Topic: The Creation Sabbath

Introduction: These notes are a combination of some files dealing with the subject of the Sabbath from the Creation of the world to today. They examine such issues as:- How Christians can be sure that today's seventh-day of the week, Saturday, is the Creation Sabbath that God blessed? The Julian/Gregorian calendration system and ways of calculating the different days of the week. The calendration system God gave to the Hebrew people so they could align the year to their Passover festival. What changes have been made to our calendar over the years and the implications of these changes on our weekly cycle. An examination of the early records of the Sabbath from creation to the time of Jesus Christ's crucifixion. And the actual date of the crucifixion Sabbath.

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Part 1: The Creation of Time

1.1 The Beginning of Time:

Some people might have difficulty believing that space and time haven't always been there. That there might have been an occasion in the universe when only God existed and nothing else is too much for some minds to handle. Yet scripture says of Jesus that, "All things were made through Him, and without Him nothing was made that was made." [John 1:1-3]. Paul, when writing to the Ephesians, backs up John's statement with, "...God who created all things through Jesus Christ." leaving us in no doubt as to who this author of the universe is.

Now just in case you're left wondering about all those invisible entities in our world such as time, gravity, space and the like, Paul says by Him, "...all things were created that are in heaven and that are on earth, visible and invisible, whether thrones or dominions or principalities or powers. All things were created through Him and for Him." [Col. 1:16]. So it is an inescapable conclusion that Jesus made time as well as the Sabbath!

The First Day: Moses opens his record of the creation event with an interesting statement, he says, "Then God said, Let there be light; and there was light. And God saw the light, that it was good; and God divided the light from the darkness. God called the light Day, and the darkness He called Night. So the evening and the morning were the first day." [Gen. 1:3-5].

There's a lot of information packed in these verses. Firstly, the episode of this day began in darkness [see v. 2, "darkness was on the face of the deep"]. Standing in the midst of this darkness, Jesus commanded that there be light and He divided this light from the darkness. It doesn't say how this was done, but here we have the first two parcels of worldly time --- Daytime & Night time.

Now night time is "the period of darkness from sunset to sunrise." [Webster's New World Dictionary]. And Moses begins this day with the darkness; he says, "...the evening [sunset] and the morning [sunrise] were the first day" of the what? We've come to say, of the week, but that's not the case here. It was the first day of time for this world; it was the first day ever. And the same thing goes on for the second, third, fourth, fifth day etc all the way to the sixth.

The First Week: Then a change in proceedings takes place. God does nothing; He rests! And Moses writes, "...And on the seventh-day God ended His work which He had done, and He rested on the seventh day from all His work which He had done. Then God blessed the seventh day and sanctified it, because in it He rested from all His work which God had created and made." [Gen. 2:2-3].

There is no mention of the eighth day, the ninth, or the one million nine hundred and fifty-seventh. The count stops at seven. After Israel's Exodus from Egypt, when God gave Moses His law at Sinai, He wrote in it, "...Remember the Sabbath day, to keep it holy. Six day you shall labour and do all your work, but the seventh day is the Sabbath of the Lord your God. In it you shall do no work:... For in six days the Lord made the heavens and the earth, the sea, and all that is in them, and rested the seventh day. Therefore the Lord blessed the Seventh day and hallowed it." [Ex. 20:8-11]. To keep this command required God's people to track every cycle of seven days from the beginning of the world.

So what's happened here in Genesis? When God rested on the seventh day and set it apart for human worship, He established the second parcel of time, what we have come to call a week. Seven cycles of sunset to sunset [Lev. 23:32 and Mark 1:32] make a week. On the week's origin the Britannica says, "The week is a period of seven days, having no reference whatever to the celestial motions - a circumstance to which it owes its unalterable uniformity .... It has been employed from time immemorial in almost all Eastern countries; and as it forms neither [a] ... part of the year nor the lunar month, those who reject the Mosaic recital will be at a loss, as Delambre remarks, to assign to it an origin having much semblance of probability." [The Encyclopaedia Britannica, Vol. 4, p. 988, (Ed. 11) art. "Calendar"].

"One of the most striking collateral confirmations of the Mosaic history of the creation, is the general adoption of the division of time into weeks, which extends from the Christian states of Europe to the remote shores of Hindustan, and has equally prevailed among the Hebrews, the Egyptians, Chinese, Greeks, Romans, and northern barbarians-nations, some of whom had little or no intercourse with others, and were not even known by name to the Hebrews." [Horne, Introduction to the Critical Study and Knowledge of the Holy Scriptures, Vol. 1, p. 163 (ed. 1825)].

Josephus said, "There is not any city of the Grecians, nor any of the barbarians, nor any nation whatsoever, whither our custom of resting on the seventh day hath not come." [Book 2, par. 40, in Works of Flavius Josephus (Winston edition) p. 899].

The "Week is a division of time which includes seven days. We do not know exactly how this man-made division of time came into being, but the ancient Hebrews were among the first to use it. The book of Genesis in the Bible says that the world was created in six days and the seventh day, or Sabbath, was a day of rest and worship." [The World Book Encyclopaedia, Vol. 21, (ed. 1976), p. 146].

What has happened is, from the creation of Adam and Eve, humans have kept the seven day cycle as a way of measuring time. Scripture mentions it at the time of Jacob; Laban told him to, "Fulfil her [Leah's] week, and we will give you this one also...." [Gen. 29:27]. The Hebrew "shâbûwa‘" literally means "sevened" or week. The verse indicates sevens were being tracked from the earliest time.

The truth of the matter is, God created the week as the second parcel of time He made when He completed the world. From that time forward, men have tracked these parcels of seven as a part of their system of time. So, rather than a peculiarity of nature, the week is a repeated reminder of a decree of God.

There is one last interesting thing about the week and religion before we move on and that is, if sin hadn't entered the world, this seventh day Sabbath would have been the only memorial the Church would have had as a reminder that God was our Creator. This is something that people who want to emphasise the first day, as well as evolutionists, would take away from us.

1.2 Signs and Seasons of Time:

On the fourth day God said, "Let there be lights in the firmament of the heavens to divide the day from the night; and let them be for signs and seasons, and for days and years...." [Gen. 1:14]. It should be noted that only days and years were defined by these heavenly bodies according to this statement in Genesis.

Defining a Day: by the Biblical account we discover that it goes from sunset to sunset. [Lev. 23:32 and Mark 1:32]. Apparently the literal Hebrew account in Genesis one reads, "There was evening, there was morning, day one." [v. 5]; "there was evening, there was morning, day two." [v. 8] etc. This would be the equivalent of our day of twenty-four hours going from midnight to midnight. Which we are told is the time it takes for the earth to complete one revolution on its axis.

There is a discrepancy between our day and the Biblical definition that we should be aware of. Those of us who make a note of when the sun sets each day are soon made aware of the fact that the time changes with each sunset. Astronomers have also seen this discrepancy. By tracking the time it takes the earth to revolve from and come back to a certain fixed point in the sky, they have measured a time difference of almost 4 minutes short of our 24 hour day. A fact which explains why sunset and sunrise times keep changing day by day. We will be looking further into this discrepancy shortly.

For now all we need to keep in mind is that a day can be represented by two periods of time depending on whether we are referring to a Solar or Zodiac day. The difference, as we have said, is about 4 minutes.

Defining the Year: is still a matter of referring to the sun; only this time it is the amount of time it takes for the earth to complete one circuit around the sun. However, in Genesis' verse speaking of days and years, there is reference to the moon as well as to seasons. In our chapter we will see how God gave Israel a more complex method of calculating a year based, not only on the sun, but the moon and barley harvest, but first lets sort out our system.

In our Western society time runs around a tidy 360° system. What our ancestors have done is to view an imaginary belt running around the world to which they gave the name, the Zodiac belt. This belt is divided into twelve segments having the names: Aries [Ram], Taurus [Bull], Gemini [Twins], Cancer [Crab], Leo [Lion], Virgo [Virgin], Libra [Balance], Scorpio [Scorpion], Sagittarius [Archer], Capricorn [Goat], Aquarius [Water Carrier], and Pisces [Fish]. All these names apply to twelve groups of fixed stars which form a band passing around the earth.

As viewed from the earth, it appears that the sun and moon trace an apparent orbit about this belt giving rise to the concept of time as:

Year: a 360° orbit of the belt by the sun.
Month: a 360° orbit of the belt by the moon.
Day: a 360° turn of the earth around its axis as plotted against this belt.

Therefore, depending on which movement we are plotting, a 360° circuit of this belt can represent a day, month, or year. Note: a year is really the orbit of the sun by the earth but for the purpose of measuring time it is taken as though we are standing on a single point looking out into space.

Now it is easy to visualise what is being said here if we picture an analogue clock with three hands. Each of these three hands are going to circumnavigate the dial for 360° to produce a different unit of time. If we use the 12 hour position for our fixed point in space, and follow the progress of the second hand around the clock face from the 12 and back again we will have watched the clock for 60 seconds or one minute. Now repeat that process with the minute hand going from 12 and back to 12 and you will have watched the movement of this minute hand for 60 minutes or one hour. Finally, if we were patient enough to trace the little hand through the same 360° orbit we would have waited through a 12 hour period, or half of the time it takes the earth to revolve around its axis.

Discrepancies in Measuring Time: Unfortunately the solar clock, with its apparent 360° orbits of the Zodiac belt, isn't quite so cooperative as its mechanical counterpart --- the clock. There are anomalies. Take the example of a day. The earth revolves once on its axis to produce a day. But if we lined up the sun with a spot on the Zodiac belt and said to ourselves, When we come back to this exact same spot the earth will have completed one revolution around its axis and that will be a day, we would find an interesting discrepancy between our position and the position of the sun.

The reason for this is as our earth is spinning on its one revolution around its axis it is also travelling along its orbit around the sun. This causes the sun's apparent position on the Zodiac belt to move so that if the sun appeared to be at the point of the vernal equinox when we began our test, when we returned to that same point, we would find that the sun had moved a few degrees off to our west. The end result of all this movement, is the solar day is 23 hours, 56 minutes and 4.09 seconds whereas our Zodiac day is 24 hours exactly.

<u>**Discrepancy List between Zodiac and Solar time:**</u>

Day: **Solar** = 23 hours, 56 minutes, and 4.09 seconds.
Zodiac = 24 hours.

Month: **Solar** = 29 days, 12 hours, and 44 minutes.
Zodiac = 30 days, and 10 hours average for a 365 day year.

Year: **Solar** = 365 days, 6 hours, 9 minutes, and 9.54 seconds.
Zodiac = 365 days, and 6 hours.

The Moving Seasons: The effect of these discrepancies between the apparent movements of the celestial bodies governing our days, months and years and their natural movements was to cause the seasons to move backwards through our calendar so that spring, for instance, came earlier each year. Sometime around 45 BC Julius Caesar shifted the beginning of the Roman calendar from the 1st of March to the 1st of January in order to re-align the seasons. This same problem of retrograde movement caused Pope Gregory in 1582 AD to remove 10 days from October so the equinox [the time the sun passes over the equator making night and day of equal length] would return to the 21st of March.

When looking at the verse in Genesis regarding the sun and moon being placed in the sky for marking days and year, Moses also noted that they were to mark seasons. Now I'm no gardener, and I don't have gardening know-how, but I spoke to a person who is experienced in that field and was assured that plants respond to the cycles of the year as indicated by the positions of the sun and moon. Apparently parsley, no matter when it is planted, will flower at a certain time. Wheat, ripens at a certain time of the year. Gardening catalogues will tell you to plant certain things in spring, others in autumn, etc.

The interesting thing about this vegetation and the cycles of the sun and moon is when God gave a system of calendration to the Jews, He combined two methods of calculating the year so as to keep the seasons in line with the year. The Jewish calendar always moved with the seasons. In our next file we'll look at how their system worked.

Part 2: The Julian/Gregorian Calendration System.

2.1 The Basis of Our Calendar:

Under the Julian/Gregorian [J/G] calendar we have two kinds of years; a common year of 365 days and a leap year of 366 days. This system has come about because as we have already seen the Zodiac year is 6 hours longer than 365 days. So by accumulating the 6 hours for three years, and adding to them the 6 hours belonging to the fourth year we can adjust our Zodiac discrepancy with an extra day in the month of February every fourth year.

Common & Leap Years: This means that in our system of calendration a common year is made up of 52 weeks and 1 day, and in a leap year the calendar will show 52 weeks and 2 days. The effect of this on the days of the week is: for a common year the calendar will change by one day. That means if the 1st of January, in a common year, begins on a Sunday the next year's 1st of January will start on a Monday. If our Sunday 1st of January was in a leap-year then the next year would begin on Tuesday for leap years contain two extra days.

It takes three common years and one leap year to accumulate enough of the 6 hourly Zodiac discrepancies to make an extra day which when added to the 1 day a year exceeds 52 weeks means every four years 3 common years and 1 leap year will produce 5 extra days for the four year period; [i.e. 3 common years= 3 days + 1 leap year = 2 days].

Repeating the Days: Now what we want to know is, with 5 extra days being added to the common/leap year cycle every 4 years, how long will it take before the calendar returns to the position where the 1st of January cycles repeat themselves exactly? To keep things simple let's label the common years "C" and the leap years "L." This means that a C+C+C+L= 5 extra days every 4 years.

Therefore, with 5 extra days being generated every 4 years, and with 7 being the number of days in a week --- the first possible occasion when the same pattern of CCCL will repeat itself is in any year that the accumulating 5 days is divisible by 7; (the number of days in a week). For example the 1st leap year cycle of 4 years will give you a surplus of 5 days meaning year 5 wont start on a Sunday but a Friday. The second leap year cycle would finish with a 10 day surplus in year 8; but year 9 doesn't start with Sunday but Wednesday. The 3rd gives you a 15 day surplus and its following year begins on a Monday.

Now the first time the accumulating number of 5 days is equally divisible by 7 is when they total 35 days [7x5 = 35] and, as there are 5 days accumulating every 4 years it takes 28 years [7x4, with each 4 being equal to 5 days, = 28 years] for the cycle to repeat itself. The advantage of this piece of information is we can now create a table of 28 years [beginning with Saturday as our purpose here is to track the Sabbath] which will tell us what day of the week any date fell on once we relate it to this cycle. Saturday has been bolded in the following table.

2.2 Table I: The 28-year Cycle:

Cycle Year	Year type	Jan. 1 Day
1	C	**Sat**
2	C	Sun
3	C	Mon
4	L	Tue
5	C	Thu
6	C	Fri
7	C	**Sat**
8	L	Sun
9	C	Tue
10	C	Wed
11	C	Thu
12	L	Fri
13	C	Sun
14	C	Mon

Cycle Year	Year type	Jan. 1 Day
15	C	Tue
16	L	Wed
17	C	Fri
18	C	**Sat**
19	C	Sun
20	L	Mon
21	C	Wed
22	C	Thu
23	C	Fri
24	L	**Sat**
25	C	Mon
26	C	Tue
27	C	Wed
28	L	Thu

Having established our 28-year cycle we need a couple more tables to handle the changes which occur in the days of the month. In our system it is obvious that the 1st day of the month can fall on any day of the week from Sunday to Saturday, but on whatever day the month begins it will follow the same sequence of days to the end of the month. This enables us to create a table giving all the possible combinations for the days of any month. Table II gives us the complete list of all the combinations.

2.3 Table II: The Combinations for All Week Days:

In the following table the numbers down the left hand column [1, 2 ,3, 4, 5, … to 31] are the days of the month and the numbers in the first row [1st, 2nd, 3rd, 4th, … to 7th] refer to all the possible names for a day of the week. As there are 7 days in a week, each day has a possible 7 locations. However, once a day's name has been selected for the beginning of the month, each day of the week must follow on in its normal way.

For example in the table below the 1st option for the 1st day of the week is given as Sunday. Therefore the 2nd day of the month is Monday and the 11th is Wednesday. However, if the 1st day of the month were the 4th option [Wednesday] then the 2nd of the month would be Thursday, and the 11th day would be Saturday [see the row marked day 11 and the column marked 4th option].

Day	1st	2nd	3rd	4th	5th	6th	7th
1	Sun	Mon	Tue	Wed	Thu	Fri	**Sat**
2	Mon	Tue	Wed	Thu	Fri	**Sat**	Sun
3	Tue	Wed	Thu	Fri	**Sat**	Sun	Mon
4	Wed	Thu	Fri	**Sat**	Sun	Mon	Tue
5	Thu	Fri	**Sat**	Sun	Mon	Tue	Wed
6	Fri	**Sat**	Sun	Mon	Tue	Wed	Thu
7	**Sat**	Sun	Mon	Tue	Wed	Thu	Fri
8	Sun	Mon	Tue	Wed	Thu	Fri	**Sat**
9	Mon	Tue	Wed	Thu	Fri	**Sat**	Sun
10	Tue	Wed	Thu	Fri	**Sat**	Sun	Mon
11	Wed	Thu	Fri	**Sat**	Sun	Mon	Tue
12	Thu	Fri	**Sat**	Sun	Mon	Tue	Wed
13	Fri	**Sat**	Sun	Mon	Tue	Wed	Thu
14	**Sat**	Sun	Mon	Tue	Wed	Thu	Fri
15	Sun	Mon	Tue	Wed	Thu	Fri	**Sat**
16	Mon	Tue	Wed	Thu	Fri	**Sat**	Sun
17	Tue	Wed	Thu	Fri	**Sat**	Sun	Mon
18	Wed	Thu	Fri	**Sat**	Sun	Mon	Tue
19	Thu	Fri	**Sat**	Sun	Mon	Tue	Wed
20	Fri	**Sat**	Sun	Mon	Tue	Wed	Thu
21	**Sat**	Sun	Mon	Tue	Wed	Thu	Fri
22	Sun	Mon	Tue	Wed	Thu	Fri	**Sat**
23	Mon	Tue	Wed	Thu	Fri	**Sat**	Sun
24	Tue	Wed	Thu	Fri	**Sat**	Sun	Mon
25	Wed	Thu	Fri	**Sat**	Sun	Mon	Tue
26	Thu	Fri	**Sat**	Sun	Mon	Tue	Wed
27	Fri	**Sat**	Sun	Mon	Tue	Wed	Thu
28	**Sat**	Sun	Mon	Tue	Wed	Thu	Fri
29	Sun	Mon	Tue	Wed	Thu	Fri	**Sat**
30	Mon	Tue	Wed	Thu	Fri	**Sat**	Sun
31	Tue	Wed	Thu	Fri	**Sat**	Sun	Mon

Now having created a table which gives us all the options for any day of the month, we need to co-ordinate these month days with all the other days in the year. For example: if Table I happened to be used for January and the 1st of January began on a Sunday then, in a common year, the 1st of February would be a Wednesday. We need a table to show these other month co-ordinates.

2.4 Table III:Common Year 1st Day Combinations:

In this table all the options given are for the 1st day of any of the months listed. This is because once we know the 1st day of any month Table II will give us the name of any other day. So in the table below the 1st of January is a Saturday and this would make the 1st of June a Wednesday [col. 2 row 6].

Jan	Sat	Sun	Mon	Tue	Wed	Thu	Fri
Feb	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Mar	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Apr	Fri	Sat	Sun	Mon	Tue	Wed	Thu
May	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Jun	Wed	Thu	Fri	Sat	Sun	Mon	Tue
Jul	Fri	Sat	Sun	Mon	Tue	Wed	Thu
Aug	Mon	Tue	Wed	Thu	Fri	Sat	Sun

Sep	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Oct	Sat	Sun	Mon	Tue	Wed	Thu	Fri
Nov	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Dec	Thu	Fri	Sat	Sun	Mon	Tue	Wed

Finally we need to repeat the data in this table to cater for leap years.

2.5 Table IV: Leap Year 1st Day Combinations:

It will be seen that in this table the months of January and February are the same as in Table III; this is because the effect of a leap year doesn't take place until after February's 28th day.

Jan	Sat	Sun	Mon	Tue	Wed	Thu	Fri
Feb	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Mar	Wed	Thu	Fri	Sat	Sun	Mon	Tue
Apr	Sat	Sun	Mon	Tue	Wed	Thu	Fri
May	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Jun	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Jul	Sat	Sun	Mon	Tue	Wed	Thu	Fri
Aug	Tue	Wed	Thu	Fri	Sat	Sun	Mon
Sep	Fri	Sat	Sun	Mon	Tue	Wed	Thu
Oct	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Nov	Wed	Thu	Fri	Sat	Sun	Mon	Tue
Dec	Fri	Sat	Sun	Mon	Tue	Wed	Thu

2.6 How to Use Tables I-IV:

The days are calculated from the tables according to the following four steps:

1. Divide the year by 28 [the remainder is the year of the 28-year cycle].
2. Table I will give you the date for the 1st of January.
3. Table III will give you the corresponding date from January for any other month. [If you are in a leap year use Table IV].
4. Table II will give you the day of the week for any day of the month.

Now as there have been some adjustments to our calendar which we will discuss later we will take an easy example for testing the above steps by using the crucifixion Sabbath as 31 AD.

Step 1 is to divide the year by 28 and get the remainder [1x28 = a remainder of 3]. Table I says in the 3rd year of a 28 year cycle the 1st of January will be a Monday. As 31 AD isn't divisible by 4 its a common year and not a leap year, so Table III tells us that if the 1st of January is a Monday then the 1st of April will be a Sunday. Now if the 1st of a month begins with a Sunday, then Table II tells us the 28th day of that month will be a Saturday. Now we will look at the significance of all this later; for now we are just showing how these tables work.

Part 3: The Hebrew Calendration System.

The calendration system God gave to the Hebrew people was to align their year to the Passover.

3.1 The Two Laws Governing:

The Jewish calendar was governed by two laws: the law of the barley harvest and the law of the full moon for the Passover festival. A year began with the month of Nisan [Abib] in accordance with the instruction given to Moses to : "Observe the month of Abib, and keep the Passover unto the Lord your God: for in the month of Abib the Lord your God brought you out of Egypt by night." [Deut. 16:1]; and therefore: "This month shall be the beginning of months to you. It shall be the first month of the year to you." [Ex. 12:2].

In connection with this Passover festival Israel was commanded to keep the feast of Unleavened Bread. The law required a handful of first fruits be offered at the time of the Passover before any grain was eaten by the people. [see Lev. 23:5-16]. This feast required that a priest offer a sheaf of Barley taken from the field on the day after the Passover. As the Passover was held on the 14th day of Nisan [Lev. 23:5] this ceremony would be held on the 15th day. Therefore, in order to meet this requirement the barley harvest must ripen in the month of Nisan.

Now the time for the Passover for the ancient Jews was when the full moon rose at the time of sunset. This, they believed, fulfilled the requirement that the Passover be held on the day of greatest light. So when the full moon rose on the eastern horizon opposite to the sun setting on the western horizon that was the time for the Passover.

3.2 Requirement for Starting a Hebrew Year:

For the Jewish year to begin both the moon and the barley harvest must agree. In practice however, it was discovered that there were occasions when the Jews came to the last month of their year only to discover that the barley harvest wasn't going to be ready for their all important festival following the Passover. In a situation like this the priests would rectify the discrepancy by adding an extra month to the end of their year to delay the termination of the year so the harvest would be ready for the festival.

This presents us with the other method of accounting for the fact that the sun and moon which govern our days, months, and years don't follow a precise pattern. So whereas the Julian calendar had fixed days with variable seasons; the Jews had a calendar of fixed seasons with variable days in their years. Hence a Julian calendar contained either 365 or 366 days in the year; and the Jewish calendar ran from 354-355 days to 383-384 days depending on the conditions of the barley harvest and the new moon.

3.3 The 19-year Cycle:

The interesting thing about this is, over a period of time, it was observed that the interpolation of an extra month in the Jewish calendar occurred 7 times every 19 years; and what's more these years followed a recurring pattern. To illustrate we will use the letter "C" to indicate a common year and a "*" to show where the extra month [known as a Veadar year. [The 12th month was known as "Adar" so when the Jews inserted an extra month, a 13th month, it became "Veadar."]

3.4 Table V: 19-Year Cycle:

Year	Type	Year	Type	Year	Type	Year	Type	Year	Type
01	c	05	c	09	c	13	c	17	*
02	c	06	*	10	c	14	*	18	c

03	*	07	c	11	*	15	c	19	*
04	c	08	*	12	c	16	c		

This pattern doesn't change. Looking at Ginzel's moon tables from 1 AD to 90 AD and comparing it with a calendar showing the Jewish Veadar years, every 19th year is a Veadar year and occurs less than a day from the previous 19th year. The following table gives the dates in Julian calendration:-

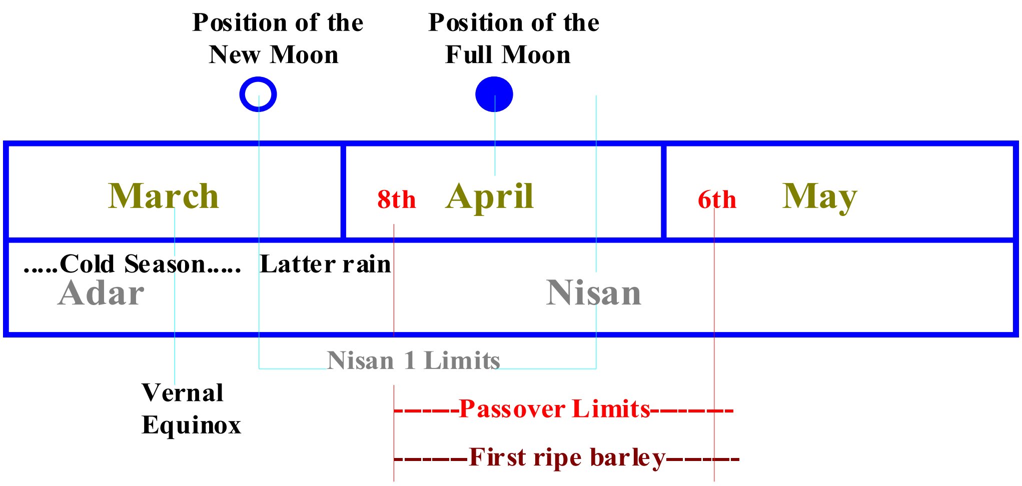
Year AD	Moon's Conjunction	Variation	Year's Length
14	Apr. 18.09	~	355
33	Apr. 17.90	04h,33m,36s	354
52	Apr. 17.91	00h,14m,24s	354
71	Apr. 18.89	23h,31m,12s	354
90	Apr. 18.65	05h,33m,36s	355

In the variation column the "h" stands for hours, the "m" for minutes, and the "s" is seconds. From this variation column it can be seen that the greatest variation of the 19th years cycle occurs in 71 AD with a time of 23 hours, 31 minutes, and 12 seconds — still less than a day. This is because every 19 years the lunar calendar comes into harmony with the solar year so that the barley harvest times repeat themselves within a day. Thus the ripening barley harvest was the Jewish key to the beginning of a new year.

3.5 The Passover Limits:

Prior to the change set down by the 1st Nicene council, which declared that the Christian Easter and the Jewish Passover shouldn't be on the same day, the Passover of the Jews was the first full moon after the spring equinox which coincided with the laws for the barley-harvest festival. These specifications imposed some limitations on when the Passover could take place.

The following diagram sets out the limits of the Passover. It should be noted that the spring rains, also called latter rains, on which the farmers depended to ripen the barley harvest, ended in the first week of April.



As Adar was the cold season, coming at the end of winter, the Passover couldn't have been celebrated before the vernal equinox because the barley at Jerusalem wouldn't be ready to produce the necessary wave sheaf. However, towards the end of this month the priests examined the barley crop to see if it could produce the necessary wave sheaf by the middle of the next month, Nisan. If it was thought that the crop wouldn't be ready, the ancient Jews added the extra month, Veadar to their year and began Nisan one month later. Therefore in the time of Christ it was possible for the barley harvest to come at any time between the 8th of April and the 6th of May.

3.6 The Full Moon at Jerusalem:

Now the Passover was observed when the full moon rose at the time of sunset. According to Amadon, this only occurs at the first sunset after the full moon. At the 2nd sunset the moon is already waning and does not rise for nearly 50 minutes after the sun has set.

As the Passover required a certain amount of preparation, for example the Passover lamb had to be set aside on the 10th day of the month in readiness for the Passover on 14th of Nisan, and as the moon's specifications didn't allow much margin for error, the Hebrews had to know when this event of greatest light would occur.

According to Schoch, whose tables Parker & Dubberstein's Babylonian Chronology's dates are calculated from, there are four factors influencing the moon's visibility, and they are:

1. The observer's latitude.
2. The sun's position in the Zodiac belt.
3. The moon's position, north or south, of the sun's path through the belt.
4. The angle between the perigee and the earth-moon-sun's conjunction line.

Apparently, at Jerusalem, the position of the moon during the period of the Passover is so high as to discount the effect of points 1-3 and we need only to consider the angle between the perigee and the conjunction. This angle is known as the moon's anomaly and upon it the whole lunar calendar depends.

If you look in an encyclopaedia you will see that the effect of the moon circling the earth as the earth itself circles the sun is to cause the moon to pass through a series of phases. We call these phases the:

1. New Moon — in which the moon's disc is not visible at all.
2. Waxing Crescent — in which you see something roughly like a banana.
3. First Quarter — in which you see half the moon's face
4. Full Moon — in which the complete disc appears.

After a full moon the moon's circuit goes into the waning phase but that's not important here.

3.7 Calculating the New Moon for the Passover:

Now the Jews know that from the 1st of Nisan to their Passover they have to count 14 days; and this calculation has to come out exactly so that the rising moon coincides with the setting sun. While this may sound like a simple thing to do there is a small trick to it. The moon doesn't follow a circular obit; the moon's orbit is elliptical. What actually happens is, as the moon orbits the earth and the earth orbits the sun, sometimes the moon lags behind and at other times it shoots ahead — giving the appearance that the moon is sometimes taking a short orbit and at other times a much longer one. However this variation can be measured. Astronomers label the short distance from the earth to the moon as the "perigee" and the longer side of the elliptical orbit the "apogee."

The distance of the moon from the earth at the beginning of the Passover month is the chief factor in knowing when the Jewish new year shall begin. This is because the moon's distance around her orbit from earth's perigee forms an angle which can be measured in terms of time; the number of days it takes the moon to travel from the point of perigee to when it reaches the position where it appears as a new moon [known as the time of conjunction]. This period of time is called the translation period. In simple terms its, the number of days from the point in the moon's orbit where its at the shortest distance from earth to the position in the moon's orbit where the new moon appears.

From this information about the anomaly the Jews discovered that when the anomaly is small, as when there is only a short translation period, the time for the moon to travel from the new moon phase [conjunction] to the full moon phase was also short. If the translation period was long, then the new moon would also be a long time in coming. The time from the new moon to the full moon is called the waxing period, indicating the moon is building up to a full moon.

As an example of how this works we will look at Ginzel's tables for the conjunction and full-moon dates in the 17th year of the 19-year lunar cycle for 5 cycles around the date of the crucifixion.

AD	Trans. Days	Conjunction	Wax. Days	Full Moon	Am. Date	P&D Date
12	2.54	Apr. 10.23	14.69	Apr. 24.92	4/13	4/12
31	3.19	Apr. 10.58	15.36	Apr. 25.94	4/14	4/12
50	3.52	Apr. 10.25	15.52	Apr. 25.77	4/14	4/12
69	2.57	Apr. 10.20	15.08	Apr. 25.28	4/13	4/12
88	1.54	Apr. 10.23	14.34	Apr. 24.57	4/12	4/12

It should be noted that all the dates given in this table for the 17th cycle are for the month of April. It should also be pointed out that Parker and Duberstein (P&D) have assigned the 12th of April to all the conjunctions that took place on the 10th day of April irrespective of the length of the moon's cycle at that time. Amadon (Am), on the other hand, using 31 AD as an example has said — the conjunction took place on April at the 10th day, 13th hour, 55th minute, and 12th second [10.58] to which a translation period of 3 days, 4 hours, 33 minutes, and 36 seconds [3.19] must be added; therefore the 1st of Nisan must have been on the 14th of April. As the waxing period was 15 days, 8 hours, 38 minutes, and 24 seconds long we would expect the full moon to have appeared at the 25th day, 22nd hour, 33 minute, and 36th second as the table indicates. It would appear P&D are only using approximate dates.

If Nisan 1 was the 14th of April as Am suggests, then the Passover on the 14th of Nisan, coming just 13 days later would have had to have been on Friday the 27th of April.

Part 4: Changes to the Calendar.

4.1 Pagan Rome and Calendar Improvements:

Our problem is, How can Christians be sure that Saturday is the creation day that God "...ended His work which He had done, and He rested on the seventh day from all His work which He had done. Then God blessed the seventh day and sanctified it, because in it He rested from all His work which God had created and made." [Gen. 2:2-3]. Let's work on that:

Julius Caesar: had a problem. He asked the astronomer Sosigenes to suggest ways for improving the Roman calendar; apparently the Romans had taken their method of reckoning years from the ancient Greeks — when Romulus, the first ruler of Rome, introduced this Grecian technique to his people around 738 BC it provided for a year of 304 days divided into 10 months, the remaining 61 days were ignored.

These unaccounted for days were soon seized upon by the Roman politicians, one ruler adding two extra months — Januarius and Februarius — hoping to collect more taxes; while public officials used them to stay longer in office. In addition to this by the time of Caesar, the calendar was approximately 3 months ahead of the seasons.

Sosigenes appears to have suggested to Caesar that he disregard the moon in calculating the calendar and that he divide the year into 12 months of 31 and 30 days. Caesar did this, and because there weren't enough days to cover the full twelve month period evenly he accounted for the shortfall by giving the last month of the year, which in his day happened to be February, 29 days. He also decreed that every 4th year February would be 30 days long to account for the yearly ¼ day anomaly in the earth's movement around the sun.

Caesar's next move was to shift the beginning of the year from March 1st to January 1st to re-align the seasons. The Romans renamed the month of Quintilis after Caesar giving us the month of July. As a matter of interest the month after July was Sextilis, it was later renamed to honour Augustus who, according to tradition, moved one of the days from February to Sextilis so that his month would be as long as Caesar's. This Julian calendar came into effect around the year 46 BC.

However, Caesar's calendar also had its problems. A solar year is 365 days, 6 hours, 9 minutes, and 9.54 seconds long. [refer The World Book Encyclopaedia, Vol. 6, (ed. 1976) p. 12]. The calendar Caesar established only provided for 365 days and 6 hours. The effect of this near 10 minute discrepancy was that, once more the seasons began to move out of line with the calendar so that by 1580 AD the vernal equinox, which in Caesar's time, had occurred around the 25th of March was in 1580 appearing around the 11th of March. The actual calculation for the time change is:-

$$\frac{\text{46 BC to 1582 AD} \times \text{9 minutes 9.54 seconds}}{\text{24 hours}}$$

which is,

$$\frac{\text{1627 years} \times \text{549.54 seconds}}{\text{86,400 seconds}} = \text{10.34 days}$$

4.2 Papal Rome and Calendar Improvements:

Gregorian Calendar: Pope Gregory XIII had a problem. The vernal equinox which, as we noted, in Caesar's time occurred around the 25th March had gradually drifted back through the month until it was occurring about 10 days earlier. The Pope, wishing to restore the equinox to the date it occupied at the time of the council of Nicea [325 AD], published a Bull dated the 1st of March 1582 AD annulling 10 days from the month of October. The Bull actually went into effect on the night of the 4th so that October the 5th became October the 15th. The actual calendar for the month of October 1582 looked like this:

1582 October 1582

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

The shaded areas on Thursday and Friday indicate the change. It should be noted however that, the British government didn't want to be seen as taking orders from the Vatican and so they refused to accept the change. Consequently Britain retained its old Julian calendar.

Commenting on this change by Pope Gregory the Catholic Encyclopaedia says: "It is to be noted that in the Christian period the order of the days of the week has never been interrupted. Thus, when Gregory XIII reformed the calendar in 1582, Thursday, October 4, was followed by Friday, October 15. So in England in 1752, Wednesday, September 2, was followed by Thursday, September 14." [Catholic Encyclopaedia, Vol. III, p. 47].

4.3 Britain Adjusts her Calendar:

Britain’s Calendar was, as we have noted, unchanged in 1582 AD. However, about 170 years later the British parliament felt the need of bringing their calendar into line with the rest of Europe and so they passed an act of parliament adding 11 days to the month of September. The extra day was put in to allow for the time lapse from 1582 to 1752 AD. The British act simply states that the day following the 2nd of September shall be the 14th. Again we are assured that there has been no change in the days of the week, the British calendar for September 1752 appearing as follows:-

1752 September 1752

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

From the blue shaded areas we can see that there has been no change in the order of the days of the week and that Thursday follows Wednesday as it always has. The actual calculation for the time change is:-

$$\frac{\text{1582 AD to 1752 AD x 9 minutes 9.54 seconds}}{\text{24 hours}}$$

which is,

$$\frac{\text{170 years x 549.54 seconds}}{\text{86,400 seconds}} = 1.08 \text{ days}$$

The 10.34 days plus the 1.08 accumulating since then give us the 11 days changed by the British parliament. If September 1752 had been left unchanged the month would have looked like this:-

1752 September 1752

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

When you compare the two calendars for the month of September you can see the days follow each other in normal orderly succession; but, the observant reader will see that October the 1st of 1752 would have begun with a Thursday instead of the Sunday it now has.

Part 5: Tracing the Sabbath to Christ's Time.

5.1 The Beginning of the Sabbath:

After six days of creation Moses writes in the book of Genesis, "...And on the seventh-day God ended His work which He had done, and He rested on the seventh day from all His work which He had done. Then God blessed the seventh day and sanctified it, because in it He rested from all His work which God had created and made." [Gen. 2:2-3]. That God instituted this day as a reminder of His position as the Creator of the world is evident from His comments in the law given from Sinai. God said, "...Remember the Sabbath day, to keep it holy. Six day you shall labour and do all your work, but the seventh day is the Sabbath of the Lord your God. In it you shall do no work:... For in six days the Lord made the heavens and the earth, the sea, and all that is in them, and rested the seventh day. Therefore the Lord blessed the Seventh day and hallowed it." [Ex. 20:8-11].

It seems highly unlikely that for about 2000 years from the time of creation to the giving of the law on Sinai that this day, set aside as a special day from the 7th day of this world's history, was wholly ignored. This seems especially unlikely in view of the fact that the Lord said of Noah that, "...Noah was a just man, perfect in his generations. Noah walked with God." [Gen. 6:9]; Enoch, the seventh from Adam, also has this distinction that he, "...walked with God; and he was not, for God took him." [Gen. 5:24]. Jude, the brother of James, has this to say, "Now Enoch, the seventh from Adam, prophesied about these men also, saying, Behold, the Lord comes with ten thousands of His saints, to execute judgment on all, to convict all who are ungodly among them of all their ungodly deeds which they have committed in an ungodly way, and of all the harsh things which ungodly sinners have spoken against Him." [Jude 1:14-15].

Here is a man of whom it has been said that he "walked with God" and he is preaching about the end of the world and the 2nd coming right back in the days of the first man who ever lived. Genesis doesn't tell us Enoch was prophesying about the judgment of the end of the world; but he was! There is an assumption that no one kept the commandments of God until the law was given at Sinai, but this isn't the case. People were charged with murder, sexual immorality, robbery long before God gave the law which said: "Thou shalt not kill" etc. Paul says, "For until the law sin was in the world...." [Rom. 5:13]; How can sin be in a world without law? "Sin is the transgression of the law." [1 John 3:4]. So its likely that the patriarchs and prophets kept the Sabbath from creation.

5.2 From Sinai to the Time of Christ:

Israel's Wilderness Experience: While, at first sight, it may seem like a futile act to try and trace the Bible Sabbath from its inception to our age we do find a reprieve from a hopeless situation in the history of Israel.

God gave the Jews a command to worship on the seventh day of the week at Mount Sinai [Ex. 20:8-11]. This injunction formed a part of that body of law known as the ten commandments; a law which carries the death penalty for any violation of any of its precepts. In the light of the severity of the punishment for any infringements of the law, it seems inconceivable that God wouldn't give the Israelites a clear indication as to which day was the seventh-day He rested on after creating the world.

According to Jewish history, as recorded in Scripture, God did this prior to giving them the law on Sinai. Moses points out God identified the Sabbath day to the Jews by three distinctive miracles concerning the supply of the manna.

Manna was a kind of bread God fed to the children of Israel to keep them alive in the desert. It was a very perishable substance, having a useful lifespan of about 24 hours after which it developed an offensive odour and became riddled with worms. It had been also known to melt in the hot desert sun. [Ex. 16:19-20].

Now in spite of the perishable nature of this substance, God instructed the children of Israel to gather twice as much manna on the sixth day as there wouldn't be any supplied on the seventh. This they did and, contrary to the normal behaviour of the manna, the second portion of manna gathered on the sixth day was unspoilt. In this way, by the double portion of manna on the sixth day and the absence of any manna on the seventh, the seventh day of the week was identified to the Jews before God gave them the law on Sinai.

Significantly, this weekly miracle with the manna over the 6th and 7th days continued for forty years, or 2080 Sabbaths. That's 2080 reminders of which day it was that God had set aside on the 7th day of this world's history.

Israel & the Sanctuary: When the children of Israel were at Mt. Sinai God instructed Moses to have them build Him a sanctuary that He might dwell among them. [Ex. 25:8]. This Moses did and as a part of their worship service they were told to change the show bread in the Holy Place every Sabbath. [Lev. 24:5-9]. To fulfil this obligation the priests had to keep a very careful track of the passing days.

The effect of this weekly show bread cycle is not unlike a shipwrecked mariner cutting a notch in a tree or piece of wood to mark the passing days. After each Sabbath the priests would count the days until the next seventh day when they would be required to change the bread again. This cycle continued right through Jewish history until the days of Christ and so preserved the day on which the manna fell and the world's creation was completed until the Christian era.

It should be noted that Israel adopted the practice of numbering their days as: The 1st day of the week; 2nd day of the week; 3rd day of the week; 4th day of the week; 5th day of the week; The preparation day; and The Sabbath, presumably as a way of reminding themselves of where they were in relation to the Sabbath.

Christ & the Sabbath: The Christian era began with the birth of Christ whose story is told in the four gospels of Matthew, Mark, Luke and John. Throughout these four Gospels there are a number of references to different conflicts that took place between Jesus and the Jewish authorities over what it was lawful to do on the Sabbath. Not once did Jesus ever dispute the day on which the Sabbath was celebrated. In fact He claimed that He was the Lord of that Day [Mark 2:28]. Thus Christ agreed with Hebrew reckoning that the Sabbath day the Jews were keeping when He lived on earth was the one God had set aside at creation.

After Christ's crucifixion Luke confirms this point when he makes the statement that the disciples and the women rested on the Sabbath, "according to the commandment." [Luke 23:56]. There was only one commandment telling the Jews to rest on the seventh day Sabbath and that was the one connected to creation in Ex. 20:8-11 and confirmed for 2080 Sabbaths by the manna miracle.

Therefore, as we don't have any record in the Gospels, or elsewhere in the New Testament where the Jews were rebuked for keeping the wrong day of the week as a memorial of creation; we must conclude that the seventh day they kept at the time of Christ was the same day in the weekly cycle that God blessed, sanctified, and rested on when He finished the work of making this world.

Part 6: Tracing the Crucifixion Sabbath.

6.1 The Historians Disagree:

World Book Encyclopaedia: According to historians there seems to be an element of doubt as to what date the crucifixion of Christ took place. The World Book Encyclopaedia gives us the choices of: 7th April, 30 AD or 3rd April, 33 AD. [World Book Encyclopaedia, Vol. 14, (ed. 1976) p. 236]. Therefore, coming one day later, the crucifixion Sabbath would be the 8th of April, 30 AD or the 3rd April, 33 AD.

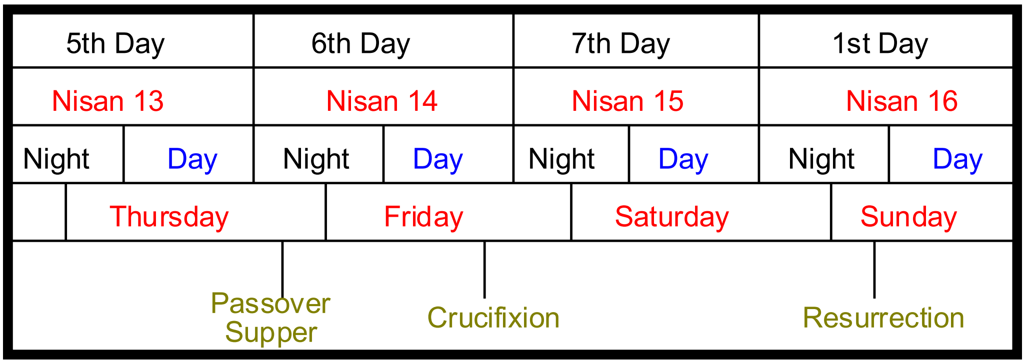
Parker and Dubberstein: The chronologists Parker and Dubberstein in their Babylonian Chronology 626 BC to 75 AD, set the date for the 1st of Nisan as the 12th April, 31 AD. As the crucifixion took place on the Passover which comes on the 14th day of Nisan, their date for the crucifixion Sabbath would be the 26th April, 31 AD.

Grace Amadon: in her book, Ancient Jewish Calendration, p. 277 says, "The year 31 AD, with a Passover on Friday, April 27th, meets all the specified demands of the calendar and the ancient Jewish record. This being the case her crucifixion Sabbath would come on the 28th April, 31 AD.

6.2 Easter & the Passover:

Passion Diagram: Clearly we have a problem. Put with this the fact that the Hebrew people began their day at sunset in accordance with the Mosaic record, where God says the day began with "evening", and not at midnight as we are in the custom of doing and we can easily see how the crucifixion day could finish up with two dates.

In fact, if we study the Gospel account of the last events of Christ's life we see that the Last Supper and the Crucifixion spread out over two of our days: Thursday to Friday, while the Gospels have both events as occurring on Nisan 14. The following diagram explains this:



So early Nisan 14 is our late Thursday, and late afternoon Nisan 14 is our Friday. The Resurrection coming on the 3rd day is very early Sunday morning for us.

While it is acknowledged that the Christian Easter and the Jews Passover in the year of Jesus' death occurred at the same time this probably wont help us much now. At the 1st council of Nicene one of the things discussed by the church was the date for the observance of Easter. It was felt by the Council that the Christian Easter and the Jewish Passover shouldn't be on the same day. [see The World Book Encyclopaedia, Vol. 14, (ed. 1976) p. 318]. The council set the date for Easter as the first Sunday after the first full moon on or after the 21st of March. It was proposed that Easter couldn't come before March 22 or after April 25th.

The effect of this prohibition by the church meant that the Jews had no alternative but to take the first full moon after the spring equinox as the commencement of their Passover season, with the result that the Jews have had March Passovers since the 4th century. But for the 1st full moon after the spring equinox to be the Passover time of ancient Israel couldn't have met the ancient specifications for the barley harvest full moon Passover. As Adar was the cold season coming at the end of winter the Passover couldn't have been celebrated either before or just after the vernal equinox.

6.3 Bible Facts Surrounding the Passion Weekend:

There can be no doubt that the Passover on which Jesus died was one in which the day following was the Sabbath. In Luke 22:15 it tells us Jesus ate the Passover the night before His crucifixion. When Pilate brought Christ out to the people and said to them, "Behold your King" Scripture says it was about the 6th hour on the preparation of the Passover. [John 19:14]; Luke says the day was the preparation and the Sabbath drew near. [Luke 23:54]. And after Christ was buried we're told that the disciples rested according to the commandment. [Luke 23:56]. The only commandment they had telling them to do this came from Ex. 20:8-11.

6.4 The Dates for 30 and 33 AD:

30 AD: World book gives the date of 7th April, 30 AD as a possible date for the Lord's last Passover. Now when we look up Ginzel's moon tables we find that in that year the conjunction took place on March 22.84 with a 2.92 day translation period making the 1st of Nisan the 26th of March.

The limits set for the Passover, as we have seen, go from the 8th of April to the 6th of May as determined by the barley harvest. According to Ginzel's tables the 14th of Nisan would have been Apr. 8th; however taking the 7th as a Passover date, we can see from our Passover Limits diagram that the rains would have barely come. In other words the 7th of April would indicate a very early Passover. Therefore the question we need to ask ourselves is, Do the Gospels contain any information which might help us determine if the Passover in the year of the crucifixion was early or late?

One statement which indicates the time of the Passover was Christ's reference to the fig tree. In Mark it says, "And Jesus entered into Jerusalem, and into the temple: and when He had looked round about upon all things, and now the eventide was come, He went out unto Bethany with the twelve. And on the morrow, when He was come from Bethany, He was hungry: and seeing a fig tree afar off having leaves, He came, if haply He might find any thing thereon: and when He came to it, He found nothing but leaves; for the time of figs was not yet...." [Mark 11:11-14].

Fig trees bear fruit twice a year in Jerusalem. The early crop comes around June, the harvest season, while the late crop appears in September, the hot season. This tree covered with leaves indicates that the warn weather experienced at the time of the harvest was beginning to make itself felt at the time of the Passover at which Christ was crucified. As Adar [March] was the cold season following winter, this experience regarding the fig tree casts serious doubt over an early Passover on 7th April, 30 AD.

33 AD: Also has the early Passover problem being on the 3rd of April. It also fails on account of the fact that the conjunction of the moon for the beginning of Nisan in 33 AD took place on Apr. 17.90 and with a translation period of 2.87 days places the 1st of Nisan on our 21st of April. As the Encyclopaedia gave the date for the Passover as the 3rd of April it would have taken place before the 1st of Nisan which is an impossibility. This leaves us with the year 31 AD as the year in which Jesus was crucified.

Part 7: Proving Sabbath Continuity.

7.1 Testing the Crucifixion Sabbath:

According to Grace Amadon in her book, Ancient Jewish Calendration, p. 277 she says that, "The year 31 AD, with a Passover on Friday, April 27th, meets all the specified demands of the calendar and the ancient Jewish record." This places the crucifixion Sabbath on which Jesus and the disciples rested as the 28th April, 31 AD. Now we want to test this date using our formulas from Part 2.

1. 31 AD divided by 28 (as per our Table I cycle) = 1x28 plus a remainder of 3.
   This locates us in the 3rd year of the cycle.
2. Table I tells us the 3rd year begins Jan. 1st with a Monday.
3. Table III, as 31 AD is a common year, says if January 1st is a Monday then
   the 1st of April will be a Sunday.
4. Table II, giving all the days for a month, tells us that if the 1st of a month
   begins with a Sunday then the 28th day of that month will be a Saturday.

Hence a Sabbath on Apr. 28, 31 AD, calculated from Grace Amadon's date for the Passover of Friday, Apr. 27, holds good.

7.2 Testing Saturdays in 1995:

Easter Saturday: This year Easter will fall on Saturday, Apr. 15, 1995. What we want to do is to test this against our system of tables an see if the Sabbath holds true. If it follows the formula then we have the same Sabbath as the one Jesus rested in Joseph's tomb. It should be noted that 1995 is not a leap year and so we can follow the same pattern we did when testing the crucifixion weekend:

Again making use of our formulas in Part 2 we have:

1. 1995 AD divided by 28 (as per our Table I cycle) = 71x28 + remainder 7.
   This locates us in the 7th year of the cycle.
2. Table I tells us the 7th year begins Jan. 1st with a Saturday.
3. Table III, as 1995 is a common year, says if January 1st is a Saturday then
   the 1st of April will be a Friday.
4. Table II, giving all the days for a month, says if the 1st of a month is Friday,
   then the 15th day of that month will be Friday.

So clearly we have a problem. Easter this year [1995] falls on a Saturday; our system is one day out. The calendar appears to have gone forward a day.

Australia Day: is another well known day in our calendar. It recognises the day of our settlement which happened to be: Saturday, January 26, 1788. Now our tables ought to be able to link this Saturday back to the crucifixion Sabbath if the weekly cycle has remained consistent. We do have to substitute Table IV for Table III in step 3 as 1788 is a leap year. Other than that the formula remains the same:

1. 1788 AD divided by 28 (as per our Table I cycle) = 63x28 + remainder 24.
   This locates us in the 24th year of the cycle.
2. Table I tells us the 24th year begins Jan. 1st with a Saturday.
3. Table IV, as 1788 is a leap year, gives Saturday as the month is still January.
4. Table II, for all the days of a month, says if the 1st of a month is Saturday,
   then the 26th day of that month will be Wednesday.

So another problem. Clearly the weekly cycle isn't following on mathematically from the number of days since Jesus rested in Joseph's tomb in 31 AD. We are now a number of days out.

7.3 Tracking Calendar Change:

What these discrepancies prove is there has been some kind of change to our calendar which precludes us dividing a year by its cycles and establishing a day in the past which we would be able to do if the numbers and weekly cycles had remained unchanged.

We know our calendar had at least two mathematical adjustments. In 1582 Pope Gregory, to fix a discrepancy with the vernal equinox, adjusted 10 days in October of that year. We also know that the British Parliament, in September 1752 made an adjustment of 11 days between Wed. 2nd and Thursday 14th. [That is Thursday the 3rd became Thursday 14th].

As we are using a British calendar we can forget Pope Gregory's 10 days and concentrate on the 11 days added by the British. Also, as there was no change to the weekly cycle of days we need only concern ourselves with the numbers. The numbers only effect our calculations in dividing the year by 28 and so we can now create another table to represent the movement of the days.

Table VI: Representing the movement caused by the 11 Days:

Group	1	2	3	4	5	6	7
A	**Sun**	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
1	Mon	Tue	Wed	Thu	Fri	Sat	Sun
2	Tue	Wed	Thu	Fri	Sat	Sun	Mon
3	Wed	Thu	Fri	Sat	Sun	Mon	Tue
5	Fri	Sat	Sun	Mon	Tue	Wed	Thu
6	Sat	Sun	Mon	Tue	Wed	Thu	Fri
7	Sun	Mon	Tue	Wed	Thu	Fri	Sat
8	Mon	Tue	Wed	Thu	Fri	Sat	Sun
9	Tue	Wed	Thu	Fri	Sat	Sun	Mon
10	Wed	Thu	Fri	Sat	Sun	Mon	Tue
B	**Thu**	**Fri**	**Sat**	**Sun**	**Mon**	**Tue**	**Wed**

In this table Group "A" with the days of the week in bold type, gives us the name of the day of the week if the 14th of Sept. 1752 had remained unchanged. Group "B" gives the name of the day of the week after the removal of 11 days.

Now if this change took place, as our encyclopaedia indicated it did, then all the dates after the 2nd Sep. 1752 ought to follow the same pattern and respond to the adjustment shown by Table VI. With this in mind lets recalculate our Australia day example:

Re-checking Australia Day 1788: recalculation using Table VI.

1. 1788 AD divided by 28 (as per our Table I cycle) = 63x28 + remainder 24.
   This locates us in the 24th year of the cycle.
2. Table I tells us the 24th year begins Jan. 1st with a Saturday.
3. Table IV, as 1788 is a leap year, gives Saturday as the month is still January.
4. Table II, for all the days of a month, says if the 1st of a month is Saturday,
   then the 26th day of that month will be Wednesday.
5. Table VI, for the 11 day adjustment, says if Group "B" is Wednesday, Then
   Group "A" gives us the original day as Saturday.

So it would appear that the only change to our calendar has been the deduction of the 11 days in

Sep. 1752 by the British Parliament.

Re-checking Easter Saturday 1995: recalculation using Table VI.

1. 1955 AD divided by 28 (as per our Table I cycle) = 71x28 + remainder 7. This locates us in the 7th year of the cycle.
2. Table I tells us the 7th year begins Jan. 1st with a Saturday.
3. Table III, as 1995 is a common year, says if January 1st is a Saturday then the 1st of April will be a Friday.
4. Table II, giving all the days for a month, says if the 1st of a month is Friday, then the 15th day of that month will be Friday.
5. Table VI, for the 11 day adjustment, says if Group "B" is Friday, Then Group "A" gives us the original day as Monday.

Obviously we still have a problem. Easter this year is a Saturday and here we have Monday which is two days later.

7.4 Adjusting the Centuries:

Checking back over the centuries to discover the source of this problem we find that Table VI works fine up until the year 1801 when it suddenly becomes one day out. This single day discrepancy continues right on through to 1901 when it climbs to two. This two day error continues right on down to our day; so what's going on?

The answer appears to be another adjustment in the way our calendar records days. From our previous study we have observed that every time there is a leap year the common year following starts two days later than the leap year. For example 1584 began on a Wednesday, but the following year, 1585 begins with a Friday — not Thursday.

Cycle Year	A.D. year	Year type	Jan. 1 Day
12	1580	L	Fri
13	1581	C	Sun
14	**1582**	C	Mon
15	1583	C	Tue
16	1584	L	Wed
17	1585	C	Fri
18	1586	C	Sat
19	1587	C	Sun
20	1588	L	Mon
21	1589	C	Wed
22	1590	C	Thu

This is because of our 52 week 1 day and 52 week 2 day pattern to our years. So when the common year changes to a leap year the leap year moves forward one day; but when the leap year moves to a common year there are two extra days at the end of the leap year to account for and so the first common year after a leap year advances two days. However, there has been some changes in the years 1801 and 1901. Lets look at those two years on our 28 year cycle. For the period surrounding 1901 the cycle looks like this:-

Cycle Year	A.D. year	Year type	Jan. 1 Day
20	1896	L	Wed
21	1897	C	Fri
22	1898	C	Sat
23	1899	C	Sun

24	1900	L	Mon
25	**1901**	C	Tue
26	1902	C	Wed
27	1903	C	Thu
28	1904	L	Fri
1	1905	C	Sun
2	1906	C	Mon

The year 1901 has been bolded. The shaded areas in the table show that the leap year covering the 24th and 25th years of the cycle haven't followed the normal pattern of advancing the first common year after a leap year by two days. Jan. 1st in the year 1901 should have begun on a Wednesday not a Tuesday if there were to be 366 consecutive days in 1900. The fact that this isn't the case proves that the calendar has now moved back another day to give a total number of twelve days. Repeating the above process for the year 1801 we find that the same thing has taken place.

Cycle Year	A.D. year	Year type	Jan. 1 Day
4	1796	L	Fri
5	1797	C	Sun
6	1798	C	Mon
7	1799	C	Tue
8	1800	L	Wed
9	**1801**	C	Tue
10	1802	C	Fri
11	1803	C	Sat
12	1804	L	Sun
13	1805	C	Tue
14	1806	C	Wed

The shaded areas in this 1801 table reveal the same pattern that we saw in the 1901 table. A day has been dropped from our calendar. All up we have lost 13 days from the calendar since Pope Gregory XIII made his first adjustment in 1582 AD.

7.5 Verifying Today's Sabbath:

With all these changes happening to our calendar it creates a degree of uncertainty as to whether the Saturday we hold as the Sabbath is really the Seventh-day God blessed and sanctified. What we need is a method of verifying our Sabbath's connection back to the same Sabbath that Jesus rested in Joseph's tomb after His crucifixion. So we will conclude our study of this subject by calculating the Sabbath from the 28th April, 31 AD to Easter Saturday, 15th April, 1995 AD.

We know that a calendar system which has 365 days in a common year and 366 days in a leap year repeats its weekly cycle every 28 years. We also know that Julius Caesar introduced the calendar in 46 BC adjusting it to line up with the seasons so that the equinox came on the 25th of March.

Using this data we can calculate that the first 28 year cycle completed itself in 18 BC; the second in 10 AD; and the year 31 AD comes in the 21st year of the third 28-year cycle. By using our previous research which showed that the crucifixion Sabbath was Saturday, 28th April, 31 AD we can calculate the day for 1st Jan., 31 AD by using our tables:

1. Table II, all the month's days, says if the 28th of a month is Saturday,
   then the 1st day of that month will be Sunday.

2. Table III, common year, says if April 1st is a Sunday then
   the 1st of January will be a Monday.

   Note: The reader might remember that when we created our tables from 1 AD the year 31 AD came in the 3rd year of the 2nd 28-year cycle. Here it is in the 21st year of the 3rd cycle because we have moved Table I back into the BC era. Just to check that moving the cycle hasn't effected the days of the week, if you look at the 3rd year of the table you'll see that Jan. 1st is listed as Monday just as it is in the 21st position of the 3rd cycle. So the position of the days of the week which is what concerns us, hasn't changed.

Now from 46 BC to 1995 AD is a total of 2040 years which represents 72 28-year cycles with a remainder of 24 years. We know 1st January on the 21st year of this cycle is a Monday from our research on the crucifixion year which now holds this position. We also know 31 AD is the 3rd year of our common-leap-year cycle. From this we can create the following table:-

Cycle Year	A.D. year	Year type	Jan. 1 Day
21	**31**	C	Mon
22	32	L	Tue
23	33	C	Thu
24	34	C	Fri
25	35	C	Sat

This table shows that a continuous stream of weeks running from the beginning of the Julian calendar in 46 BC would place the 1st of January 1995 on a Saturday. Checking this another way, we find that:-

1. 1955 AD divided by 28 (as per our Table I cycle) = 71x28 + remainder 7.
   This locates us in the 7th year of the cycle.
2. Table I tells us the 7th year begins Jan. 1st with a Saturday.
3. Table III, as 1995 is a common year, says if January 1st is a Saturday then
   the 1st of April will be a Friday.
4. Table II, giving all the days for a month, says if the 1st of a month is Friday,
   then the 15th day of that month will be Friday.

But the 15th April 1995 AD is a Saturday. This confirms our findings that in 1801 and 1901 an extra day was added to the calendar taking the total number of days adjusted since 46 BC to 13. Now going on to the last step we find:-

5. Table V, for the 11 day adjustment, says if Group "B" is Friday, Then
   Group "A" gives us the original day as Monday.

And taking a day off Monday for 1801's adjustment brings the day back to Sunday; again, taking a day off Sunday for the year 1901 brings the calendar day of the week back to Saturday; which is the day our calendars mark as the date for Easter 1995.

Finally, to lay all fears to rest, we can check our position mathematically:-

46 BC to 1995 AD x 9 minutes and 54 seconds

24 hours

which is:-

$$\frac{\text{2040 years x 549.54 seconds}}{\text{86,400 seconds}} = \text{12.975 days}$$

That these days have been adjusted in our calendar can be deduced from a statement in World Book encyclopaedia: "The Gregorian calendar is so accurate that the difference between the calendar and solar years is now only about 26.3 seconds. This difference will increase by .53 second every hundred years, because the solar year is gradually growing shorter." [The World Book Encyclopaedia, Vol. 3, (ed. 1976), p. 29]. This accuracy could not have been achieved without adjusting the zodiac/solar year discrepancy periodically. So we can rest assured today's Sabbath is the same Saturday Jesus rested in Joseph's tomb and God created the world.