Title:
Replacing JDN by CEP

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This is a proposal of a new astronomical calendrical counting system based on cosmological, cultural and anthropic principle, called CEP (Count to Equinoctial Planetary Massing), which intends to replace the outdated and defective JDN (Julian-Day-Numbers), JD (Julian Date) and other related dating systems.

What is JDN and JD?

JDN and JD are based on the Julian Period proposed by Joseph Scaliger in 1583, as it is the multiple of three liturgical cycles of the Julian calendar, i.e. Indiction, Golden Number, and the Solar Cycle, a combination of weekdays and leap days.
Originally the Julian Period was invented to convert between different calendars and only to count years to express historical dates within years of the chronological interval of 7980 years since 4713 BC of the proleptic Julian calendar .To create this epoch the combination of several cycles of the former liturgical calendar was used, such as Indiction of unknown origin (I = 15), Golden Number, basing on the Metonic Cycle (G = 19), and solar cycle, basing on the seven weekdays and the leap day every four years (S = 7*4 = 28).
Scaliger found that an instant combination of the Lithurgical cycles (S, G, I) would repeat only after 7980 (28 x 19 x 15) years and called it Julian Period. Scaliger equilized year 1 AD (as adjusted by Dionysius Exiguus) with number 9 of the solar cycle (S), with number 1 of the Golden Numbers (G) and number 3 of the Indiction (I), presumably to fulfill some holy or cabalistic magic.
Julian Day Number (JDN) is the integer assigned to a whole solar day counting the days since January 1st, 4713 BC of the proleptic Julian calendar. (November 24th, 4714 BC, in the proleptic Gregorian calendar)
JDN for January 1st, 2000 was for instance 2.451.545.

The Julian Date (JD) of any instant is the Julian Day Number for the preceding noon in Greenwich Mean Time plus the fraction of the day since that instant.
For example, the Julian Date for January 1st, 2015; 00:30:00.0 UT, is 2,457,023.50000.

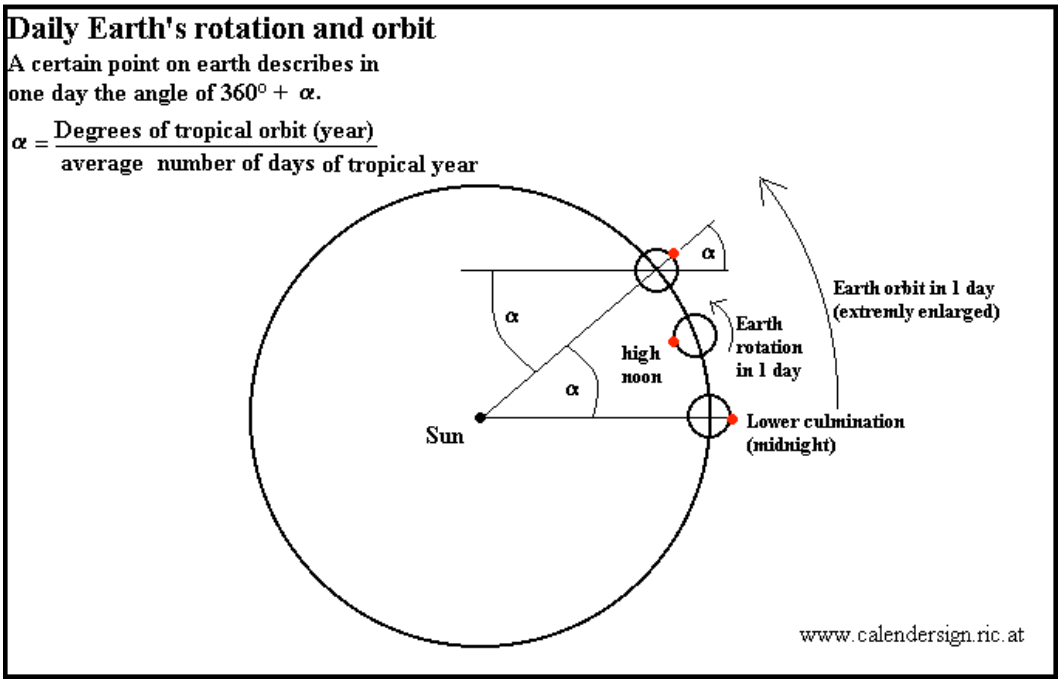
Though such a day count is very useful for astronomical calculation, it is based on arbitrary, superstitious, outdated and obsolete concepts. Several attempts for reformation and variants were invented, such as: Modified Julian Date (MJD), Modified Julian Date (MJD), Modified Julian Date (MJD), Chronological Julian Date (CJD), Lilian day number (LDN), ANSI Date, Rata Die, Heliocentric Julian Day (HJD), Geocentric Julian Day (GJD).

A principle of calendrical timekeeping

If we talk about calendrical timekeeping, we have to consider that a calendrical system

does not contain SI based units of physical time. Units such as SI seconds[1] are not part of a calendar, but the basic unit of calendrical timekeeping is only the solar day. (The average period of time measured from local midnight to the following local midnight).

Let us explore the problem and the character of calendrical timekeeping: A solar day, which is composed of daytime and nighttime due to the Sun's position, is the fundamental and integer unit of the calendar. Every other calendrical component has to be expressed in relation to it.
We measure the duration of the solar day by the angle that the sun describes as observed during one rotation of the Earth. Please note that the angle of Earth's rotation is not 360°, but a bit more: In one solar day, Earth moves on its orbit in respect to the sun, and therefore has to rotate a bit further to return to the same position referred to the Sun .



In the case of the aforementioned measurement of the solar day's duration, the starting point is the lower culmination of the Sun (midnight). One solar day is the average time of return from one lower culmination to the next measured by three aligned points of observation: 1. a point on the equator (red), 2. the center of Earth, and 3. the center of the Sun.
A correct calendar refers only the movements of Earth and calculates the relationship of the solar days and the year. How does this work?

For a tropical calendar it is important to calculate how many average synodic Earth's rotations (solar days) are on average equal to Earth's orbit from vernal equinox to vernal equinox (tropical year). This gives the number of days in an average year and is the basis of the leap day rule. Let's call the number of seconds of the average Earth's rotation "**d**" and the seconds for the orbits "**y**". The question is, how many days **(d)** fit into one year **(y)**?
This results in the very simple formula:

x * d sec = y sec;
x = y ~~sec~~ / d ~~sec~~ .
The result is the fraction of the **y / d,** which gives the average number of days in a tropical year. The physical unit "second" is reduced or cancelled in this fraction.
Let's do this calculation now with most precise available values
d sec : Average synodic Earth's rotation from lower sun's culmination to the next, expressed in seconds of Caesium atom periods. (The second is the duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium 133 atom.)
y sec: Average Earth's orbit between two equinoxes (tropical year), expressed in seconds of cesium atom periods
Calculated with the most precise data currently available the reckoning is:
d = 86,400.002 SI sec; or 794,243,403,313,263.54 of 133Cs periods
y = 31,556,925.974592 SI sec; or 290,091,200,277,572,631.98784 of 133Cs periods
x (number of average days in the tropical year) = 365.242190325319668

As you can see, it does not matter if you take seconds, an angle or the flatter of electrons. The decisive number of days is independent of the physical time of a watch. It may sound like a paradox, but physical dimensions of time do not affect the calendar. Quantities like calendar days or calendar years are numbers without a physical dimension. The final reason that the calendar does not have any physical dimension is that it is composed of angles between different alignments put in relation to each other.

CEP

In order to simplify, consolidate, and standardize all the above mentioned various attempts and alternatives of astronomical and calendrical timekeeping based upon JDN a new standard is required. Therefore a new proposal for an orientation to new epoch is made, which focuses a close massing of all planets.
This idea has ancient cosmological background and predecessors in myths (Olympic Symposion), ancient scientific time concepts such as the Indian Kali Yuga in 3102 BC (dated by Aryabhata of Kusumpara), the year of the deluge (by Abu Mashar), Chinese dynasties, and the Platonic Year according the doctrine of eternal return of everything (apokatastasis pantoon). Even the years since Christ's birth (anno domini) in fact aimed at its termination to an alignment of all planets in May 2000, as recent research show[2345].

This proposal is called CEP (Countdawn towards Equinoctial Planets). It's epoch is the moment of a close massing of all planets of the solar system as seen from Earth: Together with the Moon and the Sun the planets Mercury, Venus, Mars, Jupiter, Saturn, Uranus, and Neptune will gather then exactly at northward vernal equinox to a close massing on 20-3-2675 CE. This moment is a nonrecurring event in the historical horizon of humanity, because it is impossible to calculate with recently available astronomical measurement, when such a close massing would recur at a day of vernal equinox.
A day count towards this event is established and a monument in the Eastern Alps of Austria in the scale of 1: 1 billion illustrates this cosmic situation with models of the celestial objects in the range of about 7 km.[6]

Conversions

CEP is designed to count the days down towards the above mentioned moment (20-3-2675 CE)
E.g.: CEP -241 000 = May 19th, 2015;
CEP 0 = March 20th, 2675
CEP 1 = March 21st 2675, and so on.

The conversion between Julian Day Number (JDN) and CEP is easy:
CEP = JDN – 2,698,162.
For example: May 19th, 2015 is Julian Day Number (JDN): 2,457,162
CEP = 2,247,162 – 2,698,162
CEP = - 241,000.

In similar way converts other dating systems as e.g. the Julian Date (JD) to Countdown to Equinoctial Planetary Date (CEPD):
CEPD = JD – 2,698,162

May 19th, 2015; 00:00:00 UT is Julian Date (JD): 2,457,161.50000
CEPD = 2,457,161.50000 – 2,698,162
CEPD = - 241,000.50000

Coordinated Universal Time (UTC), International Atomic Time (TAI), Universal Time (UT), older standards as Greenwich Mean Time (GMT), and other scientific time standards would not be in conflict with CEP or CEPD, but could adopt it for a nonreligious unification of timekeeping.

Sepp Rothwangl, Vienna/Austria, May 19th, 2015; CEP -241,000

References

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