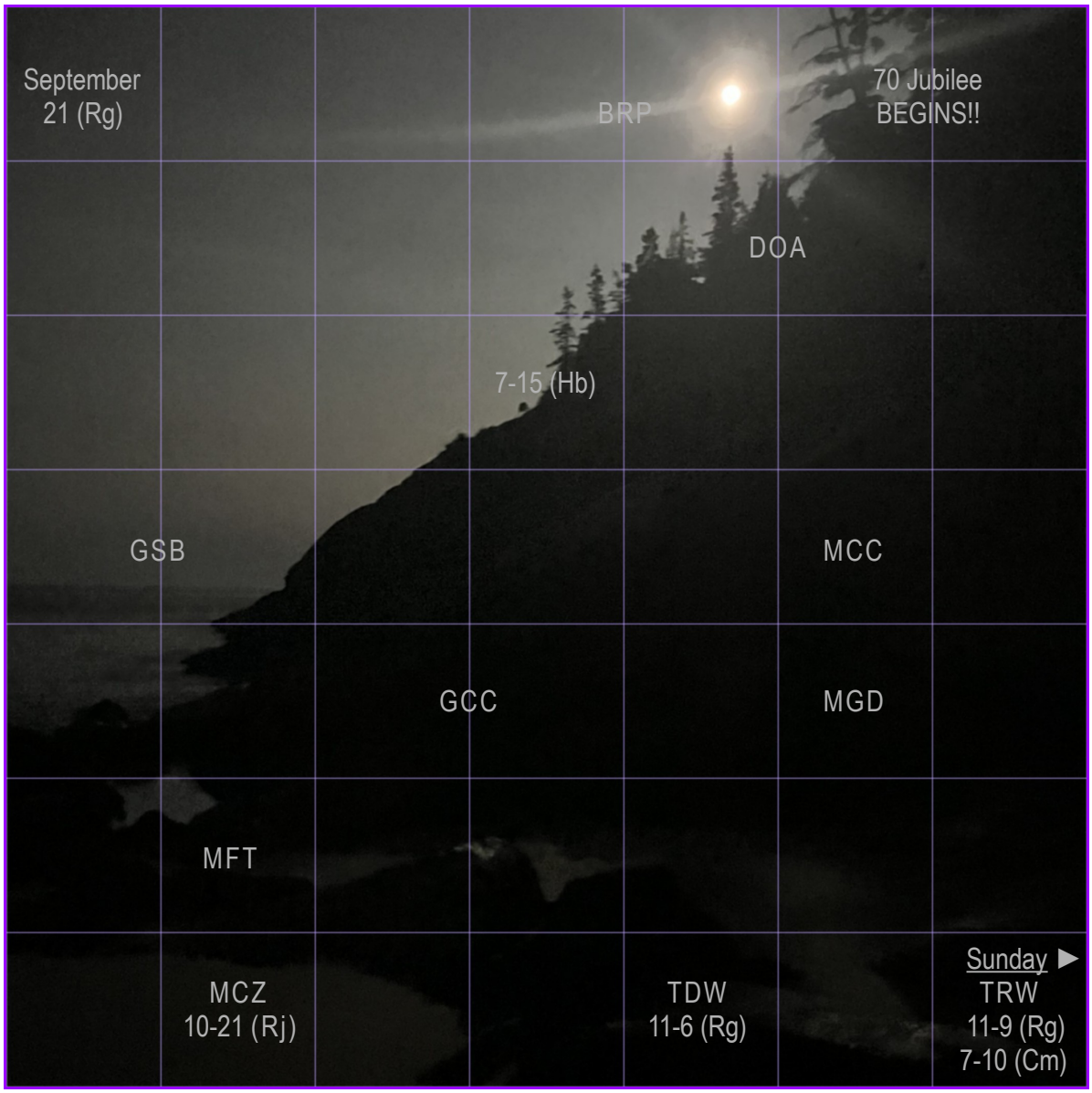
Basic CHRonology Details

2025: THE SEVENTY JUBILEE YEAR—IS HERE!!!



"To **every thing** there is a **season**,
and a time to **every purpose** under the heaven:
A **time** to be **born**, and a **time** to **die** …"
(Ecclesiastes 3:1,2)

Basic CHRonology Details

A. ABC and BCD

Solomon ♦ "To **every thing** there is a **season**, **and a time** to **every purpose** under the heaven: A **time** to be **born**, and a **time** to **die** …" (Ecclesiastes 3:1,2; see 3:1-8; Galatians 4:4; Revelation 11:18; 14:15; etc).

Jesus ♦ "… and they shall **not** leave in thee **one stone upon another**; **because** thou **knewest not** the **time** of thy **visitation**." (Luke 19:44; see 9:51; Matthew 26:18; Mark 1:15; John 7:6,8).

Thiele: "Chronology is the backbone of history. … Without exact chronology there can be NO EXACT HISTORY." (*The Mysterious Numbers of the Hebrew Kings* (3rd ed), page 33, by Edwin R Thiele; 1983, Zondervan/Kregel).

A-1. ABC and Other Motivations

For those who are new to **7GRAILS**: if you want to speed up your reading and comprehension, of this and all of our other articles, please see: https://7GRAILS.world/up-dates/reading/. The above title—"Basic CHRonology Details"—does not mean that this article is brief, simple, or just an overview; quite the opposite: this article is very detailed, comprehensive, and advanced. This article is basic, however, in the sense that it's foundational; and if you don't understand these basic foundational concepts: then you will probably miss out, on a large percentage of the Advantages of Biblical CHRonolgy (ABC). Speaking of ABC (https://7GRAILS.world/7-symbolic/chr/abc/): it's best to read it, before reading this current article (BCD); it will help motivate you to take the deep dive, and get into the weeds, with this article. For example, ABC contains an introduction to the single best *scientific* evidence, of the literal resurrection of Jesus (with much more details, in some of our other chronology articles).

This article, BCD, might seem rather tedious for some people; but it's very important background information. Also, it should get more and more interesting, as the big picture unfolds—especially the additional chronology studies, after BCD: which reveal amazing and supernaturally planned chronological alignments, found in numerous biblical events. These studies will also reveal—on a scale that has never been done before—how well Bible chronology lines up, with secular history. And this is one of the strongest ways to show that the stories in the Bible—such as the exodus, and the life of Christ—are actual facts (not just myths). Also, chronology is the skeleton for truth: it's *not* the skin, that everyone sees on the surface; yet *without* any bones, the body is just a useless wet rag.

Don't worry if you can't follow everything (on your first time through this article); those who are *not* already familiar with biblical chronology, will probably understand less than half. Nevertheless, whatever you can follow will be very valuable; and if you read it once or twice more, you will probably understand all of it much better. Many are not willing to take this time and effort, to "get into the weeds"; but if far more Christians did do this (at least on Bible subjects), the world would be a far better place!

Luke 16:10 ♦ "He that is **faithful** in that which is **least** [getting into the weeds] is **faithful also** in **much**: and he that is **unjust** in the **least** is **unjust also** in **much**."

2 Timothy 3:15-17 ♦ "… from a child thou hast known the **holy scriptures**, which are **able to make thee wise unto salvation** through faith which is in Christ Jesus. **All scripture** [even chronology] is given by inspiration of God, and is **PROFITABLE** for **doctrine**, for reproof, for correction, for instruction in **righteousness**: That the man of God may be **perfect**, throughly furnished unto **all good works**."

A-2. Outline of **BCD**

B. Basics in Brief

NOTE: There are countless chronologists who have done extensive background work—without which, this article could've never existed; so a hearty thanks to *all of them* (too many to name). Also, everything in the first subsection (B1) is common knowledge—readily available online, or in various books and encyclopedias, etc; therefore, no effort is made to document these statements.

B-1. CHRonology in a Nutshell

In our day, time is divided into the following common categories: a second, a minute (60 seconds), an "hour" (60 minutes), a "day" (24 hours), a "week" (7 days), a "month" (about 30 days, varying from 28 to 31), a "year" (12 or 13 months), a decade (10 years), a century (10 decades, 100 years), and a millennium (10 centuries, 100 decades, 1000 years). The above words in quotation marks are chronology terminologies, which are used in the Bible. The Biblical "hour" is somewhat different than our hour (pun

intended); yet that is not very important, for now. However, it is very important to know the differences between the "months" and "years" in our calendar, and those of the Jewish / Hebrew calendar.

Our months are roughly 30 days long, although they vary from 28 to 31 days (with an average of ~30.437 days). Although the word "month" is related to the word "moon": yet our months do not line up with the lunar cycle, which has an average month of about 29.53 days (or, more accurately, ~29.53059 days). In short, our average month is about 0.9 days longer, than an average lunar month; and this means that 12 lunar months is about 11 days shorter (354 days), than our normal year (365 days).

The Hebrew calendar uses lunar cycle months; but in just three years, the start of the year would drift more than one month backwards, relative to the solar seasons (spring, summer, fall, and winter). So in order to keep the years in sync, with the seasons: every two or three years, an extra "leap month" is added (a 13th month, also called intercalation). This calendar synchronizes with both the moon and the sun, so it is referred to as a "lunisolar" calendar (the Gregorian calendar is just solar); but some other lunar calendars do not have leap months, so they are strictly lunar (such as the Islamic calendar). Both of these moon-based types, are often called "lunar calendars" (even the ones that are actually lunisolar).

The term "conjunction" (or dark moon), refers to when the sun and moon are lined up; you cannot observe this, because the sun is far too bright (also, sometimes conjunction is at night). A *solar* eclipse always occurs at conjunction, when two dimensions are lined up (from our perspective); however, most conjunctions do not have any eclipse (because usually only one dimension lines up). The lunar cycle includes: conjunction, new moon, waxing moon, full moon, waning moon, and back to conjunction again.

There is debate: on exactly how and when the ancient Jews began their months, and their years (see E, F & G). Also, we know that they had two different yearly cycles: one starting in the spring (religious year), and one starting in the fall (civil year); nevertheless, with both cycles: the months were titled "first" in the spring, and "seventh" in the fall. Also, the religious cycle included yearly sacred festivals (see E-3).

The solar year is defined by four main points: spring equinox, summer solstice, fall equinox, and winter solstice. The word "equinox" comes from two words, meaning: "*equal*" and "*night*"; the two equinoxes (spring and fall) refer to the two days in the year, when the length of day and *night* are *equal*. The summer solstice refers to when the day is longest, and the night is shortest; while the winter solstice is opposite (day is shortest, and night is longest). The first Hebrew month starts near the spring equinox.

In 45 BC, Julius Caesar initiated the "Julian" calendar; in this calendar, New Year's Day was on January 1 (like our calendar). In AD 1582, Pope Gregory XIII initiated a slightly revised calendar, to fix an error in the Julian leap-year calculation; this is called the "Gregorian" calendar, which is widely used today. Most chronologists and historians refer to all BC dates, using the "proleptic" Julian Calendar (calculated backwards, even though man didn't use it prior to 45 BC). There is no year zero, between BC and AD (Julian); so be sure to account for this, when calculating total years (going from BC to AD dates).

B-2. How Many Biblical Calendars?

Our Jewish friends, both Orthodox and Messianic, teach that the Jewish or Hebrew calendar is "God's Calendar"—and indeed it is! However, that calendar is not God's ONLY calendar; in fact, it's not even His first calendar. The 360-day CHROMO calendar was first (see D); Hebrew was second, and Roman was third (Julian, then Gregorian). In God's plan, *all three* of these run parallel, all of the time; however, each calendar has its turn as the primary calendar: CHROMO (creation to exodus); Hebrew (exodus to first advent); Roman (first advent to second advent). Most of the Bible was written, during the middle period; so the dates, in the Bible, are almost always Hebrew dates (except for some of the hidden dates).

It's true that for festivals: the Hebrew calendar is God's one and only biblical calendar; but the other calendars are also biblical, for other purposes (such as time prophecies, hidden chronology alignments, etc). There is no clear evidence that humans understood the Hebrew calendar, before the exodus—or the Julian calendar, before Julius Caesar. Yet God understood them all along; and He planned for things to line up, on one or more of these calendars, throughout all history (to be revealed at the right time, now).

The first three letters—of the word "CHRonology" (which means time)—make a good acronym, which is easy to remember, for these three calendars (which is why CHR is capitalized in titles, etc); and they are even in the correct biblical order! CHR represents: the CHRomo, the Hebrew, and the Roman calendars. Calendar abbreviations will be used, in the 7GRAILS studies, as follows: Cm (CHRomo), Hb (Hebrew, biblical), Rj (Roman, Julian), and Rg (Roman, Gregorian).

B-3. Three Types: Solar, Lunar, and Stellar (Constellations)

Genesis 1:14-16 ♦ "And God said, Let there be lights in the firmament … to divide the day from the night; and let them be for signs, and for **seasons**, and for **days**, and **years** … And God made **two** great lights; the **greater light** [sun] to rule the day, and the **lesser light** [moon] to rule the night: he made the **stars** **also**."

Revelation 12:1,6 ♦ "And there appeared a great wonder in heaven; a woman clothed with the **sun**, and the **moon** under her feet, and upon her head a crown of **twelve** **stars** … a **thousand two hundred and threescore days** [1260 days; or three and a half years, 360 days each, on the stellar CHRomo calendar]."

The sun, moon, and stars are mentioned—in the context of chronology—both in the Old Testament (Genesis 1, quoted above), and in the New Testament (Revelation 12, also quoted above; these are the first and last books, of the Bible). This is NOT *merely* because astronomy is related to chronology; it is also because there are three biblical calendars—which parallel very nicely with the "sun" (greater light), the "moon" (lesser light), and the twelve "stars" (the twelve constellations, which are made of stars).

There are a few people, who think that Jehovah's Hebrew festival calendar is not lunar (the months do not line up, with the lunar cycle). But we know for certain that the CHRomo and Roman calendars are not lunar; therefore, Hebrew is the only possible one, of the three, that is represented by the moon (in the above verses). Obviously, God had the two biggest festivals of the year—Passover and Tabernacles—start in the middle of the Hebrew lunar month, so that people would be there on or about the full moon (which helped with night visibility, etc). Therefore, the original Hebrew calendar is *definitely* a lunar calendar (or lunisolar—because it has leap months, to keep in harmony with the solar cycle).

The sun represents the Roman calendar: because 365 whole days in a year, is as close as you can get to the solar cycle (which is ~365.242). The CHRomo calendar is certainly not lunar—and it misses the solar cycle, by 5 days every normal year (and 25 days on leap years); therefore, it is not represented by the sun or moon. As the sun passes through the twelve constellations, however, the average is about 30 days each: "… the zodiac is divided into twelve signs, each occupying 30° [x 12 = 360 total, in the zodiac cycle] … roughly corresponding to the star constellations …" (https://en.wikipedia.org/wiki/Zodiac). The length of ALL CHRomo months is 30 days, and all normal years are 360 days (much like 360 degrees); therefore, the 360 degrees—of the twelve constellations—nicely represents the CHRomo calendar. So the sun, moon, and stars, clearly represent these three main calendars (sun = Roman, moon = Hebrew, stars = CHRomo). Therefore, once again, this shows that there is more than one biblical calendar.

C. Common Solar Calendars

Some solar calendars will not be discussed in any detail, here, because they are not included in the three main biblical calendars (CHRomo, Hebrew, Roman). For example, Egypt had a civil calendar that was solar; it had no leap years, or any adjustments to keep in sync with the solar cycle: so it was strictly and always 365 days per year (https://en.wikipedia.org/wiki/Egyptian_calendar). This calendar does come under the general category, of solar calendars; and it will be used some, in biblical events that are connected with Egypt (such as Joseph, and the exodus, etc). Nevertheless, it will not be discussed any further, in this article.

C-1. True Enoch Calendar: 364 or 365 Days?

The apocryphal book of Enoch mentions a 364-day calendar (see 72:32; 74:10,12; 75:2; 82:6,11); some have latched onto this, as the supposedly one true calendar. However, Enoch is *not* one of the canonical books, in the true Bible (https://7GRAILS.world/babel/dated-27/); so it's *not* an authoritative source—and it certainly wasn't written by the godly man named "Enoch" (in Genesis 5). Also, there is a big problem with 364 days in a year: the days of the week are the same, every year (for example, if New Year's Day was always on a Wednesday); this destroys God's alignment plan, just like if Pentecost was always on a Sunday (see E-4).

Some have attempted to "fix" this 364-day calendar, by adding an extra day; and then it becomes a true solar calendar (365 days per year). Yet in order to still call it the 364-day year: they give the one extra day a name (filler day, or whatever), rather than a number (365). But this is just playing semantic games; it's still 365 days per year, regardless of what labels you use for the days. And the apocryphal book of Enoch does NOT mention any 365-day year.

However, the book of Genesis does: "And all the days of **Enoch** were **three hundred sixty and five years**:" (5:23). God uses days to represent years (see Numbers 14:34; Ezekiel 4:6; Revelation 11:2,3,9,11; etc); and He can also use years (Enoch's life on earth), to represent the days in a year (365). Therefore, the *true* Enoch calendar is 365 days, not 364. Enoch was a godly man (see Genesis 5:22,24; Hebrews 11:5; Jude 1:14,15); and God chose the exact time, to take him (at age 365). So why did He take Enoch, at 365 years?

C-2. Roman Calendars (Julian and Gregorian)

Neither the CHROMO calendar—nor the Hebrew calendar—EVER has 365 days in a year; but the Roman calendar does: both the Julian, and the Gregorian!! So God took Enoch, at 365 years, to validate the Roman calendar: more than 3,000 years, before Julius designed it! Some may wonder if God would direct a heathen ruler, like Julius Caesar, to design a calendar (in accordance with the plan of God).

Isaiah 44:24,28 ♦ "Thus saith the LORD … of **Cyrus** [a heathen king], He is my shepherd, **and shall perform all my pleasure** …" (see 45:1-5; 46:9-11; Jeremiah 25:9; 27:6; 43:10; Daniel 2:20,21; etc).

Here we see that God led a *heathen* king (Cyrus), to accomplish His divine plan. Likewise, God also led Julius Caesar to accomplish God's calendar plan; so it was not Julius, but rather God Himself, who designed the Julian calendar! And God foresaw that the proleptic Julian calendar would become the primary calendar, in our day, for dating BC events (https://en.wikipedia.org/wiki/Proleptic_Julian_calendar).

Additionally, God planned major events (in the lives of Noah, Abraham, Isaac, Moses, and others) to line up with specific dates—in the Julian calendar—even though it wasn't the *primary* calendar, at that time (https://7GRAILS.world/7-symbolic/chr/abcd/). Also, the Bible mentions Caesar Augustus by name, as well as someone who was probably named after Julius Caesar (see Luke 2:1; Acts 25:21,25; 27:1,3); and these two Roman rulers had their names incorporated into the months, of the Roman calendar: July and August (see Daniel 11:19-22; Revelation 9:5,10,15). When initiated, it was a reform of the previous Roman calendar; also, Julius himself was certainly a Roman leader. Therefore, the Julian calendar is indeed a Roman calendar; and "Romans" is the very title of the book, quoted below.

Romans 3:29 ♦ "Is he the God of the **Jews** [Jewish calendar] **only**? is he not **also** of the **Gentiles** [Roman calendar]? **Yes**, of the **Gentiles also**:"

Paul was the apostle to the Gentiles (see Acts 9:15; 13:47; 18:6; 21:19; 22:21; 26:17; Romans 11:13; 15:16; Galatians 2:2,8; Ephesians 3:1,8; 1 Timothy 2:7; 2 Timothy 1:11; 4:17; etc); he wrote the above statement, and he also wrote many statements against their *ungodly* practices (see Romans 1:18-32; 1 Corinthians 6:1-20; Galatians 5:19-21; etc). Yet he

never once condemned their Julian calendar! Quite the opposite: the chronology of Acts 20 shows that Paul chose to meet with Gentiles, on the anniversary of the crucifixion—on the Julian calendar; but *not* the anniversary of the crucifixion, on the Hebrew calendar (https://7GRAILS.world/7-symbolic/chr/abcd/). Last but not least, Jesus repeatedly used and validated the Roman calendar (https://7GRAILS.world/7-symbolic/chr/articles/). So once again: God uses not only the Jewish calendar, He also uses the Gentile calendar.

Of the three Biblical calendars: *only* the Roman calendar has any month, with exactly 4 weeks—which is February, with 28 days (except leap years). And the week is Biblical, both in Old Testament and New Testament times (see Genesis 7:4,10; 8:10,12; 29:27,28; 50:10; Exodus 7:25; 20:9,10; Leviticus 23:3,15,16; Deuteronomy 16:9; Judges 14:12,17; Daniel 10:2,3,12,13; Matthew 28:1; Acts 20:6; 21:4; 28:14; Hebrews 11:30; etc).

One of the most common Biblical numbers, is 12 (see Exodus 24:4; 26:15-30; 28:21; 36:20-34; 39:14; Revelation 7:4-8; 12:1; 21:12-21; 22:2; etc); and 12 years is specifically mentioned, more than once (see Matthew 9:20; Mark 5:25,42; Luke 2:42; 8:42,43). Now 12 years, on the CHRomo calendar, is 146+ months; and 12 years, on the Hebrew calendar, is 148+ months—but 12 years, on the Roman calendar, is *always* exactly 144 months: and 144 is another important *Biblical* number (see Revelation 7:4; 14:1,3; 21:17; Exodus 26:15-25; 36:20-30).

Revelation 22:2-5 ♦ "… the **tree of life**, which bare **twelve** manner of fruits, and yielded her fruit **every month** … And there shall be **no more curse** … and they shall reign **for ever and ever**."

Because of leap-year calculation differences: there is a gradual drift, between dates in the Julian and the Gregorian calendars. In the time of Christ: the Julian calendar was two days ahead of the Gregorian calendar (proleptic); and in our time, the Julian calendar is thirteen days behind the Gregorian calendar. See the following website, for converting Gregorian and Julian dates: https://www.fourmilab.ch/documents/calendar/

D. Details of the Stellar CHRomo Calendar

The first biblical calendar has no official name, at least not in the Bible; so herein it will be called the "CHRomo" calendar. This name comes from a combination of words—meaning color (chroma), time (chronology), and SAME (homo); CHRomo also has the three-letter acronym, for the three calendars (CHRomo, Hebrew, Roman). Unlike the Hebrew and Roman calendars: the CHRomo calendar has always had the SAME calculated cycle, for leap years (the Roman leap year calculation changed, from Julian to Gregorian; and Hebrew leap years have changed, repeatedly, throughout history). Furthermore, the CHRomo calendar has the SAME number of days, for every month, with no exceptions (always 30 days); this is not true, of the other two calendars (Hebrew and Roman).

Normal CHRomo years are 12 months (360 days), and leap years are 13 months (390 days). Out of every 40 years: 33 are normal, and 7 are leap years. For each 40-year cycle: there are 487 months, or 14,610 days; this makes an *average* of 365.25 days per year—which exactly equals the *average* Julian year. Julian leap years add an extra day (every 4 years), while CHRomo leap years add an extra month.

The CHRomo calendar is almost identical, to the "Old Persian" calendar; in fact, that calendar is probably a remnant, of the original CHRomo calendar (https://en.wikipedia.org/wiki/Iranian_calendars). Furthermore, "Ancient calendars around the world initially used a 360-day calendar." (https://en.wikipedia.org/wiki/360-day_calendar). Wow!!! That makes perfect sense, if the CHRomo calendar was God's *first* biblical calendar (https://360dayyear.com). Before the exodus, the 360-day calendar is what people were familiar with (see B-2).

D-1. CHRomo Calendar, in the days of Noah

Some people have made unnatural attempts: to inject the *Hebrew* calendar, into the Biblical flood record; but it does not fit! However, the CHRomo calendar fits perfectly—because it was the calendar used by Noah, and it was the primary calendar for that time (the flood was prior to the exodus).

Genesis 7:11,12 ♦ "In the **six hundredth year** of Noah's life, in the **second month**, the **seventeenth day** of the **month**, the **same day** were all the **fountains of the great deep broken up**, and the **windows of heaven were opened**. And the **rain** was upon the earth **FORTY days and FORTY nights**."

The only Biblical calendar—which has *any* cycle of 40 (days, weeks, months, or years, etc)—is the CHRomo calendar. During the flood, and many other times: God used 40 days, or 40 years, to represent the 40-year CHRomo cycle (see Genesis 7:4,17; 8:6; 25:20; 26:34; Exodus 16:35; 24:18; 34:28; Numbers 13:25; 14:33,34; 32:13; Deuteronomy 2:7; 8:2,4; 9:9,11,18,25; 10:10; 29:5; Joshua 5:6; Judges 3:11; 5:31; 8:28; 13:1; 1 Samuel 4:18; 2 Samuel 5:4; 1 Kings 2:11; 11:42; 19:8; 2 Kings 12:1; 1 Chronicles 29:27; 2 Chronicles 9:30; 24:1; Nehemiah 9:21; Psalm 95:10; Ezekiel 4:4-9; 29:11-13; Amos 2:10; 5:25; Jonah 3:4; Matthew 4:2; Mark 1:13; Luke 4:2; Acts 1:3; Acts 7:23,30,36,42; 13:18,21; Hebrews 3:9,17; etc).

Genesis 7:24; 8:2-4 ♦ "And the **waters prevailed** upon the earth an **hundred and fifty days**. … The **fountains also of the deep** and the **windows of heaven** were **stopped**, and the **rain** from heaven was **restrained** … and after the end of the **hundred and fifty days** the **waters were abated**. And the ark **rested** in the **seventh month**, on the **seventeenth day** of the **month** …"

The first 40 days were continuous rain, until the ark started to float (see Genesis 7:17); but the rain actually lasted 150 days, total (see 7:24; 8:3). We are told that the rain started on 2-17, and ended on 7-17; so this makes a period of exactly five months. This proves that the CHRomo calendar was being used, with 30 days for *every* month (5 x 30 = 150); certainly, the Hebrew calendar would *not* run for five months, without a single 29-day month! Even if the moon was not visible, for many months (during the bad weather, of the flood)—even then, a lunar calendar would *not* run on endlessly, with 30-day months; instead, it would have alternating 30-day and 29-day months (until the moon could be sighted, again). This means that five *lunar* months, during the flood, would've been 147 or 148 days (not 150).

Furthermore, God DID plan for Hebrew calendar alignments, in the year of the flood; so the *literal* rain began, on Pentecost—because it represented the spiritual rain, which fell, on the great anti-typical day of Pentecost (see Hosea 6:1-3; Joel 2:23-32; Acts 2:1-21; etc). This means that the second month, when the rain began in the flood: was the third month, in the Hebrew calendar (Pentecost is always in the third Hebrew month); therefore, again, the chronology listed (in Genesis 7): is from the CHRomo calendar, NOT from the Hebrew calendar. For further details on the flood chronology—with exact dates, during the flood—see ABCD, and other chronology articles: https://7GRAILS.world/7-symbolic/chr/articles/

D-2. CHRomo Calendar, in Daniel and Revelation

With the CHRomo Calendar, during a period of 3.5 years: sometimes there is no leap year, and sometimes there is one leap year. The 1260 days, in Daniel and Revelation, is exactly 3.5 years—with no leap year (360 x 3.5 = 1260). The 1290 days, in Daniel, is 3.5 years—with one leap year (360 + 390 leap + 360 + 180 = 1290). Several examples of this CHRomo calendar (as well as the Hebrew and Roman calendars) can be found, in both the Old and New Testaments (see Genesis 7 & 8; Esther 1:4; Daniel 7:25; 12:7,11,12; 11:24-29; Luke 4:25; James 5:17; Revelation 9:5-15; 11:2,3; 12:6,14; 13:5; etc).

The Hebrew calendar has at least 1265 days, in 3.5 years (never exactly 1290 days). The Roman calendar has ~1278 days, in 3.5 years. So again, the CHRomo calendar is the *only one* that fits these time prophecies (1260, 1290). God did this to *validate* the existence of the CHRomo calendar—even during the Old and New Testament times, of Daniel and Revelation—when it was not the primary calendar.

Daniel and Revelation both have time prophecies, based on 360 and 390-day years (see first paragraph, D-2); again, these are CHRomo years—*not* Hebrew, or Roman years! Also, the 360 days, of the CHRomo year: is the number of degrees, on a magnetic compass. And it's a nice mathematical number: "360 is the smallest number divisible by every natural number from 1 to 10 except 7." Plus, 360 divides evenly by 10, 12, 15, 18, 20, 24, 30, 36, 40, 45, 60, 72, 90, 120, 180, and 360 (https://en.wikipedia.org/wiki/360_(number)).

D-3. The Sum of All Three Calendars Is 1335

Daniel 12:12 ♦ "**Blessed** is he that … cometh to the **thousand three hundred and five and thirty days**."

1335 days is a time prophecy, just like the 1260 and 1290. But why did God pick 1335, for this time prophecy, rather than some other number? To teach us calendar truth, just like the time prophecies of 1260 and 1290 (see D-2). Please note that all three main *biblical* calendar systems are represented, below.

Nine Added Numbers
Days per normal year: 360 (Cm) + 354 (Hb) + 365 (Rj, Rg) + 180 (Cm, Hb, Rj, Rg) = 1259
Leap year systems: 13 (Cm, Hb) + 12 (Rj, Rg) + 4 (Rj, Rg) + 40 (Cm) + 7 (Cm) = 76
Total from both: 1259 + 76 = 1335!

Days Per Normal Year (and Half Year)
360 is days in a normal CHRomo year (with 30 days for all months)
354 is days in a normal Hebrew / lunar year (alternating between 30-day months, and 29-day months)
365 is days in a normal Roman year, both Julian and Gregorian (including 28, 30, and 31-day months)
180 is days in half of a normal CHRomo year; also, 180 is half the average of a normal Hebrew year, plus any Roman year (354 + 365 or 366 = 719 or 720; divided by 2, for average, = 359.5 or 360; divided by 2 again, for half of a year = 179.75 or 180—both of which round to 180)

Leap Year Systems
13 is months in a leap year, CHRomo and Hebrew
12 is months in a leap year, Roman; and months in a normal year, all calendars (also 12 hours per day, see John 11:9)
4 is years, in the Roman leap cycle
40 is years, in the CHRomo leap cycle
7 is the number of leap years, in one 40-year leap cycle (also 7 days per week, see Exodus 20:11; 31:17; etc)

All Nine Added Numbers Relate to *Yearly* Cycles
Days in a normal *year*: 360 (CHRomo), 354 (Hebrew), 365 (Roman)
Half of a normal *year* (average): 180 (1335 in Daniel is related to 1260 and 1290 days, both of which are three and a half years)
Months per *year*: 13 (CHRomo and Hebrew leap), 12 (always for Roman; normal for CHRomo / Hebrew)
Leap *year* cycles: 4, 40, 7 (see the technical note, below, about what numbers should not be in the list)

TECHNICAL NOTE: The 19-year Metonic leap cycle is not included, because it's not Biblical (there is no 19-year cycle, in the Bible; God designed Hebrew leap years to be added, based on observation). The number "1" (leap year, per 4-year Roman cycle) should not be in the list—because that is exactly what the 4 indicates (1 leap year, every 4 years); if there were 3 leaps (per 4-year cycle), then "3" *and* "4" would need to be listed (but 2 leaps, per 4-year cycle, would mean that the cycle is actually only 2 years, with 1 leap; and 4 leaps, per 4-year cycle, would mean that there are zero leaps, because all years would be the same). To put it another way: if the CHRomo calendar had only 1 leap year, per 40-year cycle, the number "1" would not be included in the above list (but "7" is included, for 7 leaps in 40 years). The number "13" (months per year) is found in the above list, because 13 is not represented in any of the other numbers; however, the numbers "28", "29", "30", and "31" (days per month) are not found in the above list, because these numbers are already represented (in the days per year—such as 360 = 30 days per month, for a normal CHRomo year). Additionally, all nine of the numbers relate directly to *yearly* cycles, and days per month are not directly related to any *yearly* cycle. Thus, all these numbers are not arbitrarily selected, or cherry-picked, to equal 1335; instead, it is obvious that God planned the number 1335, to match the sum of all these *yearly* numbers—thereby validating all three of His calendars!

E. Empirical and Calculated Lunar Calendars

There are two well-known chronology books, that will be quoted from repeatedly (in sections E and F); both of them have a lot of great information, and both of them have some mistakes. The first is titled: "Calendar and Community" (by Sacha Stern; Oxford, 2001). The other one is titled: "Mystery of the Last Supper" (by Colin J. Humphreys; Cambridge, 2011). These two books will be abbreviated C&C, and MLS.

There are numerous lunar calendars, that have been used throughout history; and some are still in use, today (such as the Islamic calendar). However, this article will be focused on the lunar calendar, that was used by the Jews—especially in Bible times.

E-1. Hebrew Calendar in the Bible

Exodus 12:1,2 ♦ "And **the LORD spake** unto **Moses** and **Aaron** in the land of Egypt, saying, **This month** shall be unto **you** the **beginning of months**: it shall be the **first month** of the **year** to **you**." (see Leviticus 23:1-44; Numbers 28:16-31; 29:1-40; Isaiah 66:22,23; Ezekiel 45:18,21,25; etc).

What was the point in Jehovah saying this: if indeed the Hebrew calendar was already known, and used, by Moses? It makes much more sense, that he was not using the Hebrew calendar (prior to this); and then God instructed him to start using it, because that was when it became the primary one. The Hebrew calendar is in the Bible, much more than the other two calendars; and the verses below show that it was still commonly used, during New Testament times.

Luke 2:41 ♦ "Now his parents [of Jesus] went to Jerusalem **every year** at the feast of the **Passover**." (see 22:1,7; John 2:13,23; 6:4; 7:2; 11:55; 12:1; 19:14; Hebrews 9:7; 11:28; etc).

The modern Hebrew calendar (Rabbinical) is not the same, as the original biblical one. The 19-year Metonic cycle—and the calculated festival postponements—are *not* in the biblical Hebrew calendar, which was designed by God (https://en.wikipedia.org/wiki/Hebrew_calendar). This means that when it comes to alignments with the festivals, and finding the dates of important biblical events: the current Rabbinical calendar should not be used. What system should be used? It is the most complex, of the three calendars; and the details will be given, below, in this study (as well as in other 7GRAILS chronology studies).

E-2. New Month Day, and New Years Day

Perhaps surprisingly, the Bible never gives detailed and explicit instructions, on how to begin the month; as a result of this, there are several different ideas—including calculated conjunction, first visible crescent, full moon, last visible crescent (or one day after last visible, which is usually ballpark or roughly the time of conjunction); and some of these have finer variations (such as average / mean conjunction, versus exact astronomical conjunction, etc).

However, there is sufficient information, in the Bible, to figure out which system was being used (at certain times); and in fact, it was not always the same (perhaps because, again, no Bible verse explicitly required using the "first visible" crescent, the "last" crescent, or the "full" moon, etc). But the primary purpose of this article, is *not* an examination of all these options; instead, chronology studies about specific events (such as the exodus), will focus on the calendar methods in use—including both the beginning of the month, as well as the beginning of the year—at that particular time.

Nevertheless, this article *will* focus on the Jewish calendars in use, around the time of Christ (first century BC, through first century AD). The reason for this, is that God designed the events in the life of Christ—especially the crucifixion and resurrection—to be foundational, or the anchor, for understanding

ALL of the other chronology, in the Bible. Because this is an *extremely important foundation*: two entire sections, in this article, are dedicated to establishing this foundation, with great clarity (see F & G).

Various options, for beginning the year, include: empirical observation, of spring conditions (rain, aviv barley, trees, lambs, and/or road conditions, etc); calculated leap year cycle, such as the 19-year Metonic cycle (with 7 leap years, every 19); and the "equinox rule" (mentioned in the next quote, below). Again, different systems were used at different times, by the Jews—as is even indicated, in this quote.

C&C: "Aristobulus' rule of the equinox [that Passover could not come prior to the spring equinox] is more likely to have originated, therefore, from outside the Bible. … the rule of the equinox may not have been adopted by the Jews till much later, possibly not before the fourth century CE." (page 53).

E-3. Spring and Fall Festivals, of the Hebrew Calendar

Most Christians believe that they are not obligated to actually keep, or observe, the Jewish festivals and sabbaths. That subject is not the topic of examination, here; nevertheless, regardless of what you believe on that question: there is certainly no question, that *understanding* the festival chronology is very beneficial—for getting a good grasp, on the chronology of important biblical events. The list, below, is just a simple and introductory overview; much greater detail will be covered, in other 7GRAILS articles.

Spring Festivals
New Year (*Rosh Chodesh*): 1-1; new month, and religious New Year's Day
Passover (*Pesach*): 1-14; lamb—it's a week-long festival, ending on 1-21
Wave Sheaf (*Omer*): 1-16; barley offering; some say it's always on Sunday (see E-4)
Feast of Weeks (*Shavuot*): 3-6 (can be 3-5 or 3-7); it's called Pentecost, in the New Testament

Fall Festivals
Trumpets (*Rosh Hashanah*): 7-1; new month, and civil New Year's Day
Atonement (*Yom Kippur*): 7-10; the most sacred, of the yearly festivals; and Jubilee trumpet (see the cover)
Tabernacles (*Sukkot*): 7-15; tents—it's also a week-long festival, ending on 7-22 (Octave / *Shemini*)

E-4. Wave Sheaf Always on Sunday, or Nisan 16?

The word "Pentecost" refers to fifty days (inclusive, seven weeks): starting with the Wave Sheaf, and ending with the Feast of Weeks (*seven* weeks, which is where this title comes from). Leviticus gives the start: "… on the **morrow after** the **sabbath** [#7676] the priest shall **wave** it." (23:11). The question here is whether the "sabbath" refers to the weekly, or the yearly sabbath; this Hebrew word (#7676) can refer to either one—and both meanings are even found, in this very same chapter (see 23:3,32; etc).

If it refers to the weekly: then Wave Sheaf (and Pentecost) will always be on Sunday—the morrow after Saturday. But if it refers to the morrow after the yearly Passover sabbath (which always falls on the 15th day, of Nisan the first month): then Wave Sheaf will always be on Nisan 16 (the morrow after the Passover sabbath, on the 15th); and in this case, Wave Sheaf (and Pentecost) will randomly land on any day of the week. This question has existed, for millennia (see C&C 18); and to this day, it's still debated.

Perhaps the worst part—of teaching that Wave Sheaf always comes on Sunday—is that it scrambles the weekly, and the yearly cycles. Passover, Wave Sheaf, and Pentecost, are all in the yearly system; but Saturday is in the weekly system. There are exactly seven sabbaths, in the yearly system (see Leviticus 23); and seven means *complete*. So the yearly system is complete—*without* throwing Saturdays into the mix, and making more than seven sabbaths: "For God is **not** the author of **confusion** …" (1 Corinthians 14:33).

Another problem—with teaching that it's always on Sunday—is that it destroys God's alignment plans, for important biblical events. You see: if everything is always the same, every year, then there can

be nothing special—about the chronology, of a special event; and this is just one of the problems, with the 364-day year (see C-1). But with God's plan: *only once* in many years, or even decades, does all of the calendar criteria line up; and this means you can find exact dates, for important biblical events, with great certainty. For details on this, see the YES FAWN alignments (https://7GRAILS.world/7-symbolic/chr/abc/).

There are many biblical events—where Wave Sheaf, and Pentecost, did NOT occur on a Sunday; for example: Noah's flood (Pentecost on Wednesday), the Jordan crossing (Wave Sheaf on Saturday), the sacrifice of Tirzah (Pentecost on Monday, see Part 2), rain on Mount Carmel (Pentecost on Saturday), and many more. Each of these cases will be detailed, in other articles about these events.

It is known that Sadducees, and Karaite Jews, had the Sunday view; while Pharisees, and Rabbinic Jews, had the Nisan 16 view (https://en.wikipedia.org/wiki/Counting_of_the_Omer). Writing by divine inspiration, the apostle Paul said that his observance of the law—as a Pharisee—was *technically* correct: "… as **touching the law**, **a Pharisee**; Concerning zeal, persecuting the church; touching the righteousness which is **in the law**, **blameless**." (Philippians 3:5,6). This indicates that the Nisan 16 view, of the Pharisees, is correct.

But wait, says the objector, if Nisan 16 is correct: then in some years, they would have to harvest the omer offering (do work)—on a Friday night. Actually, no Bible verse commands doing the harvest, in the evening; so they could've done it on Friday afternoon. Also, Jesus said: "Or have ye not read **in the law**, how that on the **Sabbath days** the **priests** in the temple **profane the Sabbath** [do priestly work], and are **blameless**?" (Matthew 12:5; see 12:1-14; Mark 2:23-28).

Well then, if the Wave Sheaf offering is supposed to be on Nisan 16: why *doesn't* the Bible say so, explicitly (like it does, with dates for the other festivals)? Because God wants you to study, and use your mind, and figure out a few things; compared to many other hidden truths: this one is actually very simple, and easy to figure out. Also, Wave Sheaf is directly linked to Pentecost (by 7 weeks, or 50 days inclusive reckoning); and Pentecost can be on Sivan 5, 6, or 7—which means that it is NOT based on an exact date, like the other festival dates (Nisan 14, Tishri 1, Tishri 10, Tishri 15, etc). So both ends, of the seven-week omer count, are NOT given any numerical Hebrew date (not in the Bible; but history does, see next).

MLS: "… the Jewish writers Philo and Josephus seem decisive. Philo (c.20 BC to AD 45) states in *De specialibus legibus* (2.144-75 [Special Laws, see 2.162]) that the first sheaf of barley was presented in the temple on the second day of the feast, that is on Nisan 16. Josephus agrees and writes: 'On the second day of unleavened bread, that is to say the sixteenth … they offer to Him the first-fruits of the barley …' (*Antiquities* 3.250-1). I therefore believe it is clear that at the time of Christ the first-fruits festival of barley was on Nisan 16. … An interesting description … given in the Mishnah … states: 'On the eve after the first day of Passover, messengers … would harvest a handful of barley … The ceremony on the 16th of Nisan permitted the people to eat from the fresh harvest of that year' (Mishnah Menahot 10.3 and 10.6)." (pages 68,69).

F. First Century: First Visible Plus Two (V+2)

Everything about the Hebrew calendar—that has been described so far, in this article—is already fairly well known, and understood, by many; but these two sections (F & G) document an entirely new understanding, about the first-century calendar of the Jews. Their months were not based upon sighting the "first visible crescent" (as has often been assumed); *nor* were they using a solar calendar—or a lunar month based on the last crescent, full moon, or conjunction, etc. Instead, their months started about two days after the first visible crescent sighting (herein abbreviated "V+2"); on rare occasions, it was as much as three days after the first potential sighting (and/or two days after actual sighting). A potential sighting, and an actual sighting, are different: whenever dust, haze, or clouds, obscures an otherwise visible moon.

This V+2 system explains *why* the disciples kept Passover, one day earlier than the mainstream Jews (see Matthew 26; Mark 14; Luke 22; 1 Corinthians 5:7; Isaiah 53:7; John 1:29,36; 18:28,39; 19:14-18; etc). The disciples observed the Passover, based on their own *unofficial* first moon sighting; but the official month was two days after

the potential sighting (and one day after the disciple sighting, in that specific month). God even planned this, so that Jesus could be with His disciples for Passover (based on their new moon); and yet, about 24 hours later, the Lamb of God could be sacrificed on Passover (based on the official calendar). Some might think that God would never approve of Passover being observed, on different days; but this is NOT true. Under special conditions: He allowed a one-month variation, for Passover (see Numbers 9:1-14; 2 Chronicles 30:1-23). Who, then, is powerful enough to twist God's arm—and *demand* that He can't allow a one-day variation, for Passover, under the most special circumstance ever??

Friday, April 3, AD 33 (Rj) is probably the most popular crucifixion date, currently believed by Christians. However, that date is based upon the first visible crescent; and it does not account for the V+2 system, nor why the disciples observed Passover one day earlier (than the rest). For a detailed article, explaining the Absolutely Best Crucifixion Date: https://7GRAILS.world/7-symbolic/chr/abcd/

F-1. How Did the Jews Start Their Months?

Again, the answer to this question depends upon the time—and even the location; for now, though, we are looking at Jerusalem, and Judea, around the time of Christ (unless stated otherwise). Somewhat mysteriously: there is very little historical documentation, to answer this question; instead, it has to be indirectly derived. One might wonder why there are no clear records, for the Jewish calendar, in the time of Christ; it's quite possible that God intentionally hid it, in order to fulfill His plans (to be understood, in our time). Additionally, the Jews themselves may have had calendar secrets; and there is some historical evidence, for this possibility (see C&C 189; MLS 138).

Did they use a solar calendar? There is some evidence that the Essenes, of Qumran, used a solar calendar: "… the solar calendars of *Enoch*, *Jubilees*, and Qumran … It is quite possible, in fact, that the [solar] calendar of *Jubilees* would only have been followed by marginal, sectarian groups." (C&C 4). "In spite of the volume of his works, Josephus does not have much to tell us about the Jewish calendar: only, in a number of passages in *Antiquities* [2.15.2; 3.10.3,5; 4.4.6,7], that it is lunar." (C&C 22; see 4,22,29).

Even if we could be certain, that the mainstream calendar was lunar (and not solar): there are still several options, for how they started their lunar months. "But the precise definition of the beginning of the month is far more debatable: whether it is the conjunction, or the first invisibility of the old moon, or the first visibility of the new moon [or V+2, or full moon] …" (C&C 13,14; see 30,105,113,119,162).

The clearest historical statement, is from Philo (see below); and yet that one is not very clear, for several reasons. First, it is never safe to rely upon only one source (especially non-biblical): "Indeed, the question of whether ancient sources reflect historical reality applies just as well, albeit perhaps to a lesser extent, to Jewish sources such as Philo and rabbinic literature." (C&C 62; see 113). Secondarily, Philo was writing about Jewish calendar methods, in Egypt; and it's quite possible that practices were different, in Judea (see C&C vii, 17, 97; etc). Third, how accurately was Philo copied and translated, into English?

And even if we accept the translation, "begin" (in the quote from Philo, see below): this word is *not* necessarily limited to a single day, or to the very first visibility (maybe the moon "begins" to shine, from sunlight, for a few days). For example, if someone said: "I review my finances, whenever a new month begins." Would we know with certainty, that they always did it on the very first day of the month? Or perhaps, could they actually mean within the first few days (of the new month)?

C&C: "If evidence on the Jewish calendar in early Roman Egypt is anywhere to be found, it is in Philo's *Special Laws*. … Philo lists the new month (*noumenia*) as the third of the ten festivals recorded in the Law. Philo describes it as follows: … The third is the new month (*noumenia*), which is after the conjunction (*synodos*) according to the new moon. … Colson (1937) translates: 'the new moon which follows the conjunction of the moon with the sun.' … at the new month, it [the moon] begins to shine. … at the new month the sun begins to illuminate the moon with the light which is perceived, and the moon reveals its own beauty to those [plural] who see it ([Philo] *Special Laws* 2. 26 (140-1))." (pages 116,117; see 119).

Then with such a great lack of clarity, on how new months were determined: WHY the unreasonable certainty—that they were supposedly going by the first visibility? It is not wise to go by assumptions. The following quotes have no historical support whatsoever (aside from what has already been quoted, above); yet they make statements as fact, though they are nothing more than educated guesswork (at best).

C&C: "… Philo is quite emphatic, as we shall see, that the Jewish month begins at the *first* visibility [compare this with Philo's *actual* wording, 'begins to shine' (quoted above)] of the new moon." (page 33).

MLS: "The first day of the first month was determined by the *first* observation of the new lunar crescent and the day went from sunset to sunset. This was the calendar the Judean Jews took back with them after the exile and it was the official Jewish calendar in the time of Christ." (page 113; see 21).

F-2. Reasons for Intentional Delay

The statements—that are quoted or referenced here (in F2, and F3)—do not usually refer to the time of Christ; however, we have very little explicit calendar information, for the first century AD (as already documented, above). Therefore, these quotes can help us reconstruct realistic possibilities, of what was happening and why (during the time of Christ).

C&C: "Because it took a few days for people [living far from Jerusalem] to find out whether the previous month had been of 29 or 30 days, witnesses could not be expected to know if the date of an incident was the 2nd or the 3rd of the month (*M. Sanhedrin* 5:3)." (page 229; see 97,164,233).

Back in the day, they didn't have modern communication methods; so for the Jews, who were living at quite a distance from Jerusalem (where the new moons were sighted): they would not necessarily know, on what day the new month began. This could result in problems, such as the one just mentioned (in the above quote); and it could also lead to Jews keeping festivals on different days—especially the Feast of Trumpets, on the first day of the new month (other festivals occurred on the fifth day or later: so there was time, for distant Jews to learn when the month had started). To solve these problems—at least in certain time periods—the Jews did set up light beacons, to allow rapid communication; however, even this system had some problems, and intentional interference (at least from the Samaritans): which led to using human messengers, and the slowness of that method (see C&C 158,214; MLS 142,143).

During the time of Christ, therefore, it is very possible that the Jews solved both problems (beacon interference, and slowness of messengers): by intentionally delaying the beginning of the month (V+2), until about two days after the visible crescent (or at least the potential visible crescent). Then the distant Jews could know—with certainty—the festival dates, in advance, even for the Feast of Trumpets.

With this system, the month would *not* begin during the thin sliver moon; instead, it would begin during the thicker waxing "horned" moon (V+2). In nearly all months (except for bad weather, that lasted several days): all Jews, at various locations, would be able to see the moon—on or before, the first day of the month (even those living in mountainous places, where views of the western horizon were blocked).

Because of several advantages, with this V+2 method; and also because no Bible quote explicitly commanded them, to go by the "*first* possible visibility" of the new moon: it is reasonable that both the Pharisees, and the Sadducees, had accepted this system (although the 12 disciples favored using the *first* visible crescent). And there may have been yet another V+2 advantage: maybe it was a welcome method, to keep their Jewish calendar distinct (from other lunar calendars—used by Babylon, or other non-Jewish communities); strict Jews have always favored distinction, from other societies and practices, etc.

These reasons, for *intentionally* delaying the new moon, may or may not be compatible with yet another possibility: the *unintentional* drift, of a calculated new moon. It's quite possible that there was a calculated system, that drifted over the centuries, and yet it was accepted (for some of the above reasons).

F-3. New Month Calculation Drift

C&C: "The institution of a fixed calendar would have made it possible for all Jewish communities to observe the festivals on exactly the same days. Indeed, the same calendrical calculation could be carried out by any Jewish community, anywhere in the world." (page 232; see 6,9,14,15,64,180).

Today, the official Rabbinical Jewish calendar is calculated; yet it is different, than the calendar that was used in the time of Christ. Using calculations, rather than actual moon sightings, may have started about the time of the Babylonian captivity, or shortly after (see C&C 178; MLS 147)—when the Jews were scattered, and had no way to know when the moon was sighted (in Jerusalem). In fact, the Jews may have adopted a calculated system, from the Babylonians—or some other country (see C&C 103,111,208,227,228). The problem with any calculation, though, is drift (caused by calculation error, especially back in those days).

C&C: "The Egyptian cultic calendar, by contrast, began the month at the morning of first invisibility of the old moon. … because of a discrepancy in the 25-year lunar cycle [309 lunar months] that was in use in the Ptolemaic and Roman periods, the beginning of the month gradually shifted towards conjunction (with which it began to coincide in the second century BCE) and eventually towards the visibility of the new moon (with which it coincided by the mid-second century CE)." (page 104; see 14,198, and footnote 733).

The above quote clearly shows a gradual drift, over centuries; it's not exactly the same calendar, as the Jews were using: yet it does show a realistic possibility, that something similar happened to the Jewish calendar (and covered a similar time period). The quote below refers to a later time (5th century, AD); and it does have V+2 examples, which may be the result of drift (and/or other reasons).

C&C: "A number of inscriptions, however, yield results that are most unlikely [based upon the author's lack of understanding, that V+2 is very likely—at least in some cases]: one day before conjunction (Z312), two days after first visibility (N4, N7), and far worse, three days after first visibility (Z177 = S14, S16). … [Footnote 504:] Thus in Z312, the 1 Siwan [Sivan, first day of the third month] would have occurred either 2 days before conjunction … or 2 days after day of first visibility …" (page 149; see 142).

We don't even know, for sure, IF the Jews were using a calculated new moon (in the first century); and we certainly don't know WHAT calculation they were using, if any (see C&C 6,9,14,15,64,180). Yet there is a very simple calculation, that they may have used; and it would account for the drift, from visible to V+2 (within several hundred years). It is a cycle of 130 months; every cycle would have three sets of 32 months, and one set of 34 months. At one defined place in each cycle (probably at the start): one extra day would be added, to a month that would *normally* be 29 days (all other months would always alternate between 30 days, and 29 days). This would produce an average month of ~29.53077 days long; and the real month is ~29.53059 days long: creating a drift of ~0.00018 days, per month (~1.1 days, in 500 years).

This amount of drift, if indeed they used this calculation, does *not* account for two full days after potential visibility (V+2)—at least not within the five hundred years or so, from the exile to the advent (of Christ). However, they may have intentionally started the cycle, on potential visibility plus one day; this was already fairly normal, with lunar months (when clouds or something delayed the month, by one day).

Furthermore, knowing the reality of drift—but not knowing which way—they probably preferred starting the month a day late (in case the moon drifted lower in the sky, each month, it would still remain visible much longer). To put it another way, if everyone was accustomed to moon visibility (whenever the month started): it would be better to start a day late, with the moon higher (and remain visible, even if it drifted lower)—than to start low and have it drift lower, and become invisible every month. Something similar can be seen, even in our day, with the current Jewish lunar calendar: "In the present-day rabbinic calendar, early visibility of the new moon is no longer a concern …" (C&C footnote 623; see 181).

If indeed the 130-month system were used, or *any* other calculated *new moon* system: this does NOT necessarily mean that the *leap years* were calculated (using the 19-year Metonic cycle, or any other such cycle). In fact, there would've been no need for calculating the new year: because that could've been determined empirically, by observation (and/or whatever other criteria was used)—with plenty of time to announce the decision, to distant communities, before the next month began (see C&C 6,64,163).

G. Good Examples from Josephus

So far, this article has examined the possibility—that the Jewish calendar, around the time of Christ, was based on V+2; however, the possibility of something is not the same as *evidence* of something. In this section (G), though: we will look at a few actual historical examples, from Josephus, of V+2.

G-1. Yom Kippur Total Eclipse (9-15, 5 BC)

Because nobody has understood the V+2 calendar, in the time of Christ: for that very same reason, nobody has understood that the total lunar eclipse—which occurred on September 15, 5 BC—happened on the night, *immediately after* Yom Kippur (Day of Atonement). Josephus says that it occurred, not long before Herod's death (see *Antiquities*, book 17, chapters 6-8); but there is much debate, regarding which eclipse—and what year—Josephus was referring to (see the full quote, about that eclipse, below). But as soon as you recognize that the eclipse was on the night—*immediately after* Yom Kippur—then suddenly, there is only one possible option: it was the total lunar eclipse, shortly before midnight, on September 15 (5 BC)!

Color Key
Purple highlight, red / yellow text: referring to one day, Yom Kippur (including an eclipse, later that night)
Purple highlight, black text: referring to Joseph, the substitute *high* priest for that one day (Yom Kippur)
Gray highlight, red text: referring to Matthias, the high priest, removed by Herod (on Yom Kippur)
Gray highlight, black text: referring to Joazar, the new permanent high priest (starting after Yom Kippur)

Josephus: "So, in the very middle of the day they got upon the place; they pulled down the eagle, and cut it into pieces with axes: while a great number of the people were in the temple [because it was Yom Kippur]. … But the people, on account of Herod's barbarous temper, and for fear he should be so cruel as to inflict punishment on them, said, 'What was done [removal of Herod's large golden eagle, from the temple], was done without their approbation: and that it seemed to them that the actors might well be punished for what they had done.' But as for Herod he dealt more mildly with others [of the assembly] but he deprived Matthias of the high priesthood, as in part an occasion of this action [eagle removal—and also, partly because of the next story]; and made Joazar, who was Matthias's wife's brother, high priest in his stead. Now it happened that during the time of the high priesthood of this Matthias, there was another person [Joseph, mentioned below] made high priest for a single day; THAT *VERY* day which the Jews observed as a FAST [Yom Kippur (see Acts 27:9; G-2)]. The occasion was this: This Matthias the high priest, on the night before that day, when the FAST was to be celebrated [Yom Kippur], seemed, in a [wet] dream, to have conversation [intercourse] with his wife: and because he could not officiate himself on that account, Joseph, the son of Ellemus, his kinsman, assisted him in that sacred office [only on that one day, Yom Kippur; and then Herod put Joazar in, the new high priest (stated above)]. But Herod deprived this Matthias of the high priesthood: and [at the *very* same time] burnt the other Matthias [who was NOT the high priest; he was someone else, who had this same name (see *War*, book 1, 33.2-4)], who had raised the sedition [eagle removal], with his companions, alive. And THAT *VERY* night [a few hours after the Yom Kippur—when BOTH of these events happened: Matthias replaced (the high priest), and Matthias burned (the eagle remover)] there was an ECLIPSE of the moon." (*Antiquities*, book 17, 6.3,4; footnotes NOT by Josephus).

Did Herod deprive Matthias, of his high priest position, on two different occasions?? Of course not! The two events happened on the same day, Yom Kippur—and Herod only deprived Matthias once (though Josephus mentioned it twice—in the context of the two different *reasons*, for why he was replaced, both of which happened on the same day). Also, it is rather likely that the high priest knew what was being planned, for Yom Kippur (eagle removal); and he didn't want to get caught in the middle—so he made up an *excuse* (wet dream), to stay home that day. But Herod saw through his *excuse*, and replaced him.

Plus, the conspirators were probably happy to do the stunt, when the substitute teacher was in for the day. Furthermore, they no doubt saw the Biblical concept—of cleansing the temple, on Yom Kippur (see Leviticus 16:16-34; etc); so that was the perfect day, to remove Herod's defiling idol (eagle). Notice also that Josephus used the word "very" only twice, in the paragraph (6.4)—and both times, it refers to Yom Kippur (and the night immediately following): "that very day" was Yom Kippur, which ended at sunset; and "that very night" was an eclipse, a few hours later (before midnight, on the same Roman day).

Josephus: "… [Herod] built a theatre at Jerusalem [years before the eclipse story, quoted above] … And when the King [Herod (now *this is* the eclipse story)] had ordered them [eagle removers] to be bound, he sent them [away] to Jericho, and called together [right there in Jerusalem] the principal men among the Jews. And when they were come, he made them assemble in the theatre [that he had built in Jerusalem; but NOT in the 'amphitheatre at Jericho'] …" (*Antiquities*, book 15, 8.1; book 17, 6.3; see 8.2; *War*, book 1, 33.2-4,8).

We know that Herod was very impulsive, and quick to rage—especially at this time of his life, when he was diseased and approaching death (see *Antiquities*, book 17, 6.1,4,5; Matthew 2:1-23; etc). So there's no reason why Herod would've waited, for days, to execute the perpetrators. We are told that it was in the "middle of the day" (when the eagle was removed); and it's clear that Herod was in Jerusalem, on Yom Kippur (see the previous quote)—so the perpetrators were brought to Herod, probably within the hour. Then he sent them bound, to a place of custody, in Jericho; and he called the Jewish leaders for a trial, at Herod's theater in Jerusalem. The fact that it was Yom Kippur: could've easily been used, by Herod, as an argument for the death penalty (see Leviticus 23:27-32; Exodus 31:14; etc). So within a few hours: he could've easily had them tried, and ordered their deaths (which order would've followed them, probably by horse, to Jericho; then the execution could've been carried out, sometime that evening or night). It all happened in less than 24 hours, and ended with an eclipse near midnight (a few hours after the end of Yom Kippur, at sunset).

It is well recognized, that this is the only eclipse—mentioned by Josephus (lunar or solar)—in all of his writings. Certainly, then, it must've been a total eclipse; anything less than total, surely would not have made the position of the most important eclipse—in all of his writings! But if we narrow it down to a total lunar eclipse: then most of the other possible eclipses, shortly before Herod died, are eliminated—because they aren't total; furthermore, only one total eclipse is anywhere near Yom Kippur (see #04812; this is normally considered 5 BC, but it is listed as year -0004, or 4 BC, because astronomy uses a year "0" between BC and AD, whereas other chronology does not; https://eclipse.gsfc.nasa.gov/LEcat5/LE-0099-0000.html).

Well then, now that we know the exact eclipse, which Josephus was referring to (9-15, 5 BC): what can we learn, about the Jewish calendar—in the time of Christ? Fortunately, with modern technology, we are able to calculate the exact day of *potential* new moon visibility (even for ancient dates): "This has been facilitated by the availability of computing power that would have been unthinkable only a few years ago." (MLS 12). For the seventh Jewish month, 5 BC, moon visibility was the evening of September 3; and for Yom Kippur to be on Thursday evening, through Friday evening (9-14,15): the month had to begin on the evening of September 5—exactly TWO DAYS AFTER the first visible crescent (V+2). This is slam-dunk historical verification: that the Jews in Jerusalem, at the time of Christ, were using the V+2 system!!

G-2. What Day Did the "Jews Observe as a FAST"?

The answer to this question might seem so obvious, that one might wonder why even ask it—all but the least educated in the Bible, and Jewish festivals, will instantly know the correct answer: Yom Kippur!

In fact, when Matthias called in sick—and Joseph was "high priest for a single day"—that had to be Yom Kippur: because that's the only day of the year, when the high priest was required to be present; all *other* duties, on all *other* days, could've been performed by the *other* priests (see Leviticus 16:1-34; Hebrews 9:3-7; *War*, quoted below). Yet, because of false chronological traditions, such as the first visible crescent (rather than V+2): many wander off into unnatural and vague uncertainties (at best)—or very unrealistic absurdities (at worst)—about what day Josephus meant, by the "fast" (in the eclipse quote, above; and the two quotes below, in G-3). And this, in spite of the fact that *Josephus himself* went to the trouble: of DEFINING what he meant—in not one, but BOTH of his two main books (*War*, *Antiquities*).

War: "However, the high-priest … went into the most sacred part of the temple, which he did but once in a year [Yom Kippur (see Leviticus 16:1-34; Hebrews 9:3-7)]: on that day when our custom is for all of us to keep a FAST to God." (book 5, 5.7).

Antiquities: "But on the seventh month … on the tenth day [Yom Kippur (see Leviticus 16:29; 23:26-32; 25:9; Numbers 29:7-11)] of the same lunar month, they FAST till the evening." (book 3, 10.2,3).

Both of these definitions were written, before he ever mentioned any regular Jewish "fast" day; and this is a very good writing technique—so that anyone reading through the book, in sequence, will already know what he meant by the "fast"! Also, Josephus never specifically mentioned "Yom Kippur" (not with this terminology); but he did call it the "FAST" (quoted above). Furthermore, he never mentioned any *other* regular fast day; yet he did mention battles, where people fasted—because of the circumstances, but *not* because it was a regular Jewish fast day (*War*, book 4, 3.14; *Antiquities*, book 12, 7.1). However, in the eclipse quote (above), and in the next two quotes (below): Josephus was defining chronology, with a specific *annual* Jewish "fast"—which is very *certainly* Yom Kippur!

G-3. Yom Kippur: Pompey in 63 BC, and Herod in 37 BC

Josephus: "But Pompey pitched his camp … on the north part of the temple … And had it not been our practice, from the days of our forefathers, to rest on the seventh days [Saturdays], this bank could never have been perfected; by reason of the opposition the Jews would have made. For though our law gives us leave then to defend ourselves against those that begin to fight with us, and assault us; yet does it not permit us to meddle with our enemies; while they do any thing else. [⁋] Which thing when the Romans understood; on those days which we call sabbaths [chronology (Saturday)], they threw nothing at the Jews; nor came to any pitch'd battel [battle] with them: but raised up their earthen banks, and brought their engines into such forwardness, that they might do execution the next days. … For altho' the city were taken on the third month [chronology], on the day of the FAST [chronology (Yom Kippur)], upon the hundred seventy ninth olympiad [chronology]; when Caius Antonius, and Marcus Tullius Cicero were consuls [chronology]; and the enemy then fell upon them, and cut the throats of those that were in the temple … when the battering engine was brought near [Saturday], the greatest of the towers was shaken by it, and fell down; and brake down a part of the fortifications. So the enemy poured in apace [on a Yom Kippur FAST day—which was ALSO a Saturday] …" (*Antiquities*, book 14, 4.2-4; see Cassius Dio, book 37, 15 & 16).

Josephus: "This destruction befel the city of Jerusalem when [chronology] Marcus Agrippa and Caninius Gallus were consuls of Rome; on the hundred eighty and fifth olympiad [chronology]; on the third month [chronology]; on the solemnity of the FAST [chronology]. As if a periodical revolution of calamities had returned, since that which befel the Jews under Pompey. For the Jews were taken by him on the same day [*annual* festival]; and this was after twenty seven years time [chronology]." (*Antiquities*, book 14, 16.4).

In the Bible, also, the "fast" is Yom Kippur—when the oncoming winter made travel unsafe, by sea (see Acts 27:9; https://biblehub.com/commentaries/acts/27-9.htm). However, nowhere in the Bible or Jewish history, is there any official *weekly* FAST on Saturday; this is merely an imaginary invention, in order to avoid what should be obvious (that the "fast" means Yom Kippur). "We should place priority on the source material's own interpretation of itself [how did *Josephus himself* define the 'fast' day], not on a modern scholar's reinterpretation of it. If it makes good sense as written, there is no real reason to reject it." (RL). This is indeed the standard principle of interpretation; and there is no reason whatsoever to reject it, in this case.

It's true that in the Pompey case, above, the temple was breached on the fast day (Yom Kippur)—AND it was ALSO on a Saturday; but this does NOT mean that Saturday itself, was ever an official day of fasting. Yet the fact that it was BOTH, in this case, provides amazing chronological clarity. It is widely recognized, and correct, that this happened in 63 BC (https://en.wikipedia.org/wiki/Siege_of_Jerusalem_(63_BC)). If Nisan 1 was in late March, that year: then Yom Kippur, on a Saturday, would positively be September 26 (Julian). This would require the month to start on September 16 (evening)—which is at least V+2, maybe even V+3 (the moon was on the ragged edge, of *potential* visibility, on the evening of 9-13). Or, if Nisan was one month later, then Passover would've been in early May: which *never* happens, with the official rabbinical calendar; yet it is possible, with other versions of the Hebrew calendar—in special cases, if needed, for God's chronology alignment plans (however, 63 BC is not one of those cases). Furthermore, even if Passover had been in May (63 BC): it would only mean that V+2 came later (after 63 BC, yet prior to 5 BC); this could rule out calculated drift, but it certainly would not rule out *intentional* V+2 delay.

G-4. Herod's Reign, and 4 BC Death

NOTE: This subsection is extra technical, especially for those who want to understand the bigger picture; however, those who are new to chronology, might want to skim this or skip it (and go to G-5).

There is still some chronology data—in the context of the two "fast" quotes, above (about Pompey, and Herod)—that needs to be explained. This will help make it even more certain, that Josephus was very consistent in his usage of the "fast" (meaning Yom Kippur). And this will also identify the timing of Herod's reign, and death, with very good clarity. For those who want to take an extra deep dive, on this, there is an excellent article by Rick Lanser (https://biblearchaeology.org/abr-projects/the-daniel-9-24-27-project-2/4365-the-first-year-of-herod-the-great-s-reign). He is spot on, in nearly everything—except, like many others, he fails to see the "fast" as Yom Kippur. But he does a great job of showing: that Josephus used inclusive reckoning, as well as a spring new year (in the Hebrew calendar), etc.

In describing the chronology, of Pompey in 63 BC (quoted above), Josephus wrote: "… it was in the *third* month of the SIEGE before the Romans could[,] even with great difficulty, overthrow one of the towers, and get into the temple." (*War*, book 1, 7.4). This explains his other statement: "For altho' the city were taken on the *third* month [of the siege], on the day of the FAST …" (*Antiquities*, book 14, 4.3); the "fast" is in the *seventh* Jewish month, so the "third month" was the duration of the siege (as quoted from *War*).

And in describing the chronology, of Herod in 37 BC (quoted above), Josephus wrote: "… made Antigonus, the son of Aristobulus, King. And when he had reigned three years *and three months*, Sosius and Herod BESIEGED him …" (*Antiquities*, book 20, 10.1); "… a SIEGE of *five* months …" (*War*, book 1, 18.2); "… the first wall was taken in forty days; and the second in fifteen more …" (*Antiquities*, book 14, 16.2); and finally, "This destruction befel the city of Jerusalem … on the *third* month; on the solemnity of the FAST." (*Antiquities*, book 14, 16.4). Some think that Antigonus reigned three years *and three months*, until he died; but the text, taken at face value, says it was when: "Herod BESIEGED him" (he died months later).

Here are the events, in sequence: #1 preparations for the siege began, shortly after "winter" (*War*, book 1, 17.8; *Antiquities*, book 14, 15.14); #2 the actual "siege" BEGAN "*three months*" into the Jewish year (in Sivan); #3 the siege lasted "*five* months" (inclusive), ending in the seventh month—which is EXACTLY when the Yom Kippur "fast" is observed; #4 in the middle of these *five* months, there was a new phase—probably

starting when "they brought their engines to bear" (*Antiquities*, book 14, 16.2)—this took forty days, and fifteen more (fifty five total); #5 the city fell on the "*third* month"—which was NOT Sivan (Jewish calendar third month), NOR was it the third month of the entire siege (the city fell, at the end of a *five* month siege).

Then why did Josephus say that Jerusalem fell, in the "*third* month" (on Yom Kippur)? Probably because, in context, he was seeing parallels with the Pompey case (both cases were on Yom Kippur, etc); and with Pompey, the temple was indeed taken in the "*third* month" (of the siege). So Josephus reckoned the "third month" parallel, in the Herod case, starting with the forty days and fifteen days—which *began* in the fifth Jewish month (in summer, the middle of August), and *ended* in the seventh Jewish month: this was the *third* month, by inclusive reckoning (fifth, sixth, and seventh months, *three* total).

Here's yet another similarity, in these two cases (Pompey and Herod): "But when he [Aristobulus II] had reigned three years, and *as many months*, Pompey CAME upon him … And when he [Antigonus II] had reigned three years and *three months*, Sosius and Herod BESIEGED him …" (*Antiquities*, book 20, 10.1). The phrase "as many months" is not very clear; it certainly does not specifically say, "and three months" (like it does, with the other one). Some have said that it's just a copyist corruption, of the original text; and some say it represents three and one-half years (like the 1260 days, in the Bible). Either way, it does not eliminate the "fast" being on Yom Kippur; literally, it was probably three years, and about four or five months—then Pompey BEGAN his siege (like Herod: 3 years, and 3 months, then his siege STARTED).

Now then, with the "fast" being immovably grounded as Yom Kippur, and with the Herod attack coming on a sabbatical year—both well before, and continuing after Yom Kippur (*Antiquities*, book 14, 16.2; book 15, 1.2)—we now know that this sabbatical year, was reckoned from spring to spring (because, if it was based on fall to fall: then the sabbatical would end, ten days prior to Yom Kippur). This seven-year cycle was not the original one, from the days of Moses (2025 *is the original* Jubilee); but it was the same one, that started after the Babylonian exile—and it continued, in the New Testament times (see Luke 4:17-21; etc).

Last but not least: with Yom Kippur now solidly anchored, to ALL THREE of the above events (63 BC, 37 BC, 5 BC)—we have very strong certainty, that Herod died in Nisan of 4 BC (not long after the Yom Kippur total eclipse, on 9-15, 5 BC). This also shows that indeed: Josephus was using inclusive reckoning, to count the years—just as he did, with inclusive months ("*three* months" and "*five* months"; and the "*third* month"). It was 27 years (inclusive), from 63 BC to 37 BC (*Antiquities*, book 14, 16.4); it was 7 years (inclusive), from 37 BC to the 31 BC Actium battle (*Antiquities*, book 15, 5.2); and finally, it was 34 years (inclusive), from 37 BC to Herod's 4 BC death (*War*, book 1, 33.8; *Antiquities*, book 17, 8.1).

G-5. Battle at the Great Zab River (*Not* on 6-12, 130 BC)

Josephus: "Of which Nicolaus of Damascus is a witness for us: who in his history writes thus: 'When Antiochus [VII] had erected a trophy at the river Lycus [the Great Zab], upon his conquest of Indates the general of the Parthians, he stayed there two days. It was at the desire of Hyrcanus, the Jew; because it was such a festival derived to them from their forefathers, whereon the law of the Jews did not allow them to travel.' And truly he did not speak falsely in saying so. For that festival, which we call Pentecost, did then fall out to be the next day to the Sabbath. Nor is it lawful for us to journey, either on the Sabbath day, or on a festival day." (*Antiquities*, book 13, 8.4).

This case is not a strong support, for V+2; instead, it is supposedly a strong support for first visible crescent: because it supposedly happened on Friday, June 12, 130 BC—followed by Saturday, and then Pentecost on Sunday (see G. R. F. Assar, 2020). But EVEN IF first visible crescent was certain, in this case: it would prove nothing, against V+2, in the time of Christ (*more* than 100 years later). Instead, at best, it could show that V+2 came later (after 130 BC); this *might* rule out calculated drift, but it certainly would not rule out *intentional* V+2 delay (in the time of Christ). However, for first crescent to work, in this case: it requires not one, but ALL of the following six things to be true—most of which are uncertain, at best. And if only one is *not* true: then the above quote says nothing, about *first* visible, in the time of Hyrcanus.

#1 That the Zab battle was certainly in 130 BC, not in 131 BC (see Thomas Fischer, 1970; Edward Dąbrowa, 2010).

#2 That Wave Sheaf and Pentecost dates—in the time of Hyrcanus—were NOT based on the view of the Boethusians, or Sadducees (that Pentecost is always on Sunday, *regardless* of the new moon method).

#3 That Nisan 1, in 130 BC, began on the evening of April 10 (Julian); but *not* one month earlier. Yet there is no certainty that the 19-year Metonic cycle, or any other calculated leap-year cycle, was used by Hyrcanus and/or the Jews of his time (see C&C 31).

#4 That John Hyrcanus personally witnessed the Nisan 1 new moon, on the evening of April 10 (130 BC); or else, at some point during his military campaign (before Pentecost): someone came and told John—that the Nisan 1 moon had been sighted, at Jerusalem, on April 10 (130 BC). And the fact that John was on a military campaign, and traveling widely, underscores the probability that he used *calculated* new moons.

#5 That when Josephus wrote "Pentecost" (see above quote): he relied on another unnamed and unquoted source—in spite of naming and quoting Nicolaus, on the exact same chronology (about the exact same event). And if Josephus did *not* have another ghostwriter source: then he was probably guessing, about which festival—and it could have been a fall festival (see C&C 113,114; "probably" another Jewish source, Assar, 18).

#6 That the intended meaning, accurate copying, and correct translation of Josephus: is that *this* Pentecost came "after" or "following" the "Sabbath" (rather than "before" or "next to" or "adjacent" or "beside").

In closing, there is another case that is worth briefly mentioning here; but the full details are for another article. In 66 AD, the Romans and Jews fought during the Feast of Tabernacles, on a day that was also a "seventh day … Sabbath" (see *War*, book 2, 19.1-7). This could NOT be Saturday, September 27; it had to be on Saturday, October 4, and it had to be the last day of the feast (Tishri 22)—because after 3 more days of waiting, plus 1 day of travel, plus 4 more days: Josephus said that it was Tishri / Hyperbereteus 30 (22 + 3 + 1 + 4 = 30). This means that the month began, on September 12 (evening); the moon was at least potentially visible, on September 9 (evening)—so that month began three days later! Why three days, not two? Because, as stated earlier, the V+2 system does occasionally have a new moon on the third day (after the *potential* crescent). Furthermore, if the months were based on a calculated new moon (not intentional delay): as time passed, it would drift more and more towards V+3 (and this was 66 AD).

Last but not least: the New Testament is loaded with examples, of V+2 (occasionally V+3); but those cases will need to be addressed, in other chronology articles (https://7GRAILS.world/7-symbolic/chr/articles/). Also, the foundation—for clearly understanding ALL biblical chronology, with exact date precision—is the crucifixion, and resurrection, of Jesus; and if you don't understand the V+2 calendar, in the time of Christ: you probably won't get ANY dates right (at least not the right day, and maybe not the right year). When you do have the exact dates for the crucifixion, and resurrection, however: then you can clearly see Jehovah's absolutely amazing astronomy alignment—which is the single best EVER *undeniable* scientific evidence, of the literal physical bodily resurrection of Jesus Christ!!! For extensive details on this, see the article titled: Absolutely Best Crucifixion Date (https://7GRAILS.world/7-symbolic/chr/abcd/). That article also has much more details, about the sabbatical and Jubilee cycles, etc.

HAPPY SEVENTIETH JUBILEE!!!
