

IDEAS & INVENTIONS

Refers to Home Page: <http://www.brijvij.com/>

DISCOVERING THE UNIQUE CYCLE – 896-yrs/159 LWks, seeds of which I planted during my calculations of The Metric Calendar Year (1973-82); and I remained STUCK to this being relevant to calendar calculations that I worked & discussed with United States Metric Association, USMA members & Calndr-L groups for a NEWER format of my Modified Gregorian calendar < http://www.brijvij.com/bb_cb2013mgc.pdf> wherein I suggest mere shifting the day of July 31st to 2nd month as February 29th (ALL YEARS), on keeping a World Peace Day (December 31st) and the Leap Day (between June 30th & July 01) OUTSIDE the calendar; on slight modifying the "centurion Leap Day Rule i.e. div.4/skip100th/count400th - getting Mean Year =365.2425 days" to better Mean Year value of 365.2421875 days using Leap Day Rule i.e. div.4/skip128th years; and to define the new time interval, decimal second (s_d) linked with arc-length, Metre New (m') as: $1/10^{5th}$ of arc-angle $\pi/180$ i.e. 1° , please see: http://www.brijvij.com/bb_deci-sec-nu-mtr.pdf.

Apart from my claim on 896-yr/159 LWks, using 'DIVIDE SIX (6) plan -149 normal +10 AKLWks i.e. 159 LWks, I feel the JITTER shall (when calculated appears to me) be lesser with DIVIDE SEVEN (7) plan on inserting 31 Additional Keplers' Leap Weeks. However, astronomers shall be the better authority to establish "What plan is better – the divide SIX (6); the divide SEVEN (7); or the divide EIGHT (8) if Leap Weeks be the choice. The 'divide FOUR (4) Leap Day plan with a SKIPPED day at 128th Year, to me seem a better option – of course, the current Leap Day insertion 'does need modifying' as discussed, during my communications.

Yes, I can justifiably now lay my claim in the 'discovery of Divide Six(6) scheme' for inserting a Leap Week along with Keplers. Leap Weeks, as per:

http://www.brijvij.com/bb_wrlld-cal.Nu-app..pdf and http://www.brijvij.com/bb_harappaTithi-Cycles.pdf.

BRIJ BHUSHAN VIJ

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896-year /159 Leap Weeks Cycle USING DIVIDE SEVEN (7) PLAN: (128 Normal +31 Additional Keplers' Leap Weeks)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
00/SKIP	0007	0014	0021	0028	1 st KLWk	0035	0042	0049	0056	0060	0063	0070	0077	0084	0088
0091	0098	0105	0112	0116	0119	0126	0133	0140	0144	0147	0154	0161	0168	0172	0175
0182	0189	0196	0200	0203	0210	0217	0224	0228	0231	0238	0245	0252	0256	0259	0266
0273	0280	0284	0287	0294	0301	0308	0312	0315	0322	0329	0336	0340	0343	0350	0357
0364	0368	0371	0378	0385	0392	0396	0399	0406	0413	0420	0424	0427	0434	0441	0448
0452	0455	0462	0469	0476	0480	0483	0490	0497	0504	0508	0511	0518	0525	0532	0536
0539	0546	0553	0560	0564	0567	0574	0581	0588	0592	0595	0602	0609	0616	0620	0623
0630	0637	0644	0648	0651	0658	0665	0672	0676	0679	0686	0693	0700	0704	0707	0714
0721	0728	0732	0735	0742	0749	0756	0760	0763	0770	0777	0784	0788	0791	0798	0805
0812	0816	0819	0826	0833	0840	0844	0847	0854	0861	0868	0872	0875	0882	0889	0896

Next Additional Keplers' Leap Week MUST be 'SKIPPED' so as to follow 896-year/159 LWks plan. *Accordingly, Y2008 was 3rd Additional KLWk in 3rd 896-year cycle and the Year after 2012 December 21 i.e. proposed day for start of my Modified Gregorian Calendar at 'ZERO HOUR' to be dated – 2013, January 01 (Monday) H 00:00:00, marking START of New Era.* Gregorian calendar could remain in continuation, on correcting the 2½ day discrepancy from Friday 'on skipping Saturday & Sunday' at Y2013 and the next Additional LWk shall be during Year 2036.

Following 31 Keplers' Leap Weeks need be inserted evry 896-year/159 LWks cycle (i.e. 128+31 =159 LWks)

0032	0060	0088	0116	0144	0172	0200	0228	0256	0284	0312	0340	0368	0396	0424	0452
0480	0508	0536	0564	0592	0620	0648	0676	0704	0732	0760	0788	0816	0844	0872	SKIPPED

From: **Brij Bhushan Vij** (metricvij@hotmail.com)

Sent: Fri 10/01/10 4:53 PM

To: calendar listserv (calndr-l@listserv.ecu.edu); Rick McCarthy(calndr-L) (mccartyr@ecu.edu)

Karl, McCarthy Dr Marcus Wong & List, sirs:

>I see at <http://personal.ecu.edu/mccartyr/calendar-reform.html>

> a Double Leap Calendar <http://doubleleap.weebly.com/> proposed by Marcus Wong.

It shall be interesting to see the possibility of using DIVIDE SEVEN plan along with *Additional Keplers' Leap Weeks* as:

"**An 896-year cycle has 327257.01010776 days, to account 159 'leap weeks'.**

These 159 Leap Weeks could be divided once EVERY seven (7) years, with an additional Leap Week at interval of ONE every 28-years. **Thus, accommodating 128-leap weeks+31 Additional Leap Weeks i.e. 159 Leap Weeks in 896-year cycle getting Mean Year = $7*(52+1/7+31/896) = 365.2421875$ days.** This distribution overcome the anomaly 896 not being divisible by six; since 896 IS DIVISIBLE by SEVEN. There shall be 128 normal divide 'seven LWks and 31 Additional Keplers' Leap Weeks during every 896-years".

The added Additional Kepler Leap Week may be inserted between TWO 'normal' divide seven (7) Leap weeks.

Regards,

Brij Bhushan Vij

(MJD 55470)/1726+D-271W40-05 (G. Friday, 2010 October 01H16:87 (decimal) EST

Date: Thu, 30 Sep 2010 13:03:06 +0100

From: karl.palmen@STFC.AC.UK

Subject: Double Leap Calendar

To: CALNDR-L@LISTSERV.ECU.EDU

Dear Calendar People

I see at <http://personal.ecu.edu/mccartyr/calendar-reform.html>

a Double Leap Calendar <http://doubleleap.weebly.com/> proposed by Marcus Wong.

It's a leap week calendar whose leap week rule is derived from the Gregorian Calendar rule by a simple method.

Every 7th year has a leap week. Also every 28th year has a second leap week, except those whose number is divisible by 700 but not 2800.

This method has the advantage of resembling the Gregorian leap year rule and seeming intuitively to have the same mean year as it. But it fails to exploit the fact that 400 Gregorian years has a whole number of weeks and also it has considerable jitter.

The worst interval for jitter in the 2800-year cycle is year 2128 to 3472 inclusive. These 1345 years have 193 leap weeks (week 53) and 49 leap weeks (week 54) totalling 242 leap weeks.

The average number of leap weeks in 1345 years is equal to $(71/400)*1345 = 238.74$ giving a difference of 3.26 weeks (22.8 days), which is worse than the simple 5:40:400 rule or Colligan's Pax calendar (2 to 3 weeks).

The method can be applied to any leap-day rule to produce a leap-week. As such, I mentioned it to the list many years ago. If the leap day rule has minimum jitter (e.g. 33-year cycle) then the leap-week rule will have just under 2 weeks jitter.

Karl

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The **blue** numbers in the calendar are the numbering of weeks.

Jan	Apr	Jul	Oct	N	M	T	W	R	F	S
		27	1	14	2	3	4	5	6	7
2	15	28	27	28	9	10	11	12	13	14
3	16	29	42	15	16	17	18	19	20	21
4	17	30	43	22	23	24	25	26		
5	18	31	44	29	30					
Feb	May	Aug	Nov			1	2	3	4	5
6	19	32	45	6	7	8	9	10	11	12
7	20	33	46	13	14	15	16	17	18	19
8	21	34	47	20	21	22	23	24	25	26
9	22	35	48	27	28	29	30			
Mar	Jun	Sep	Dec					1	2	3
10	23	36	49	4	5	6	7	8	9	10
11	24	37	50	11	12	13	14	15	16	17
12	25	38	51	18	19	20	21	22	23	24
13	26	39	52	25	26	27	28	29	30	31
			Dec							
1st Leap Week			53	32	33	34	35	36	37	38
2nd Leap Week			54	39	40	41	42	43	44	45
December either gets 1 Leap Week or 2 Leap Weeks (see 1st-step rounding on how leap weeks are applied).										

Features:

- 364 days
- 52 weeks
- 2,800-year period calendar (repeatable)
- Each month contains 30/31 days except for December which might have 31/38/45 days

Fixed holidays and special days:

- **New Year's Day - Sun, Jan 1**
- Valentine's Day - Mon, Feb 14
- **Good Friday - Fri, Apr 6**
- **Easter Monday - Mon, Apr 9**
- Halloween - Mon, Oct 30
- Christmas Eve - Sat, Dec 24
- **Christmas Day - Sun, Dec 25**
- **New Year's Eve - Sat, Dec 31/38/45**

ISO 8601 format for the days in the leap week: e.g. 2100-12-32

North America Daylight Saving Time (DST):

Begins on **Sun, Mar 4 @ 2 AM** & Ends on **Sun, Oct 29 @ 2 AM** (34 weeks [from Week 10 to Week 43](#))

'Won't it be much easier to remember when to adjust your clocks?? It will always be Mar 4 and Oct 29!!'

Pros:

1. **Lifelong calendar.** Well...hopefully no major catastrophic events that would change the Earth's axis and causing it to tilt at a different angle, or a change in speed when rotating on its axis, or a change in speed when revolving around the Sun. Else, we will have to change the calendar again.
2. Complies with the 7-day cycle in the bible, respects the [fourth](#) of the [Ten Commandments](#), and [Sabbath](#). Quote from the bible (Genesis 2:2): 'On the seventh day God finished his work which he had made; and he rested on the seventh day from all his work which he had made.'
3. Equal financial quarters - ideal for businesses and governments. Consistent with university and high-school schedules.

Cons:

1. **Complication in leaping days/weeks/months/years:** A solar year is roughly 365.25 (The mean tropical/solar year in 2000 AD is 365.2422 SI days (see [Tropical/Solar Year](#))). In order to account for the 1.25 days loss each year, one method is to use the above. Alternatively, we can add a 35-day leap month every 28 years (1.25 days/year * 28 years = 35 days). This method is not recommended as it disrupts the 12-month cycle, dramatically.
2. Friday the 13th appears every 3 months or 4 times per year (Oh come on, the world is not perfect!?). I mean, really, think about your worst days in your life, do they all fall on the Friday the 13th?? I think we'll get used to it, eventually.
3. For those who were born during the leap weeks, you'll have to celebrate on December 31.