



## PRECESSION INFO

Precession Info:

(f) "Precession of Equinoxes: EQUINOX – equal night, is the time of the year when the center of Sun is directly over the equator. The Sun crosses the equator twice during a year: (a) Vernal (spring) equinox, March 21/22, as the Sun enters Northern hemisphere; and (b) Autumnal (autumn) equinox, September 21/22, as the Sun enters Southern hemisphere. PRECESSION: Since the center of Sun does not always cross the equator at the same equinoctial point, each year the Sun crosses the equator about 50-seconds (Y2000=0.013966486°) of arc-angle, west of the point where it crossed the year before – or  $1^{\circ}$  in 71.59997153 years. This westwards movement of the equinoctial point is called Precession of Equinoxes. The attraction of the Sun and Moon upon the equalitarian bulge of earth causes the Earth's equator to change in regard to apparent path (ecliptic) of the Sun, across the sky and the 'celestial equator' (an equivalent of terrestrial equator in space). This attraction is called luni-solar precession, since caused by LUNA (Moon) and SOL (Sun). Every year it causes the Earth to twist slightly to the east, so that Sun appears to be moving west. If Sun and Moon were the only influences on earth's precession: the vernal equinox would move  $50''.27935 + 0.000229 T$  per year, where T is number of years after AD 2000 of arc per year. But, other planets also exert a pull that cause an eastward movement of  $0.1''/\text{year}$  – called planetary precession. Because the whole Earth twists as a unit, the North Celestial Pole - point in the sky above earth's North Pole - swings in a large circle among the stars in the

same period of time. The brightest star within a few degrees of arc of this circle becomes the Pole Star for thousands of years, while the North Celestial Pole is in its vicinity. Because of precession, Zodiac signs no longer correspond to the constellation for which they were named - Aries. In 2000 years, the First Point of Aries/Mesha is now in Pisces/Mina and is receding to Aquarius/Kumbha. This means that it will take 25775y 361d 11h.97585916 for the precession of equinoxes to take one full circle, at current rate of precession".

BRIJ BHUSHAN VIJ

[metricvij@hotmail.com](mailto:metricvij@hotmail.com)

---

In my mail of March 29<sup>th</sup>, 2010 to Karl & Decker, I wrote:

This 896-year 'UNIQUE lunisolar cycle' can be in two-448 years as:

$[(13*33)+19]+[19+(13*33)]=896\text{-years}/11082\text{ lunation}$ . 896-years need JUST ONE day/tithi to align with 11082 lunation, to get Mean Year =  $7*(52+159/896) = (365+31/128) = 365.2421875$  days; and Mean Lunation =  $(896\text{-years}+1\text{day})/11082 = 29.53059014618299946$  days [29d 12h 44m 2s.98863] - the current lunation value.

It shall be of interest to OBSERVE that in about 26000-years "ONE LUNATION GETS AUTOMATICALY COMPENSATED" as:  $26000\text{-years}*11082/896 = 9486489$  tithi (321576 lunation).

Ratio Lunation:Year = 12.368303571428571428571428571429.

I do hope these calculations/approach are meaningful, for software developments.

Brij Bhushan Vij

(MJD 55284)/1726+D-099W14-01 (G. Monday, 2010 March 29H16:29 (decimal) EST

THIS also turns out that ONE cycle of PRECESSION of Equinoxes, in say, 25776-years (25775y 361d 11h.97585916 = 2259474945056 decimal seconds,  $s_d$ ) = 25775.98975147 years = 9414478.93773274 days = 318804.31 lunar 'synodic' months [9404727 tithi [i.e. 26567 lunar years & 9 tithi]. 25776-years are 28 cycle of 896-years & 688 years (i.e.  $28*896+ 5*128+48\text{-years}$ ), resulting in Mean Year =  $9414479/25776 = 365.24204686530106$  days (365d 5h 48m32s.8492); Mean Lunation =  $9414479/318804 = 29.53061755812349$  days [29d 12h 44m 5s.357].

**20100331**

**AUTHOR**