DAY-DATE DISCREPANCY IN GREGORIAN CALENDAR

A Big Mistake which continues for last 300 years

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Abstract: -

In 46 BC Roman Emperor Julius Caesar introduced Julian Calendar by reforming the ancient Roman Calendar. The Gregorian Calendar was introduced in 1582 to do the correction of average year time of the Julian Calendar. According to mathematics the tropical year is 365 days 5 hr 48 min and 46 sec or 365.24181 days that is determined by the Earth's revolution around the Sun. In Julian Calendar the average year time considered was 365.25 but in Gregorian calendar the accuracy has been increased by considering it as 365.2422 days.

Gregorian Calendar had been introduced in 1582 October and it has been adopted by most of the countries in 17th century. In 1752 Britain& USA had accepted this Gregorian calendar by skipping 11 days from their Julian Calendar. By doing this they have made the Date correction but at the same time they did not calculated the days, means 2nd September (Wednesday) has been followed by 14thSeptember (Thursday). As per this study, 14th September 1752 should have been a Monday Instead of Thursday. We will see the explanation below.

Introduction: -

The calendar which today we do follow internationally is called Gregorian Calendar which was introduced in 1582 by Pope Gregory XIII and it was a reformof Julian Calendar.

Below are the basic differences between Julian Calendar and Gregorian Calendar

	Julian Calendar	Gregorian Calendar
Introduced in	January 46 BC	October 1582
Introduced By	Julius Caesar	Pope Gregory XIII
Average Year time	365.25 Days	365.2422 Days
Leap Year calculation	If the year is divisible by 4	If the year is divisible by 4 or by 400 if the last two digits are zero in a year

Observations & Findings: -

Solar Year Calculations: -

Julius Caesar had introduced the Leap Year concept in 46BC. As per Julian calendar average year time is 365.25 days. So every years are consists of 365 days and in every 4 years one day added in calendar as leap year. Calculations are as below

365.25 X 4 = 1461 days

Or (365 X 4) + 1 = 1461 days

But the actual Solar year duration is 365.24181 days

So,in 4 years, the actualSolar year time is 365.242181 X 4 = 1460.968724 Days

Means if we compare the Gregorian Calendar time with actual Solar year time, there is a difference of 0.031276 days or 45 minutes in 4 years which means the Julian Calendar lags behind45 minutes in 4 years or lags behind A Day in 128 year.This cumulative effect of 0.031276 days error had made a difference of 10 days till year 1582 when Gregorian calendar was introduced and a difference of 11 days till 1752 when England or other countries accepted this Gregorian Calendar.

Now if we search in Google the Calendar of 1582 October or 1752 September, we will find the below.

Gregorian Calendar of 1582 October when it was introduced and 10 Days were skipped from the calendar

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Gregorian Calendar 1752 September when it was adopted by England or other countries and 11 days were skipped from the calendar.

The Gregorian Calendarhas been introduced in 1582 October by adjusting 10 days in Julian Calendar and It has been accepted by Britain/ other countries in 1752 September by skipping 11 days in Julian Calendar.

11 Days have been adjusted in 1752 September calendar and 2nd September (Wednesday) has been followed by 14thSeptember (Thursday). But as the 11 days here has been skipped to be aligned with the solar year the DAY also should have been adjusted along with the DATE, simply saying **14th September 1752 should have been a Monday Instead of Thursday. SO there was a mistake done in the calendar of 1752 September**and the mistake continues as no reformation has been don't on it till now.

The GregorianCalendar and my proposed Calendar of 1752 September is given below.

Year 1752 Month September

Gregorian Calendar

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1	2	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

My Proposed Calendar

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1	2	X	X	X	X
X	X	X	X	X	X	X
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Conclusions: -

The Gregorian Calendar which is universally followed, maintains the most accurate solar year but it reflects a WRONG DAY.

As per the above observations, from the very date 14th September 1752 a Day discrepancy has been started and we are mentioning a wrong Dayevery day.

Below is the conclusion of the study where I am listing the correct days against the Days mentioned in today's calendars.

Days mentioned in Gregorian Calendar/ Today's Calendar	Correct Days
Monday	Friday
Tuesday	Saturday
Wednesday	Sunday
Thursday	Monday
Friday	Tuesday
Saturday	Wednesday
Sunday	Thursday

(The Day correction could have been done in 1582 October too in the same way as explained below for 1752 September.)

References: -

https://en.wikipedia.org

https://www.mentalfloss.com/article/51370/why-our-calendars-skipped-11-days-1752

The Article has been posted in Tanaji's Blog and the link is below

https://santrabari.com/2020/09/11/day-date-discrepancy-in-gregorian-calendar-a-mistake-in-september-1752/

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