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Periodical and Temporal Indicator for Statistical Study of Phenomena Evolving with Time: Universal Standard Calendar

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Abstract
We present in this work a universal standard calendar and a transitional calendar. The transitional calendar is used to establish a correspondence between the Gregorian calendar and the universal standard calendar. Thus, there is no perturbation on the previous chronology. The particular feature of the universal standard calendar is that its dates are fixed. We have used this feature to show that it is possible to study the temperature variability of any region of the Earth and its seasonal divisions. An application of this study was done for the annual temperature of the Douala airport for the year 2004 and the result is very interesting. The sources of instabilities of the temperature were presented and the consequences on climate change as well. The universal standard calendar presents numerous advantages and can contribute to the economic growth. Some of these advantages were underlined for many areas of our daily live. The universal standard calendar is the answer to many questions of Human being and it is the unique calendar usable by all the people of the world.

1. Introduction

Since more than a decade, many natural processes occur in our environment under the powerlessness of the scientific community: violent winds, inundations, heat waves, etc... In November 1998, after the violent Atlantic cyclone called hurricane Mitch that devastated Central America causing more than 9000 deaths (J.L. Guiney and M.B. Lawrence, 1999), many scientists noticed the failure of existing alerts and prediction systems. Since that time, we have been questioning ourselves about the causes and the nature of these disasters and their eventual periodicity. These natural disasters occur almost everywhere in the world. Too many examples are known today of having strong intensities. The most deathly one occurred on the 26 December 2004 in Sumatra in Indonesia called the Tsunami, affecting citizens of 55 countries and took the life of almost 230000 people (UN Office of Special Envoy for Tsunami, 2007). Recently on the March 2011, Japan's East coast was hit by a magnitude 9 earthquake (the largest recorded for Japan) and then about an hour later by a very large tsunami that inundated the Fukushima-1 nuclear site. The tsunami caused considerable material damages and losses of lives across Japan (M. Weightman, 2011). The pictures of these events remain in our memories. Today, we understand that natural phenomena are linked to the dynamics of the Earth around the sun, the human activity and the instabilities due to interactions of our

planet with other planets of the solar system. If the instabilities are neglected, some of these processes may have a periodicity or a pseudo-periodicity (e.g.: the appearance of seasons in a year, the temperature variability) because the dynamics of our planet around the sun is periodical. Natural disasters which are not periodicals are due to instabilities (e.g.: tsunami). The evolution of natural processes which change with time cannot be studied in a calendar also changing with time like the Gregorian calendar. Therefore, it is important to use a periodical and temporal indicator for a judicious study of these processes occurring around our planet. It then appears that the Gregorian calendar used by most of the people in the world and which is the revision of the Julian calendar introduced in 1582 by Pope Gregorian XIII, is no more the good calendar to be used. While we were thinking, we discovered a periodical standard calendar adapted to the observation and the study of these natural processes: the universal standard calendar (USC). This work is organized in 5 parts. Part 2 is the presentation of the Gregorian calendar and the construction of the universal standard calendar. Part 3 is the relationship between the Gregorian calendar, the transitional calendar and the universal standard calendar. Part 4 is the study of a temperature diagram, the seasonal divisions and the source of instabilities. Part 5 is the impact of the universal standard calendar in our society. We conclude about the urgent need of using the universal standard calendar to enable profound mutations in the social and the daily live of each person and in the whole scientific community as well and finally to get a more comprehensible world with time harmonization.

2. Gregorian Calendar and Construction of the Universal Standard Calendar

2.1. Gregorian Calendar

The Gregorian calendar is a calendar of 365,2425 days. Due to the fact that this number is not an integer, leap years are introduced. In the Gregorian calendar, an ordinary year has 365 days and a leap year 366 days. Leap years are all years divisible by 4 but excluding the centenary years divisible by 100 but including those divisible by 400 and every 400 years, 3 leap years are dropped (American Psychological Association, retrieved 2012). For example, during the next 400 years, the years 2100, 2200 and 2300 will not be leap years and the year 2400 will be a leap year unless the velocity of the Earth changes significantly before the year 2400. The particularity of the Gregorian calendar 2012 is that the first day of the year is a Sunday which is exactly the first day of the week in the Christian calendar because the Sabbath or Saturday is the last day of the week according to the bible. This feature will be used to maintain Sunday as the first day of any week, the first day of any month and the first day of any year in the universal standard calendar.

2.2. Construction of the Universal Standard Calendar

We know with precision that one minute lasts 60 seconds, that one hour lasts 60 minutes, that one day lasts 24 hours, that one week lasts 7 days but, we can't say with precision the number of days or weeks in one month. In the same way, we can't say with precision the number of months in a trimester or in a semester. So, there is a sequential rupture. To avoid this sequential rupture, and harmonize the time, we affect to a month the duration of 4 weeks that is 28 days.

Thus, one month would last 4 weeks, a trimester would last 3 months 1 week that is 13 weeks, a semester would last 6 months 2 weeks that is 26 weeks, an ordinary year would last 13 months 1 day that is 52 weeks 1 day, a leap year would last 13 months 2 days that is 52 weeks 2 days.

This allows us to construct a 13 months calendar. The last month is consisted of 29 days for ordinary years and 30 days for leap years. We realize that the days of the week are fixed in this new calendar which then has a particular feature. One can start using this calendar at the beginning of any year without perturbation on the previous chronology because this calendar doesn't change from a year to another. To obtain the universal standard calendar, we started from the 2012 Gregorian calendar (Table 1) in which the first January is a Sunday. Next, we deduced the transitional calendar (Table 2) which allows a correspondence between the universal standard calendar and the Gregorian calendar. This transitional calendar was obtained using two translations of dates appearing on the Gregorian calendar. The additional month on the transitional calendar is between June and July because it is made of only 13 days of June within a total number of 30 days and only 15 days of July within a total number of 31 days. These numbers are respectively smaller than the half total number of days in June and in July which are consisted respectively of 30 and 31 days. We give the name 'nature' to that month because the universal standard calendar can help to understand and to save the nature. Finally, we deduced from the transitional calendar, the universal standard calendar (Table 3). Let me give you the opportunity to discover it, to discover its beauty. Table 3 is also the universal standard calendar of this century. Table 4 is the universal standard calendar of the last century.

Table 1. *Gregorian Calendar 2012.*

January							**July**							**Gregorian**
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
1	2	3	4	5	6	7							1	
8	9	10	11	12	13	14	2	3	4	5	6	7	8	
15	16	17	18	19	20	21	9	10	11	12	13	14	15	Calendar 2012
22	23	24	25	26	27	28	16	17	18	19	20	21	22	

January							**July**							**Gregorian**
29	30	31					23	24	25	26	27	28	29	Year
							30	31						
February							**August**							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
			1	2	3	4			1	2	3	4	5	
5	6	7	8	9	10	11	6	7	8	9	10	11	12	
12	13	14	15	16	17	18	13	14	15	16	17	18	19	
19	20	21	22	23	24	25	20	21	22	23	24	25	26	
26	27	28					27	28	29	30	31			
March							**September**							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	2012
			1	2	3	4						1	2	
5	6	7	8	9	10	11	3	4	5	6	7	8	9	
12	13	14	15	16	17	18	10	11	12	13	14	15	16	
19	20	21	22	23	24	25	17	18	19	20	21	22	23	
26	27	28	29	30	31		24	25	26	27	28	29	30	
April							**October**							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
						1	1	2	3	4	5	6	7	
2	3	4	5	6	7	8	8	9	10	11	12	13	14	
9	10	11	12	13	14	15	15	16	17	18	19	20	21	
16	17	18	19	20	21	22	22	23	24	25	26	27	28	
23	24	25	26	27	28	29	29	30	31					
30														
May							**November**							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
	1	2	3	4	5	6				1	2	3	4	
7	8	9	10	11	12	13	5	6	7	8	9	10	11	
14	15	16	17	18	19	20	12	13	14	15	16	17	18	
21	22	23	24	25	26	27	19	20	21	22	23	24	25	
28	29	30	31				26	27	28	29	30			
June							**December**							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3						1	2	
4	5	6	7	8	9	10	3	4	5	6	7	8	9	
11	12	13	14	15	16	17	10	11	12	13	14	15	16	
18	19	20	21	22	23	24	17	18	19	20	21	22	23	
25	26	27	28	29	30		24	25	26	27	28	29	30	
							31							

Table 2. *Transitional calendar between the 2012 Gregorian calendar and the USC.*

January							**Nature**							**Transitional Calendar**
S	M	T	W	T	F	S	S	M	T	W	T	F	S	Between The
1	2	3	4	5	6	7	18	19	20	21	22	23	24	2012 Gregorian
8	9	10	11	12	13	14	25	26	27	28	29	30	1	Calendar and the
15	16	17	18	19	20	21	2	3	4	5	6	7	8	Universal Standard
22	23	24	25	26	27	28	9	10	11	12	13	14	15	Calendar
														Year
February							**July**							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
29	30	31	1	2	3	4	16	17	18	19	20	21	22	
5	6	7	8	9	10	11	23	24	25	26	27	28	29	
12	13	14	15	16	17	18	30	31	1	2	3	4	5	
19	20	21	22	23	24	25	6	7	8	9	10	11	12	
March							**August**							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	2012
26	27	28	1	2	3	4	13	14	15	16	17	18	19	
5	6	7	8	9	10	11	20	21	22	23	24	25	26	
12	13	14	15	16	17	18	27	28	29	30	31	1	2	
19	20	21	22	23	24	25	3	4	5	6	7	8	9	
APRIL							**September**							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
26	27	28	29	30	31	1	10	11	12	13	14	15	16	
2	3	4	5	6	7	8	17	18	19	20	21	22	23	
9	10	11	12	13	14	15	23	25	26	27	28	29	30	
16	17	18	19	20	21	22	1	2	3	4	5	6	7	

May							**October**						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
23	24	25	26	27	28	29	8	9	10	11	12	13	14
30	1	2	3	4	5	6	15	16	17	18	19	20	21
7	8	9	10	11	12	13	22	23	24	25	26	27	28
14	15	16	17	18	19	20	29	30	31	1	2	3	4
June							**November**						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
21	22	23	24	25	26	27	5	6	7	8	9	10	11
28	29	30	31	1	2	3	12	13	14	15	16	17	18
4	5	6	7	8	9	10	19	20	21	22	23	24	25
11	12	13	14	15	16	17	26	27	28	29	30	1	2

December						
S	M	T	W	T	F	S
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	29					

Table 3. *Universal Standard Calendar of this century.*

January							**Nature**						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
February							**July**						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
March							**August**						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
April							**September**						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
May							**October**						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
June							**November**						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28

Universal

Standard

Calendar

Year		
2001	2035	2069
2002	2036	2070
2003	2037	2071
2004	2038	2072
2005	2039	2073
2006	2040	2074
2007	2041	2075
2008	2042	2076
2009	2043	2077
2010	2044	2078
2011	2045	2079
2012	2046	2080
2013	2047	2081
2014	2048	2082
2015	2049	2083
2016	2050	2084
2017	2051	2085
2018	2052	2086
2019	2053	2087
2020	2054	2088
2021	2055	2089
2022	2056	2090
2023	2057	2091
2024	2058	2092
2025	2059	2093
2026	2060	2094
2027	2061	2095
2028	2062	2096
2029	2063	2097
2030	2064	2098
2031	2065	2099
2032	2066	2100
2033	2067	
2034	2068	

December						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Table 4. *Universal Standard Calendar of the last century.*

January							**Nature**							**Universal**						
S	M	T	W	T	F	S	S	M	T	W	T	F	S							
1	2	3	4	5	6	7	1	2	3	4	5	6	7	Standard						
8	9	10	11	12	13	14	8	9	10	11	12	13	14							
15	16	17	18	19	20	21	15	16	17	18	19	20	21	Calendar						
22	23	24	25	26	27	28	22	23	24	25	26	27	28							
														Year						
														1901		1935		1969		
														1902		1936		1970		
February							**July**							1903		1937		1971		
S	M	T	W	T	F	S	S	M	T	W	T	F	S	1904		1938		1972		
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1905		1939		1973		
8	9	10	11	12	13	14	8	9	10	11	12	13	14	1906		1940		1974		
15	16	17	18	19	20	21	15	16	17	18	19	20	21	1907		1941		1975		
22	23	24	25	26	27	28	22	23	24	25	26	27	28	1908		1942		1976		
														1909		1943		1977		
														1910		1944		1978		
March							**August**							1911		1945		1979		
S	M	T	W	T	F	S	S	M	T	W	T	F	S	1912		1946		1980		
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1913		1947		1981		
8	9	10	11	12	13	14	8	9	10	11	12	13	14	1914		1948		1982		
15	16	17	18	19	20	21	15	16	17	18	19	20	21	1915		1949		1983		
22	23	24	25	26	27	28	22	23	24	25	26	27	28	1916		1950		1984		
														1917		1951		1985		
														1918		1952		1986		
April							**September**							1919		1953		1987		
S	M	T	W	T	F	S	S	M	T	W	T	F	S	1920		1954		1988		
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1921		1955		1989		
8	9	10	11	12	13	14	8	9	10	11	12	13	14	1922		1956		1990		
15	16	17	18	19	20	21	15	16	17	18	19	20	21	1923		1957		1991		
22	23	24	25	26	27	28	22	23	24	25	26	27	28	1924		1958		1992		
														1925		1959		1993		
														1926		1960		1994		
														1927		1961		1995		
May							**October**							1928		1962		1996		
S	M	T	W	T	F	S	S	M	T	W	T	F	S	1929		1963		1997		
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1930		1964		1998		
8	9	10	11	12	13	14	8	9	10	11	12	13	14	1931		1965		1999		
15	16	17	18	19	20	21	15	16	17	18	19	20	21	1932		1966		2000		
22	23	24	25	26	27	28	22	23	24	25	26	27	28	1933		1967				
														1934		1968				
June							**November**							**December**						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28
														29	30					

3. Relationship Between the Three Calendars

To find out a date corresponding to a previous event on the universal standard calendar, we must first of all identify the anniversary date on the 2012 Gregorian calendar and then, we have to look for this date on the transitional calendar. Finally, the date of the corresponding day on the universal standard calendar is the new anniversary date of that event. For example, Cameroon was unified the 20 May 1972 and celebrates its unification every 20 May. On the 2012 Gregorian calendar, the 20 May is the third Saturday which corresponds to the fourth Saturday on the transitional calendar but, on the universal standard calendar that fourth Saturday corresponds to the 28 May.

For leap years, the 29 February would correspond to the 1st March on the transitional calendar and to the 4 March on the universal standard calendar. Henceforth, the additional day of a leap year corresponds to the 30 December. We are now going to study the temperature diagram of the Douala airport using the features of the universal standard calendar.

4. Temperature Diagrams of the Douala Airport

The universal standard calendar can help to predict the seasonal divisions of an area given that seasons are periodical from a year to another. Therefore, it is important to study the

variability of the temperature during a period of one year corresponding to the period of the revolution of the Earth around the sun. Data in Table 5 are the daily, monthly and biweekly mean temperatures of the Douala airport for the year 2004 (National Meteorology, Cameroon). We have studied its seasonal divisions and presented a brief general description of the sources of instabilities.

Table 5. *Temperature measurement using the universal standard calendar features.*

Temperature Measurement														
Year														
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	
	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	
	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	
	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	
	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	
	2092	2093	2094	2095	2096	2097	2098	2099	2100					
Daily Average Temperature														
Week	Month		J	F	M	A	M	J	N	J	A	S	O	N	D
	Day	Date													
	S	1	27.5	27.4	28.7	27.9	26.6	27.1	25.7	26.9	25.1	26.2	26.9	25.6	27.4
	M	2	27.5	27.6	28.7	27.4	28.3	26.5	26.3	26.2	24.5	24.5	27.2	26.1	27.8
	T	3	27.5	28.2	28.3	27.4	26.3	26.5	26.8	25.7	23.8	25.9	27.0	26.1	27.7
1	W	4	27.5	28.0	28.4	27.6	28.1	27.1	26.4	25.5	24.6	26.0	25.1	25.9	27.8
	T	5	28.1	28.3	28.5	27.0	26.2	25.5	25.0	25.6	24.7	27.4	26.1	27.5	26.6
	F	6	28.3	28.2	28.2	27.4	26.1	26.8	26.4	25.9	25.2	27.3	26.6	27.6	26.6
	S	7	27.5	28.3	26.8	27.4	27.0	26.1	26.0	26.7	24.7	26.4	26.8	26.5	27.6
	S	8	27.8	28.2	28.0	29.1	25.7	25.0	24.7	25.3	25.3	25.8	26.5	27.4	27.8
	M	9	28.4	27.8	28.4	28.2	27.4	26.1	25.6	25.6	25.0	25.9	24.9	27.7	27.2
	T	10	28.3	28.4	26.4	25.5	27.5	25.8	26.0	25.7	24.9	25.9	25.8	25.1	28.0
2	W	11	29.4	28.5	28.0	27.8	27.4	26.6	23.8	25.0	24.3	25.9	26.6	27.1	25.4
	T	12	28.8	28.5	27.4	28.7	25.8	26.6	25.2	24.8	24.8	26.3	26.5	25.8	26.8
	F	13	27.9	28.6	28.0	25.0	26.4	25.9	26.0	23.6	25.3	26.3	24.9	27.0	27.1
	S	14	27.8	29.0	28.0	27.5	27.9	26.6	25.9	23.3	25.9	26.1	26.3	25.2	28.1
	S	15	28.0	28.9	28.4	26.3	25.3	26.2	26.3	24.4	25.5	25.8	26.5	26.4	28.1
	M	16	27.6	27.9	28.2	27.5	27.1	25.1	26.4	24.8	25.2	24.5	24.7	26.2	27.9
	T	17	27.3	28.9	28.2	27.4	26.2	27.1	26.8	25.4	26.1	26.1	26.3	26.0	28.2
3	W	18	26.7	29.0	27.5	27.8	27.0	25.7	26.7	24.3	26.2	26.7	25.8	27.1	27.2
	T	19	27.2	28.2	27.3	27.6	27.2	26.8	26.2	25.1	26.0	26.5	26.8	25.6	27.7
	F	20	27.7	28.7	28.1	28.6	27.0	26.2	26.0	26.3	25.1	25.2	26.7	25.5	27.8
	S	21	26.2	28.7	28.1	28.6	27.2	26.4	26.8	25.3	26.2	25.6	26.9	26.5	28.3
	S	22	26.3	28.3	28.7	26.1	26.9	27.1	26.2	24.1	25.9	25.7	26.5	27.0	28.1
	M	23	25.8	28.8	28.3	26.5	27.3	26.3	25.0	24.8	24.6	25.5	26.8	26.7	28.2
	T	24	27.5	29.2	28.6	27.6	26.0	26.9	25.8	25.1	26.4	26.5	25.1	27.8	27.8
4	W	25	27.8	29.2	27.9	28.7	26.2	25.2	26.2	24.6	24.9	24.7	26.9	27.8	27.8
	T	26	28.3	29.1	28.7	28.3	26.6	26.0	26.4	24.3	25.2	25.8	26.1	27.8	27.1
	F	27	28.1	29.5	27.9	27.9	27.5	25.8	25.7	24.5	25.4	26.7	26.7	28.0	27.5
	S	28	27.3	29.4	28.7	28.0	27.5	25.7	25.9	25.1	25.8	25.5	27.5	28.0	28.2
	S	29					D	A	T	A					27.5
	M	30					2	0	0	4					27.8
Monthly Average			27.6	28.5	28.1	27.5	26.8	26.2	25.9	25.1	25.2	26.0	26.3	26.7	27.6
Period			Biweekly Average Temperature												
1-2	S 1 to S 14		28.0	28.2	28.0	27.4	26.9	26.3	25.7	25.4	24.9	26.1	26.2	26.5	27.3
3-4	S15 to S28		27.3	28.8	28.2	27.6	26.8	26.2	26.2	24.9	25.6	25.8	26.4	26.9	27.8

4.1. Seasonal Divisions

We have used the monthly mean temperatures of Table 5 to plot the temperature diagram of Douala airport. It appears that the higher temperatures are measured in February and the lower in July. These two months belong respectively to the dry season and the raining season. The two other seasons are intermediate: the small dry season and the small raining season. In fact, during a year the Earth moves between two extreme positions from the sun on an elliptic orbit: the nearest which is the perihelion and the farthest which is the aphelion. It is then normal that the highest temperatures are observed in some areas at the perihelion and the lowest temperatures in other areas at the aphelion during a year. This is not always true for all the areas of the Earth because the weather depends of numerous factors (temperature, precipitation, wind, cloud, dynamic of the globe, pressure, forests, ice sheets, oceans, etc...) (Factors that determine weather, accessed 2012). For example, the Douala climate is influenced by the Atlantic monsoon (Tchiadeu and Olinga, 2012). Therefore, to establish

the seasonal divisions of a region, we can use its temperature diagram or the temperature data to plot a continuous function of time. Using this diagram or this curve, it will be possible to identify the four seasons which normally exist in any country even if they don't have the same duration.

- Highest temperatures correspond to summer (dry season),
- After summer we have autumn (small dry season) ,
- Lowest temperatures correspond to winter (raining season),
- After winter we have spring (small raining season).

According to the dynamic of the Earth on its elliptic orbit and to the position of the sun, we can say that the winter and the summer almost have the same duration. The autumn and the spring which are transitional seasons almost have the same duration too. This is a more general result even if practically the durations of the summer and the spring are very shorts in some areas because of their positions from the sun. Figure 1 presents the temperature diagram of the Douala airport.

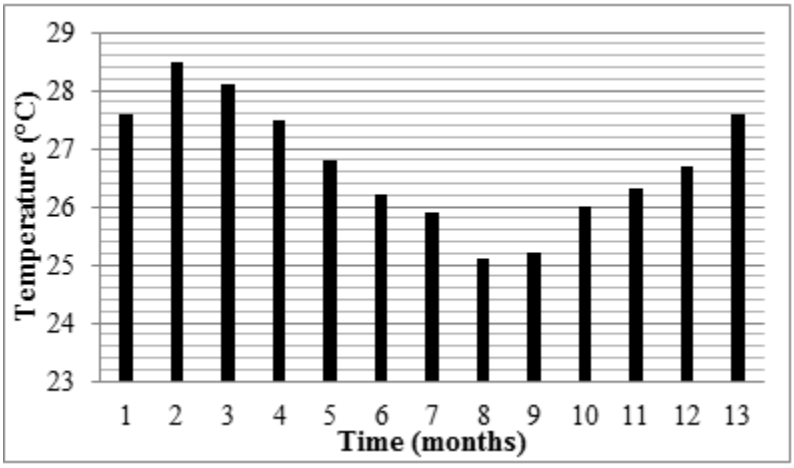

Fig. 1. *Douala airport temperature (2004).*

The seasonal division derived from this diagram is the following:

Dry season: December, January to April; Small dry season: May and June; Raining season: Nature to September; Small raining season: October and November. One year is not enough to study the seasonal divisions of a region. Hence, this work needs deep studies for instance a decadal study of the change in the mean monthly and the mean annual temperature as a continue function of time taking in account the rotation and the revolution of the terrestrial globe.

4.2. Sources of Instabilities

The change in the seasonal divisions is weak from a year to another and is due to numerous sources of instabilities of the Earth. The emission of gases of greenhouse effect (Greenhouse Gas Emissions, accessed 2012) and other atmospheric factors (Earth's orbit, Earth's reflectivity, Sun's energy, etc...) have a negative impact on the environment and consequently on the climate (Causes of climate change, accessed 2012). The instability of the globe centre mass in its dynamic around the sun is due to mechanical factors. This can lead to a weak change of the polar axis direction. We denote three main factors of instability:

- Electromagnetic interactions of our planet with other planets of the solar system,
- The matter transfer from a point to another on the globe (exportation, importation, migration flux…),
- The matter flux between the globe and the space (satellite, space rocket, meteorite…).

These factors affect the climate and consequently the temperature because they modify the irradiance of the Earth. If this persists for a long period, a continuous increasing or decreasing of the temperature can lead to a climate change. In August 2003, a heat wave occurred in Europe (P. Bessamoulin et al, 2004) and during this period, it was snowing in Lesotho, a rare event (E. Pecher, 2003). This could be due to a small fluctuation of the polar axis of the Earth.

5. Impact of the Universal Standard Calendar on the Society

The discovery of this calendar will permit to reform many structures and activities in various domains: social, cultural, medical, educational, technological, environmental, computing, economical, political, scientific research, etc...

5.1. Social Domain

On the social plan, it will be easy to deduce a date knowing the day and the order of the week. A date is then given by the following formula: D=7A+B, where D is the date, A: number of past weeks varying from 0 to 3 in the month, and 0 to 4 for the month of December, B: sequence number of the day in the week of which we are seeking the date varying from 1 to 7.

Each one will be able to establish easily a personal and periodical timetable that can be daily, weekly, monthly, or annual. The universal standard calendar will give an impetus of periodicity to the entire society and will permit a rational using of time. In fact, an old adage says that 'time is money'. Hence, the universal standard calendar is a source of riches.

5.2. Cultural Domain

Although all the people of the world don't have the same culture, they will understand that they are linked by the same destiny and could work together to protect the environment because all the people are carried by the same space vehicle which must be protected and this vehicle is nothing other than the terrestrial globe, the Earth.

5.3. Medical Domain

The ovarian cycle lasts generally 28 days which is the duration of a month in the universal standard calendar. During the ovarian cycle, a woman can have some menstrual discomforts and her body can become less resistant to disease. To avoid these menstrual discomforts, it is important for women to use highly breathable sanitary napkins with anti-bacterial and super absorbent properties (JM Ocean Avenue, Winalite, Accessed 2014). The universal standard calendar being a periodical calendar, can help women to check the duration of their ovarian cycle and any perturbation due to a disease, the evolution and the duration of a pregnancy as well. The universal standard calendar is also the solution to the accurate determination of the epidemic or endemic behavior of a disease.

5.4. Educational Domain

A timetable memorized and used by a student contributes to his success. In the universal standard calendar, days and dates are fixed. This allows students to memorize hours and exact days of each lesson. We know that information received in a precise interval of time and easily spotted is better memorized. Hence, this standard calendar will increase the holding capacity of students and will decrease undoubtedly the failure rate in schools. The authorities of education could better reorganize the academic programmes of a year in trimesters and semesters.

5.5. Environmental Domain

The calendar being standard, we will not need to produce it every year. This will permit to save a large amount of money. The lifespan of the trees which should be used for the manufacture of these calendars would prolong in our forests. Consequently, our park and our environment will be preserved.

5.6. Scientific Research Domain

We will be able to study by meteorological data, the climate of each region and establish easily the seasonal divisions of different regions of the globe. The temperature being a function of time, the study of its evolution in any region of the globe can be done easily. Table 4 is the calendar which could have been the calendar of the last century. We can study the climate evolution of the globe for the last decade, for the last fifty years or for the last century. Let's suppose that we have this calendar in a computer and with a click on a date, we open a window, write down and conserve information. So, we can describe the characteristics of the weather (temperature, wind, cloud, humidity, etc…) of each day and conserve them in this calendar at the position of the corresponding date. Hence we can conserve information in this calendar like in a memory (Read Access Memory) hourly, daily, weekly, monthly or annually, etc... Physical and observable processes, periodical or pseudo-periodical like the terrestrial globe's dynamics and the atmosphere's dynamics could be studied scrupulously. It would be easier to study the evolution of the climate of the terrestrial globe. Therefore, these studies will permit surely to increase the precision of meteorological previsions.

We remind that the period of the revolution of the moon around the Earth is approximately 27,32 days so not far from 28 days. When we divide the period of the revolution of the Earth around the sun by that of the moon around the Earth, we obtain 13,37 which is the number of lunar months per year. This means that the moon does 13,37 turns per year around the Earth. The Universal standard calendar being a 13 months calendar can then be used to check the phases of the moon.

5.7. Technological and Industrial Domains

In the technological and industrial domain, we will have to produce in the whole world the universal standard calendar, new computers, new cell phones, new diaries, etc...

5.8. Political and Economical Domains

Days being fixed in the universal standard calendar, public holidays are also fixed. Thus, the number of working days is known in advance. Therefore economic activities will be well organized and stable. The problem of working hours (e.g. 35 hours in France) would be solved definitely. Incomes in private and state companies would increase and obviously a substantial increase of national and world economy would be observed. Economic growth would allow economic operators to increase salaries and to create new jobs.

6. Conclusion

We have constructed the universal standard calendar that presents many advantages. It permits time harmonization, a best control of meteorology and the climate's evolution of the globe. The universal standard calendar is a new window opened on the world that will help scientists to observe and to analyze easily phenomena evolving with time. Thus, it is very important for scientific research. It also allows a substantial and azimuthal increasing of the world economy. This calendar is one of the unique occasions to link all the people of the world without discrimination around the same objective which is the protection of the terrestrial globe. To protect the terrestrial globe means to protect the environment, to protect fauna and flora, to protect human lives against disasters by predictions whenever it is possible. All this is possible with the mastering of time, the mastering of the globe's dynamic, the mastering of the climate, the mastering of meteorology, a better knowledge of the sources of the terrestrial globe's instability, etc... The universal standard calendar is then very

important for our daily life. This is why we are calling on all the nations through the United Nations to adopt this calendar on the one hand, to give the new generation of scientists the keys to face the new scientific challenges like the climate change and its consequences and on the other hand to allow Human being to live in a harmonious world.

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