

# The Liturgical (Church) Year is a 364-day Year

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## Abstract

In this article I argue that the 364-day (52 weeks) calendar proposed by the author of *1 Enoch* had been adopted by the Church fathers in the 4<sup>th</sup> century and is used by the Western churches to this very day.

Early Christians needed an appropriate calendar. By that time the lunisolar calendar was already taken by the Jews and the solar calendar was adapted by the Romans into the Julian calendar. What was left was a 364-day (52 weeks) calendar. In his *Ecclesiastical History* the 5<sup>th</sup> century church historian Sozomenus wrote (Book VII, chapter 19):<sup>1</sup>

The Montanists, who are called Pepuzits and Phrygians, celebrate the Easter according to a strange fashion which they introduced. They blame those who regulate the time of observing the feast according to the course of the moon, and affirm that it is right to attend exclusively to the cycles of the sun. They reckon each month to consist of thirty days, and account the day after the vernal equinox as the first day of the year, which, according to the Roman method of computation, would be called the ninth day before the calends of April.

Ford (1966, 146) wrote:<sup>2</sup>

According to Sozomen and Pseudo-Chrysostom the Montanists used the Solar calendar... We know that the writer of Jubilees, possibly the members of Qumran, the Samaritans and some of the early Christians used the solar calendar.

From the Catholic Church point of view there were two problems with the Montanists' calendar. The first was concerning the fact that the Montanists used a calendar not generally accepted by the emerging religion. Apparently, early Christians used the Julian calendar. One custom that was initiated at that time and is still in use nowadays is assigning martyrs' and saints' days to dates of the Julian and later Gregorian calendar.

The second was the way they calculated the date of Easter. Sozomenus wrote:

For they computed the day of the creation of the sun, mentioned in the Sacred Writ, to have been the fourteenth day of the moon, occurring after the ninth day before the kalends of the month of April, and answering to the eighth day prior to ides of the same month. They always celebrate Easter on this day, when it falls on the day of the resurrection; otherwise they celebrate it on the following Lord's day; for it is written according to their assertion that the feast may be held on any day between the fourteenth and twenty first.

In other words, they celebrated Easter on a Sunday if it occurred on April 6 and if not on a Sunday that occurs after, no later than April 13.

Here is the problem. The First Council of Nicaea (325 CE) established the date of Easter as the first Sunday after the full moon following the vernal equinox. The date of Easter therefore varies between March 22 and April 25. Although it is not mentioned directly, the reason for this calculation is to assure that Easter does not occur before Passover. The Jewish months follow the movement of the moon, and the 15<sup>th</sup> of the month is always a full moon. Passover is celebrated on the 15<sup>th</sup> of the month of Nisan. According to the calendar used by the Montanists, Easter could have occurred before Passover.

The Montanist sect was considered to be heretic within the Catholic Church and eventually it disappeared. Nevertheless, I suggest that eventually the Catholic Church had adopted a 364-day calendar with some modifications as its liturgical (church) calendar, and that this calendar is still in use by Western churches. The First Council of Nicaea occurred at 325 CE, and in the so-called Philocalian Calendar, compiled in 354 CE, December 25 is marked as the day Jesus was born: "VIII kal. ian. natus Christus in Betleem Iudeæ" 'Eighth day before the kalends of January, Birth of Christ in Bethlehem Judea.' So it seems that the Catholic Church's liturgical year had been established in the first half of the 4<sup>th</sup> century.

It is commonly assumed that the date of the nativity celebration was chosen to be the winter solstice in order to replace a pagan holiday in honor of Sol Invictus. However,

Hijmans (2003)<sup>3</sup> argues that the idea that Christmas was intended to compete or replace a pagan holiday is a 19<sup>th</sup> century invention with no evidence to support it. He suggests that the day was chosen as a cosmic symbol or allegory for eternity.

The Protestant Churches have continued to employ this 364-day calendar. To illustrate my argument I will use the liturgical years 2017 and 2018 of the calendar of Evangelical Lutheran Church of Finland.<sup>4</sup>

The liturgical years are not the same as the chronological years of the Gregorian calendar. The liturgical year 2017 starts on First Advent Sunday, November 27, 2016, and ends on Saturday, December 2, 2017, the day before the next Advent Sunday. It lasts 371 days – 53 weeks. The liturgical year 2018 starts on December 3, 2017 and ends on December 1, 2018. It lasts 364 days – 52 weeks. A week starts on a Sunday.

The next three Sundays are II, III and IV Advent Sundays. On the liturgical year 2017 December 25, 2016, is on a Sunday, a week after the Fourth Advent Sunday, which means that an extra week was inserted there. Had a week not been inserted, then the rule that there must be four Advent Sundays before Christmas would have been broken. On 2018, Christmas day is on a Monday, just after the Fourth Advent Sunday and 2018 is shorter in one week than 2017.

The rule that there must be four Advent Sundays before Christmas ascertains that the liturgical year follows the solar year. In other words, choosing Christmas to be on the day of the winter solstice has served as a means of anchoring the liturgical year to the solar year. The intercalation system works properly regardless of what day of the week Christmas Day happens to fall on.

The most important feature of a 364-day calendar is that each holiday occurs always on the same day of the week. In the original calendar as described in *1 Enoch*, the year is divided into 12 months, each consists of 30 days, so the instructions given in the Torah for celebrating the holidays could be fulfilled. However, since Christians do not celebrate Jewish holidays, there was no point in keeping this part of the system.

Easter is celebrated on the first Sunday after the full moon following the spring equinox. The Friday before Easter is Good Friday. Palm Sunday is a week earlier than Easter. Shrove Tuesday is marked on a Tuesday seven weeks before Easter. In the Finnish Catholic Church the fasting period starts at Ash Wednesday 40 days before Easter and ends at the beginning of the evening mass of Holy Thursday. Ascension Day is celebrated on a Thursday 40 days after Easter. Pentecost is celebrated on a Sunday seven weeks after Easter, 10 days after Ascension Day. Since the beginning of the liturgical year depends automatically on the date of Christmas, the result is a fixed calendar in respect to the solar year.

The liturgical year is 364-day long, however, in a solar year there are a little bit less than  $365\frac{1}{4}$  days. In order to have the liturgical year compatible with a solar year, an intercalary week is added every 5 or 6 years. The mathematics is simple. The difference between these two years is  $1\frac{1}{4}$  days. Multiplying this number with 28 years gives us 35 days, or 5 weeks. So, in a cycle of 28 years five weeks have to be inserted. The only possible method of computing these 5 years in a manner that the system functions properly is to insert this intercalary week three times in cycles of 6 years (=18) and twice in cycles of 5 (=10). Table 1 is an example of such a cycle of 28 years, between 2017 and 2044.<sup>5</sup> In this table the years are marked according the Gregorian calendar, that is chronological years, and not according to the counting of liturgical years.

year	Easter	Pentecost	First Advent Sunday
2017	16.4.	4.6.	3.12.
2018	1.4.	20.5.	2.12.
2019	21.4.	9.6.	1.12.
2020	12.4.	31.5.	29.11.
2021	4.4.	23.5.	28.11.
2022	17.4.	5.6.	27.11.
2023	9.4.	28.5.	3.12.
2024	31.3.	19.5.	1.12.
2025	20.4.	8.6.	30.11.
2026	5.4.	24.5.	29.11.
2027	28.3.	16.5.	28.11.
2028	16.4.	4.6.	3.12.
2029	1.4.	20.5.	2.12.
2030	21.4.	9.6.	1.12.
2031	13.4.	1.6.	30.11.
2032	28.3.	16.5.	28.11.
2033	17.4.	5.6.	27.11.
2034	9.4.	28.5.	3.12.
2035	25.3.	13.5.	2.12.
2036	13.4.	1.6.	30.11.
2037	5.4.	24.5.	29.11.
2038	25.4.	13.6.	28.11.
2039	10.4.	29.5.	27.11.
2040	1.4.	20.5.	2.12.
2041	21.4.	9.6.	1.12.
2042	6.4.	25.5.	30.11.
2043	29.3.	17.5.	29.11.
2044	17.4.	5.6.	27.11.

6 years

5 years

6 years

6 years

5 years

Table 1. A cycle of 28 years

I find the intercalary system ingenious. The fact is that it has already been working without an itch for apparently almost 1700 years. What makes the system so intriguing is that the intercalation system seems as if it works ‘backwards,’ since the date of the beginning of the liturgical year seems to be ‘pushed back’ in relation to chronological year. Disregarding the Julian and Gregorian calendars and just looking at the liturgical years, the intercalation is executed by adding an extra week to the liturgical year in certain intervals, as in any other intercalation system. I believe that the system was not evolved casually but rather was invented by a smart individual. I suggest that the date of

the birth of Jesus was fixed in connection with creating the liturgical year of 364 days and that the process occurred at the first part of the 4<sup>th</sup> century.

I Advent Sunday can occur on November 27 or any day after it, no later than December 3, which is a period of one week (27/11 + 28/11 + 29/11 + 30/11 + 1/12 + 2/12 +3/12 = 7 days). Table 2 displays the date of I Advent Sunday in the liturgical years 2013-2018 according to the Gregorian calendar. The date is pushed backwards since the liturgical year is shorter than the chronological year.

Liturgical year	Date of I Advent Sunday
2013	2.12.2012
2014	1.12.2013
2015	30.11.2014
2016	29.11.2015
2017	27.11.2016
2018	3.12.2017

Table 2. Dates of I Advent Sunday

Table 3 displays the occurrence of Christmas Day among the days of the weeks. Every year the days of marking Christmas moves forwards in the week, since the chronological year has 1¼ days more than the liturgical year.

liturgical year	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2013			25.12.2012				
2014				25.12.2013			
2015					25.12.2014		
2016						25.12.2015	
2017	25.12.2016						
2018		25.12.2017					

Table 3. The occurrence of Christmas Day among the days of the weeks

In an intercalated liturgical year, Christmas Day is almost always on a Sunday, for example in 2017. Occasionally it falls on a Saturday, for example 25.12.2027, the liturgical year 2028. The reason for this is that in the year before, 2026, Christmas Day is on a Friday, and the 1¼ day interval is not enough to skip to Sunday.

Table 4 displays the length of the liturgical years.

Liturgical year	number of weeks
2013	52
2014	52
2015	52
2016	52
2017	53
2018	52

Table 4. The length of the liturgical years

I maintain that the intercalation system is quite simple. It may look highly complicated, and the reason for this is that the two different calendars seem to intertwine with each other. However, these are two separated calendars. In practice, the only dates where those two calendars meet are on Christmas Day and Epiphany, which is always celebrated 12 days after Christmas, on January 6. While the Gregorian calendar marks months, the liturgical year has a different structure. For example, in the Catholic Church, the year is divided into six seasons: Advent, Christmas, Ordinary Time after Epiphany, Lent, Easter, and Ordinary Time after Pentecost. In several of these seasons Sundays are counted, for example: First Sunday of Advent, Third Sunday after Epiphany, Third Sunday of Lent, Sixth Sunday after Easter, Tenth Sunday of Ordinary Time, Ninth Sunday of Ordinary time, etc. Since the length of the liturgical year varies between 52 and 53 weeks and the date of Easter depends, among other factors, on the movement of the moon, the duration of part of the seasons is slightly different every year.

In order to determine the winter solstice, the Julian calendar was employed. However, there is a fault in the Julian calendar, as the solar year is almost 11 minutes shorter than 365¼ days. The discrepancy resulted in a drift of about three days every 400 years. On February 24, 1582, Pope Gregory XIII signed a decree to reform the Julian calendar. As far as the liturgical year is concerned nothing has changed; those who maintain the calendar of liturgical years just need to continue to follow the rule of four Advent Sundays before Christmas.

The winter solstice no longer falls on December 25, however it is irrelevant for the intercalary system. To be accurate, the winter solstice no longer fell on December 25 when the intercalary system apparently was established. For marking Saints' Days the Catholic Church uses the Gregorian calendar, which means that two types of calendars are employed at the same time.

Before the introduction of printed calendars, in the Nordic countries there was a custom of creating a calendar stick – in Norwegian *primstav*. Below is such a Norwegian calendar stick.<sup>6</sup> The year is divided into summer and winter, and on each side of the stick there are 26 weeks. For marking the holidays certain symbols were used.



A Norwegian primstav

The reform enacted by Pope Gregory XIII was indeed a wise one, and the best proof is the almost universal acceptance of it. Looking closely at the calendar reform, Pope Gregory XIII did something which, to use contemporary terminology, was not in his authority. After all, the Julian calendar is a universal pagan calendar which does not belong to the Catholic Church, although the church uses it for marking saints' days and



determining the date of Christmas. The fact is that Eastern churches have not accepted the reform and still adhere to the old calendar. Interesting enough, the dates of Easter in the Western and Eastern churches, both certainly follow the rules, are rarely identical, so when both churches celebrate Easter on the same date, the occurrence is a news item. As it has turned out, Pope Gregory XIII reform has widened the schism among Christians.

As the date of Easter is determined by the date of Passover, from the Christian perspective a problem is hidden here: In the Jewish calendar there is a mistake of almost 7 minutes a year in relation with the solar year, and it accumulates to one whole day every 216 years. Presently Passover is 7 days in error towards the summer. Merzbach (2007)<sup>7</sup> reviews several suggestions for correcting the calendar, however he suggests that for the time being nothing should be done. He argues that since there is no generally accepted Jewish authority which is authorized to make such a change that will bind everybody, there is a danger that not all Jewish groups will accept a change in the calendar. The result of such change now might cause a division among Jews; the present calendar is accepted by all Jews without the slightest disagreement. Merzbach writes that the present state can continue for the next 2000 years.

Eventually Jews will correct their calendar. When this will occur, let us see how Christians will reform their calendar.

1. Sozomenus. Church History. A Select Library of Nicene and Post-Nicene Fathers of the Christian Church. Vol. II. Trans. Philip Schaff et al. Grand Rapids: WM. B. Eerdmans Publishing Company. 1957.

2. Ford, J. Massingbred. 1966. *Was Montanism a Jewish-Christian Heresy?* Journal of Ecclesiastical History. Vol. XVII, No. 2, pp. 145-158.

3. Hijmans, Steven 2003. Sol Invictus, the Winter Solstice, and the Origins of Christmas. Mouseion, Series III, Vol. 3, 277-298.

4. <http://evl.fi/Evkirja.nsf/kv2017?OpenView&start=1&count=449>

5. Based on the table of moving holidays at:

<http://sakasti.evl.fi/sakasti.nsf/sp?open&cid=Content35BF3C>

6. <http://no.wikipedia.org/wiki/Primstav>

7. Merzbach, Ely. 2007. Moving Pesach towards the summer. BDD, Vol. 18, pp 99-104.  
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