The 2100-calendar

the ultimate, modern Gregorian calendar

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Year 1582
The introduction of the Gregorian calendar

- The Gregorian calendar replaced the Julian calendar from 46 BC after ca. 1630 years of usage.
  - The Julian calendar day Thursday, 4 October 1582 was followed by the first day of the Gregorian calendar, Friday, 15 October 1582 (10 days were cut out, and the cycle of weekdays was not affected).
- The final preparation time took more than 36 years.
  - Many early proposals. 1515 a paper from the University of Salamanca was sent to the Vatican.
  - 1545, the Council of Trent authorized Pope Paul III to reform the Julian calendar.
  - The mathematician, etc., dr.Aloysius Lilius (c.1510-1576) developed the basic paper. Proposal to Pope Gregory XIII passed to the Calendar Reform Commission in 1575.
  - Some members of the reform commission proposed Easter to be computed from the true motions of the Sun and Moon, but a tabular, approximation method was maintained. This includes: The 19-year cyclus (Metonic calendar) is **almost exactly** equal to 235 synodic months and, rounded to full days, counts 6,940 days.
  - Papal bull (Inter gravissimas) issued 24 Feb 1582.

BUT

- The telescope was first invented 1608.
  - Galileo Galilei's first observations were in 1609.
- The Geocentric World Picture was the established world order (scientific, religious, officially, and among people).
  - Kepler's laws and his heliocentric view was published 1609-1619. But was first generally accepted much later.
  - Only the Sun, and the planets Mercury, Venus, Mars, Jupiter, and Saturn were known.
- The astronomic measurements were rather imprecise.
  - But the geocentric model had at that time better predictions than the heliocentric model.
- Clocks were imprecise, a "world clock system" and "time zones" were practically non-existing .
- The computing time was very slow and often with "raw" approximations.
- The last country to adapt the calendar was Greece in 1923.
- The Gregorian calendar have now been in use for 435 years.

Is it time for an update?

Many proposals to "improve" the Gregorian calendar

As of today the Gregorian calendar is the de-facto universal calendar on this Earth.
But since year 1582 many serious and less serious proposals – not to forget a numerous amount of different, existing calendars from all over the world – have been debated.

The two most serious calendars to date for a replacement of the Gregorian calendar are:

The World Calendar from 1930:
First in the League of Nations and then in the UN this proposal was close to be accepted, but was finally discontinued in the 1950ies by the USA and then the UN. The "World Calendar" violated the 7-day week by inclusion of 1 or 2 so-called "**off-week days**" - among other reasons for discontinuation.

The Hanke–Henry Permanent Calendar from 2011:
This is one of many examples of **leap week calendars**. Calendars which maintain synchronization with the solar year by intercalating entire weeks rather than single days. It does not violate the 7-day week, but it needs a leap week every 5th or 6th year, and the leap year is difficult to compute. The “normal” leap day is an irritating, but necessary small stone in the shoe. A leap week is a rock.

BOTH have been based on the perceived necessity to please **modern management needs**. They are focussing on the work week, and the construction of four identical quarters of the year, all starting on the same week day.

My view is:
1. A new calendar should be better than the present calendar. It should be practical and be the optimal physical-mathematical representation of the real world with due respect for the past.
2. Any calendar should be more than a management tool.
3. The digital support available today makes the management need much less necessary.
4. They will not work because all states, nations, religions, etc. have their own special days that anyhow will destroy the possible benefits of these claimed management needs.
5. An universally accepted calendar should never aim at standardizing the life of all the many nations on Earth, its cultures, religions, and local needs. It should primarily be a support for further co-operation and co-existence.

Earth and Sun facts

The average distance between the **Sun and the Earth** is 149,598 mill. km. On an A4-paper it gives a scale 1:1496 bill. (1 cm is app. 15 mill. km). Most often, the movement of the Earth is illustrated as a typical ellipse. But the eccentricity of 0,0167 is so small, that the most correct illustration is **a perfect circle**, as on the next slide.

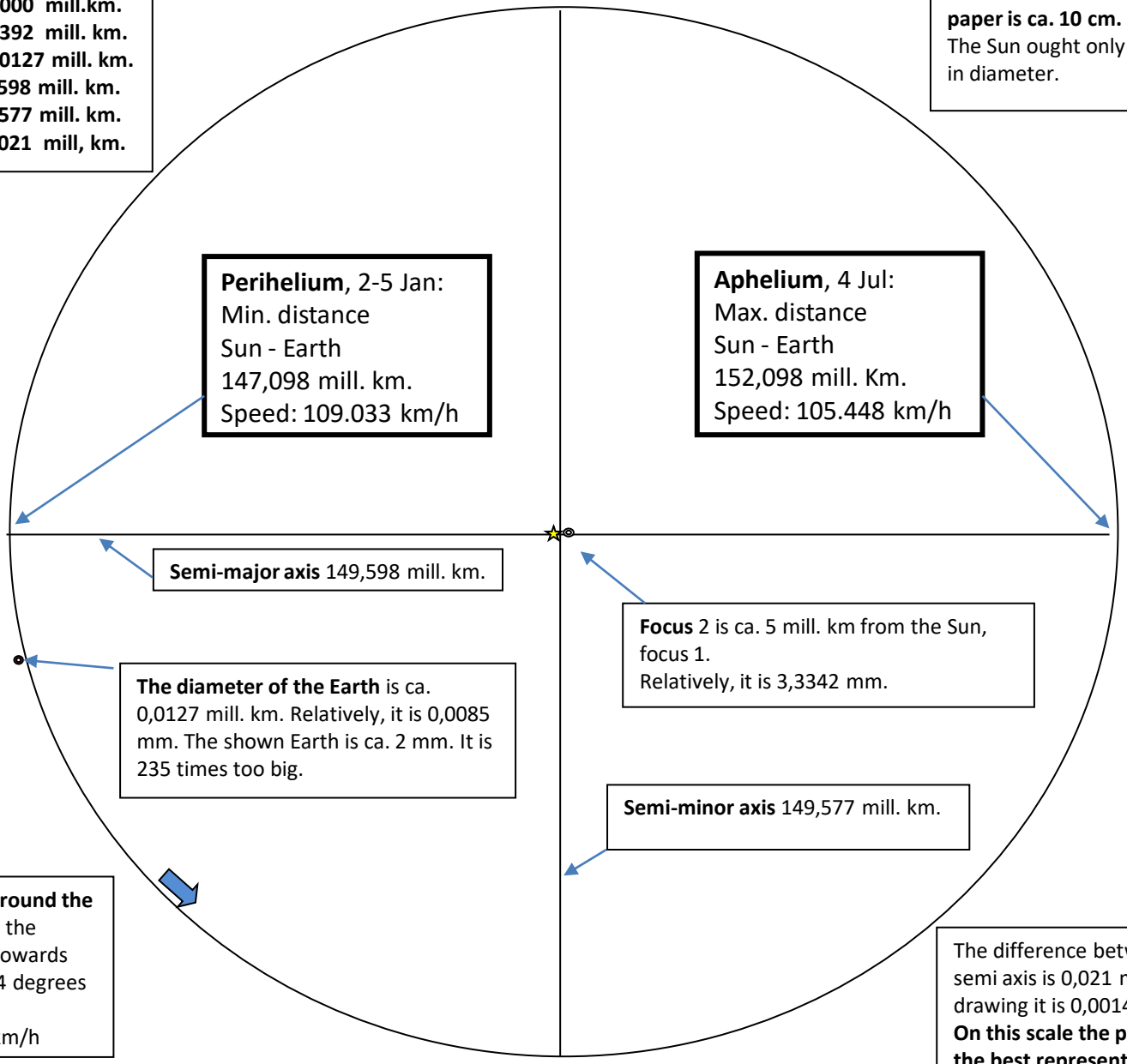
The Mean Tropical (Solar) Year (MTY) was, as of the 1st of January 2000, calculated to **365,24219878 days** measured between two following March equinoxes. However, MTY fluctuates in individual years up to 30 minutes (0,02083 Day or plus/minus 0.0057 %) from this average.
The Gregorian 400-years period (97 leap years) has an average year of **365,2425 days**, or 0,00030122 days too much.
In 400 years the difference amounts to less than 3 hours (2,891712 hours).
This is **in 3200 years only one day**, so it is fair to disregard this difference.

Note: The time from March Equinox (ME) to September Equinox (SE) is 185-186 days, but SE to ME is only 179-180 days. The difference of app. 6 days is due to the speed differences of the Earth around the Sun.
The average speed is 107.219 km/h.
Max. is 109.033 km/h, when closest to the Sun.
Min. is 105.448 km/h when far from the Sun.

EARTH – SUN to scale 1cm: 15 mill.km

Sun-Earth avg. Distance:	**149,598 mill. km.**
Diff. max - min.:	**5,000 mill.km.**
Sun avg. diameter:	**1,392 mill. km.**
Earth avg. diameter:	**0,0127 mill. km.**
Semi-major axis:	**149,598 mill. km.**
Semi-minor axis:	**149,577 mill. km.**
Diff. axises:	**0,021 mill, km.**

The distance Sun-Earth on an A4 paper is ca. 10 cm.
The Sun ought only to be 0,93 mm in diameter.



Perihelium, 2-5 Jan:
Min. distance
Sun - Earth
147,098 mill. km.
Speed: 109.033 km/h

Aphelium, 4 Jul:
Max. distance
Sun - Earth
152,098 mill. Km.
Speed: 105.448 km/h

Semi-major axis 149,598 mill. km.

Focus 2 is ca. 5 mill. km from the Sun, focus 1.
Relatively, it is 3,3342 mm.

The diameter of the Earth is ca. 0,0127 mill. km. Relatively, it is 0,0085 mm. The shown Earth is ca. 2 mm. It is 235 times too big.

Semi-minor axis 149,577 mill. km.

The motion of the Earth around the Sun seen perpendicular to the ellipse plane of the Earth towards the North star with a 23,44 degrees tilt (Axial tilt).
Average speed: 107.210 km/h

The difference between the two semi axis is 0,021 mill. km, on the drawing it is 0,0014 mm.
On this scale the perfect circle is the best representation.

The physical-mathematical consequences of the motion/speed of the Earth around the Sun.

Problem:
If it is given that the calendar has 365 or 366 days and has 12 months –
how will the speed of the Earth influence the number of days in the months ?

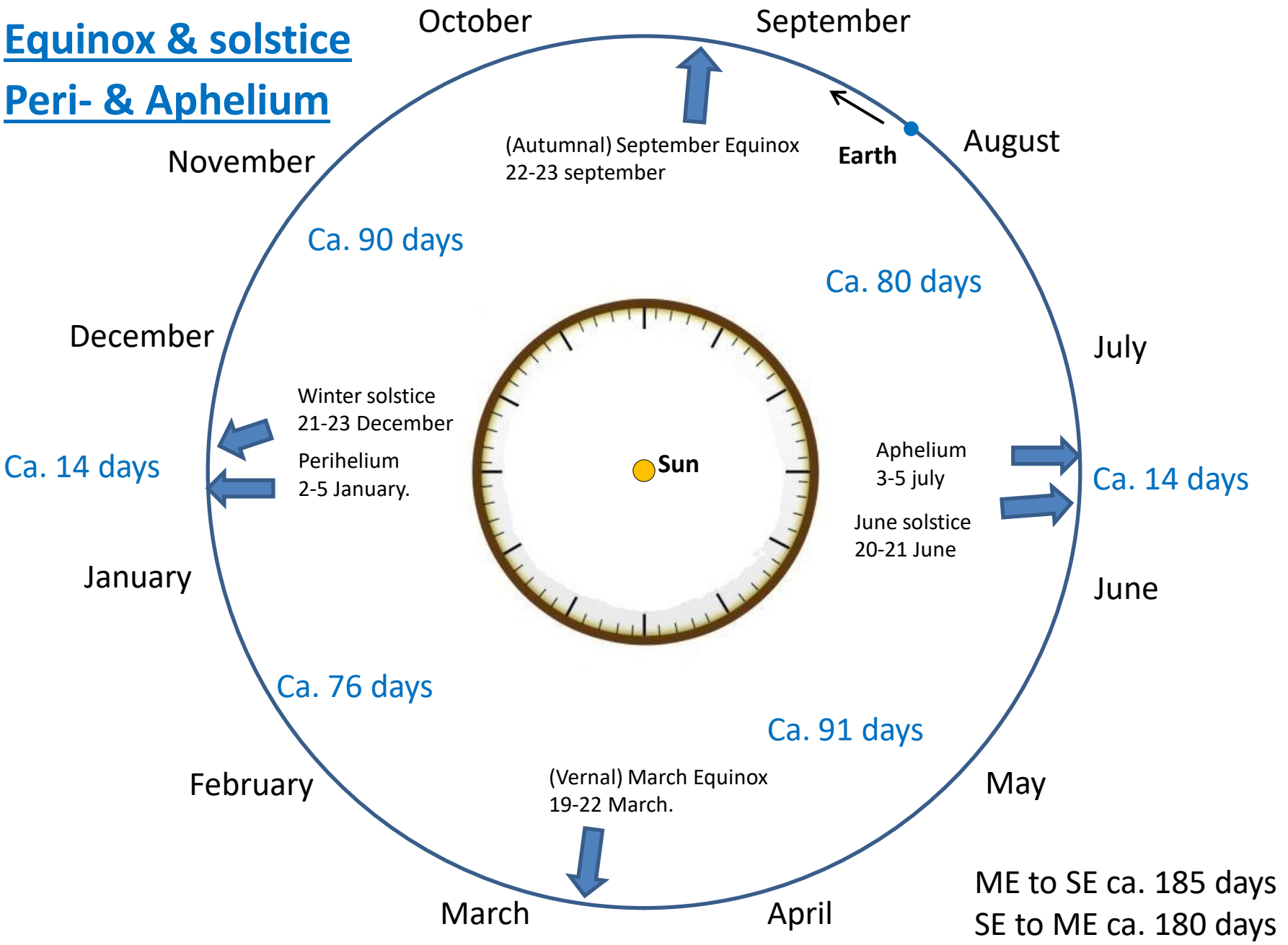
Analysis:
The average month is 30 5/12 (common years) or 30 6/12 days (leap years).
The speed of the Earth is a mathematical factor for the length of the month, therefore ***as***:
The average speed, 107.219 km/h represents the average month, ***then:***
The maximum speed, 109.033 km/h (it gets faster to the next month) represents the shortest month, and
The minimum speed, 105.448 km/h (it takes longer to get to the next month) represents the longest month.

Calculations:
The common year has 365 days. **The average month is 30 5/12 days long** and the average speed is 107.219 km/h.
The consequences are:
The shortest month (Ms) is more than Ms = (30 5/12) x 107.219 : 109.033 = **29,9106 days long**, and
The longest month (Ml) is less than Ml = (30 5/12) x 107.219 : 105.448 = **30,9275 days long.**
(More than because the max. speed only is in one moment of the motion. "Less than" has the same logics.)
As the days in any calendar is an integer, then the best approximation must be used, therefore
all the months in the common year must be either 30 or 31 days long.

The leap year has 366 days. **The average month is 30 6/12 days long** and the speed is 107.219 km/h
Therefore:
The shortest month (Ms) is more than Ms = (30 6/12) x 107.219 : 109.033 = **29,9926 days long**, and
The longest month (Ml) is less than Ml = (30 6/12) x 107.219 : 105.448 = **31,0212 days long.**
As the days in any calendar is an integer, then the best approximation must be used, therefore
all the months in the leap year must also be either 30 or 31 days long.

Conclusions:
1. **The Gregorian calendar with February being 28 or 29 days long has a physical-mathematical failure in representing the actual motion of the Earth around the Sun.**
2. **The optimal calendar under the physical realities of our Solar system must have months of either 30 or 31 days length.**

Equinox & solstice
Peri- & Aphelium



ME to SE ca. 185 days
SE to ME ca. 180 days

What is “wrong” with the Gregorian calendar ?

It carries a number of **traditional and religious anachronisms** from before Christ.

One is the **position of the leap day** on the 29th of February (actually, in accordance with an old Roman tradition, the leap day is on the 24th of February).

Second. Why is **February only 28/29 days long**, when the best approximation of the length of the months is between 30 and 31 days?

Third. Nobody really knows for sure why **both July and August contain 31 days**, while the rest of the year follows a 31 - 30 days rhythm, however with February out of rhythm.

The explanation is likely that our calendar at any time was a result of step-by-step adjustments to the realities of the uncompromising physics of the World, as science improved. But old traditions always were spilled over to the new calendar - and so for the Gregorian calendar.

More than 2000 years ago the "new" months, January and February were initially placed after the 10th month, so far the last month of the year, which accordingly was/is named December. These two months were later placed before the "old" months - that, however, during this process were not renamed accordingly. This was partly because the year traditionally was considered to begin with the Spring in March.

So far, many calendar systems quite naturally and intuitively have added leap days/weeks/months to the end of the calendar. However, the Julian and the Gregorian calendars do have their leap days placed strangely inside the year.

Easter calculation

With the date of the March equinox (time and time zone) universally established, the Easter date can precisely be calculated using modern technology (with 1 sec. of accuracy) and the rules in paragraph 6 of the "Inter Gravissimas":

"One notes in examining this that it is necessary to rule at the same time on three points to restore the celebration of Easter according to rules fixed by the previous Roman pontiffs, particularly Pius I [ca. 140 - 154] and Victor I [ca. 189 - 198, who established Easter's celebration on Sunday, rather than 14 Nisan favoured by the "Quartodeciman" bishops of Asia], and by the fathers of the councils, in particular those of the [first] great ecumenical council of Nicæa [May 20 - August 25, AD 325, deciding the following rules]. Namely:

First, the precise date of the vernal equinox,
then the exact date of the fourteenth day of the moon which reaches this age the very same day as the equinox or immediately afterwards,
finally the first Sunday which follows this same fourteenth day of the moon.

Therefore we took care not only that the vernal equinox returns on its former date, of which it has already deviated approximately ten days since the Nicene Council, and so that the fourteenth day of the Paschal moon is given its rightful place, from which it is now distant four days and more, but also that there is founded a methodical and rational system which ensures, in the future, that the equinox and the fourteenth day of the moon do not move from their appropriate positions."

<u>The Easter calculation in modern, precise language</u>:

1. Time and date (A) of the March equinox in Jerusalem time zone.

2. Time and date in Jerusalem time zone of the first full moon (B) <u>on or after</u> (A).

3. Easter is on the first Sunday in Jerusalem time zone after (B).

The beginning of the year

A circle/ellipse has no start or ending. The calendar, in principle, can start on any date.

• Far back in time the start of the calendar was normally related to the most precise astronomical observation possible: March equinox (app. 21 March in GR) or Winter Solstice (app. 21-23 December in GR).

• The first **Roman calendar began March 1**, but did not cover the Winter period.
• March remained the first month of the Roman calendar year perhaps as late as 153 BC, although January and February were added to the calendar and placed before March.
• The **Julian calendar began January 1**.
• During the Middle Ages Christen festivals in different Western countries were used as New Year:
    • **December 25 (Nativity of Jesus), March 1, March 25, or Easter**.
• The Orthodox Church used **September 1** from app. 988.
• **Slowly January 1** became the official start of the year, among others:
    • Lithuania 1362, Germany (Holy Roman Empire) 1544, Spain and Portugal 1556, Sweden 1559, France 1564, The Gregorian calendar 1582, Scotland 1600, and Great Britain 1752.

• Today January 1 is the recognized start of the civil year globally, however, many cultures and religions still celebrate the beginning of the New Year in March or even another month/day .
•The liturgical year begins in most Christian churches with Advent four Sundays before Christmas (in the period November 27 to December 3).

•As the calendar in principle can start on any date – as we have just seen – one could argue for a better date than January 1. It could, as an example, be on the date the Earth in its motion is closest to the Sun (at Perihelium in the period 2-5 January). However January 1 is well establish and is as good a date for the beginning of the year as any other date.

The 2100-Calendar will unchanged use January 1.

2100-calendar. My proposal

a. **To maintain the Gregorian calendar in general, that is**:

- To maintain the 7-day week unchanged:
  Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday (in the language of choice)
  with holidays/resting days and local names unchanged.

- Unchanged names and order of the 12 months (in the language of choice).

- The first day of the year unchanged on the 1st of January.

- Unchanged system of common and leap years of 365 days and 366 days, respectively.

b. **To adjust the Gregorian calendar as follows**:

- Leap day is moved from February to the last, the 366th day of the year.

- The length of the months is changed into a permanent and systematic pattern of 30 and 31 days:
  January has 30 days, February 31, March 30, April 31, May 30, June 31,
  July 30, August 31, September 30, October 31, November 30, and
  December 30 or 31 days (in common or in leap years).

c. **Transfer from the Gregorian calendar to the 2100-Calendar:**

The transfer can be made effective on any date of the year.

The first 30 days of the year in the two calendars are identical,
so a transfer in this period would be totally unproblematic.

But, should for example Sunday the 12th of November 2017 in the Gregorian calendar be chosen as the transfer date - which is on the 316th calendar day of that year - then the same calendar day in the 2100-Calendar is Sunday the 11th of November 2017.

The transfer will start from the Date-line and last 24 hours.

Why is the 2100-calendar as proposed ?

The following **pre-conditions** are ruling my proposal for the 2100-calendar:

The leap day is to be placed at the end of the leap year.
The year of 365 or 366 days is divided into 12 months.
The length of the months are evenly distributed in a systematic pattern throughout the year.

Therefore, the length of all the months must be as close to the average month as possible:

30 5/12 days in common years, and
30 6/12 days in leap years.
That means, that the **length of the months must be 30 days or 31 days.**

From this **follows mathematically**, that the calendar must have:

In common years: 7 months of 30 days and 5 months of 31 days. And December has 30 days.
In leap years: 6 months of 30 days and 6 months of 31 days. And December has 31 days.

Under these pre-conditions more calendars can be constructed. Mathematically, a total of 462 combinations. But if months of 30 and 31 days are to interchange (as the Gregorian calendar attempts), **only 1 combination is possible**:

The 2100-calendar represents the optimal, mathematical solution under the established conditions.

Comparison

To sum up we have today the Gregorian calendar with arbitrary lengths of the 12 months and with leap day in February:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	12 months
31	28/29	31	30	31	30	31	31	30	31	30	31	365/366 days

Note, the lengths of the months are without any symmetry/rhythm. Many people have to use the knuckles of their fist to memorize this.

The 2100-Calendar looks like this:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	12 months
30	31	30	31	30	31	30	31	30	31	30	30/31	365/366 days

But, how about the “185/180” year?

Remember, March Equinox (ME) to September Equinox (SE) is app. 185 days, whereas SE to ME is app. 180 days.

Should we create a calendar accordingly, placing all months of 31 days in the ME to SE period?

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	12 months
30	30	30	31	31	31	31	31	30	30	30	30/31	365/366 days

Note, in this calendar ME-SE is 185 always days. SE-ME is 180 days in common years and 181 days in leaps days.
So, the above calendar seems to be the best approximation to the physical reality of the ellipse motion of the Earth around the Sun. The benefit at the first view is that the Northern hemisphere will get a longer spring & summer period. But then, what about the Southern Hemisphere?
No, I would NOT recommend this possibility. After all, we may name the days of the year as we will – It will not change the physical reality of the motion of the Earth around the Sun at all. For that reason I can only recommend the 2100-Calendar, as the best approximation of the motion of the Earth around the Sun seen as a whole. It is also the most logical and easy calendar to memorize.

The 2100-Calendar. My recommendation:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	12 months
30	31	30	31	30	31	30	31	30	31	30	30/31	365/366 days

But, can we minimize the changes to the "old" calendar?

Yes, it is possible. I call this version 2100-C v.2.:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	12 months
31	**30**	31	30	31	30	**30**	31	30	31	30	**30**/31	365/366 days

Note, the few changes in this 2100-calendar v.2. February is changed from only 28/29 days to permanently 30 days, so no "old" dates are annulated. Further, July is reduced from 31 days to 30 days. ONE (1) "old" date is annulated, but the "old" 31 July would generally be referred to 30 July in the new calendar. 31 December still exist, but only in leap years. However, this version is not rhythmic. It can be said that it is mirrored around Mid-year, June/July.

No, I would NOT recommend this possibility. The 2100-Calendar is in my opinion the best approximation of the motion of the Earth around the Sun seen as a whole. It is also the most logical and easy calendar to memorize.
However, the future, international implementation of the 2100-calendar could, of course, select 2100-C v.2., primarily because it contains minimal changes to the Gregorian calendar, and at the same time meet the physical-mathematical requirements to a modern calendar that the family of 2100-calendars all represents. BUT:

The 2100-Calendar. My recommendation:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	12 months
30	31	30	31	30	31	30	31	30	31	30	30/31	365/366 days

Year 2018

With its simple conversion between OLD and NEW calendar

2100-calendar for year 2018. WEEK DAY - DATE - week number.

*)		JANUARY		FEBRUAR		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		
2018	1	M	1	W		S		M	14	T		S		T		T		S		T		F		S		1
2019	2	T		T		S		T		F		S		W		F		M	36	W		S		M	49	2
2020	3	W		F		M	10	W		S		M	23	T		S		T		T		S		T		3
	4	T		S		T		T		S		T		F		S		W		F		M	45	W		4
2021	5	F		S		W		F		M	19	W		S		M	32	T		S		T		T		5
2022	6	S		M	6	T		S		T		T		S		T		F		S		W		F		6
2023	7	S		T		F		S		W		F		M	28	W		S		M	41	T		S		7
2024	8	M	2	W		S		M	15	T		S		T		T		S		T		F		S		8
	9	T		T		S		T		F		S		W		F		M	37	W		S		M	50	9
2025	10	W		F		M	11	W		S		M	24	T		S		T		T		S		T		10
2026	11	T		S		T		T		S		T		F		S		W		F		M	46	W		11
2027	12	F		S		W		F		M	20	W		S		M	33	T		S		T		T		12
2028	13	S		M	7	T		S		T		T		S		T		F		S		W		F		13
	14	S		T		F		S		W		F		M	29	W		S		M	42	T		S		14
2029	15	M	3	W		S		M	16	T		S		T		T		S		T		F		S		15
2030	16	T		T		S		T		F		S		W		F		M	38	W		S		M	51	16
2031	17	W		F		M	12	W		S		M	25	T		S		T		T		S		T		17
2032	18	T		S		T		T		S		T		F		S		W		F		M	47	W		18
	19	F		S		W		F		M	21	W		S		M	34	T		S		T		T		19
2033	20	S		M	8	T		S		T		T		S		T		F		S		W		F		20
2034	21	S		T		F		S		W		F		M	30	W		S		M	43	T		S		21
2035	22	M	4	W		S		M	17	T		S		T		T		S		T		F		S		22
2036	23	T		T		S		T		F		S		W		F		M	39	W		S		M	52	23
	24	W		F		M	13	W		S		M	26	T		S		T		T		S		T		24
2037	25	T		S		T		T		S		T		F		S		W		F		M	48	W		25
2038	26	F		S		W		F		M	22	W		S		M	35	T		S		T		T		26
2039	27	S		M	9	T		S		T		T		S		T		F		S		W		F		27
2040	28	S		T		F		S		W		F		M	31	W		S		M	44	T		S		28
	29	M	5	W		S		M	18	T		S		T		T		S		T		F		S		29
2041	30	T		T		S		T		F		S		W		F		M	40	W		S		M	1	30
	31			F				W				M	27			S				T				**		31

*) Gives for the years 2018-2041 WEEK DAY at the beginning of the year.

**) NEXT LEAP DAY in 2020.

Conversion to the Gregorian calendar (GR): 0 unchanged;. -1 one day back (1 FEB is 31 JAN in GR); +1 one day forward; +2 two days forward to the next color. Expl: SAT 29 JUN 2018 NEW er SAT 30 JUN 2018 GR.

Conversion from GR to NEW: Find the date. Max 2 days from this position find the GR weekday. Read the date. F.ex. SAT 12 MAY 2018 GR. 12 MAY is a Monday in NEW. Find the Saturday max 2 days away. That is SAT 10 MAY NEW.

2100-calendar for year 2020 (Leap year). WEEK DAY - DATE - week number.

	JANUARY		FEBRUAR		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		
1	W	1	F		M	10	W		S		M	23	T		S		T		T		S		T		1
2	T		S		T		T		S		T		F		S		W		F		M	45	W		2
3	F		S		W		F		M	19	W		S		M	32	T		S		T		T		3
4	S		M	6	T		S		T		T		S		T		F		S		W		F		4
5	S		T		F		S		W		F		M	28	W		S		M	41	T		S		5
6	M	2	W		S		M	15	T		S		T		T		S		T		F		S		6
7	T		T		S		T		F		S		W		F		M	37	W		S		M	50	7
8	W		F		M	11	W		S		M	24	T		S		T		T		S		T		8
9	T		S		T		T		S		T		F		S		W		F		M	46	W		9
10	F		S		W		F		M	20	W		S		M	33	T		S		T		T		10
11	S		M	7	T		S		T		T		S		T		F		S		W		F		11
12	S		T		F		S		W		F		M	29	W		S		M	42	T		S		12
13	M	3	W		S		M	16	T		S		T		T		S		T		F		S		13
14	T		T		S		T		F		S		W		F		M	38	W		S		M	51	14
15	W		F		M	12	W		S		M	25	T		S		T		T		S		T		15
16	T		S		T		T		S		T		F		S		W		F		M	47	W		16
17	F		S		W		F		M	21	W		S		M	34	T		S		T		T		17
18	S		M	8	T		S		T		T		S		T		F		S		W		F		18
19	S		T		F		S		W		F		M	30	W		S		M	43	T		S		19
20	M	4	W		S		M	17	T		S		T		T		S		T		F		S		20
21	T		T		S		T		F		S		W		F		M	39	W		S		M	52	21
22	W		F		M	13	W		S		M	26	T		S		T		T		S		T		22
23	T		S		T		T		S		T		F		S		W		F		M	48	W		23
24	F		S		W		F		M	22	W		S		M	35	T		S		T		T		24
25	S		M	9	T		S		T		T		S		T		F		S		W		F		25
26	S		T		F		S		W		F		M	31	W		S		M	44	T		S		26
27	M	5	W		S		M	18	T		S		T		T		S		T		F		S		27
28	T		T		S		T		F		S		W		F		M	40	W		S		M	53	28
29	W		F		M	14	W		S		M	27	T		S		T		T		S		T		29
30	T	30.	S		T	91.	T		S	152.	T		F	213.	S		W	274.	F		M	49 - 335.	W		30
31			S	61.			F	122.			W	183.			M	36 - 244.			S	305.			T	366.	31

Last day of each months the day number of the year is shown.

NEXT LEAP DAY in 2024.

Conversion to the Gregorian calendar (GR): 0 unchanged until next color mark;. -1 one day back (1 FEB is 31 JAN in GR); +1 one day forward. Eg: SAT 30 FEB 2020 NEW is SAT 29 FEB 2020 GR.

Conversion from GR to NEW: Find the date or the closest date in the 2100.calendar. Max 1 day from this position find the GR weekday. This is the date in GR. Eg. SUN 31MAY 2018 GR. SUN 30 MAY NEW is the closest.

2100-calendar for the year 2018. WEEKDAY - DATE - CALENDAR DAY.

The 2100-calendar is almost an eternity calendar. Only weekdays are to be moved one space up each year. In the year after a leap year 2 spaces up.

*)	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
2018	M	1	1	W	1	31	S	1	62	M	1	92	T	1	123	S	1	153	T	1	184	T	1	214	S	1	245	T	1	275	F	1	306	S	1	336
2019	T	2	2	T	2	32	S	2	63	T	2	93	F	2	124	S	2	154	W	2	185	F	2	215	M	2	246	W	2	276	S	2	307	M	2	337
2020	W	3	3	F	3	33	M	3	64	W	3	94	S	3	125	M	3	155	T	3	186	S	3	216	T	3	247	T	3	277	S	3	308	T	3	338
	T	4	4	S	4	34	T	4	65	T	4	95	S	4	126	T	4	156	F	4	187	S	4	217	W	4	248	F	4	278	M	4	309	W	4	339
2021	F	5	5	S	5	35	W	5	66	F	5	96	M	5	127	W	5	157	S	5	188	M	5	218	T	5	249	S	5	279	T	5	310	T	5	340
2022	S	6	6	M	6	36	T	6	67	S	6	97	T	6	128	T	6	158	S	6	189	T	6	219	F	6	250	S	6	280	W	6	311	F	6	341
2023	S	7	7	T	7	37	F	7	68	S	7	98	W	7	129	F	7	159	M	7	190	W	7	220	S	7	251	M	7	281	T	7	312	S	7	342
2024	M	8	8	W	8	38	S	8	69	M	8	99	T	8	130	S	8	160	T	8	191	T	8	221	S	8	252	T	8	282	F	8	313	S	8	343
	T	9	9	T	9	39	S	9	70	T	9	100	F	9	131	S	9	161	W	9	192	F	9	222	M	9	253	W	9	283	S	9	314	M	9	344
2025	W	10	10	F	10	40	M	10	71	W	10	101	S	10	132	M	10	162	T	10	193	S	10	223	T	10	254	T	10	284	S	10	315	T	10	345
2026	T	11	11	S	11	41	T	11	72	T	11	102	S	11	133	T	11	163	F	11	194	S	11	224	W	11	255	F	11	285	M	11	316	W	11	346
2027	F	12	12	S	12	42	W	12	73	F	12	103	M	12	134	W	12	164	S	12	195	M	12	225	T	12	256	S	12	286	T	12	317	T	12	347
2028	S	13	13	M	13	43	T	13	74	S	13	104	T	13	135	T	13	165	S	13	196	T	13	226	F	13	257	S	13	287	W	13	318	F	13	348
	S	14	14	T	14	44	F	14	75	S	14	105	W	14	136	F	14	166	M	14	197	W	14	227	S	14	258	M	14	288	T	14	319	S	14	349
2029	M	15	15	W	15	45	S	15	76	M	15	106	T	15	137	S	15	167	T	15	198	T	15	228	S	15	259	T	15	289	F	15	320	S	15	350
2030	T	16	16	T	16	46	S	16	77	T	16	107	F	16	138	S	16	168	W	16	199	F	16	229	M	16	260	W	16	290	S	16	321	M	16	351
2031	W	17	17	F	17	47	M	17	78	W	17	108	S	17	139	M	17	169	T	17	200	S	17	230	T	17	261	T	17	291	S	17	322	T	17	352
2032	T	18	18	S	18	48	T	18	79	T	18	109	S	18	140	T	18	170	F	18	201	S	18	231	W	18	262	F	18	292	M	18	323	W	18	353
	F	19	19	S	19	49	W	19	80	F	19	110	M	19	141	W	19	171	S	19	202	M	19	232	T	19	263	S	19	293	T	19	324	T	19	354
2033	S	20	20	M	20	50	T	20	81	S	20	111	T	20	142	T	20	172	S	20	203	T	20	233	F	20	264	S	20	294	W	20	325	F	20	355
2034	S	21	21	T	21	51	F	21	82	S	21	112	W	21	143	F	21	173	M	21	204	W	21	234	S	21	265	M	21	295	T	21	326	S	21	356
2035	M	22	22	W	22	52	S	22	83	M	22	113	T	22	144	S	22	174	T	22	205	T	22	235	S	22	266	T	22	296	F	22	327	S	22	357
2036	T	23	23	T	23	53	S	23	84	T	23	114	F	23	145	S	23	175	W	23	206	F	23	236	M	23	267	W	23	297	S	23	328	M	23	358
	W	24	24	F	24	54	M	24	85	W	24	115	S	24	146	M	24	176	T	24	207	S	24	237	T	24	268	T	24	298	S	24	329	T	24	259
2037	T	25	25	S	25	55	T	25	86	T	25	116	S	25	147	T	25	177	F	25	208	S	25	238	W	25	269	F	25	299	M	25	330	W	25	360
2038	F	26	26	S	26	56	W	26	87	F	26	117	M	26	148	W	26	178	S	26	209	M	26	239	T	26	270	S	26	300	T	26	331	T	26	361
2039	S	27	27	M	27	57	T	27	88	S	27	118	T	27	149	T	27	179	S	27	210	T	27	240	F	27	271	S	27	301	W	27	332	F	27	362
2040	S	28	28	T	28	58	F	28	89	S	28	119	W	28	150	F	28	180	M	28	211	W	28	241	S	28	272	M	28	302	T	28	333	S	28	363
	M	29	29	W	29	59	S	29	90	M	29	120	T	29	151	S	29	181	T	29	212	T	29	242	S	29	273	T	29	303	F	29	334	S	29	364
2041	T	30	30	T	30	60	S	30	91	T	30	121	F	30	152	S	30	182	W	30	213	F	30	243	M	30	274	W	30	304	S	30	335	M	30	365
				F	31	61				W	31	122				M	31	183				S	31	244				T	31	305				**)	~~31~~	~~366~~

By Poul Erik Tranberg, Poznan. poul.tranberg@hotmail.com, 20 may 2018

*) Shows for the years 2018-2041 the WEEKDAY for the first day of the year.

**) NEXT LEAP YEAR: 2020.

21 march (often the standard day for the vernal equinox) is in the Gregorian calendar day number 80, in leap years it is day number 81. In the 2100-calendar the same day (day number 80) in 2018 is 19 march. Here shown in GREEN.

2100-calendar for the year 2020. WEEKDAY - DATE - CALENDAR DAY.

The 2100-calendar is almost an eternity calendar. Only weekdays are to be moved one space up each year. In the year after a leap year 2 spaces up.

*)	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
2020	W	1	1	F	1	31	M	1	62	W	1	92	S	1	123	M	1	153	T	1	184	S	1	214	T	1	245	T	1	275	S	1	306	T	1	336
	T	2	2	S	2	32	T	2	63	T	2	93	S	2	124	T	2	154	F	2	185	S	2	215	W	2	246	F	2	276	M	2	307	W	2	337
2021	F	3	3	S	3	33	W	3	64	F	3	94	M	3	125	W	3	155	S	3	186	M	3	216	T	3	247	S	3	277	T	3	308	T	3	338
2022	S	4	4	M	4	34	T	4	65	S	4	95	T	4	126	T	4	156	S	4	187	T	4	217	F	4	248	S	4	278	W	4	309	F	4	339
2023	S	5	5	T	5	35	F	5	66	S	5	96	W	5	127	F	5	157	M	5	188	W	5	218	S	5	249	M	5	279	T	5	310	S	5	340
2024	M	6	6	W	6	36	S	6	67	M	6	97	T	6	128	S	6	158	T	6	189	T	6	219	S	6	250	T	6	280	F	6	311	S	6	341
	T	7	7	T	7	37	S	7	68	T	7	98	F	7	129	S	7	159	W	7	190	F	7	220	M	7	251	W	7	281	S	7	312	M	7	342
2025	W	8	8	F	8	38	M	8	69	W	8	99	S	8	130	M	8	160	T	8	191	S	8	221	T	8	252	T	8	282	S	8	313	T	8	343
2026	T	9	9	S	9	39	T	9	70	T	9	100	S	9	131	T	9	161	F	9	192	S	9	222	W	9	253	F	9	283	M	9	314	W	9	344
2027	F	10	10	S	10	40	W	10	71	F	10	101	M	10	132	W	10	162	S	10	193	M	10	223	T	10	254	S	10	284	T	10	315	T	10	345
2028	S	11	11	M	11	41	T	11	72	S	11	102	T	11	133	T	11	163	S	11	194	T	11	224	F	11	255	S	11	285	W	11	316	F	11	346
	S	12	12	T	12	42	F	12	73	S	12	103	W	12	134	F	12	164	M	12	195	W	12	225	S	12	256	M	12	286	T	12	317	S	12	347
2029	M	13	13	W	13	43	S	13	74	M	13	104	T	13	135	S	13	165	T	13	196	T	13	226	S	13	257	T	13	287	F	13	318	S	13	348
2030	T	14	14	T	14	44	S	14	75	T	14	105	F	14	136	S	14	166	W	14	197	F	14	227	M	14	258	W	14	288	S	14	319	M	14	349
2031	W	15	15	F	15	45	M	15	76	W	15	106	S	15	137	M	15	167	T	15	198	S	15	228	T	15	259	T	15	289	S	15	320	T	15	350
2032	T	16	16	S	16	46	T	16	77	T	16	107	S	16	138	T	16	168	F	16	199	S	16	229	W	16	260	F	16	290	M	16	321	W	16	351
	F	17	17	S	17	47	W	17	78	F	17	108	M	17	139	W	17	169	S	17	200	M	17	230	T	17	261	S	17	291	T	17	322	T	17	352
2033	S	18	18	M	18	48	T	18	79	S	18	109	T	18	140	T	18	170	S	18	201	T	18	231	F	18	262	S	18	292	W	18	323	F	18	353
2034	S	19	19	T	19	49	F	19	80	S	19	110	W	19	141	F	19	171	M	19	202	W	19	232	S	19	263	M	19	293	T	19	324	S	19	354
2035	M	20	20	W	20	50	S	20	81	M	20	111	T	20	142	S	20	172	T	20	203	T	20	233	S	20	264	T	20	294	F	20	325	S	20	355
2036	T	21	21	T	21	51	S	21	82	T	21	112	F	21	143	S	21	173	W	21	204	F	21	234	M	21	265	W	21	295	S	21	326	M	21	356
	W	22	22	F	22	52	M	22	83	W	22	113	S	22	144	M	22	174	T	22	205	S	22	235	T	22	266	T	22	296	S	22	327	T	22	357
2037	T	23	23	S	23	53	T	23	84	T	23	114	S	23	145	T	23	175	F	23	206	S	23	236	W	23	267	F	23	297	M	23	328	W	23	358
2038	F	24	24	S	24	54	W	24	85	F	24	115	M	24	146	W	24	176	S	24	207	M	24	237	T	24	268	S	24	298	T	24	329	T	24	259
2039	S	25	25	M	25	55	T	25	86	S	25	116	T	25	147	T	25	177	S	25	208	T	25	238	F	25	269	S	25	299	W	25	330	F	25	360
2040	S	26	26	T	26	56	F	26	87	S	26	117	W	26	148	F	26	178	M	26	209	W	26	239	S	26	270	M	26	300	T	26	331	S	26	361
	M	27	27	W	27	57	S	27	88	M	27	118	T	27	149	S	27	179	T	27	210	T	27	240	S	27	271	T	27	301	F	27	332	S	27	362
2041	T	28	28	T	28	58	S	28	89	T	28	119	F	28	150	S	28	180	W	28	211	F	28	241	M	28	272	W	28	302	S	28	333	M	28	363
2042	W	29	29	F	29	59	M	29	90	W	29	120	S	29	151	M	29	181	T	29	212	S	29	242	T	29	273	T	29	303	S	29	334	T	29	364
2043	T	30	30	S	30	60	T	30	91	T	30	121	S	30	152	T	30	182	F	30	213	S	30	243	W	30	274	F	30	304	M	30	335	W	30	365
				S	31	61				F	31	122				W	31	183				M	31	244				S	31	305			**)	T	31	366

By Poul Erik Tranberg, Poznan. poul.tranberg@hotmail.com, 20 may 2018

*) Shows for the years 2020-2043 the WEEKDAY for the first day of the year.

**) NEXT LEAP YEAR: 2024.

21 march (often the standard day for the vernal equinox) is in the Gregorian calendar day number 80, in leap years it is day number 81. In the 2100-calendar the same day (day number 81) in 2020 is 20 march. Here shown in GREEN.

Pros and cons.

+ The **best possible approximation** to the physical motion of the Earth around the Sun.

+ The lengths of the **months change systematically** between 30 and 31 days
(December only has 31 days in leap years)

./. The following **dates are not in** the 2100-Calendar:
31st January, 31st March, 31st May, and 31st July.
And 31st December in common years.
30th and 31st February, 31st April, and 31st June are new dates .

+ The 2100-Calendar is in praxis **an eternity calendar** with a permanent relationship between the date and the calendar day (day number in the year).

+ **Leap day is always the last day** of the year, the 366th day, 31st December.

+ February will always contain **all phases of the Moon**, as it is the case with all the other months.

+ The Quarters I - IV of the year are **symmetrical (91 - 92 – 91 – 91/92 days).**

+ The meteorological seasons of the year are also **more symmetrical (91/92 – 91 – 92 - 91 days)**.

+ Traditional and religious **anachronisms** from before Christ are **reduced.**

+ And the new calendar may **facilitate a universal Easter**, and the Easter calculations can be made easier.

The “right" dates (birthdates etc.) in the Gregorian calendar and in the 2100 Calendar.

Objectively, a date is just a name of a particular day in the year.
In reality the position of any date in the year is governed by the day number in the year.

The 1st of January is day number 1.
The 31st of December in a leap year is always the 366th and the last day of the year.

However, by habit and for practical reasons we are not using the day number much.

We are using the name of the date to position an event in the year.
For this reason we do not think much about the factual "chaos" the usage of dates in the Gregorian calendar contains.

This "chaos" disappears totally at the introduction of the 2100 Calendar.
The proof is here:

The Gregorian calendar:

The date of an event:

1 Jan - 28/29 Feb: The date in relation to the day number of the year is always **unchanged**.

1 Mar - 31 Dec:

in common years: The date in relation to the day number of the year is **unchanged** during common years.
The date in relation to the day number of the year is **changed (+1)** during leap years.

in leap years: The date in relation to the day number of the year is **changed (-1)** during common years.
The date in relation to the day number of the year is **unchanged** during leap years.

Examples:

Born 29 June 1949,
the 180th day in 1949:
Birthday 29 June 1950, 180th day in 1950.
Birthday 29 June 1951, 180th day in 1951.
Birthday 29 June 1952, 181th day in 1952.
Birthday 29 June 1953, 180th day in 1953. **75% on the "right" day**.

Born 29 June 1948,
the 181th day in 1948:
Birthday 29 June 1949, 180th day in 1951.
Birthday 29 June 1950, 180th day in 1950.
Birthday 29 June 1951, 180th day in 1951.
Birthday 29 June 1952, 181th day in 1952. **25% on the "right" day.**

The 2100 Calendar:

The date of an event:

1 Jan - 30/31 Dec: The date in relation to the day number of the year is always **unchanged**.

It is obvious that the 2100 Calendar is far more simple and usable than the Gregorian calendar on this issue.

Leap days and the change of the length of the months in the 2100 Calendar.

Both calendars have the same **problem for a leap day event in common years**.
Normally, the 29 Feb is moved to the 28th Feb in the Gregorian calendar, whereas the 31 Dec would be moved to the 30 Dec in the 2100 Calendar.
However, also on this issue the 2100 Calendar has a benefit: One will still celebrate birthday on the last day of the year, New Year's Eve.

Obviously, **the 2100 Calendar** - as was/is the case when changing from the Julian to the Gregorian calendar - **will need a transition policy** for "old" historical dates (birthdates, historical events etc.).

In general **the transition would be very simple:** The same date.
However, the 2100 Calendar does not contain the old dates: 31 Jan, 31 Mar, 31 May, and 31 July, but has instead the new dates: 30 and 31 Feb, 31 April, and 31 June. There are 3 general possibilities:

1. To continue to refer to the Gregorian calendar for events before the change to the 2100 Calendar. This is the same policy generally used for events before the introduction in 1582 of the Gregorian calendar. Dates from the Julian calendar are used.

2. The "correct" policy would be to use the day number of the "Gregorian" event. This will automatically give the date in the 2100 Calendar, as the relation between the day number and the date is always the same. For example the 31 July 2018 in the Gregorian calendar is on the 212nd day of that year. In the 2100 Calendar this is always on the 29 July.

3. The 3rd policy could be the same as normally used for the 29 Feb in leap years in the Gregorian calendar. That is to refer 31 Jan, 31 Mar, 31 May, and 31 July to 30 Jan, 30 Mar, 30 May, and 30 July, respectively.

Perpetual calendar

for year 2017, beginning on a Sunday.

For any other year 2013-2102 slide the upper part so the actual year is aligned with the 1st of January, or read the weekday for the actual year and align any same weekday with the 1st of January.

år:	13	14	15	16		17	18	19	20		21	22	23	24		25	26	27	28		29	30	31	32		33	34
35	36		37	38	39	40		41	42	43	44		45	46	47	48		49	50	51	52		53	54	55	56	
57	58	59	60		61	62	63	64		65	66	67	68		69	70	71	72		73	74	75	76		77	78	79
80		81	82	83	84		85	86	87	88		89	90	91	92		93	94	95	96		97	98	99	00	01	02
M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S

JANUARY day 1 -30							APRIL day 91 -122							JULY day 184 - 213							OCTOBER day 275 - 305						
						1							1	1	2	3	4	5	6	7	1	2	3	4	5	6	7
2	3	4	5	6	7	8	2	3	4	5	6	7	8	8	9	10	11	12	13	14	8	9	10	11	12	13	14
9	10	11	12	13	14	15	9	10	11	12	13	14	15	15	16	17	18	19	20	21	15	16	17	18	19	20	21
16	17	18	19	20	21	22	16	17	18	19	20	21	22	22	23	24	25	26	27	28	22	23	24	25	26	27	28
23	24	25	26	27	28	29	23	24	25	26	27	28	29	29	30						29	30	31				
30							30	31																			
FEBRUARY day 31 - 61							MAY day 123 - 152							AUGUST day 214 - 244							NOVEMBER day 306 - 335						
	1	2	3	4	5	6			1	2	3	4	5			1	2	3	4	5				1	2	3	4
7	8	9	10	11	12	13	6	7	8	9	10	11	12	6	7	8	9	10	11	12	5	6	7	8	9	10	11
14	15	16	17	18	19	20	13	14	15	16	17	18	19	13	14	15	16	17	18	19	12	13	14	15	16	17	18
21	22	23	24	25	26	27	20	21	22	23	24	25	26	20	21	22	23	24	25	26	19	20	21	22	23	24	25
28	29	30	31				27	28	29	30				27	28	29	30	31			26	27	28	29	30		
MARCH day 62 - 91							JUNE day 153 - 183							SEPTEMBER day 245 - 274							DECEMBER day 336 - 366						
				1	2	3					1	2	3						1	2						1	2
4	5	6	7	8	9	10	4	5	6	7	8	9	10	3	4	5	6	7	8	9	3	4	5	6	7	8	9
11	12	13	14	15	16	17	11	12	13	14	15	16	17	10	11	12	13	14	15	16	10	11	12	13	14	15	16
18	19	20	21	22	23	24	18	19	20	21	22	23	24	17	18	19	20	21	22	23	17	18	19	20	21	22	23
25	26	27	28	29	30		25	26	27	28	29	30	31	24	25	26	27	28	29	30	24	25	26	27	28	29	30
C2100 - perpetual calendar 2013 - 2102, COMPACT																					~~31~~						

A new, revolutionary approach to

an Easter calculation

Should Christian feast days fall on a fixed day or on variable days ?

We still use old Jewish traditions, a fixed Ecclesiastical March Equinox, and the Metonic cycle. They are all incorrect.

Should we still use the good old "Computus" ?

Jesus died Friday the 3th of April AD 33. Why not fix Easter around this date ?

Jesus died on the 93th day of AD 33.

This is always the 2nd of April using the 2100-Calendar.

<u>Good Friday should always be the first Friday after the 1st of April.</u>

(Some scholars argue for another possible date, the 7th of April AD 30. This is on the 97th day of AD 30. This is always the 6th of April in the 2100-Calendar. But the majority of scholars argues strongly for the 3th of April.)

Year 2017. Conversions between the 2100-Calendar and the Gregorian calendar.

*)	JANUARY				FEBRUARY				MARCH				APRIL				MAY				JUNE			
	21-C			G	21-C			G	21-C			G	21-C			G	21-C			G	21-C			G
2017	S	1	1	-	T	1	31	J31	F	1	62	3	S	1	92	2	W	1	123	3	F	1	153	2
2018	M	2	2	-	W	2	32	1	S	2	63	4	M	2	93	3	T	2	124	4	S	2	154	3
2019	T	3	3	-	T	3	33	2	S	3	64	5	T	3	94	4	F	3	125	5	S	3	155	4
2020	W	4	4	-	F	4	34	3	M	4	65	6	W	4	95	5	S	4	126	6	M	4	156	5
	T	5	5	-	S	5	35	4	T	5	66	7	T	5	96	6	S	5	127	7	T	5	157	6
2021	F	6	6	-	S	6	36	5	W	6	67	8	F	6	97	7	M	6	128	8	W	6	158	7
2022	S	7	7	-	M	7	37	6	T	7	68	9	S	7	98	8	T	7	129	9	T	7	159	8
2023	S	8	8	-	T	8	38	7	F	8	69	10	S	8	99	9	W	8	130	10	F	8	160	9
2024	M	9	9	-	W	9	39	8	S	9	70	11	M	9	100	10	T	9	131	11	S	9	161	10
	T	10	10	-	T	10	40	9	S	10	71	12	T	10	101	11	F	10	132	12	S	10	162	11
2025	W	11	11	-	F	11	41	10	M	11	72	13	W	11	102	12	S	11	133	13	M	11	163	12
2026	T	12	12	-	S	12	42	11	T	12	73	14	T	12	103	13	S	12	134	14	T	12	164	13
2027	F	13	13	-	S	13	43	12	W	13	74	15	F	13	104	14	M	13	135	15	W	13	165	14
2028	S	14	14	-	M	14	44	13	T	14	75	16	S	14	105	15	T	14	136	16	T	14	166	15
	S	15	15	-	T	15	45	14	F	15	76	17	S	15	106	16	W	15	137	17	F	15	167	16
2029	M	16	16	-	W	16	46	15	S	16	77	18	M	16	107	17	T	16	138	18	S	16	168	17
2030	T	17	17	-	T	17	47	16	S	17	78	19	T	17	108	18	F	17	139	19	S	17	169	18
2031	W	18	18	-	F	18	48	17	M	18	79	20	W	18	109	19	S	18	140	20	M	18	170	19
2032	T	19	19	-	S	19	49	18	T	19	80	21	T	19	110	20	S	19	141	21	T	19	171	20
	F	20	20	-	S	20	50	19	W	20	81	22	F	20	111	21	M	20	142	22	W	20	172	21
2033	S	21	21	-	M	21	51	20	T	21	82	23	S	21	112	22	T	21	143	23	T	21	173	22
2034	S	22	22	-	T	22	52	21	F	22	83	24	S	22	113	23	W	22	144	24	F	22	174	23
2035	M	23	23	-	W	23	53	22	S	23	84	25	M	23	114	24	T	23	145	25	S	23	175	24
2036	T	24	24	-	T	24	54	23	S	24	85	26	T	24	115	25	F	24	146	26	S	24	176	25
	W	25	25	-	F	25	55	24	M	25	86	27	W	25	116	26	S	25	147	27	M	25	177	26
2037	T	26	26	-	S	26	56	25	T	26	87	28	T	26	117	27	S	26	148	28	T	26	178	27
2038	F	27	27	-	S	27	57	26	W	27	88	29	F	27	118	28	M	27	149	29	W	27	179	28
2039	S	28	28	-	M	28	58	27	T	28	89	30	S	28	119	29	T	28	150	30	T	28	180	29
2040	S	29	29	-	T	29	59	28	F	29	90	31	S	29	120	30	W	29	151	31	F	29	181	30
2041	M	30	30	-	W	30	60	M1	S	30	91	A1	M	30	121	M1	T	30	152	J1	S	30	182	J1
					T	31	61	M2					T	31	122	M2					S	31	183	J2

JULY				AUGUST				SEPTEMBER				OCTOBER				NOVEMBER				DECEMBER			
21-C			G	21-C			G	21-C			G	21-C			G	21-C			G	21-C			G
M	1	184	3	W	1	214	2	S	1	245	2	M	1	275	2	T	1	306	2	S	1	336	2
T	2	185	4	T	2	215	3	S	2	246	3	T	2	276	3	F	2	307	3	S	2	337	3
W	3	186	5	F	3	216	4	M	3	247	4	W	3	277	4	S	3	308	4	M	3	338	4
T	4	187	6	S	4	217	5	T	4	248	5	T	4	278	5	S	4	309	5	T	4	339	5
F	5	188	7	S	5	218	6	W	5	249	6	F	5	279	6	M	5	310	6	W	5	340	6
S	6	189	8	M	6	219	7	T	6	250	7	S	6	280	7	T	6	311	7	T	6	341	7
S	7	190	9	T	7	220	8	F	7	251	8	S	7	281	8	W	7	312	8	F	7	342	8
M	8	191	10	W	8	221	9	S	8	252	9	M	8	282	9	T	8	313	9	S	8	343	9
T	9	192	11	T	9	222	10	S	9	253	10	T	9	283	10	F	9	314	10	S	9	344	10
W	10	193	12	F	10	223	11	M	10	254	11	W	10	284	11	S	10	315	11	M	10	345	11
T	11	194	13	S	11	224	12	T	11	255	12	T	11	285	12	S	11	316	12	T	11	346	12
F	12	195	14	S	12	225	13	W	12	256	13	F	12	286	13	M	12	317	13	W	12	347	13
S	13	196	15	M	13	226	14	T	13	257	14	S	13	287	14	T	13	318	14	T	13	348	14
S	14	197	16	T	14	227	15	F	14	258	15	S	14	288	15	W	14	319	15	F	14	349	15
M	15	198	17	W	15	228	16	S	15	259	16	M	15	289	16	T	15	320	16	S	15	350	16
T	16	199	18	T	16	229	17	S	16	260	17	T	16	290	17	F	16	321	17	S	16	351	17
W	17	200	19	F	17	230	18	M	17	261	18	W	17	291	18	S	17	322	18	M	17	352	18
T	18	201	20	S	18	231	19	T	18	262	19	T	18	292	19	S	18	323	19	T	18	353	19
F	19	202	21	S	19	232	20	W	19	263	20	F	19	293	20	M	19	324	20	W	19	354	20
S	20	203	22	M	20	233	21	T	20	264	21	S	20	294	21	T	20	325	21	T	20	355	21
S	21	204	23	T	21	234	22	F	21	265	22	S	21	295	22	W	21	326	22	F	21	356	22
M	22	205	24	W	22	235	23	S	22	266	23	M	22	296	23	T	22	327	23	S	22	357	23
T	23	206	25	T	23	236	24	S	23	267	24	T	23	297	24	F	23	328	24	S	23	358	24
W	24	207	26	F	24	237	25	M	24	268	25	W	24	298	25	S	24	329	25	M	24	259	25
T	25	208	27	S	25	238	26	T	25	269	26	T	25	299	26	S	25	330	26	T	25	360	26
F	26	209	28	S	26	239	27	W	26	270	27	F	26	300	27	M	26	331	27	W	26	361	27
S	27	210	29	M	27	240	28	T	27	271	28	S	27	301	28	T	27	332	28	T	27	362	28
S	28	211	30	T	28	241	29	F	28	272	29	S	28	302	29	W	28	333	29	F	28	363	29
M	29	212	31	W	29	242	30	S	29	273	30	M	29	303	30	T	29	334	30	S	29	364	30
T	30	213	A1	T	30	243	31	S	30	274	O1	T	30	304	31	F	30	335	D1	S	30	365	31
				F	31	244	S1					W	31	305	N1					**)	~~31~~	~~366~~	

By Poul Erik Tranberg, Poznan. poul.tranberg@hotmail.com, 28 june 2017

*) Shows for the years 2017-2041 the WEEKDAY for the first day of the year.

Legends:

21-C: Shows the 2100-Calendar for year 2017 with weekday, date, and calendar day.

G: Shows the dates of the Gregorian calendar for year 2017. Note that the weekdays and the week numbers are unchanged.

- : Shows unchanged date, no difference between 2100-K and G.

M1, M2, A1, etc. :
Show dates in the Gregorian calendar starting 1-2 days in the previous month in the 21-C.
Please note that the differences between 21-C and G dates are max. 2 dates.

Red marking:
Easter Sunday is Sunday 16 April in the Gregorian calendar.
In the 2100-Calendar Easter Sunday is 15 April, same calendar day, weekday, and week number.

Green marking:
Vernal equinox 2017 is 20 March at 12:29 UTC+3 (Nicæa time zone) in the Gregorian calendar on calendar day 79.
This equals 18 March in 21-C.

Blue marking:
First full moon after the vernal equinox in year 2017 is Tuesday 11 April in the Gregorian calendar and Tuesday 10 April in 21-C.
Easter Sunday in both calendars is on calendar day 106. That is 16 April in G, and 15 April in 21-C.

In summary

The 2100-Calendar is a modern, updated, and more logical, symmetrical, and user friendly
improvement of the Gregorian calendar.

The transfer from the Gregorian calendar to the new calendar can take place
without any dramatic changes - secularly or religiously.

Any calendar day is permanently related to a specific date throughout the years,
which makes the calendar more user friendly and makes it in reality **an eternity calendar**.

The de-facto international **7-day week is unchanged**.

Nations, different cultures and religions may have **full freedom** to use any week day of their choice as the first or most important day of the week without any impact on the calendar.

Digitally the 2100-Calendar is much **more simple**.

With the 2100-Calendar we may optimistically hope that all Christians will in the future be able
to **celebrate Easter on the same date**.

And finally, after centuries of a special position, **February will become equal with the rest of the months**, and the leap day will be moved to its original and intuitively correct position at the end of the year where it will not disturb the beauty and order of the calendar.

QUESTION ?

To sum up we have today the Gregorian calendar with arbitrary lengths of the 12 months and with leap day in February:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	12 months
31	28/29	31	30	31	30	31	31	30	31	30	31	365/366 days

Note, the lengths of the months are without any symmetry/rhythm. Many people have to use the knuckles of their fist to memorize this.

The 2100-Calendar looks like this:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	12 months
30	31	30	31	30	31	30	31	30	31	30	30/31	365/366 days

THANK YOU !!