

Modified Gregorian Calendar



The Modified Gregorian Calendar by Brij Bhushan Vij (click for larger image.)

The **Modified Gregorian Calendar** is a [calendar reform](#) proposal by Brij Bhushan Vij, a fellow of the Metrology Society of India. It is a [perpetual](#), 364-day calendar in which each year begins on a Monday and ends on a Sunday.

Like the [World Calendar](#), the Modified Gregorian Calendar features two "off-calendar" days that are outside the standard weeks and months, but count as part of the calendar year.

The 365th day of every year is "World Peace Day," December 31, which is placed after the final day of the month of December, Sunday, Dec. 30. In leap years, a 366th day of the year would be added after Sunday, July 30, the final day of the month of July.

No.	Name	Days	Leap Days
1	January	31	
2	February	29	
3	March	31	
4	April	30	
5	May	31	
6	June	30	Leap Day (after June 30)
7	July	30	
8	August	31	
9	September	30	
10	October	31	
11	November	30	

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Features and benefits

The calendar has 52 weeks(364-days) of 4 equal quarters (91-days or 13-weeks)

There are no Fridays the 13th

It is perpetual - months and weekdays never change

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External link

[Homepage of Brij Bhushan Vij](#)

Leap Weeks (Option) — Refers to: http://www.hermetic.ch/cal_stud/palmen/lweek1.htm#cycle

The **Bonavian Civil Calendar** does not use the Gregorian cycle. Instead, it uses an 896 year cycle, equivalent to a Julian calendar modified so that years divisible by 128 are not leap years. A year has a leap week if and only if *it is divisible by 28 but not 896 or has a remainder of 5,11,16 or 22* from dividing by 28. Its new year varies about **2 weeks** against the seasons.

[Refer also: http://brijvij.com/Brij_index_Contributions.doc & http://www.the-light.com/cal/bbv_div6.doc]

Brij Bhushan Vij has proposed an 834-year cycle, where a year has a leap week if and only if *it is divisible by six or is one of nine additional years* per 834-year cycle. See his [MS Word document](#) for a table of these additional leap years. Each of these additional leap years occurs either 90 or 96 years after the previous such year and all have odd numbers divisible by 3.

A Solution for Reform of Calendars (with or without) Leap Weeks

Permit me to introduce myself as the 'individual researcher' investigating: Why Time & Arc-angle are not linked to length Unit METRE, and hence A possible World Calendar, using New base for SI-time unit? I am a former Air Force Engineer, (10313) Flt Lt Brij Bhushan Vij of AE(L) Branch, who on qualifying after Passing Section's 'A' & 'B' of the Institution of Engineers (India), was commissioned on 29th March 1964 (antedate inclusive).

I joined IAF in ranks — 218696 u/t AC₂ as an Electrician II, on 14th September 1954 with nothing to look forwards to, having migrated to post partitioned India, as a child of just 11 years; but my 'zeal to study & be educated' lay within me. I believed in STOP NOT TILL MY GOAL was achieved! As the son of a Head Clark in railways, this was a tall claim.

My hitting an precedent idea resulted in an *AFO 690/71 on Bright Ideas* when I was a Flight Lieutenant that changed course of my thinking, after publication of my base works: Metric Norms for Time Standard (1971); and The Metric Second & Metric Calendar Year (1973) through Bureau of Indian Standards, New Delhi. I continued to publish my ideas, on topics NOT connected with 'Defence Matters' through media that possibly put me up against my 'superiors' while filling a 'Squadron Leader' post, then serving at No 2 EE&IU, AF. What happened to my Air Force career is history untold/unheard?

I knew, I was meant to examine the Calendar Question – afresh! My updates since 1970-71 are summed up at: <http://www.brijvij.com/synopsis-n-364d-options.doc> and my Calendar RHYME at:

http://www.brijvij.com/bb_CalRhyme.jpg on shifting a day from July (31st) and introducing this day as February (29th) making the 52-week calendar in FOUR equal quarters. By keeping, A World Peace Day 365th day (December 31st) outside of Calendar format between December 30th and January 01st of next year.

A Leap Sunday is inserted between June 30th and July 01st, making the TWO half-years of 183 days 'but' modifying the current Leap Day Rule from $\text{div.4/skip100th/count400th-years}$ [Mean Year=365+97/400 =365.2425 days] to improved value, which being the best possible on divide 4/ skip128th-years [Mean Year=365+31/128 =365.2421875 days]. Please see: http://www.brijvij.com/bbv_Gen8Cal.doc.

My proposed approach is placed: http://www.brijvij.com/bb_metro-contrbn.2007.pdf

While 'ideas' to introduce Leap Weeks to replace 'Leap Days' has been in the air since Year 1910, NEVER did man propose to use 'SIMPLE' divide by six (6) plan (for introducing Leap Weeks), like divide four(4) for Leap Days, I suggest TWO proposals to give improved Mean Year value using $(7*128)$ i.e. 896-year/159 LWks; also 2688-years/477 LWks cycle [Mean Year = $7*(52+1/6+29/2688) = 365.2421875$ days]; or the alternate 834-year/148 LWks cycle [Mean Year = $7*(52+1/6+9/834) = 365.242206235012$ days].

I propose a NEW thought altogether, that I believe had been in vogue in ancient India (Harappa & Indus civilization). I examine the use of 'SIDEREAL DAYS' for the format of A World Calendar – the same as my Rhyme calendar http://www.brijvij.com/bb_CalRhyme.jpg. My examination and calculations suggest that 128-year/ $7*128$ (i.e. 896-year) cycles are ideal and have the potential to be used for the purpose of a civil calendar, at NO ADDED costs to tax-payer; also stabilizing the cause of *Precession of Equinoxes* placed at: http://www.brijvij.com/bbv_128-896-yr_trSlr-wrldCal..pdf and http://www.brijvij.com/bbv_precession.doc. This approach give Mean Year = 366.2421875 days. The clock face and Calendar format need NO REFORM.

HOLDER of Limca Book of Indian Records (1994) on Decimalised Sidereal Day Calendar, using decimalized Hour of Time of the Day & arc-Angle.

19-years ($5*47=235$ lunation) 'Metonic Cycle', possibly existed during Harappa Era, see:

http://www.brijvij.com/bbv_Lnr-Tithi_HarrCal..pdf is my interpretation that this was 'Lunar tithi based' and NOT a solar day Calendar! The 'tithi' duration was 966/965 day or 138Weeks/965. My interpretations to the use of 'Twice the METRE as – their Length Unit' during Indus Civilisation (Mohenjo-Daro) via the Indus Inch (as British excavators) named: <http://www.brijvij.com/indusEvidence.doc> are known and published in Sir Mortimer Wheeler Commemora-tion Volume (1984) through Archaeological Survey (Society) of India, New Delhi.

I have demonstrated that my calculations meet the expectations of an astronomer. I have/am in discussion groups of usma@colostate.edu and CALNDR-L@LISTSERV.ECU.EDU since mid-2002. Details of my other calculations can be EXAMINED at my Home Page: <http://www.brijvij.com/> and http://brijvij.com/Brij_index_Contributions.doc. Kindly contact metricvij@hotmail.com for any clarifications.

It is my opinion that it is Time that India took the bold step to revoke discussions for corrections to the Gregorian Reform of Calendar (simply by shifting July 31st to February 29th) and its use as A World Calendar for All Ages.

Brij Bhushan Vij, Author

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Reference: http://calendars.wikia.com/wiki/Calendar_reform

Calendar reform

This article is a general overview of the calendar reform movement. For a list of specific proposals for calendar reform, see the article, [Alternative and Proposed Calendars](#)

Calendar reform is any proposed reform of a calendar.

Historically, most calendar reforms have been made in order to synchronize the calendar in use with the astronomical year (either solar or sidereal) and/or the **synodic month** in lunar or lunisolar calendars.

The **Gregorian calendar** is currently used by most of the world. It was the consequence of Pope Gregory XIII's reform of the Julian calendar, which was, itself, the reform under Julius Caesar of the existing Roman calendar.

Subsequent proposals have since been made to make the Gregorian calendar more useful.

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Historical reforms

Most reforms for calendars have been to make them more accurate. This has happened to various lunar and lunisolar calendars and also the Julian calendar when it was modified into the Gregorian calendar.

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Reform of lunar and lunisolar calendars

There have been 50 to 100 reforms of the traditional [Chinese calendar](#) over 2500 years, most of which were intended to better fit the calendar months to astronomical lunations and to more accurately add the extra month so that the regular months maintain their proper seasonal positions, even though each seasonal marker can occur anywhere within its month. There have been at least four similar reforms of the lunisolar version of the [Hindu calendar](#), all intended to make the month a better match to the lunation and to make the year a better fit to the *sidereal* year. There have been reforms of the 'solar' version of the Hindu calendar which changed the distribution of the days in each month to better match the length of time that the Sun spends in each *sidereal* zodiacal sign. The same applies to the [Buddhist calendar](#). The first millennium reform of the [Hebrew calendar](#) changed it from an observational calendar into a calculated calendar. The [Islamic calendar](#) was a reform of the preceding lunisolar calendar which utterly divorced it from the solar year.

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Julian/Gregorian reforms

At the time at which Julius Caesar took power in Rome, the Roman calendar had ceased to reflect the year accurately. The provision of adding an [intercalary](#) month to the year when needed had not been applied consistently, because it affected the length of terms of office.

The Julian reform lengthened the months (except February, owing to its religious significance) and provided for an [intercalary](#) day to be added every four years to February, creating a [leap year](#).

This produced a noticeably more accurate calendar, but it was based on the calculation of a year as 365 days and 6 hours. In fact, the year is 11 minutes and 14 seconds less than that. This had the effect of adding three-quarters of an hour to a year, and the effect accumulated. By the sixteenth century, the vernal equinox fell on March 10.

Under Pope Gregory XIII, two reforms were effected: ten days were dropped from one year, to bring the calendar back into synchronization, and then to have century years, which are divisible by four, nevertheless not be leap years unless they are also divisible by 400. While this does not synchronize the years entirely, it would require 35 centuries to accumulate a day.

This reform slowly spread through the nations that used the Julian calendar, although the Russian church year still uses the Julian calendar. The times varied so widely that some countries had to drop more than ten: Great Britain, for instance, dropped eleven.

When noting dates occurring within the period, "Old Style" and "New Style" are used to distinguish which calendar was used by the person who recorded the date.

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The existing calendar

Reformers cite several problems with the Gregorian calendar:

the main problem with the Gregorian Calendar is that it consists of two separate cycles: one cycle of irregular months and another of regular weeks, and the two run side by side without mutual reference.

It is not perpetual. Each year starts on a different day of the week, and calendars expire every year.

Months are not equal in length, requiring the [mnemonic](#) rhyme, "[Thirty days hath September...](#)" to remember which month is 28, 29, 30, or 31 days long.

It is difficult to determine the weekday of any given day of the year.

The year's four quarters are not equal.

Its [epoch](#) (origin) is not religiously neutral. The same applies to [month](#) and [weekday](#) names in many languages.

Each month has no connection with the Moon.

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Perpetual calendars

Many calendar reforms have offered solutions to make the calendar [perpetual](#). These reforms would make it easy to work out the day of [week](#) of a particular [date](#), and would make changing calendars each year unnecessary.

These make it easier to work out the day of week by having exactly 52 weeks in each year plus an extra day not belonging to any week and also having the leap day outside of any week.

For example, The [World Calendar](#) and the [International Fixed Calendar](#) are proposals that start each year on a Sunday. The remaining 364 days then form 52 weeks of 7 days. The World Calendar has every third month beginning on the same day of week.

Both of these calendars treat one or two days (the 365th day, and the 366th [leap year](#) day) each year as outside of any week or month in order to keep the calendar perpetual. In The World Calendar, these days are considered holidays and named Worlds Day and Leap Year Day. These "off-calendar", or "intercalary", days stand outside the seven-day week and caused some religious groups to strongly oppose adoption of The World Calendar. Such concerns helped prevent The World Calendar from being adopted in the 1940s and 1950s.

Supporters of The World Calendar, however, argue that the religious groups' opposition overlooked every individual's right to celebrate these holidays as extra days of worship, or Sabbaths. This option, they reason, maintains the seven-day worship cycle for those who share that concern, while allowing benefits of a perpetual calendar to be shared by all.

In the [World Season Calendar](#), months are discarded altogether; instead, the year is divided into four seasons of 13 weeks each. An extra day (two days during [leap year](#)) is added to the calendar that is not assigned a day of the week in order to keep the calendar perpetual. The same calendar of 91 days is used for each season of every year.

Some calendar reform ideas, such as the [Pax Calendar](#), [Bonavian Civil Calendar](#), [New Earth Calendar](#), [Symmetry454 Calendar](#) and the [Common-Civil-Calendar-and-Time Calendar](#), were created to solve this problem by having years of either 364 days (52 weeks) or 371 days (53 weeks), thus preserving the 7-day week.

[These calendars](#) add a leap week of seven days to the calendar every five or six years to keep the calendar roughly in step with the [tropical year](#).

The Bonvaian Civil and Symmetry⁴⁵⁴ calendars have months of 28 and 35 days, and a leap week in December, when needed. The Common-Civil-Calendar-and-Time Calendar has months of 30 and 31 days, but includes an occasional 7-day leap week named "Newton".

The 53-week calendar, used in government and in business for **fiscal years**, is a variant of this concept. Each year of this calendar can be up to 371 days long.

Still other proposals, like [the 30x11 Calendar](#), abandon attempts to make the calendar perpetual, instead opting for eleven 30-day months and one "long month" of December at 35 days, or 36 days in leap years.

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13-month calendar proposals

Some calendar reformers seek to equalize the length of each month in the year. This is accomplished by creating a calendar that has 13 months of 28 days each, making 364 days.

An early 13-month proposal was the 1849 [Positivist Calendar](#), created by **Auguste Comte**. It was based on a 364-day year which included one or two "blank" days. Each of the 13 months had 28 days and exactly four weeks, and each started on a Monday. The International Fixed Calendar is a more modern descendant of this calendar.

Another example of the use of "blank" days is the **13 moon calendar**, which views the uncounted 365th and 366th days as "days out of time".

Some proposals, such as the [Sol Calendar](#), add one or two days to the calendar each year to account for the annual solar cycle, while others keep these days off the calendar entirely, to make the calendar perpetual.

Around 1930 Colligan invented the [Pax Calendar](#), which avoids off-calendar days by adding a 7-day leap week to the perpetual 364-day year for 71 out of 400 years. The [New Earth Calendar](#) does likewise by adding a leap week once every 5 years with exceptions.

While some 13-month calendars are perpetual, none are equally divisible into four quarters, unless months are split into parts.

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Lunisolar proposals

The [Hermetic Lunar Week Calendar](#) is a lunisolar calendar proposal which has 12 or 13 lunar months of 29 or 30 days a year, and begins each year near the **vernal equinox**.

The [Simple Lunisolar Calendar](#) uses 12 or 13 lunar months of 30 or 29 days with fixed lengths, and begins each year between Gregorian [December 3](#) and [January 1](#).

The [Rectified Hebrew calendar](#) uses a more accurate leap month cycle of 4366 months every 353 years, intended to replace the 19-year cycle of the modern [Hebrew calendar](#).

The [Meyer-Palmen Solilunar Calendar](#) has 12 lunar months with 29 or 30 days plus a leap month called [Meton](#) every 3 or 2 years with 30 or 31 days. 60 years together are called a cycle. It uses a leap cycle which has equal number of days, weeks, months, years and cycles. 2498258 days, 356894 weeks, 84599 months, 6840 years and 114 cycles nearly all equal each other. It is called an era, although time isn't divided into it in this calendar.

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Naming reform proposals

Calendar proposals that introduce a thirteenth month or change the Julian-Gregorian system of months often also propose new names for these months. New names have also been proposed for days out of the week cycle (e.g. 365th and leap) and weeks out of the month cycle. In The World Calendar, for example, the last day of the year is "Worldsday".

Proposals to change the traditional month and weekday names are less frequent. The Gregorian calendar obtains its names mostly from gods of now obsolete religions (e.g. Thursday from Nordic Thor or March from Roman Mars) or leaders of vanished empires (July and August from the first Cæsars), or ordinals that got out of synchronization (September through December, originally seventh through tenth, now ninth through twelfth).

Calendar reformers, therefore, seek to correct what they see as deficiencies by focusing on more homogeneous sets of individuals, who usually share common traits.

Comte's Postitivst calendar, for example, proposed naming the 13 months in his calendar after figures from religion, literature, philosophy and science: Moses, Homer, Aristotle, Archimedes, Caesar, Saint Paul, Charlemagne, Dante, Gutenberg, Shakespeare, and Descartes.

Similarly, the Hermetic Lunar Week Calendar uses 12 or 13 lunar months named after 13 pioneers in contributors to research for physioactive plants and chemicals: Artaud; Benjamin; Clark; De Quincy; Ellis; Furst; Grof; Hofmann; Izumi; Janiger; Kesey; Lilly; and leap month McKenna.

The Simple Lunisolar Calendar names its months after the letters of the Greek alphabet: Alpha; Beta; Gamma; Delta; Epsilon; Zeta; Eta; Theta; Iota; Kappa; Lambda; Mu; and leap month Nu.

The Meyer-Palmen Solilunar Calendar names its months after 13 people who worked on astronomy and calendars: Aristarchus, Bruno, Copernicus, Dee, Eratosthenes, Flamsteed, Galileo, Hypatia, Ibrahim, Julius, Khayyam, Lilius and leap month Meton.

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See also

[Calculating the day of the week](#)

[Alternative and Proposed Calendars](#)

[The Prospects for Calendar Reform](#)

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External links

[Calendar Reform by Rick McCarty](#)

[Calendar Zone Reform Calendars](#)

[A New Calendar - options for calendar reform](#)

[Leap week calendars in which each year has either 364 or 371 days](#)

[C&T calendar home page](#)

[Slashdot discussion of Dick Henry's C&T](#)

[Johns Hopkins press release on C&T](#)

[Bob McClennon's Refomed Weekly Calendar](#) (Leap rule has a drafting error, but is correct in code sample)

[The Symmetry454 Calendar home page](#)

[The Rectified Hebrew Calendar home page](#)

[The 30x11 Calendar home page](#)

[Tranquility Calendar \(13-month calendar\)](#)

[The 13-Moon Change movement](#)

[The 13-Month Sol Calendar](#)

[The New Earth Calendar \(13-month calendar\)](#)

[The Abysmal Calendar \(formerly Synaptic\) \(13-month calendar\)](#)

Catholic Encyclopedia "Reform of the Calendar" Historical information

[Aristean calendar website](#)

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Supplementary External Links

[The Lengths of the Seasons](#) (numerical integration analysis)

[The Length of the Lunar Cycle](#) (numerical integration analysis)



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Reference: <http://www.aatideas.org/itinica/develop/index.html>

[AAT ICAS development](#)

... Richard E. White III, Gerhard Uhde, Marc Verhagen, **Brij Bhushan Vij**, Katie Ware, Ray Winstead, John Woelflein, AppleScript developers communities, ...

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process review of decimal calendar module

AAT review of a decimal calendar module currently centers on the following considerations:

- use of the ICAS NDN scale? otherwise scale conversion factors to NDN.
- use of NC year scale? otherwise scale conversion factors to NC.
- use of term identifier for module
- use of a term set, use of SI prefixes?
- specification of annuation in decimal calendar
- specification of sub-annuation in decimal calendar
- specification of methods of coordinating annual units and subunits

AAT is also reviewing the usability of a decimal calendar module as an alternative method of specifying calendar dates for particular applications.

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