Appendix A: 3 Days and 3 Nights before the Resurrection

Introduction

Was Yeshua three days and three nights in the grave, as He said in Matthew 12:40?

Can you figure three days and three nights between sunset "Good Friday" and sunrise Easter Sunday? We have never published an article that stirred more comment and enthusiastic endorsement than this article.

It is commonly supposed, today, Yeshua was crucified on FRIDAY, and that the resurrection occurred about sunrise on Easter Sunday morning.

It would seem that no one, until recently, ever thought to question or to PROVE this "Good-Friday-Easter" tradition. Yet the Scriptures tell us to PROVE all things. And you will be literally astounded by this proof.

For PROOF there is but one dependable authority; a sole historical record – the Scriptures.

Tradition No Evidence

There were no eye-witnesses to the resurrection. Even so-called "apostolic fathers" had no source of information save that record which is today available to us. Tradition, then, must be dismissed.

What are the recorded facts?

The doubting Pharisees were asking Yeshua for a SIGN – a supernatural evidence -- in proof of His Messiahship.

Yeshua answered: "An evil and adulterous generation seeketh after a sign; and there shall no sign be given to it, but the sign of the prophet Jonas: For as Jonas was three days and three nights in the whale's belly, so shall the Son of man be THREE DAYS AND THREE NIGHTS in the heart of the earth." (Matt. 12:38-40). Now consider, please, the tremendous import – the overwhelming significance – of Yeshua' statements!

He expressly declared that the ONLY SIGN He would give to prove He was the Messiah was that He should be just THREE DAYS AND THREE NIGHTS in the rock-hewn sepulchre in "the heart of the earth."

The Significance of the Sign

These Messiah-rejecting Pharisees demanded PROOF. Yeshua offered but one evidence. That evidence was not the fact of the resurrection itself – it was the LENGTH OF TIME He would repose in His grave, before being resurrected.

Think what this means! Yeshua staked His claim to being your Saviour and mine upon remaining exactly THREE DAYS AND THREE NIGHTS in the tomb. IF He remained just three days and three nights inside the earth, He would PROVE Himself the Saviour – if He failed in this sign, He must be rejected as an imposter!

No wonder Satan has caused unbelievers to scoff at the story of Jonah and the "Whale!" No wonder the Devil has set up a tradition that DENIES Yeshua is the Messiah!

The Dilemma of the Higher Critics

This one and only supernatural PROOF ever given by Yeshua for His Messiahship has greatly bothered the commentators and the higher critics. Their attempts to explain away this sole proof for Messiah's divinity are ludicrous in the extreme. For explain this away they must, or their "Good-Friday-Easter" tradition collapses!

One commentator says, "Of course we know that Yeshua was actually in the tomb only half as long as He thought He would be!" Some expositors impose upon our credulity to the extent of asking us to believe that "in the GREEK language, in which the New Testament was written, the expression 'three days and three nights' means three PERIODS, either of day or of night"

Yeshua, they say, was placed in the tomb shortly before sunset FRIDAY, and rose at sunrise Sunday morning -- two nights and one day.

The SCRIPTURES Definition

But the SCRIPTURES definition of the duration of "nights and days" is simple.

Even these same higher critics admit that in the HEBREW language, in which the book of Jonah was written, the expression "three days and three nights" means a period of 72 hours – three twelve-hour days and three twelve-hour nights.

Notice Jonah 1:17: "And Jonah was in the belly of the fish THREE DAYS AND THREE NIGHTS!" This, they admit was a period of 72 hours. And Yeshua distinctly said that AS Jonah was three days and three nights in the great fish's belly, So He would be the same length of time in His grave!

As Jonah was in the "GRAVE" (see marginal reference, Jonah 2:2) 72 hours, after which he was supernaturally resurrected by Yahweh, by being vomited up, to become a saviour to the people of Ninevah upon proclaiming the warning to them, so should Yeshua be 72 hours in His grave, thereupon being resurrected by Yahweh to become the saviour of the world!

Did Yeshua know how much time was in a "day" and in a "night"? Yeshua answered, "Are there not twelve hours in a day ... but if a man walk in the NIGHT, he stumbleth." (John 11:9-10).

Notice the SCRIPTURES DEFINITION of the expression, "THE THIRD DAY." Text after text tells us that Yeshua rose THE THIRD DAY. See how the SCRIPTURES defines the time required to fulfill "THE THIRD DAY."

In Genesis 1:4 Yahweh "divided the LIGHT from the DARKNESS. And Yahweh called the LIGHT Day, and the DARKNESS He called Night. And the evening (darkness) and the morning (light) were THE FIRST DAY ... and the evening (darkness) and the morning (light) were THE SECOND DAY, ... and the evening (now three periods of darkness called NIGHT - three nights) and the morning (now three periods of light called DAY -- three days) were THE THIRD DAY." (Gen. 1:4-13).

Here we have the ONLY SCRIPTURES DEFINITION which explains and COUNTS UP the amount of time involved in the expression "THE THIRD DAY." It includes three dark periods called NIGHT, and three light periods called DAY – three days and three nights, and Yeshua said they contained TWELVE HOURS for each period – a total of 72 hours!

That ought to be conclusive! Any seven-year old, near the end of the second grade, could figure it easily. We praise Yahweh that His plain truths are revealed UNTO BABES, and hidden from the wise and prudent!

What Is Wrong?

What is wrong with these plain, simple words of Yeshua? How do these wise and prudent theologians KNOW Yeshua was crucified "Good Friday" and rose "Easter Sunday?"

The simple answer is, THEY DO NOT KNOW IT – for IT IS NOT TRUE! It is merely TRADITION – a tradition we have been taught from childhood, and carelessly ASSUMED! Yeshua warns against making "the Word of Yahweh of none effect through your TRADITION." (Mark 7:13).

We have examined two scriptural witnesses, in Matthew and in Jonah, both setting the duration of the body of Yeshua in the tomb as three days and three nights, which the Scriptures plainly define as 72 hours of time. Now let us examine four other Scriptural witnesses the PROVE THE SAME THING.

Notice Mark 8:31 "And He began to teach them that the Son of man must suffer many things, and be rejected of the elders, and of the chief priests, and scribes, and be killed, and AFTER three days rise again."

Our young second grader can figure this. IF Yeshua had been killed on Friday, and then AFTER one day He had risen, the resurrection would have occurred on Saturday evening. IF AFTER TWO DAYS, it would have occurred Sunday evening, and if AFTER THREE DAYS, it would have occurred MONDAY EVENING!

Examine this text carefully. You cannot, by any process of arithmetic, figure any less than a full 72 hours -three days and three nights – in a resurrection which occurred three days AFTER the crucifixion! If Yeshua was in the grave only from Friday sunset to Sunday sunrise, then this text too, must be torn out of your Scriptures or else you must reject Yeshua Messiah as your Saviour! If He rose AFTER THREE DAYS, it might have been more than 72 hours, but it could not have been a second less!

Notice now Mark 9:31. "... they shall kill him; and AFTER that he is killed, he shall rise THE THIRD DAY." The duration expressed here must be between 48 and 72 hours. According to this verse it could not have been past 72 hours, and Yeshua still rise THE THIRD DAY. And it could not be Friday sunset to Sunday sunrise, because that is only 36 hours, carrying us into the middle of the second day, AFTER He was killed.

In Matthew 27:63 Yeshua is quoted as saying, "AFTER THREE DAYS I will rise again." This cannot possibly be figured as less than 72 full hours.

And in John 2:18-22, "Yeshua answered and said unto them, Destroy this temple, and IN three days I will raise it up ... but HE spake of the temple of his body." To be raised up IN three days after being destroyed, or crucified and buried, could not be more than 72 hours.

If we are to accept all the testimony of THE SCRIPTURES, we must conclude that Yeshua was a full three days and three nights – three full 24-hour days – 72 hours in the grave or the only supernatural proof He gave must fail.

The TIME OF DAY of the Resurrection

Now notice carefully this fact: In order to be three days and three nights – 72 hours – in the tomb, our Lord had to be resurrected at exactly THE SAME TIME OF DAY that His body was buried in the tomb!

Let us realize that very vital fact.

If we can find the TIME OF DAY of the burial, then we have found the TIME OF DAY of the resurrection! If the burial, for instance, was at sunrise, then in order to be left an even three days and three nights in the tomb, the resurrection likewise had to occur at sunrise, three days later. If the burial were at noon, the resurrection was at noon. If the burial was at sunset, the resurrection was at sunset, three days later.

Yeshua cried on the cross soon after "the ninth hour" or three o'clock in the afternoon. (Matt. 27:46-50; Mark 15:34-37; Luke 23:44-46).

The crucifixion day was called "the preparation," or day before "the sabbath." (Matt. 27:62; Mark 15:42; Luke 23:54; John 19:14). This day ended at sunset, according to Scriptures reckoning (Lev. 23:32).

Yet Yeshua was buried before this same day ended – before sunset. (Matt. 27:57; Luke 23:52-54). John adds, "There laid they Yeshua, therefore, because of the Jews' preparation day." According to the laws observed by the Jews all dead bodies must be buried before the beginning of a Sabbath or feast day. Hence Yeshua was buried BEFORE SUNSET on the same day He died. He died shortly after 3 p.m.

Therefore – notice carefully – the BURIAL OF MESSIAH'S BODY WAS IN THE LATE AFTERNOON! It was between 3 p.m. and sunset as these Scriptures prove.

And since the RESURRECTION had to occur at the SAME TIME OF DAY, three days later, THE RESURRECTION OF MESSIAH OCCURRED, not at sunrise, but IN THE LATE AFTERNOON, near sunset! Startling as this fact may be, it is the PLAIN SCRIPTURES TRUTH!

If Yeshua rose at any other time of day, He could not have been three days and three nights in His grave. If He rose at any other time of day, He failed to prove, by the only sign He gave that He was the true Messiah, the Son of the living Creator! Either He rose near the END of a day near sunset, or else He is not the Messiah! He staked His claim on that one and only sign!

So a time-honored tradition must be shattered! Let us praise Yahweh for His TRUTH which has been preserved through the dark ages, so that the true light may now shine forth, if our hearts and minds are still willing to receive it! Praise His name! Do you LOVE the TRUTH as it is revealed, or despise it and love the traditions you have heard? "Whosoever despiseth the Word shall be destroyed!" Let us say with David, "How precious also are THY thoughts unto me, O Yahweh!"

What Day Was the Resurrection?

Now which DAY OF THE WEEK was the resurrection day? The first investigators, Mary Magdalene and her companions, came to the sepulchre on the first day of the week (Sunday) very early, while it was yet dark, as the sun was beginning to rise, at dawn. (Mark 16:2; Luke 24:1; John 20:1).

Now here are the texts most people have SUPPOSED stated the resurrection was at sunrise Sunday morning. But they do not say that!

When the women arrived, the tomb was already OPEN! At that time Sunday morning while it was yet dark – YESHUA WAS NOT THERE! Notice how the angel says "HE IS NOT HERE, BUT IS RISEN!" See Mark 16:6; Luke 24:3; John 20:2; Matt. 28:5-6.

Yeshua was ALREADY RISEN at sunrise Sunday morning! Of course He was. He rose from the grave IN THE LATE AFTERNOON, near SUNSET!

And since we know the resurrection was just shortly prior to that Sunday morning, and that it occurred in the late afternoon of the day, we now may know THE RESURRECTION OF MESSIAH OCCURRED LATE SATURDAY AFTERNOON.

The Sabbath day ended at sunset. It was late on that day, before the beginning of the first day of the week. It was not, then, a Sunday resurrection at all - it was a Sabbath resurrection!

Did Messiah Fulfill His Sign?

Now all this is based on the supposition that Yeshua did fulfill His only SIGN of being three days and three nights in the grave. All our evidence is based on the claims of Yeshua BEFORE His crucifixion. But some of the higher critics and doctors of divinity tell us that Yeshua made a mistake – that He was only in the tomb HALF AS LONG as He expected to be. Let us have PROOF as to whether He did spend the exact amount of time in the grave He said He would.

Notice that in Matt. 28:6, THE ANGEL OF ELOHIM gives this testimony, which we now present as EVIDENCE! "He is not here: for He is risen, AS HE SAID." And He certainly did not rise AS HE SAID unless He rose at the precise TIME that He had said! So we have the proof of the ANGEL OF ELOHIM, recorded in the sacred WORD OF YAHWEH that Yeshua did fulfill His sign – He was three days and three nights in the earth – He did rise Sabbath afternoon, and not Sunday morning!

Another proof that Messiah was in the grave the full length of time He expected to be is found in 1 Cor. 15:3-4.

"For I delivered unto you first of all that which I also received, how that Messiah died for our sins ACCORDING TO THE SCRIPTURES: And that He was buried, and that He rose again the third day ACCORDING TO THE SCRIPTURES."

His death and burial were ACCORDING TO THE SCRIPTURES – NOT CONTRARY TO THEM.

The THIRD DAY following His Wednesday burial was the Sabbath; THREE FULL DAYS spent in the grave ended Saturday afternoon just prior to sunset, not Sunday morning.

Which Day Was the Crucifixion?

It is not difficult now to determine the day on which Yeshua was crucified. Counting back three days from the Sabbath when He rose, we come to Wednesday, the fourth or very middle day of the week.

Yeshua was crucified on WEDNESDAY, the middle day of the week, He died on the cross shortly after 3 p.m. that afternoon, was buried before sunset Wednesday evening. Now COUNT the THREE DAYS and THREE NIGHTS. His body was Wednesday, Thursday and Friday NIGHTS in the grave -- THREE NIGHTS. It also was there through the daylight part of Thursday, Friday and Saturday – THREE DAYS. He rose Saturday – the Sabbath – late afternoon, shortly before sunset, at the same TIME OF DAY that He was buried! And Sunday morning at sunrise He was NOT THERE – HE WAS ALREADY RISEN!

It is significant that in Daniel's prophecy of the "Seventy weeks" (Dan 9:24-27), Yeshua was to be cut off "in the midst of the week." While this prophecy has the application of a day for a year, so that this 70th week became a literal seven years, Messiah being "cut off" after three and a half years' ministry, as He was, yet it is significant that He was also "cut off" ON THE MIDDLE DAY OF A LITERAL WEEK!

WHAT Sabbath Followed the Crucifixion?

Now to come to an objection some may raise, yet the very point which PROVES this truth! Perhaps you have noticed that the Scriptures say the day AFTER the crucifixion was a SABBATH! Hence, for centuries, people have blindly assumed the crucifixion was on Friday!

Now we have shown by all four Gospels that the crucifixion day – Wednesday – was called "the preparation." The preparation day for THE SABBATH. But for WHAT Sabbath?

John's Gospel gives the definite answer: "It was the preparation of the PASSOVER."

"For that Sabbath day was an HIGH DAY." (John 19:14, 31).

Just what is a "HIGH DAY"? Ask any Jew! He will tell you it is one of the annual set apart days, or feast days. The Israelites observed seven of these every year – every one called SABBATHS! Annual Sabbaths, falling on certain annual calendar dates, and on different days of the week in different years, just like the Roman holidays now observed. These Sabbaths might fall on Monday, on Thursday, or on Sunday.

If you will notice the following texts, you will see these annual set apart days were all called Sabbath days: Lev. 23:24; Lev. 16:31; Lev. 23:39; Lev. 23:15; Lev. 23:26-32.

Notice Matthew 26:2: "Ye know that after two days is the Passover, and the Son of man is betrayed to be crucified." And if you will follow through this chapter you will see that Yeshua was crucified ON THE PASSOVER!

And what was THE PASSOVER? It was the ancient day of Israel commemorating their deliverance from Egypt, and picturing to them the crucifixion of Messiah and their deliverance from sin. In the twelfth chapter of Exodus you will find the story of the original Passover. The children of Israel killed the lambs, and struck the blood over the door-posts and on the side-posts of their houses, and wherever the blood had thus been applied the death- angel PASSED OVER that house, sparing it from death. Following the Passover, was a set apart convocation or annual Sabbath.

Observe the dates: "And in the fourteenth day of the first month is THE PASSOVER of Elohim. And in the fifteenth day of this month is the FEAST." (Num. 28:16-17).

The Passover lamb, killed every year on the 14th of the first month called "Abib," was a type of Messiah, the Lamb of Yahweh that taketh away the sin of the world. Messiah is OUR PASSOVER, sacrificed for us. (1 Cor. 5:7).

YESHUA WAS SLAIN ON THE VERY SAME DAY THE PASSOVER HAD BEEN SLAIN EVERY YEAR! He was crucified on the 14th of Abib, the first Hebrew month of the year! And this day, the PASSOVER, was the day before, and the preparation for, THE FEAST day, or annual highday Sabbath, which occurred on the 15th of Abib. THIS Sabbath might occur an ANY day of the week. Frequently it occurs, even today, and is observed by the Jews, on THURSDAY. The Jews observed this "high-day Sabbath on Thursday, 1952 and did again in 55, 59, and 62.

And the Hebrew calendar shows that in the year Yeshua was crucified, the 14th of Abib, Passover day, the day Yeshua was crucified, was WEDNESDAY. And the annual Sabbath was THURSDAY. This was the Sabbath that drew on as Joseph of Arimathea hastened to bury the body of Yeshua late that Wednesday afternoon. THERE WERE <u>TWO SEPARATE SABBATHS THAT WEEK</u>!

Honest Objections Examined

Someone is sure to notice Mark 16:9, thinking this text says the resurrection was upon Sunday. But if you read the whole sentence, it does not say that at all. The expression "was risen" is in the perfect tense. What was Yeshua' condition early the first day of the week? Does it say he "was rising" or that He "did rise" from the grave? No, early the first day of the week, at the time He appeared to Mary Magdalene, He WAS RISEN. Of course He was! He had risen the late afternoon before, so naturally He WAS RISEN Sunday morning. The text does not in any way refute the scores of other texts we have given.

Another passage that might confuse, is Luke 24:21:" ... and besides all this, today is the third day SINCE THESE THINGS WERE DONE." "These things" included all the events pertaining to the resurrection – the seizing of Yeshua, delivering Him to be tried, the actual crucifixion, and, finally the setting of the seal and the watch over the tomb the following day, or Thursday. Study verses 18-20, telling of "these things" and also Matt. 27:62-66. "These things" were not completed until the watch was set, Thursday. And the text says Sunday was the third day SINCE THESE THINGS were done. These things were not done until Thursday, and Sunday truly was the third day since Thursday. But it was not the third day since FRIDAY, so this text could not prove a Friday crucifixion.

The Final Proof

There is yet one **final clinching PROOF** of this amazing truth.

A vital text proving that there were two Sabbaths in that week has been obscured by almost every translation into English. Only the Berean Literal Bible and Ferrar Fenton's version has this point correct.

Turn to Matthew 28:1. In the common versions it says, "In the end of the Sabbath," or more correctly, "after the Sabbath." Notice that both of these renderings use the singular – Sabbath. But in the original Greek the word is in the <u>PLURAL</u>. The Berean Literal Bible and Fenton's render it correctly by saying, "After the <u>SABBATHS</u>," (although Fenton's remaining part of the verse he has not translated quite correctly. In a foot-note to this text, he says, "The Greek original is in the plural, 'Sabbaths'.")

According to Mark 16:1, Mary Magdalene and her companions did not buy their spices to anoint the body of Yeshua until <u>AFTER THE SABBATH WAS PAST</u>. They could not prepare them until AFTER this – yet after preparing the spices THEY RESTED THE SABBATH DAY ACCORDING TO THE COMMANDMENT! (Luke 23:56).

Study these two texts carefully.

There is only one possible explanation: After the <u>annual high-day Sabbath</u>, the feast day of the days of unleavened bread – which was Thursday – these women <u>purchased and prepared their spices on FRIDAY</u>, and then they rested on the weekly Sabbath, Saturday, according to the Commandment! (Exodus 20:11).

A comparison of these two texts PROVES there were <u>TWO Sabbaths that week, with a DAY IN BETWEEN</u>. Otherwise, these texts contradict themselves.

The PLAIN TRUTH concerning the crucifixion and the resurrection of Messiah is fast sweeping the world. Thousands are coming to see it. This truth has been published in the Sunday School Times. The Oxford University Press, in the "Companion" Scriptures, publish a table proving this newly-revealed truth of the Scriptures.

We praise Yahweh that though the truths of His Word became trampled upon and LOST through the dark ages of superstition, apostasy, and counterfeit doctrines, that the ORIGINAL TRUTH has been carefully preserved in THE SCRIPTURES ITSELF. We can STUDY to show ourselves approved unto Yahweh, and seek out and FIND these long- hidden truths IN THE SCRIPTURES.

What a wonderful study it is! How precious is HIS WORD! All the Truth has not YET been brought to light. Let us press on, and seek and find more and more! Let us feed upon the pure WORD OF YAHWEH! Let us not reject the true light, or Yahweh will certainly reject us! Let us rejoice in it, with praise and thanksgiving!

Yeshua's Resurrection When?

Havienu L'Shalom - Hebrew Calendar Hebrew Year 4030, Jewish Calendar Year 3790 years from Adam Note 240 years removed from Jewish Calendar in 135 CE

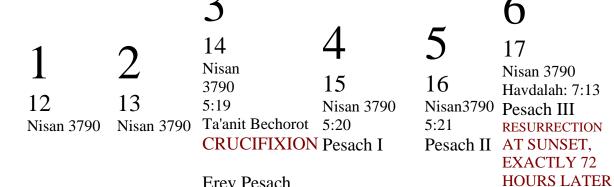
The algorithms for hebcal ver. 3.10 were taken from Emacs 19's calendar routines by Edward M. Reingold and Nachum Dershowitz. http://www.knowledgengineers.com/Havienu/html/vestibule/hebcalmonthview.html Documentation and References at the end of this Article

April in the Year AD 30

Sunday

Monday Tuesday Wednesday Thursday Friday Saturday

11 Nisan 3790



Erev Pesach

7 18 Nisan 3790 Pesach IV FEAST OF FIRSTFRUITS	8 19 Nisan 3790 Pesach V	9 20 Nisan 3790 5:2 Pesach VI	10 21 Nisan 3790 5:24 Pesach VII	11 22 Nisan 3790 Havdalah: 7:17	12 23 Nisan 3790 5:25	13 24 Nisan 3790 Havdalah: 7:18 Shmini
14 25 Nisan 3790	15 26 Nisan 3790	16 27 Nisan 3790	17 28 Nisan 3790	18 29 Nisan 3790	19 30 Nisan 3790 Rosh Chodesh 6:30	20 1 Iyyar 3790 Rosh Chodesh Havdalah: 8:23 Tazria-Metzora
21 2 Iyyar 3790	22 3 Iyyar 3790	23 4 Iyyar 3790	24 5 Iyyar 3790	25 6 Iyyar 3790	26 7 Iyyar 3790 6:35	27 8 Iyyar 3790 Havdalah: 8:28
28 9 Iyyar 3790 Sunday	29 10 Iyyar 3790 Monday	30 11 Iyyar 3790 Tuesday	Wednesday	Thursday	Friday	Saturday

This calendar, for the month of April and/or Nisan (YEAR AD 30), has Nisan 14 on Wednesday, APRIL 3RD. Here is what is amazing. Pontius Pilate wrote to the Roman Emperor, in an attempt to explain the reason for having Yeshua, Jesus, crucified. Pontius Pilate wrote the letter, and at the end of the letter, he dates the writing: "THE 5TH OF THE CALENDS OF APRIL." The word "calends" has reference to the first of a month, thus it appears to mean the 5th day of the beginning of April.

Since this letter is in the British Museum in London, it appears authentic. This means that whenever Nisan 14, the day of the crucifixion, was \rightarrow it had to be BEFORE APRIL 5th!! This authenticates the year of AD 30, when according to the above calendar, Nisan 14 was on APRIL 3 \rightarrow JUST TWO DAYS BEFORE THE LETTER WAS WRITTEN ON APRIL 5TH. That is the calendar shown above. It makes perfect sense that Pontius Pilate would, almost immediately, (2 days later), write the Emperor, explaining what he did, and try to explain why.

Crucifixion	Resurrection
29AD Nisan 14 Saturday	April 14 Nisan 17 Tuesday April 17
30AD Nisan 14 Wednesday	April 3 Nisan 17 Saturday April 6
31AD Nisan 14 Monday	March 24 Nisan 17 Thursday March 27
32AD Nisan 14 Monday	April 12 Nisan 17 Thursday April 15
33AD Nisan 14 Friday	April 1 Nisan 17 Monday April 4

One of the most well known facts of history is the death, burial, and resurrection of Yeshua the Messiah, Jesus the Christ. Scholars have long argued the time frame between AD 29 and AD 33 as the time of the crucifixion and resurrection of the Messiah. It is one of the most well documented facts of history that He died on a Roman Cross, and in 3 days rose again from the dead. There has always been a cloud of uncertainty regarding the exact day and year. The fact of the resurrection of the Messiah gives a blessed hope to all mankind.

Computers are great tools for study, research, and calculations. Modern calendar computer programs, some of which were developed for the space program and astronomy, have allowed us to know the exact date for these most historic events.

We can now know that there is only one date that agrees with all the Gospel accounts. That date agrees with our modern Roman Gregorian calendar, Hebrew calendar, the modified Jewish calendar, and also the letter of Pontius Pilot, written on April 5, AD 30.

The Messiah died on a Roman cross in Jerusalem on Nisan 14, on Wednesday, April 3, in AD 30. In 3 days and 3 nights, exactly 72 hours later Yeshua the Messiah rose from the dead.

Calendrical calculations are based on hebcal calendar calculation progam version 3.20:

Jewish Calendar References

The algorithms for hebcal were taken from Emacs 19's calendar routines by Edward M. Reingold and Nachum Dershowitz. Their program is extremely clear and provides many instructive examples of fine calendar code in emacs-LISP.

Edward M. Reingold's Calendar Book, Papers, and Code

Calendrical Calculations

By Nachum Dershowitz and Edward M. Reingold.

Cambridge University Press, 1997.

A unified, algorithmic presentation is given for the Gregorian (current civil), ISO, Julian (old civil), Islamic (Moslem), Hebrew (Jewish), Persian, Coptic, Ethiopic, Bahai, Mayan, French Revolutionary, Chinese, and Hindu calendars. Easy conversion among these calendars is a byproduct of the approach, as is the determination of secular and religious holidays. Calculations of lunar phases, solstices, equinoxes, sunrise, and sunset are described as well.

Implementing Solar Astronomical Calendars

By Nachum Dershowitz and Edward M. Reingold.

Birashkname (Musa Akrami, editor), University of Shahid Beheshti, 1998.

In this note we describe a unified implementation of calendars whose year is based on the astronomical solar cycle – that is, on the precise solar longitude at a specified time. For example, the astronomical Persian calendar begins its new year on the day when the vernal equinox (approximately March 21) occurs before apparent noon (the middle point of the day, not clock time) and is postponed to the next day if the equinox is after apparent noon. Other calendars of this type include the French Revolutionary calendar and the future form of the Bahai calendar. Our approach also offers a slight simplification to the implementation of the Chinese lunisolar calendar. (PostScript; 7 pages)

Line Drawing and Leap Years

By Mitchell A. Harris and Edward M. Reingold.

submitted for publication.

Bresenham's algorithm minimizes error in drawing lines on integer grid points; leap year calculations, surprisingly, are a generalization. We compare the two calculations, and show how to compute directly, without iteration, individual points of a Bresenham line. We also discuss an unexpected connection of the leap year/line pattern with Euclid's algorithm for computing the greatest common divisor. (PostScript; 18 pages)

Conversion To and From Other Calendars

The Emacs calendar displayed is always the Gregorian calendar, sometimes called the "new style" calendar, which is used in most of the world today. However, this calendar did not exist before the sixteenth century and was not widely used before the eighteenth century; it did not fully displace the Julian calendar and gain universal acceptance until the early twentieth century.

The Emacs calendar can display any month since January, year 1 of the current era, but the calendar displayed is the Gregorian, even for a date at which the Gregorian calendar did not exist.

While Emacs cannot display other calendars, it can convert dates to and from several other calendars.

Supported Calendar Systems

The ISO commercial calendar is used largely in Europe.

The Julian calendar, named after Julius Caesar, was the one used in Europe throughout medieval times, and in many countries up until the nineteenth century.

Astronomers use a simple counting of days elapsed since noon, Monday, January 1, 4713 B.C. on the Julian calendar. The number of days elapsed is called the Julian day number or the Astronomical day number.

The Hebrew calendar is the one used to determine the dates of Jewish holidays. Hebrew calendar dates begin and end at sunset.

The Islamic (Moslem) calendar is the one used to determine the dates of Moslem holidays. There is no universal agreement in the Islamic world about the calendar; Emacs uses a widely accepted version, but the precise dates of Islamic holidays often depend on proclamation by religious authorities, not on calculations. As a consequence, the actual dates of occurrence can vary slightly from the dates computed by Emacs. Islamic calendar dates begin and end at sunset.

The French Revolutionary calendar was created by the Jacobins after the 1789 revolution, to represent a more secular and nature-based view of the annual cycle, and to install a 10-day week in a rationalization measure similar to the metric system. The French government officially abandoned this calendar at the end of 1805.

The Maya of Central America used three separate, overlapping calendar systems, the long count, the tzolkin, and the haab. Emacs knows about all three of these calendars. Experts dispute the exact correlation between the Mayan calendar and our calendar; Emacs uses the Goodman-Martinez-Thompson correlation in its calculations.