

# The Perennial Ecliptic Calendar

## INTRODUCTION

The Perennial Ecliptic Calendar is a system for marking time in which weeks vary between seven and eight days in length, but everything else is completely regular: each month has exactly four weeks and each year has exactly twelve months. Furthermore, the scheduling of holidays is done *for you* by the calendric system.

## DESCRIPTION

### Construction of the Ecliptic Calendar

The year in the Ecliptic Calendar is divided into twelve months in the manner shown in the following chart.<sup>1</sup> The constellation names are of the zodiacal constellation most prominent in the night-time sky that time of year.

| Month Number | Sidereal (constellation) name | Ab-<br>bre-<br>via-<br>tion | Approximate starting date (in Gregorian notation) | Seasonal name for persons in the Northern Hemisphere | Seasonal name for persons in the Southern Hemisphere | Number of days in the month |
|--------------|-------------------------------|-----------------------------|---|--|--|-----------------------------|
| <b>01</b>    | Leo                           | Leo                         | Mar 20  | Early Spring   | Early Autumn   | 30 or 31                    |
| <b>02</b>    | Virgo                         | Vir                         | Apr 20  | Mid Spring   | Mid Autumn   | 31                          |
| <b>03</b>    | Libra                         | Lib                         | May 21  | Late Spring  | Late Autumn  | 31                          |
| <b>04</b>    | Scorpius                      | Sco                         | Jun 21  | Early Summer   | Early Winter   | 31 or 32                    |
| <b>05</b>    | Sagittarius                   | Sag                         | Jul 22  | Mid Summer   | Mid Winter   | 31                          |
| <b>06</b>    | Capricornus                   | Cap                         | Aug 22  | Late Summer  | Late Winter  | 31                          |
| <b>07</b>    | Aquarius                      | Aqu                         | Sep 22  | Early Autumn   | Early Spring   | 30                          |
| <b>08</b>    | Pisces                        | Pis                         | Oct 22  | Mid Autumn   | Mid Spring   | 30                          |
| <b>09</b>    | Aries                         | Ari                         | Nov 21  | Late Autumn  | Late Spring  | 29 or 30                    |
| <b>10</b>    | Taurus                        | Tau                         | Dec 21  | Early Winter   | Early Summer   | 29                          |
| <b>11</b>    | Gemini                        | Gem                         | Jan 19  | Mid Winter   | Mid Summer   | 29 or 30                    |
| <b>12</b>    | Cancer                        | Can                         | Feb 18  | Late Winter  | Late Summer  | 30                          |

Notice that there are four months with a variable number of days in them. One simply chooses the number of days so that the next cardinal event (equinox or solstice) fall on the first day of the proper month. Complete details are available on the website [www.EclipticCalendar.org](http://www.EclipticCalendar.org).

In the Ecliptic Calendar is a system for numbering the years. The system need not be described here, except to say that the Perennial Ecliptic Calendar adopts the same system.

Notice that each month has either 29, 30, 31, or 32 days. The construction is very simple: one adds 1, 2, 3, or 4 holidays to the 28 basic days of a month so as to make the month have the correct number of days, 29, 30, 31, or 32.

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<sup>1</sup> Because of the complexities of celestial mechanics, lengths of the months will vary over the centuries, but the chart shown is good for at least the next several hundred years. The system for determining the lengths of the months is set so that (1) the two solstices and two equinoxes invariably fall on the first day of a month, and (2) in each season, shorter months are placed toward the Point of the Perihelion, when the Earth's angular velocity is greatest in its orbit. Full details as to how to construct such a chart is given in the Technical Definition of the Ecliptic Calendar.

A month of 29 days has its single holiday placed at the beginning of the first week. The entire month looks like this:

|                    |               |                |                  |                 |               |                  |                    |
|--------------------|---------------|----------------|------------------|-----------------|---------------|------------------|--------------------|
| <b>01</b>          | <b>02</b>     | <b>03</b>      | <b>04</b>        | <b>05</b>       | <b>06</b>     | <b>07</b>        | <b>08</b>          |
| Holiday of Calends | First Monday  | First Tuesday  | First Wednesday  | First Thursday  | First Friday  | First Marketday  | First Day of Rest  |
|                    | <b>09</b>     | <b>10</b>      | <b>11</b>        | <b>12</b>       | <b>13</b>     | <b>14</b>        | <b>15</b>          |
|                    | Second Monday | Second Tuesday | Second Wednesday | Second Thursday | Second Friday | Second Marketday | Second Day of Rest |
|                    | <b>16</b>     | <b>17</b>      | <b>18</b>        | <b>19</b>       | <b>20</b>     | <b>21</b>        | <b>22</b>          |
|                    | Third Monday  | Third Tuesday  | Third Wednesday  | Third Thursday  | Third Friday  | Third Marketday  | Third Day of Rest  |
|                    | <b>23</b>     | <b>24</b>      | <b>25</b>        | <b>26</b>       | <b>27</b>     | <b>28</b>        | <b>29</b>          |
|                    | Fourth Monday | Fourth Tuesday | Fourth Wednesday | Fourth Thursday | Fourth Friday | Fourth Marketday | Fourth Day of Rest |

Such a month happens once, rarely twice, a year, always in the month of Taurus (Early Winter in the Northern Hemisphere) and rarely in Aries or Gemini. Since the next month is sure to start with a Holiday of Calends, the sequence of weekends for such a month is as follows:

{two-day weekend, two-day weekend, two-day weekend, three-day weekend}

A month of 30 days has the Holiday of Calends, as before, together with a Holiday of Ides placed towards the end of the second week. Its calendar looks like this:

|                    |               |                |                  |                 |               |                  |                    |                    |
|--------------------|---------------|----------------|------------------|-----------------|---------------|------------------|--------------------|--------------------|
| <b>01</b>          | <b>02</b>     | <b>03</b>      | <b>04</b>        | <b>05</b>       | <b>06</b>     | <b>07</b>        | <b>08</b>          |                    |
| Holiday of Calends | First Monday  | First Tuesday  | First Wednesday  | First Thursday  | First Friday  | First Marketday  | First Day of Rest  |                    |
|                    | <b>09</b>     | <b>10</b>      | <b>11</b>        | <b>12</b>       | <b>13</b>     | <b>14</b>        | <b>15</b>          | <b>16</b>          |
|                    | Second Monday | Second Tuesday | Second Wednesday | Second Thursday | Second Friday | Second Marketday | Holiday of Ides    | Second Day of Rest |
|                    | <b>17</b>     | <b>18</b>      | <b>19</b>        | <b>20</b>       | <b>21</b>     | <b>22</b>        | <b>23</b>          |                    |
|                    | Third Monday  | Third Tuesday  | Third Wednesday  | Third Thursday  | Third Friday  | Third Marketday  | Third Day of Rest  |                    |
|                    | <b>24</b>     | <b>25</b>      | <b>26</b>        | <b>27</b>       | <b>28</b>     | <b>29</b>        | <b>30</b>          |                    |
|                    | Fourth Monday | Fourth Tuesday | Fourth Wednesday | Fourth Thursday | Fourth Friday | Fourth Marketday | Fourth Day of Rest |                    |

Such a month occurs about 5 times a year, mostly during the autumn and winter in the Northern Hemisphere. The sequence of weekends for such a month is

{two-day weekend, three-day weekend, two-day weekend, three-day weekend}

A month of 31 days has the holidays as before together with a holiday toward the end of its fourth week:

|                    |               |                |                  |                 |               |                  |                        |                    |
|--------------------|---------------|----------------|------------------|-----------------|---------------|------------------|------------------------|--------------------|
| <b>01</b>          | <b>02</b>     | <b>03</b>      | <b>04</b>        | <b>05</b>       | <b>06</b>     | <b>07</b>        | <b>08</b>              |                    |
| Holiday of Calends | First Monday  | First Tuesday  | First Wednesday  | First Thursday  | First Friday  | First Marketday  | First Day of Rest      |                    |
|                    | <b>09</b>     | <b>10</b>      | <b>11</b>        | <b>12</b>       | <b>13</b>     | <b>14</b>        | <b>15</b>              | <b>16</b>          |
|                    | Second Monday | Second Tuesday | Second Wednesday | Second Thursday | Second Friday | Second Marketday | Holiday of Ides        | Second Day of Rest |
|                    | <b>17</b>     | <b>18</b>      | <b>19</b>        | <b>20</b>       | <b>21</b>     | <b>22</b>        | <b>23</b>              |                    |
|                    | Third Monday  | Third Tuesday  | Third Wednesday  | Third Thursday  | Third Friday  | Third Marketday  | Third Day of Rest      |                    |
|                    | <b>24</b>     | <b>25</b>      | <b>26</b>        | <b>27</b>       | <b>28</b>     | <b>29</b>        | <b>30</b>              | <b>31</b>          |
|                    | Fourth Monday | Fourth Tuesday | Fourth Wednesday | Fourth Thursday | Fourth Friday | Fourth Marketday | Holiday of Month's End | Fourth Day of Rest |

Such a month occurs about 5 or 6 times a year, mostly during the spring and summer in the northern hemisphere. Its weekends are arranged in this fashion:

{*two-day weekend, three-day weekend, two-day weekend, four-day weekend*}

Notice also that this calendar is the same as a thirty-day calendar with only its ending changed.

A month of 32 days has the holidays already set forth together with one at the beginning of its third week, called the Holiday of Midmonth:

|                     |               |                |                  |                 |               |                  |                        |                    |
|---------------------|---------------|----------------|------------------|-----------------|---------------|------------------|------------------------|--------------------|
| <b>01</b>           | <b>02</b>     | <b>03</b>      | <b>04</b>        | <b>05</b>       | <b>06</b>     | <b>07</b>        | <b>08</b>              |                    |
| Holiday of Calends  | First Monday  | First Tuesday  | First Wednesday  | First Thursday  | First Friday  | First Marketday  | First Day of Rest      |                    |
|                     | <b>09</b>     | <b>10</b>      | <b>11</b>        | <b>12</b>       | <b>13</b>     | <b>14</b>        | <b>15</b>              | <b>16</b>          |
|                     | Second Monday | Second Tuesday | Second Wednesday | Second Thursday | Second Friday | Second Marketday | Holiday of Ides        | Second Day of Rest |
| <b>17</b>           | <b>18</b>     | <b>19</b>      | <b>20</b>        | <b>21</b>       | <b>22</b>     | <b>23</b>        | <b>24</b>              |                    |
| Holiday of Midmonth | Third Monday  | Third Tuesday  | Third Wednesday  | Third Thursday  | Third Friday  | Third Marketday  | Third Day of Rest      |                    |
|                     | <b>25</b>     | <b>26</b>      | <b>27</b>        | <b>28</b>       | <b>29</b>     | <b>30</b>        | <b>31</b>              | <b>32</b>          |
|                     | Fourth Monday | Fourth Tuesday | Fourth Wednesday | Fourth Thursday | Fourth Friday | Fourth Marketday | Holiday of Month's End | Fourth Day of Rest |

Such a month occurs approximately every other month of Scorpius (Early Summer in the Northern Hemisphere). The sequence of weekends for a month of this type is this:

{*two-day weekend, four-day weekend, two-day weekend, four-day weekend*}

## FEATURES

### **Alignment with the astronomical seasons**

The calendar is perfectly aligned with the astronomical seasons. The months can even be *named* after the astronomical seasons for people outside the tropics, and, for such persons, the seasonal names are the easiest to learn and get used to.

### **Perennial nature of the new calendar**

The calendar is truly perennial. A school district that decides to start its school year on “the First Tuesday of Capricornus” knows exactly when this start-date will be, relative to holidays and relative to the seasons. In all, the phrase “the  $x^{\text{th}}$   $y$ -day of month  $z$ ” is meaningful for  $x$  taken to be *First*, *Second*, *Third*, or *Fourth*, with  $y$  taken to be *Monday*, *Tuesday*, *Wednesday*, *Thursday*, *Friday*, *Marketday*, or *Restday*, and  $z$  taken to be any of the twelve months of the year. All days but the holidays have such names, and even the holidays have a remarkable regularity to them.

Notice that there are only four different kinds of monthly calendars. One merely chooses the right species of calendar and puts in the correct name at the top and there is your calendar.

### **A common Day of Rest for persons of all religions**

The calendar has a common Day of Rest at the end of each week that should be respected by all religions. This Day of Rest is placed at the end of each week. Enforcement of this Day of Rest can be accompanied by legislation in each location so that people do not work *one another* on the Day of Rest, but instead economic activity is brought to a minimum on such days. Such is original meaning of the Sabbath, as recorded in Exodus and Deuteronomy. Even though five to six four-day weekends occur in the year, the Days of Rest are so placed that each is never more than the eighth day from the one previous.

The calendric scheme, not acts of legislatures, determines where holidays occur in the year. By political maneuvering, societies can change the *names* of the holidays, for example calling the Calends of Aries “Thanksgiving” and the Calends of Taurus “Christmas”. But all employers can count on twenty days of work out of employees each month, a number that is neither increased nor diminished by political machinations.

The holidays are liberally strewn throughout the year and number 29 or 30 in any given year. Together with new-found ability to enforce the Days of Rest, the Perennial Ecliptic Calendar is not simply a calendar one can comfortably *work with* but very enjoyably *live in*.

### **Names each culture can choose**

The calendric scheme, not political maneuvering, determines where holidays occur in the year. By political maneuvering, societies can change the *name* of the holidays, for example calling the Calends of Aries “Thanksgiving” and the Calends of Taurus “Christmas”. But all employers can count on twenty days of work out of employees each month, a number that is neither increased nor diminished by political machinations.

Similarly, what are called “Monday”, “Tuesday”, and so forth can be changed by each language and culture to names that it prefers. The *structure* of the calendar, though, is the same for all people.

## **ADOPTION**

The Perennial Ecliptic Calendar requires adoption by an entire society, but adoption of the (regular) Ecliptic Calendar does not. The fact that the Perennial Ecliptic Calendar is not going to be adopted any time soon does not mean that people should refrain from adopting the non-perennial Ecliptic Calendar as a personal calendar used for marking one's time entirely by celestial motions.

Adoption of the Perennial Ecliptic Calendar will occur when a society decides that the advantages of the new system outweigh the cost of conversion, together with belief that having a common Day of Rest respected by all religions is more important than having a Sabbath that occurs only on seven-day intervals. If that day should ever come, then the Perennial Ecliptic Calendar is available as an unusually sensible, agreeable, and regular way of marking time. One simply accounts time under both systems as the conversion takes place, relying on computers to make the double-naming of days both easy and automatic. Over time, people will think of time entirely in the new system (especially since their weeks will comport with the new system and not the old), and the old system will pass into secondary status.

## **ACKNOWLEDGEMENT**

The Perennial Ecliptic Calendar was designed by Damon Scott, the author of the (non-perennial) Ecliptic Calendar, in August of the year 2008. It is similar in spirit to Variant 2 of "Calendar 717" by Joseph Vlk of the Czech Republic and which appeared on the Internet in December of the year 2007.