THE DATES OF EASTER SUNDAY

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On the Julian, Gregorian and Lunar Calendars, the First Ecumenical Council of Nicaea, the Vernal Equinox and the Paschal Full Moon.
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Why is Easter Celebrated on Different Sundays in the Eastern Orthodox and Western Catholic and Protestant Churches?

Easter Sunday is the most important day of the year for Christians around the world. Easter is celebrated in the Spring, but when exactly? The dates of Easter seem to be changing every year following a mystifying pattern that seems impossible to predict. What is perhaps even more confusing is the fact that Eastern Orthodox and Western Catholic and Protestant Churches typically celebrate Easter on different Sundays each year, but not always!

The calculation of future dates of Easter is and has always been a very important matter in the Christian churches, because Easter celebrates the Passion and Resurrection of Jesus Christ. The date of Easter also determines the dates of a number of other religious feasts each year, which are called movable feasts in the church calendar. Note that Christmas is an immovable feast and it is celebrated by all on December 25 every year. Some Churches celebrate Christmas on January 7, but this is due only to different calendars used, Julian and Gregorian, as it is explained below.

The reason for the apparent confusion regarding the dates of Easter is that they are determined based on both lunar and solar calendars, and in fact different solar calendars, and on ancient rules that are interpreted differently by the Eastern and Western churches. This article attempts to shed some light on the subject of Easter dates. It also includes the needed background on solar and lunar calendars, and discusses the First Ecumenical Council of 325AD, which set the rules of when Easter should be celebrated, the vernal equinox and the Paschal Full Moon that is used for the calculation of Easter dates.

In the following, a Summary is given first of all the reasons which cause different Easter Dates in the Eastern and Western churches. The rest of the article discusses the issues in more detail.

In Summary

According to the Nicaean Ecumenical Council of 325 AD, *Easter should be celebrated on the first Sunday after the first full moon after the Spring (Vernal) Equinox*. All Eastern and Western churches follow this Ecumenical Council ruling. The differences come from the different interpretation of these rules.

The Eastern Christian Churches (Orthodox) follow the Julian calendar in calculating Easter dates, while the Western Christian Churches (Catholic, Protestant) follow the Gregorian calendar.

The Eastern Churches have fixed the above "Vernal Equinox" to be March 21 of the Julian calendar, which currently is April 3 in the Gregorian calendar. *So, in Eastern churches, Easter falls between April 4 and May 8, while in Western churches Easter falls between March 22 and April 25.*

The above "fist full moon after the Vernal Equinox" is not the actual full moon, but it is a calculated, ecclesiastical full moon called the Paschal Full Moon.

Eastern churches calculate it using the March 21 Julian calendar Vernal Equinox date (the Paschal Full Moon occurs on or after March 21 of the Julian calendar, that is on or after April 3 in the Gregorian calendar), and a method involving the 19-year moon cycle (Metonic cycle) is used.

The Western churches use an astronomical accurate time for the Vernal Equinox, which may be on March 20 or March 21 and a corrected, more accurate moon cycle (Gregorian method) to calculate the Paschal Full Moon. To determine the Paschal Full Moon, the exact times of full moon around March 20 are calculated and compared with the exact time of the Vernal Equinox. If the full moon occurs even a few minutes before the time of the Vernal Equinox that full moon is not the Paschal Full Moon and the next one is taken.

The key to calculating the Easter Sunday date each year is the calculation of the date for the Paschal Full Moon (the first ecclesiastical full moon after the Vernal Equinox), which falls on different Gregorian calendar dates for the Eastern and Western churches most of the time. Easter is celebrated on the first Sunday after the Paschal Full Moon.

So the differences in the calculation of Easter Sunday dates between Eastern Orthodox and Western Catholic and Protestant Churches are due to:

(i) the calendars (Julian and Gregorian),
(ii) the time and date taken as the Vernal Equinox, and the
(iii) time and date taken for the ecclesiastical full moon around March 20.

On Calendars

Before explaining the methods used to calculate Easter dates and explain the differences between Easter dates in Eastern and Western Christian churches, it is necessary first to review the way we keep track of time using calendars.

Very early in the history of humanity it became clear that it was essential to be able to predict the coming of seasons, as such knowledge made it possible for people to plan ahead, find shelter and plant on time, all very important for survival, since making errors of when to travel, sow or harvest could have devastating consequences. Measuring the passage of time accurately and being able to predict when future events will occur has always been very important in the lives of people.

Early calendars were based on the phases of the moon, and so they were **lunar calendars**. The reason probably was that full and new moons are easy to observe and repeat themselves every 30 days or so, which is a rather conveniently short time to observe and record. Some lunar calendars are still in use today and this is discussed later in this article.

Today, most of the world measures time in terms of (solar) days and years, and uses **solar calendars,** which are based on the movement of the earth with respect to the sun. A (solar) day corresponds to a complete revolution of the earth around its North-South axis, and a year corresponds to a complete revolution of the earth around the sun. A (mean tropical) year currently is 365.24219 days long. Note that the length of the year is not exactly constant; due to tidal friction, the earth's rotation decreases slowly, thus increasing the absolute day length and so shortening the year length as expressed in days.

Today, in every-day life, we use the solar **Gregorian calendar**. It is described in the following together with its predecessor, the **Julian calendar**.

Julian and Gregorian Calendars. Solar Calendars.

The **Julian calendar** was the solar calendar introduced in Rome in 46 BC by Julius Caesar and slightly modified by his successor Augustus. It established the 12-month year of 365 days with each 4th year (leap year) having 366 days. So the Julian calendar assumes that the solar year is exactly 365.25 days long--three 365 days long years and one 366 days year in every four year cycle.

The Julian calendar established also the months having 31 or 30 days except for February that has 28 days or 29 days during the leap year--February was considered an unlucky month for the Romans and so they wanted to keep it short! Another, more balanced choice could have been having all months be 30 or 31 days long--we would have then 5 or (during leap years) 6 months of 31 days long and the rest 30 days long, instead of the current 7 months of 31 days each, 4 months of 30 days each and 1 month (February) 28 or (during leap years) 29 days long.

The difference between the 365.25 days length of the year according to the Julian calendar and the 365.24219 actual length of the year introduces about 10 days error in 1500 years. So the vernal equinox (which is the time instant when the sun passes the equatorial plane from South to North and corresponds to approximately equal lengths of day and night) that fell on March 20 at Caesar's time did not happen until the end of March 1500 years later. Obviously there was need for some corrections.

The **Gregorian calendar** which is the calendar now in general use, was introduced by Pope Gregory XIII in 1582 (by the Papal Bull "Inter Gravissimas"; Aloisius Lilius and Christoph Clavius were the designers) to correct the errors in the Julian calendar. One needed a way to systematically subtract whole days, or not add as many days using the leap year mechanism (part of a day cannot be added or subtracted and so for a full day correction one needs to wait for significant number of years). The correction is that in the Gregorian calendar (as opposed to the Julian calendar) only centenary years divisible by 400 should be leap years--so 2000 AD is a leap year but 1900, 1800, 1700 or 2100 AD are not leap years. Everything else is as in the Julian calendar. In the Gregorian calendar the solar year is 365.2425 days long, instead of 365.25 of the Julian calendar. Since the Gregorian calendar assumes a year length of exactly 365.2425 days and not 365.24219, there is still an error of 1 day in 3226 years and so the calendar will need to skip one leap day around 4000 AD!

When the Gregorian calendar was first implemented in 1582, in order to catch up, 10 days were suppressed, making October 5 be called October 15!

The Gregorian calendar was not immediately adopted by all. Most European countries on the continent converted to the Gregorian calendar by 1700; England and its American colonies, including the US, converted later, in September 1752.

The 10 days difference between the two calendars in 1582 has grown to 13 days today, and so December 25 in the Julian calendar is January 7 in the Gregorian calendar and this is why some Eastern Orthodox Churches (e.g. Russian and Serbian) celebrate Christmas in January.

Which churches do and do not follow the Gregorian calendar and when they started using it? The reason many churches did not adopt the more accurate Gregorian calendar was that a change in the calculation of Easter was also introduced by Pope Gregory XIII in 1582 at the same time as the new calendar. The Orthodox Church of Greece and other Orthodox churches adopted the Gregorian calendar in 1923, but still use the Julian calendar for the calculation of Easter dates. The Russian and Serbian churches, among others, use only the Julian calendar as their liturgical calendar.

The Date of Christmas

There is a difference between the dates Christmas is celebrated in some Christian churches and this is due exclusively to the differences between the Julian and Gregorian calendars. Every year Christmas is celebrated on December 25 by everyone. In some

churches like the Russian and Serbian Orthodox churches that follow the Julian calendar, December 25 falls 13 days later in the Gregorian calendar (the Julian calendar is slower than the Gregorian) and so, for example, the 2007 Christmas is celebrated on January 7, 2008. The Greek Orthodox Church follows the Gregorian calendar in this case and celebrates Christmas on December 25, same as in the Western Catholic and Protestant Churches.

The Date of Easter Sunday

In 2008 Easter Sunday was celebrated on March 23 by the Western Churches, but on April 27 by most Eastern Churches. Note that in 2008 the Jewish Passover was on April 20, which was after the Western Easter but before the Eastern Easter. In 2010 and 2011 the date of Easter were the same for all, on April 4 and April 24 respectively.

Year	Eastern	Western Easter	Passover
2008L	27 April	23 March	20 April
2009	19 April	12 April	9 April
2010	4 April	4 April	30 March
2011	24 April	24 April	19 April
2012L	15 April	8 April	7 April

The Western and Eastern churches calculate Easter dates using the same or very similar rules. Why then do these differences occur? There are two main reasons. The first has to do with the differences between the Julian and the Gregorian calendars discussed above, and the second with the different methodologies used to calculate the date of the first full moon after the Vernal Equinox. The phases of the moon play a significant role in the calculation of Easter dates, because Easter celebrates events that took place immediately after the Jewish Passover, which is celebrated on a date based on the lunar calendar. Calendars based on the movement of the moon are older than solar calendars and are based on the lunar month, which is approximately 29 days long.

The underlying cause of the difficulties in calculating the Easter dates is the fact that the solar year (the time it takes for the earth to make a complete revolution around the sun) is not exactly 365 days long (it is 365.24219 days long), and that the lunar month (the time between new moons) is not exactly 29 days long (it is 29.5306 days long). If the length of the solar year were exactly equal to an integer number of days we would not need corrections (leap years) and measuring time would have been much simpler. Similarly for the length of the lunar month, the calculation of holidays in the Jewish or Moslem traditions would be much simpler if the lunar month were exactly an integer number of days long.

In the following, lunar calendars and their relation to solar calendars are briefly discussed.

Lunar Calendars

A lunar month (synodic month) is 29.5306 days long. 12 lunar months make a lunar year which is 354.37 (solar) days long. So the lunar year is about 11 days shorter than the 365.24219 days long solar year, and if we use the lunar calendar in 3 lunar years we fall 33 days or a little more than a lunar month behind the solar cycle. After 33 years the first day of the year of the lunar calendar is back where it is supposed to be, having fallen behind an entire solar year. The lunar month and year is the basis of the **Moslem calendar**. Note that the ninth month of the Mohammedan year is named Ramadan and as a consequence Ramadan does not occur at the same time every year (in the solar calendar) although it occurs at the same month in the lunar year.

When using a lunar calendar, keeping up with the sun and the seasons is very desirable and so there is need for corrections to synchronize lunar and solar calendars. The long term behavior of the moon can be described using a **19-year cycle** called the moon cycle or **Metonic cycle**. Meton had discovered that in 19 solar years there were (almost) exactly 235 full moons or lunar months (235x29.5306=6939.691 days; while 19x 365.24219=6939.6016 days). This is equivalent to 19 lunar years plus 7 lunar months left over. The Babylonians added the 7-month discrepancy throughout the 19 year cycle one month at a time. In this system, each 19-year cycle has 12 12-month years and 7 13-month years. This calendar is a **lunar-solar calendar**; it is based on lunar months, but changed to keep up with the sun and the seasons. The **Jewish calendar** today is a lunar-solar calendar. To keep in synchronization with the seasons, a leap month is added approximately once every 3 years. Note that in the Jewish calendar each day starts at sunset and each month starts with a new moon--on the evening when the crescent is first visible (in modern solar based calendars the day starts at midnight or 12:00 AM and these differences lead sometimes to one day differences in dates of events!).

In the 19-year cycle the lunar month is 29.53022 days long, instead of the correct 29.5306. This adds to about a difference of 1 day approximately every 310 years. Note that if the 19-year moon cycle calendar is corrected with 8 days every 25 centuries, then an average lunar month of 29.53069 days is obtained which is accurate to less than a second and so it is following the solar calendar very accurately indeed. This is the correction used to calculate (the Paschal Full Moon and) Easter by most Western churches after 1582 and it is called the **Gregorian method**.

One could use an 84-year cycle instead of a 19-year cycle, which has 84x365.24219=30680.343 days. This method was also used in the early church. The 84-year cycle corresponds to 1038.934 lunar months (determined by dividing by the 29.5306 days of the lunar month) or almost exactly 1039 lunar months (this is 86 lunar years with 7 lunar months left over). The 84-year cycle, consists of 4 19-year cycles (Metonic cycles) plus an 8-year addition. 8 years have 2921.9375 days which correspond to 98.9461 lunar months or 8 lunar years and about 3 extra lunar months. These 3 extra lunar months are inserted together with 4 19-year cycles to generate the 84-year cycle. Note that the 3 lunar months added every 8 years stems from an ancient Greek invention called the *octaeteris*, where three extra lunar months are inserted into an eight-year cycle.

The first Olympics starting in the eighth century BC followed this cycle, alternating between gaps of 49 and 50 lunar months rather than the every four solar years system we adopted for the modern Olympics, which is based on the modern solar calendar.

Having discussed, only too briefly, solar and lunar calendars we will now focus on the determination of Easter dates, how it all started and how Easter dates are calculated today.

The First Ecumenical Council of Nicaea

The First Ecumenical Council of Nicaea in the fourth century (325 AD) was convened by Roman Emperor Constantine the Great to solve the problems raised by Arianism, but it also decided a number of other issues including the determination of the Easter date celebration. It decreed that **Easter should be celebrated on the first Sunday after the first full moon in Spring or after the Spring Equinox**.

Before that time, Easter was celebrated at different dates in different Churches and sometimes not even on Sundays. In fact, a few Christians celebrated Easter on the day of Passover. The Passover date could happen any day of the week, so the main thing was to regularize the celebration, to have it on Sunday across the Christian world and in all Churches. The reason for the use of *the first full moon in Spring* was that the Crucifixion of Jesus was on a Friday and the resurrection took place on the following Sunday, after the first day of Passover. Passover or Pesach, a day to celebrate the exodus of Jews from Egypt, was the 15 Nisan--Nisan is the first spring month and 15 Nisan is the first full moon of the Spring (note that in the Jewish calendar each month starts with a new moon). This then explains the Council's decree that "Easter should be celebrated on the first Sunday after the first full moon in spring."

Unfortunately no verbatim account of the Council's decisions has survived. Instead, the matter seems to have been referred to the Church of Alexandria, a city well known for its scientific scholarship at the time. The practice of Alexandria was to celebrate Easter on the first Sunday after the earliest fourteenth day of a lunar month that occurred on or after March 21. Note that *March 20 (in the Julian calendar) was the first date of Spring or Vernal Equinox in Alexandria in 325 AD at the time of the First Ecumenical Council*.

Differences Because of Different (Julian and Gregorian) Calendars and Vernal Equinox Dates

Today, Eastern Orthodox churches still use the Julian calendar for the calculations of Easter dates, where March 22 (the earliest possible Sunday after the first full moon in Spring) is April 4 today in the Gregorian calendar--there is a 13-day difference, as we saw above in the discussion of Christmas dates. So Easter cannot be celebrated in Eastern churches before April 4, which is March 22 in the Julian calendar the earliest day Easter can take place. The first full moon date of the Spring is calculated --and this is not as straightforward as it sounds, as we will see below--and Easter is on the Sunday after that. **In Eastern Orthodox churches, Easter falls between April 4 and May 8**. **Western**

Catholic and Protestant churches follow the Gregorian calendar and Easter falls between March 22 and April 25. The first set of differences in determining Easter dates occur because the Eastern and Western churches follow different calendars--Julian and Gregorian, but also use different dates for the Vernal Equinox. *Eastern churches fix the vernal equinox on March 21(not March 20) in the Julian calendar, the earliest full moon is on March 21 and Easter can take place on March 22 or after, which in the Gregorian calendar is on April 4 or after. Western churches use a more astronomically correct time for the Vernal Equinox, which varies and may occur on March 20 or less frequently on March 21 in the Gregorian calendar*. Without trying to add complications it should be pointed out that the exact time of when a day starts or the Vernal Equinox occurs depends also on one's location on earth's surface. *It is generally accepted that Jerusalem should be the point of reference for the exact dates of the Equinox, which is an instant of time and not a whole day*. In addition, although a new day today starts at midnight, this was not always the case; for example in the Jewish calendar even today a new day starts at sunset! These considerations give us some sense of the difficulties involved if one wants to be absolutely correct. *Also notice that the term "Vernal Equinox" is used instead of Spring Equinox, as the Vernal Equinox is the first day of Spring in the northern hemisphere and Jerusalem, but not in the southern hemisphere where it is the first day of Fall!*

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SIDEBAR-Further Clarification of the First Council of Nicaea's Decision

During the Middle Ages this practice was more succinctly phrased as "Easter is observed on the Sunday after the first full moon on or after the day of the vernal equinox." The Church of Rome used its own methods to determine Easter until the sixth century, when it adopted the Alexandrian method, as converted into the Julian calendar. Specifically, at around 525 AD things were made more precise by Dionysius Exiguus (he introduced the Anno Domini (AD) year counting that we still use today). Pope John I requested that Dionysius compute a table for future dates of Easter, celebrated on the Sunday following the first full moon after the vernal equinox. Dionysius Exiguus ("Dennis the Small" or Minor) 470-540 AD was a 6th century Dacian monk, who lived in Rome, and who was born in Scythia Minor in what is now Dobruja Romania. In about 525 AD, Dionysius produced his *Liber de Paschate.* Dionysius' definition of the Easter date (per the First Council of Nicaea) was that Easter is the Sunday following the first Luna XIV (the 14th day of the moon) that occurs on or after *XII Kalendas Aprilis* (21 March) (kalendas means the first day of the month, and the date given counts days backward starting with 1 on the first day of the given month, which is according to the Roman custom). The change from 15 Nisan of the Jewish Pesach to Luna 14 probably has to do with the fact that on the Hebrew calendar days start at sunset, while in the Christian AD calendar (which was also introduced by Dionysius) days start at midnight. *Dionysius' method of computing Easter Sunday dates is called the* ***Julian method***. This was not widely accepted until it was described and defended by the Venerable Bede in his *De Temporum Ratione* (725 AD). Dionysius used a 19-year cycle for the calculation of the full moon--see section on Lunar calendars for explanation of the 19-year cycle.
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Differences Because of Different Vernal Equinox and Paschal Full Moon Dates.

Additional differences in determining Easter dates occur because Eastern and Western churches follow different calculation methods for the full moon (*the full moon in the calculations of Easter dates is not the astronomical full moon, but a fictitious mathematically calculated approximation called the Paschal Full Moon*).

The Jews originally celebrated Passover on the first full moon following the vernal equinox (this is the time instant when the sun passes the equatorial plane from South to North). After the destruction of Jerusalem in 70 AD and the dispersal of the Jews, Passover was celebrated on different dates, sometimes even before the vernal equinox, because calculations were based on local pagan calendars. So many early Christian churches stopped regulating the observance of Easter by the Jewish Passover. As an alternative to calculating Easter by the Passover, the Paschal Cycles were devised.

Today the rule is that **Easter Sunday is the Sunday following the Paschal Full Moon date of the year.** The **Paschal Full Moon** is a calculated date for the first full moon in the spring, and it may differ from the real full moon by a small number of days. This difference arises because the calculated date is based on lunar cycles and the dates of the full moon are adjusted periodically to synchronize with the solar calendars in use today. Specifically, the Paschal Full Moon is the first calculated full moon after March 20, which was the equinox date in 325 AD; that is the Paschal Full Moon is the full moon on or after March 21(note that the Eastern churches have adopted the March 21 date as the fixed vernal equinox in the Julian calendar and the Paschal Full Moon is the full moon on or after this fixed March 21 vernal equinox). These calculated full moons are called Ecclesiastical Full Moon dates as they are used by the Christian churches; they are approximated astronomical full moon dates not the actual ones. *The Paschal Full Moon may occur from March 21 through April 18 and the date of Easter is from March 22 through April 25 in the Gregorian calendar in the Western churches and from April 4 to May 8 in the Eastern churches*.

How is the Paschal Full Mon calculated? The long term behavior of the moon can be described using the 19-year cycle or Metonic cycle and this was the method used by all churches until 1582 when the **Gregorian calendar** was introduced. Eastern churches continue to follow the 19-year cycle for the calculation of the Paschal Full Moon; in addition they make sure that Easter always falls after the day of Passover.

At the time when the Gregorian calendar was introduced, the method for determining Easter dates was also changed. First, as it was already mentioned, the vernal equinox was not fixed any longer, but it could be on March 20 or March 21 depending on the correct time instant of the equinox. Second, the method for calculating the full moon was also refined. Specifically, for Easter dating the 19-year moon cycle used was corrected with 8 days every 25 centuries leading to an average lunar month of 29.53069 days, which is accurate to less than a second. This Easter dating method uses the Gregorian calendar and the new 8 days per 25 centuries moon cycle correction. It is called the **Gregorian method**, and it is used by most Western churches today. The Paschal Full Moon dates in

the Gregorian calendar always occur within 3 days, before or after the astronomical full moon date.

The dates of Easter for the Eastern and Western Churches from 1990 to 2026 are given in the table at the end of this article. The table also includes the dates of the Passover and of the astronomical full moon. Passover *always* occurs before the Eastern Easter but not always before Western Easter. Note that the Passover holiday begins at 6 p.m. (or sunset) on the previous day and so the Passover dates given in the table may be slightly different from other sources.

Notes and References

At Vatican II in the 1960's the suggestion was made to fix the date of Easter on a particular Sunday, say the second Sunday in April. In 1997 the World Council of Churches meeting in Aleppo, Syria suggested using astronomical measurements of the vernal equinox and the full moon at the meridian of Jerusalem to determine the date of Easter. Currently no church has adopted any of these proposals.

Regarding references, several references, in hardcopy and electronic were consulted to write this article.

For further reading, the easiest way to start looking deeper into these topics is to search the web for articles and books on Easter date, ecclesiastical calendar, paschal full moon, first Ecumenical Council. There are thousands of informative articles and many books discussing time and calendars, the Vernal Equinox, the Paschal cycles and the dates of Easter written by astronomers, mathematicians, theologians, historians, and just interested individuals. Some are well researched, correct scholarly works, while others contain broad and sometimes inaccurate descriptions and so caution is advised.

Interesting information and articles may be found at http://en.wikipedia.org/wiki/Computus, http://aa.usno.navy.mil/faq/ and at http://www.assa.org.au/edm.html#OrthCalculator. Dates in different calendars may be found by web searching the word "calendrica" and the Jewish holidays in any year may be found at http://www.hebcal.com. Dr. Lewis Patsavos, Professor of Orthodox Canon Law at the Hellenic College/Holy Cross School of Theology in Brookline, Massachusetts, has written a brief, informative article on the subject of the dates for Orthodox Easter; it may be found at http://www.goarch.org/en/ourfaith/articles/article7050.asp

The article was first published on the Web at http://*www.nd.edu/~pantsakl in December 2005. The article was updated on Christmas Day, December 25, 2007 and on Easter, April 4, 2010.*

The Dates of Easter Sunday, Passover and Astronomical Full Moon (1990-2026)

	Easter Sunday Dates			
Year	**Eastern**	**Western Churches**	**Passover**	**Astronomical Full Moon**
1990	15 April	15 April	10 April	10 April
1991	7 April	31 March	30 March	28 April (March 30)
1992L	26 April	19 April	18 April	17 April
1993	18 April	11 April	6 April	6 April
1994	1 May	3 April	27 March	25 April (March 27)
1995	23 April	16 April	15 April	15 April
1996L	14 April	7 April	4 April	4 April
1997	27 April	30 March	22 April	22 April (March 24)
1998	19 April	12 April	11 April	11 April
1999	11 April	4 April	1 April	30 April (March 31)
2000L	30 April	23 April	20 April	18 April
2001	15 April	15 April	8 April	7 April
2002	5 May	31 March	28 March	26 April (March 22)
2003	27 April	20 April	17 April	16 April
2004L	11 April	11 April	6 April	5 April
2005	1 May	27 March	24 April	24 April (March 25)
2006	23 April	16 April	13 April	13 April
2007	8 April	8 April	3 April	2 April
2008L	27 April	23 March	20 April	20 April (March 21)
2009	19 April	12 April	9 April	9 April
2010	4 April	4 April	30 March	28 April (March 30)
2011	24 April	24 April	19 April	18 April
2012L	15 April	8 April	7 April	6 April
2013	5 May	31 March	26 March	25 April (March 27)
2014	20 April	20 April	15 April	15 April
2015	12 April	5 April	4 April	4 April
2016L	1 May	27 March	23 April	22 April (March 23)
2017	16 April	16 April	11 April	11 April
2018	8 April	1 April	31 March	30 April (March 31)
2019	28 April	21 April	20 April	19 April (March 21)
2020L	19 April	12 April	9 April	8 April
2021	2 May	4 April	28 March	27 April (March 28)
2022	24 April	17 April	16 April	16 April
2023	16 April	9 April	6 April	6 April
2024L	5 May	31 March	23 April	23 April (March 25)
2025	20 April	20 April	13 April	13 April
2026	12 April	5 April	2 April	2 April