

Ancient Chronologies:

FOMENKO's Hypothesis vs Solar Eclipses

Léo DUBAL

virtual laboratory for archaeometry

*Invention of a Linear Time Scale,
Fomenko's Findings & Hypothesis,
Modeling Delta T,
Measuring LOD & Tides,
Retrodiction of Solar Eclipses*

How Robust is Common Chronology?

Abstract :

LLR & SLR data, collected over the last 45 years, provide crucial data over the time behaviour of the Length Of Day, i.e. LODs range of fluctuation at fortnightly, seasonal, yearly and decennial level. Those limits comfort our smooth Earths deceleration Model explaining all reliable past observations of solar eclipses, including the one which occurred during the reign of Akhenaton, 3345 years ago.

1540.08.05 Joseph Just **SCALIGER** born in Agen.

1572: Escaped the St Barthélemy's massacre....

..flew to Geneva... nominated Professor of Philosophy



1583: Revolution in Natural Philosophy

Galileo GALILEI noticed *pendulum* might be used to *keep* time...

The son of *Julius Caesar* « **Della SCALA** » *invented* :

Julian Days' linear time scale

the ideological « causal » tool so badly needed by the Reform

1606: Invention of Chronology

Thesaurus temporum (Repertory of dates)

The author would like to express the wish for this seven-volume edition to provide an impetus for the development of new empirico-statistical methods of studying historical texts so that the problems of ancient chronology can be solved in their entirety.

Anatoly T. Fomenko

Chronology 1

First volume of *History: Fiction or Science?* series
by A. T. Fomenko and G. V. Nosovskiy

INTRODUCING THE PROBLEM

A CRITICISM OF THE SCALIGERIAN CHRONOLOGY
MATHEMATICAL AND STATISTICAL DATING METHODS

ECLIPSES

ZODIACS

GLOBAL CHRONOLOGY

A. T. Fomenko, March 2002

History :
Fiction
or Science ?

ВСЕМИРНАЯ ХРОНОЛОГИЯ КАК ТОЧНАЯ НАУКА

НОСОВСКИЙ Глеб Владимирович, ФОМЕНКО Анатолий Тимофеевич

Официальный сайт научного направления
НОВАЯ ХРОНОЛОГИЯ

"Scaliger me seduxit" ("Скализер сбил меня с пути")

"Terret me, ut video, studium chronologicum"

("Пугает меня, как вижу, занятие хронологией")

Johannes Kepler

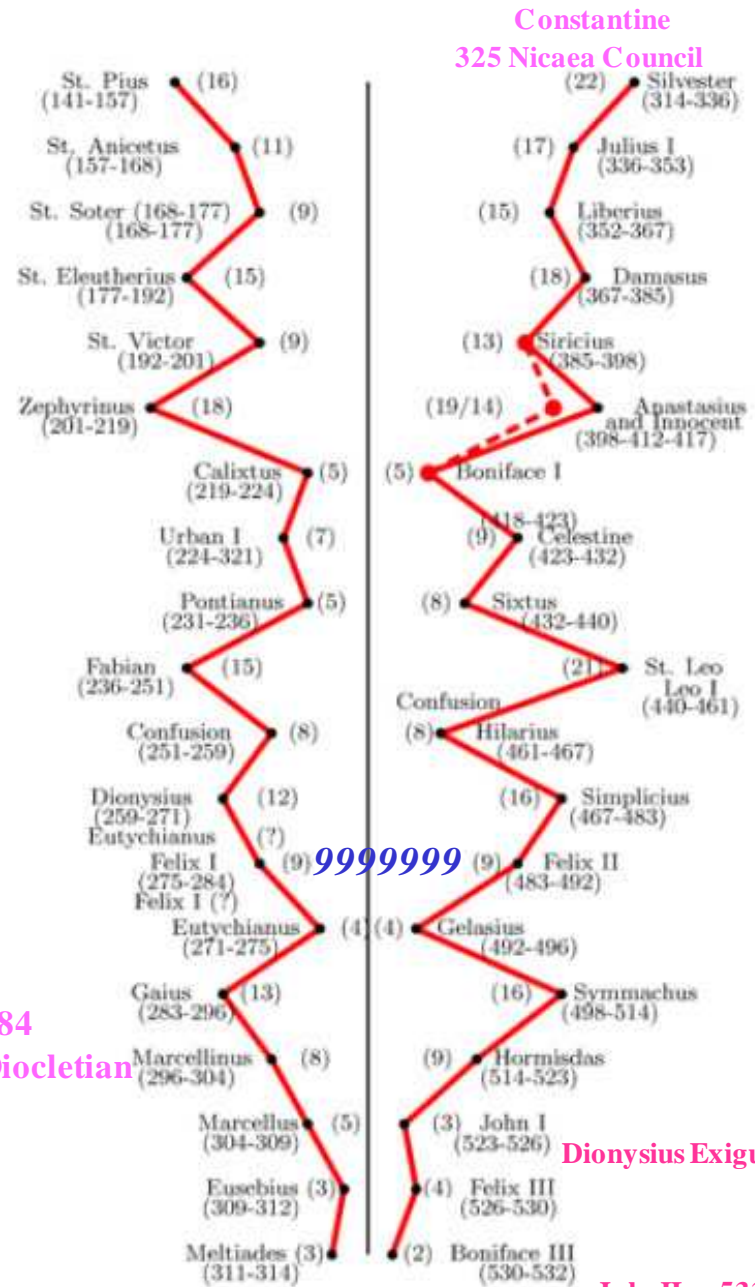
*Anatoly F. FOMENKO's Findings:
Fictitious History thanks to
Polychronic Dynasties !*

(« cloning »)

**Create respectability & legitimacy through
extended « historical » record !!!**

First Period of the
Roman Episcopate
in 141-314 A.D.

Second Period of the
Roman Episcopate in
314-532 A.D.

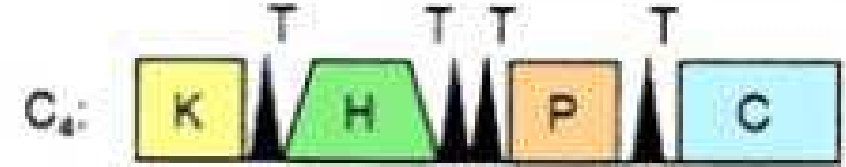
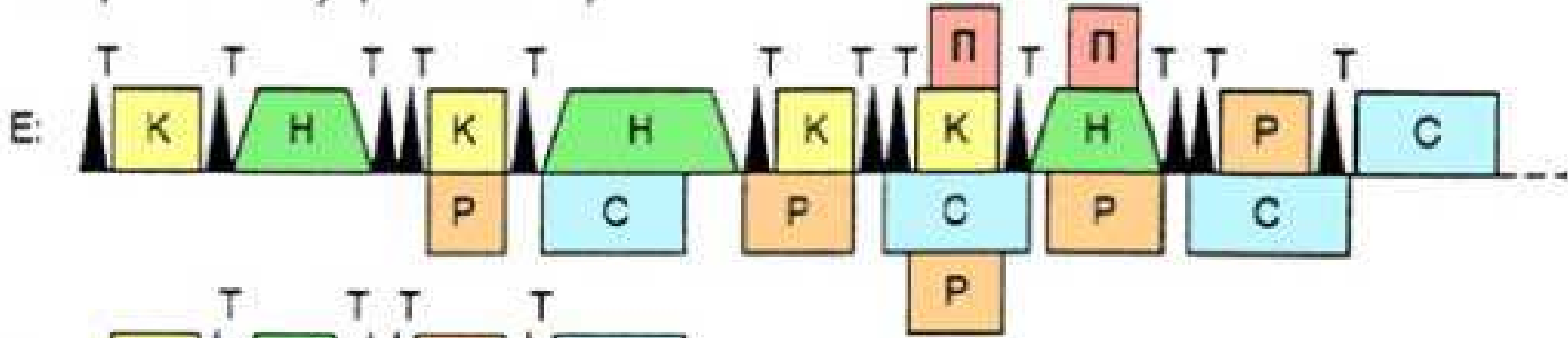


Clone

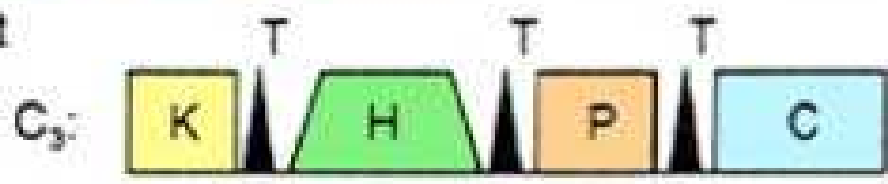
Model



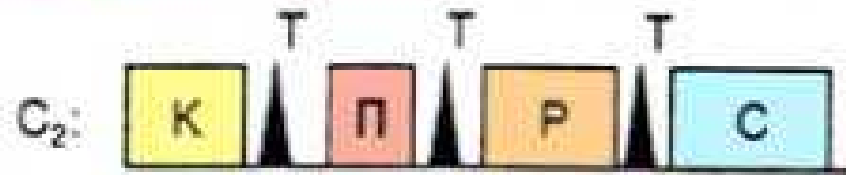
European history (chronicle E)



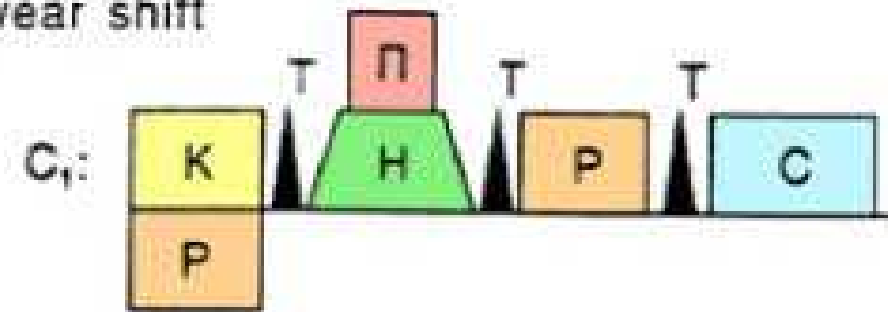
1.778-year shift



1.053-year shift



333-year shift



Peloponesus War

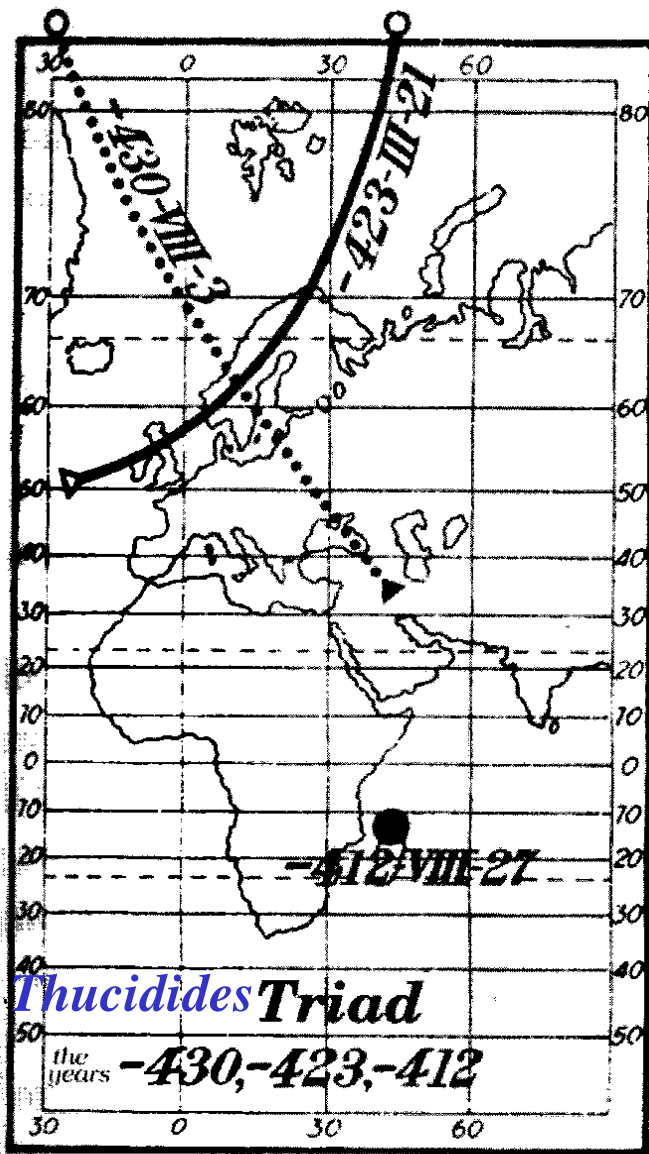


Fig. 2.6. The erroneous astronomical "solution" for the "Thucydides triad" of eclipses as offered by D. Petavius. The track of the lunar shadow for the first annular solar eclipse of 431 B.C. is represented by a dotted line. The track for the second solar eclipse of 424 B.C. is represented by a solid line, with the large dot standing for the zenith point of the lunar eclipse of 413 B.C. Taken from [544], Volume 4, page 505.

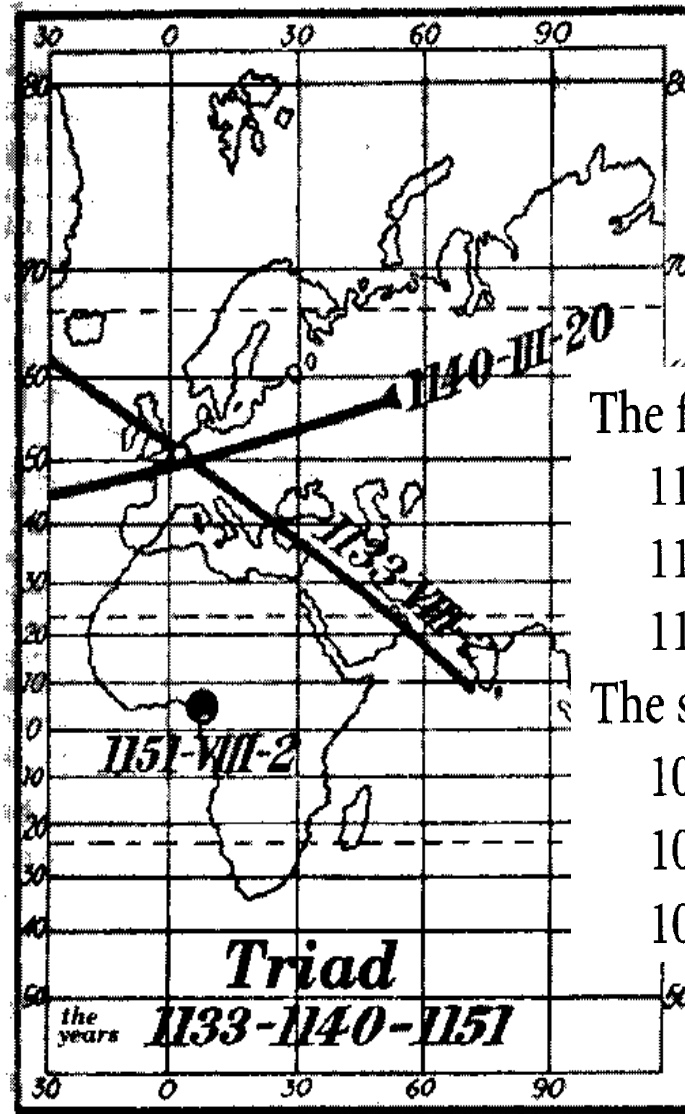


Fig. 2.9 The triad of eclipses described by the "ancient" Thucydides: 1133, 1140, and 1151 A.D. The solution was found by N. A. Morozov. One sees the lunar shadow tracks for the first two eclipses and the zenith visibility point for the lunar eclipse of 1151. Taken from [544], Volume 4, page 509.

The first solution (N.A. Morozov):

- 1133 A.D., 2 August (total solar);
- 1140 A.D., 20 March (total solar);
- 1151 A.D., 28 August (lunar).

The second solution (A.T. Fomenko):

- 1039 A.D., 22 August (total solar);
- 1046 A.D., 9 April (partial solar);
- 1057 A.D., 15 September (lunar).

Naked eye observation of an annular SE



Pitiüses Is. E1.418°/N38.735°

+2005.10.03

8:50 AM

Hipparchus of Nicaea

(-190 to -120)



Total over Hellespont

°Isnik (Nicaea)



31° 11' 04,6" N <-> 31,18461° (éclipse partielle de soleil) [Aide](#)

29° 56' 55,4" E <-> 29,94873°

Degré d'obscurité : 73,74%  Grandeur de l'éclipse : 0,79089
Rapport Lune/Soleil : 1,00721

Phase ($\Delta T=12022,4s$)	Date	Heure (TU)	Alt	Azi	P	V	CL
Début de l'éclipse partielle (C1)	20/11/-128	12:47:27,7	+23,7°	226,1°	285°	03,9	
Maximum de l'éclipse	20/11/-128	14:01:18,7	+11,2°	238,8°	002°	01,5	
Fin de l'éclipse partielle (C4)	20/11/-128	15:06:37,4*	-01,2°	247,8°	079°	11,3	

4/5 over Alexandria

Quoted by Pappus & Cleomedes

Saros 79/18

-128.11.20/13:46 UT

Duration: 31 sec

Elevation 11°

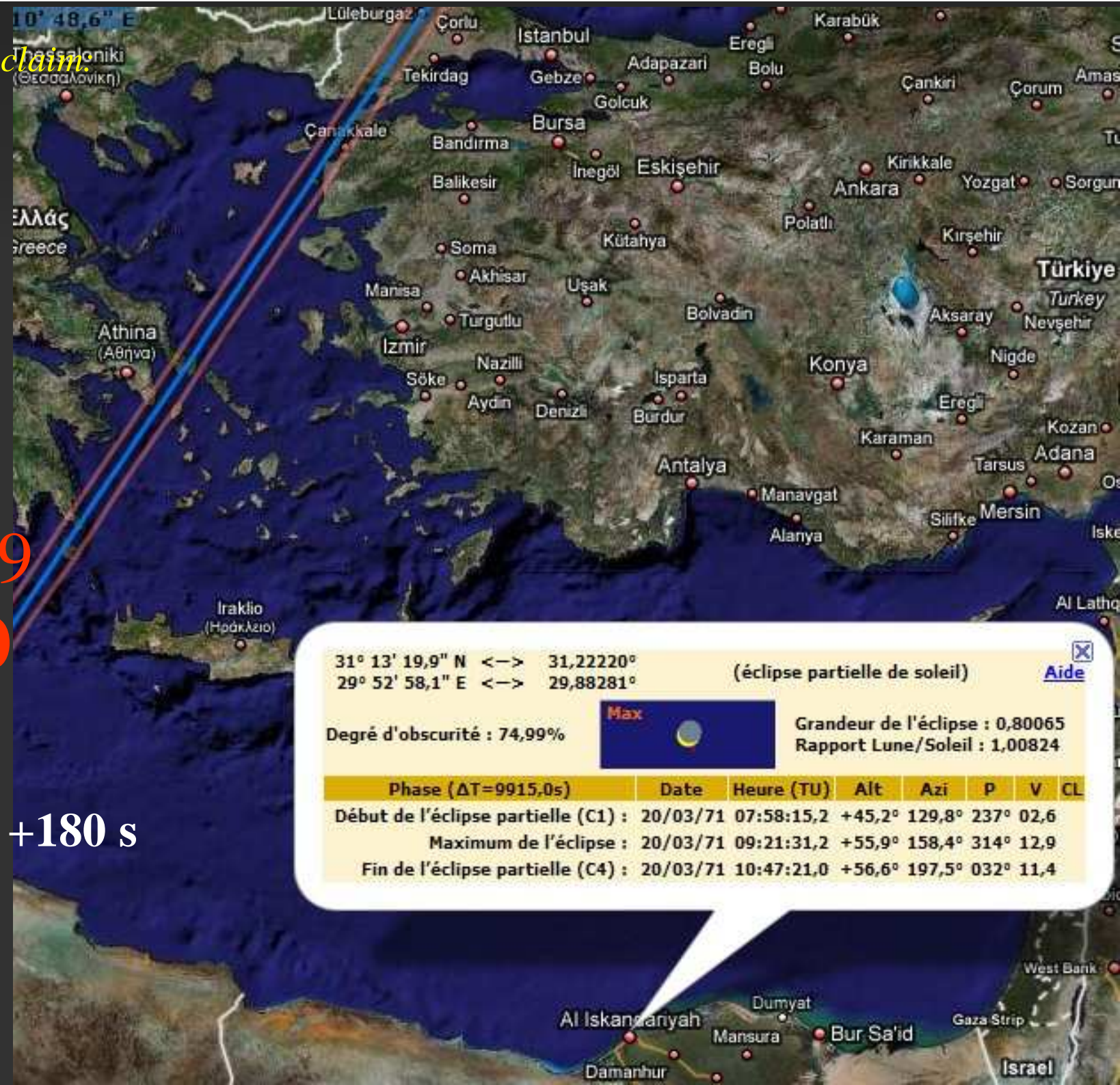
Zoltan Hunnivari's claim.
 198 virtual years
 gap : 870 to 1068

**+198 yr =
 11 Saros**

**Saros 79/29
 +71.03.20**

DeltaT shift : +180 s

is it a lot ??



31° 13' 19,9" N <-> 31,22220°
 29° 52' 58,1" E <-> 29,88281° (éclipse partielle de soleil) [Aide](#)

Degré d'obscurité : 74,99%  Grandeur de l'éclipse : 0,80065
 Rapport Lune/Soleil : 1,00824

Phase (ΔT=9915,0s)	Date	Heure (TU)	Alt	Azi	P	V	CL
Début de l'éclipse partielle (C1)	20/03/71	07:58:15,2	+45,2°	129,8°	237°	02,6	
Maximum de l'éclipse	20/03/71	09:21:31,2	+55,9°	158,4°	314°	12,9	
Fin de l'éclipse partielle (C4)	20/03/71	10:47:21,0	+56,6°	197,5°	032°	11,4	

VLA's Canon of Observed Ancient Solar Eclipses

Retrodiction with Xavier JUBIER's 5MCSE freeware

http://xjubier.free.fr/site_pages/solar_eclipses/5MCSE/xSE_Five_Millennium_Canon.html

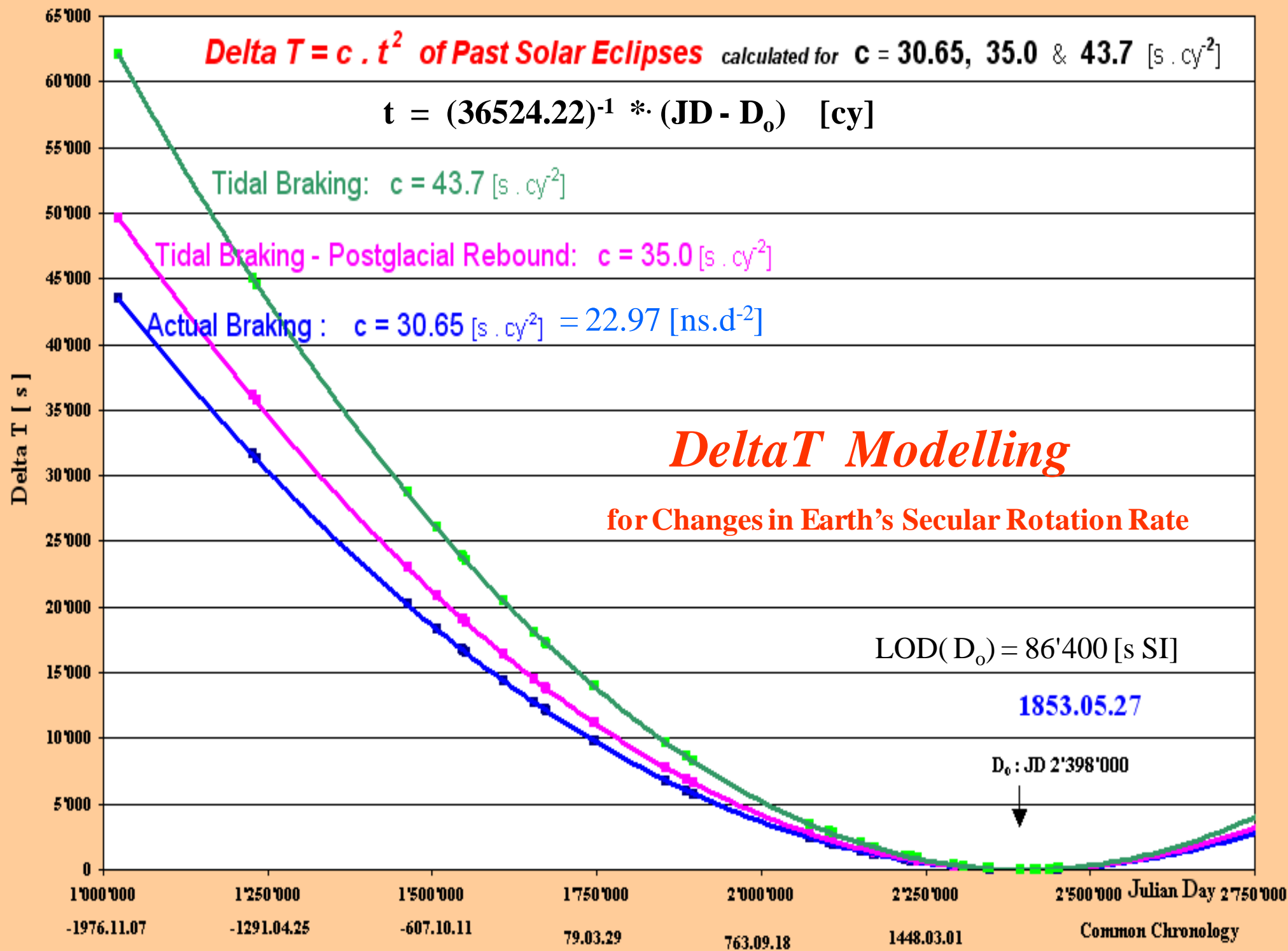
with url "no default value"-option "&dT= 1", i.e. $\Delta T = 30.65 * t^2$ [s]

$$t = (36524.24)^{-1} * (JD - 2'398'000.5) \text{ [cy]}$$

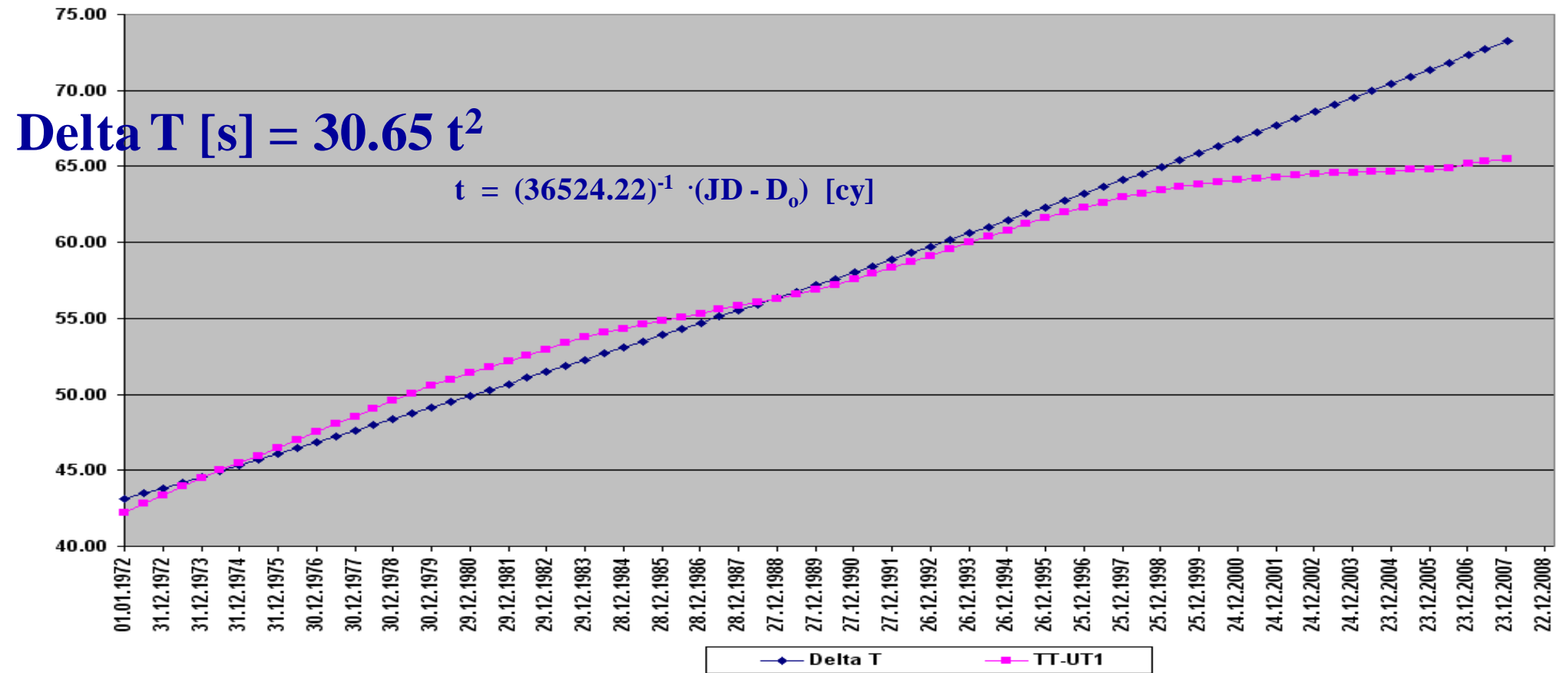
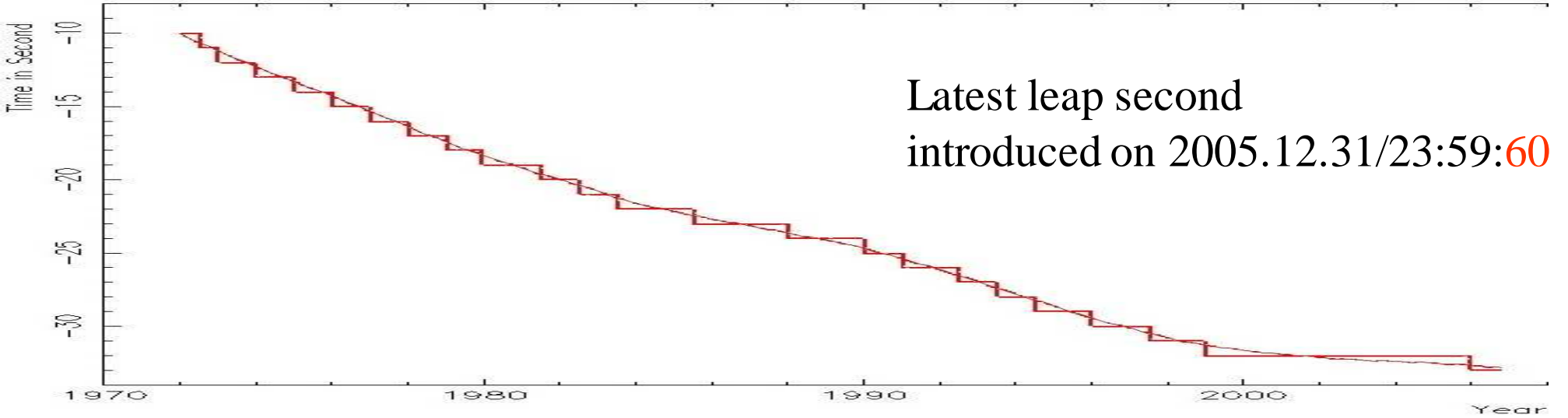
Those Delta T values are based on a constant deceleration Model of the Earth,

For more details, see <http://www.archaeometry.org/titanic.htm>

SAROS / #	JD (Julian Day) Common Chronology [yy/mm/dd] t [cy]	ΔT [s]	Appellation Site GPS Co-ordinates	Universal Time @ Max. Eclipse Sun Altitude	Magnitude, type Duration [m/s]
23/ 14	1 023 332 -1911.09.24	43'417	PANG "Double Sunset" Sanmiao Changde E111.7° / N29.01°	10:45 1°	0.967 annular
26/ 38	1 232 852 -1337.05.14	31'191	AKHENATEN Thèbes E32.64/N25.697 Tell el-Amarna E30.90 /N27.67	12:25 50° 12:22 52°	0.941 1.009 3m 50s
35/32	1 242 390 -1311.06.24	30'682	MURSILI II bad omen Corum / 60km N-Hattussa E 34.94 / 40.55	11:22 61°	1.007 2m 05s
44/ 42	1 462 659 -708.07.17	20'100	LU HUAN GONG Chinese Annals # 1 Jining E116.576 /N35.401	07:53 41°	1.004 1m 53s
57/ 33	1 507 900 -584.05.28	18'203	THALES of Miletos Lydian-Median Battle Halas E28.5/N39.0	16:00 12°	1.032 3m 34s
50/ 41	1 545 847 -480.04.19	16'684	GAUBIL Chinese Annals # 35 Shanghai E121.47 /N31.25	05:0 62°	1.022 4m 39s
42/ 62	1 546 881 -477.02.17	16'643	PINDAR Thiva E23.38 /N38.36	10:07 37°	0.961 annular 5m 25s
50 /42	1 552 432 -462.04.30	16'427	TANIT's rise ? Carthago E10.32 /N36.83	12:39 49°	0.985
69/ 24	1 608 421 -309.08.15	14'513	AGATHOCLES' escape Syracuse E15.29 / N37.07	06:32 28°	0.999



UTC follows TAI (horizontal segments) and approximates UT1 by one-second st



1962 - 2008

0,004000

Excess of LOD

[s]

0,003000

0,002000

0,001000

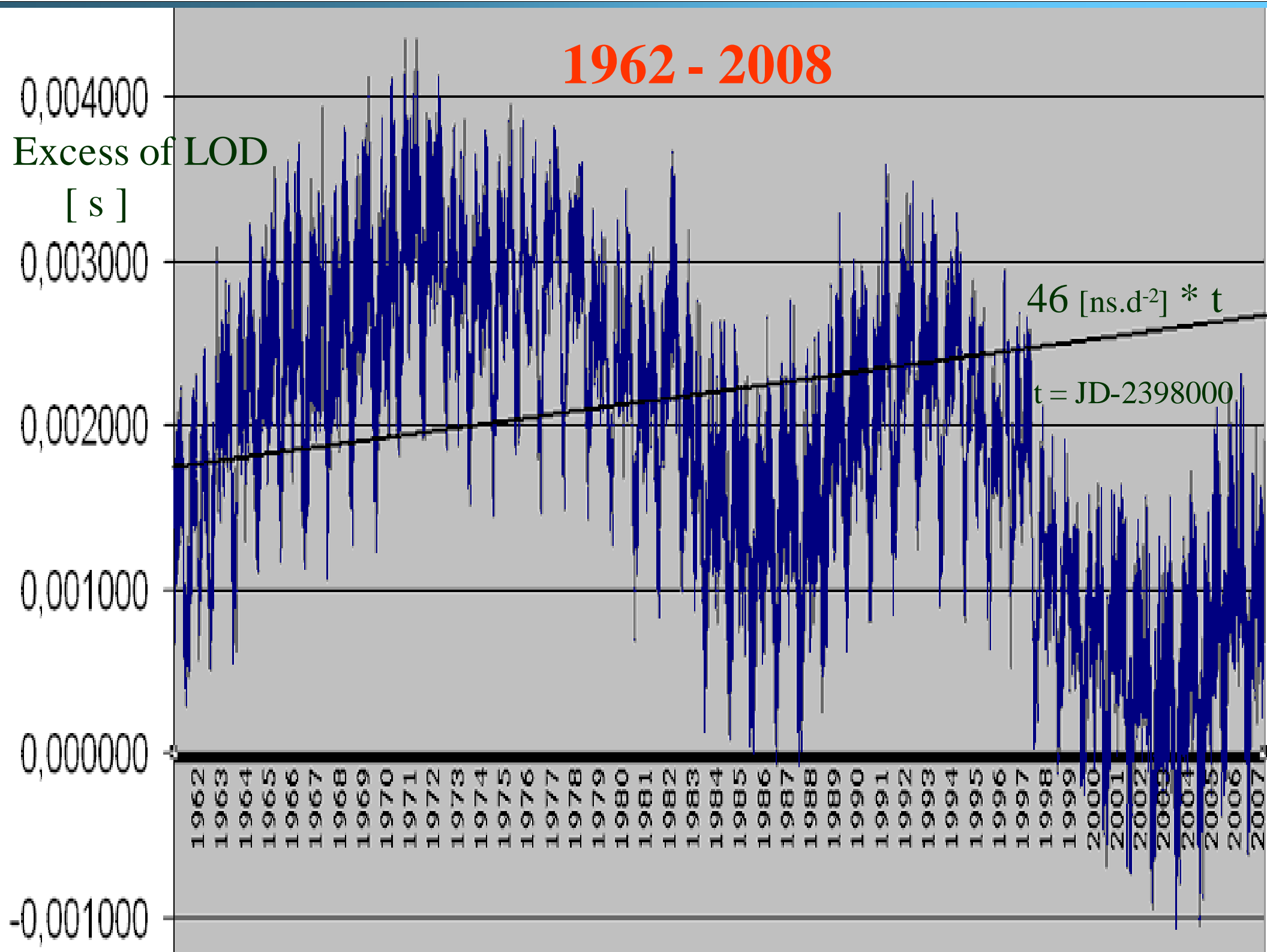
0,000000

-0,001000

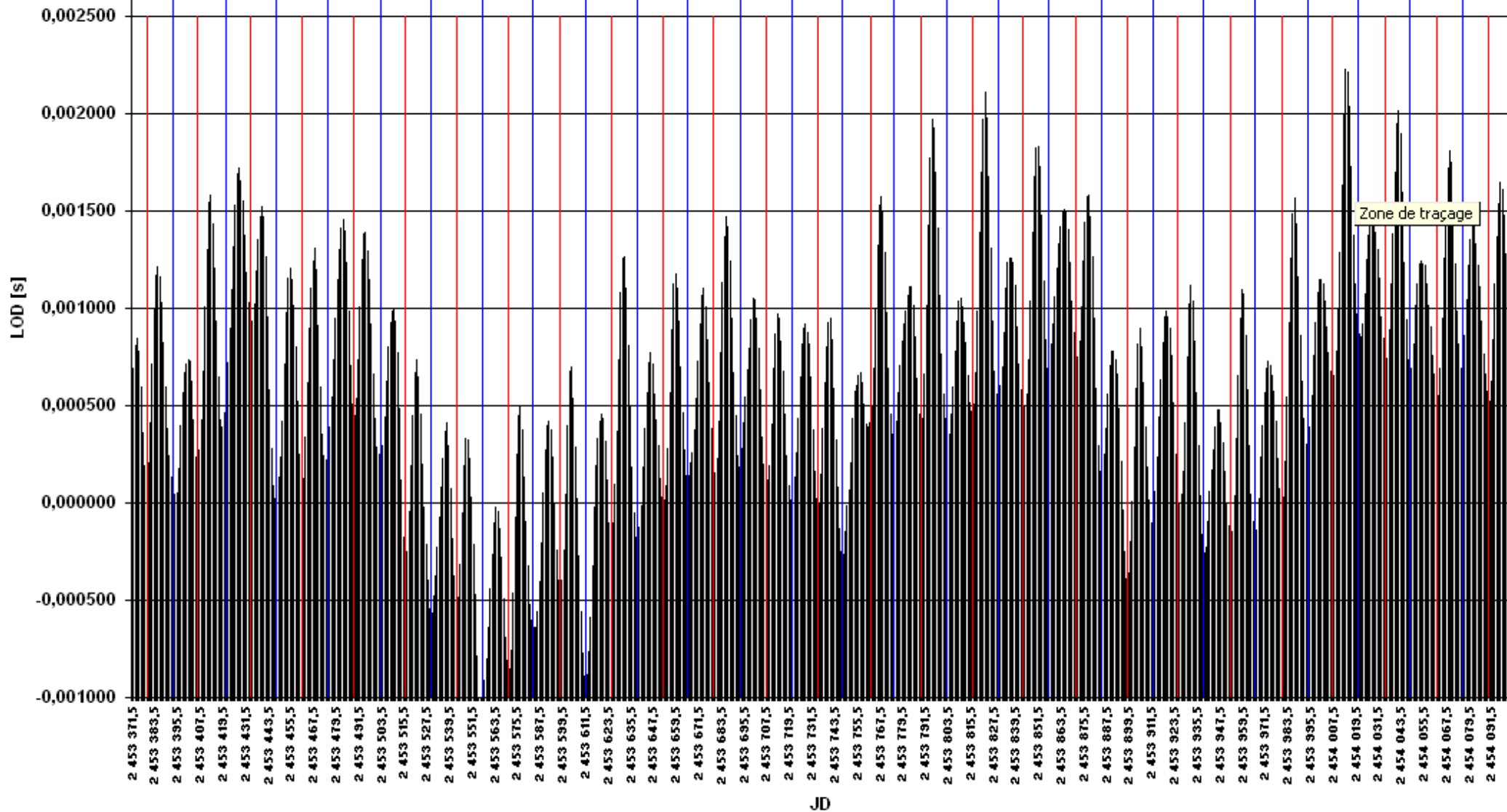
$46 \text{ [ns.d}^{-2}] * t$

$t = \text{JD}-2398000$

1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007



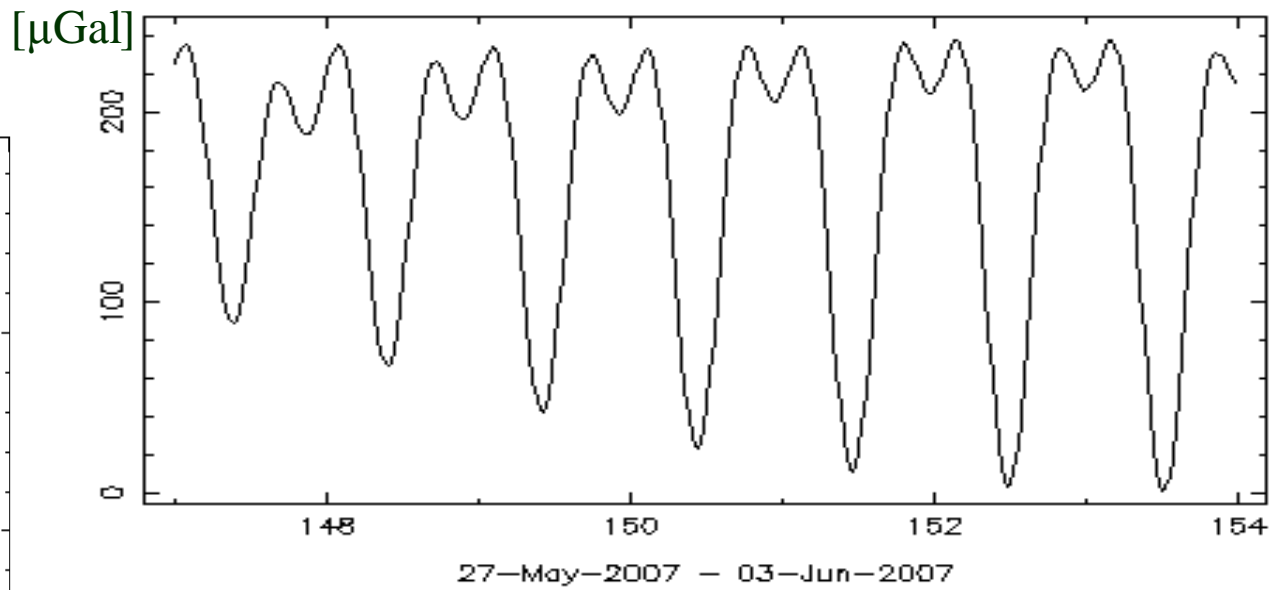
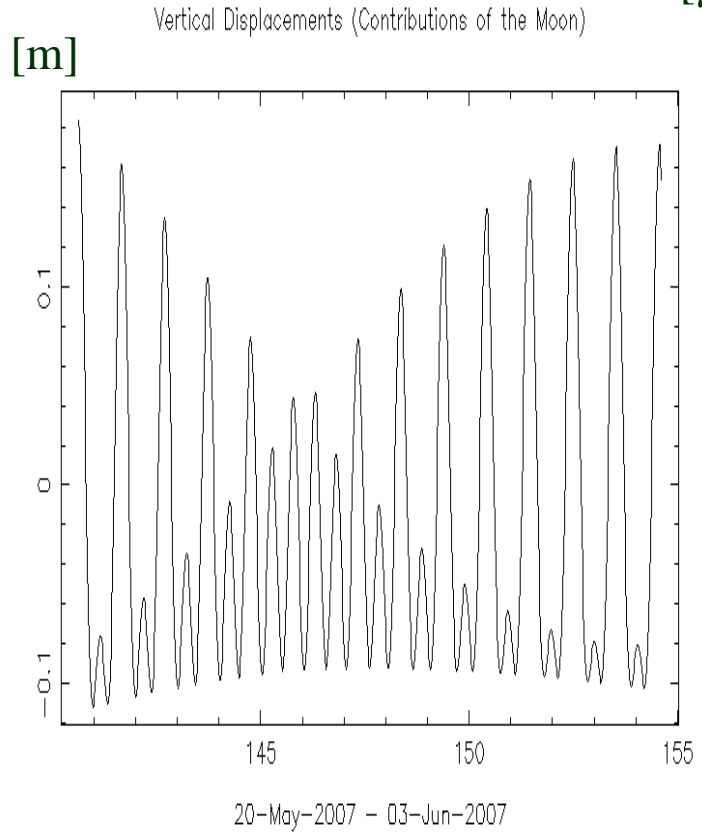
Effect of Lunar Equinoxes & Solar Equinoxes on LOD



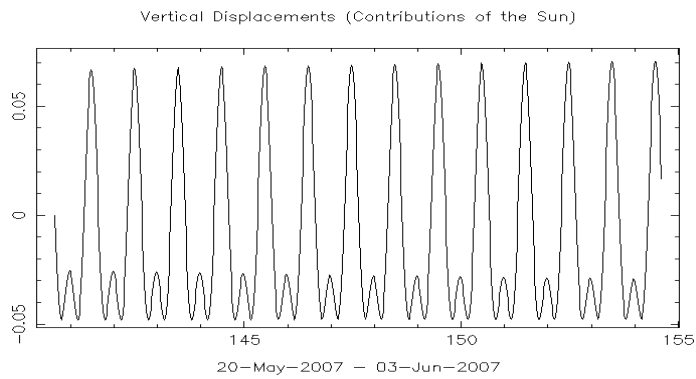
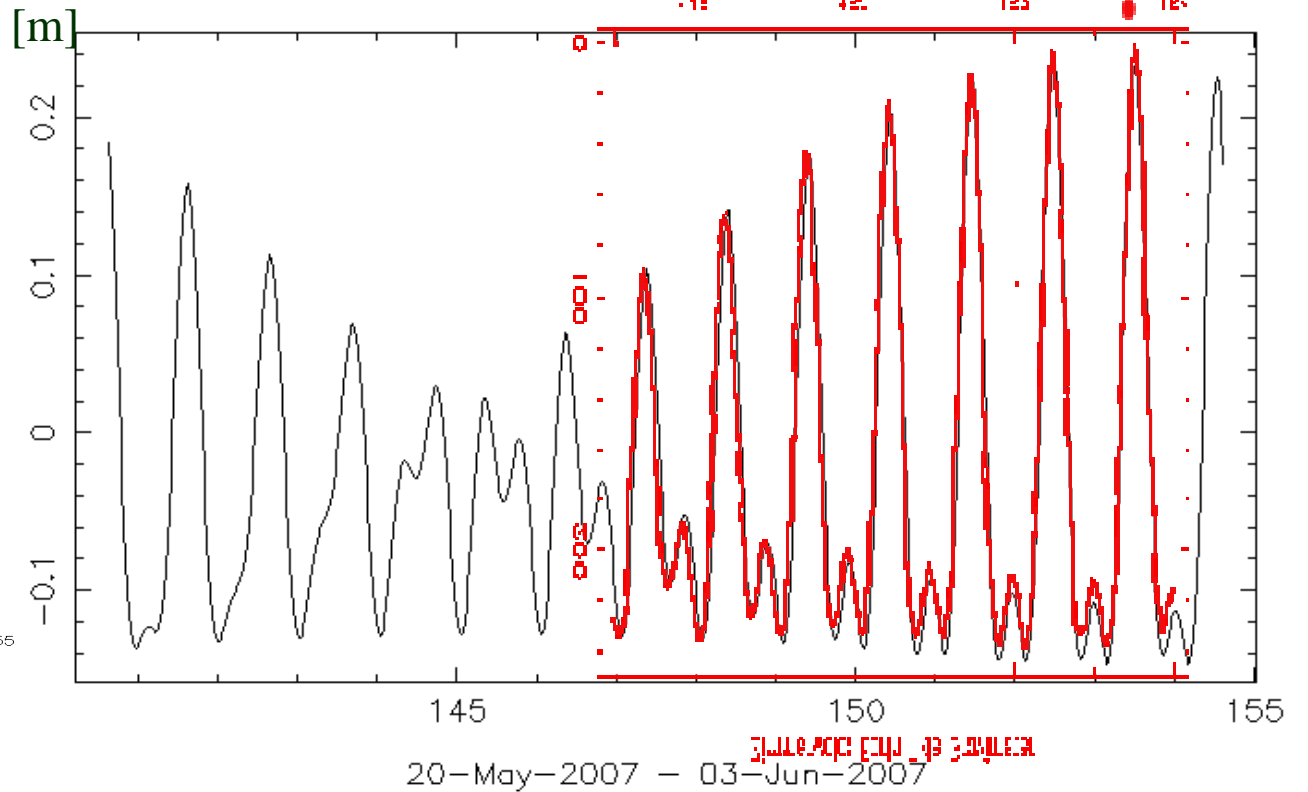
■ LOD (1.1.2005-31.12.2006) ■ Déclinaison minimale ■ Déclinaison maximale

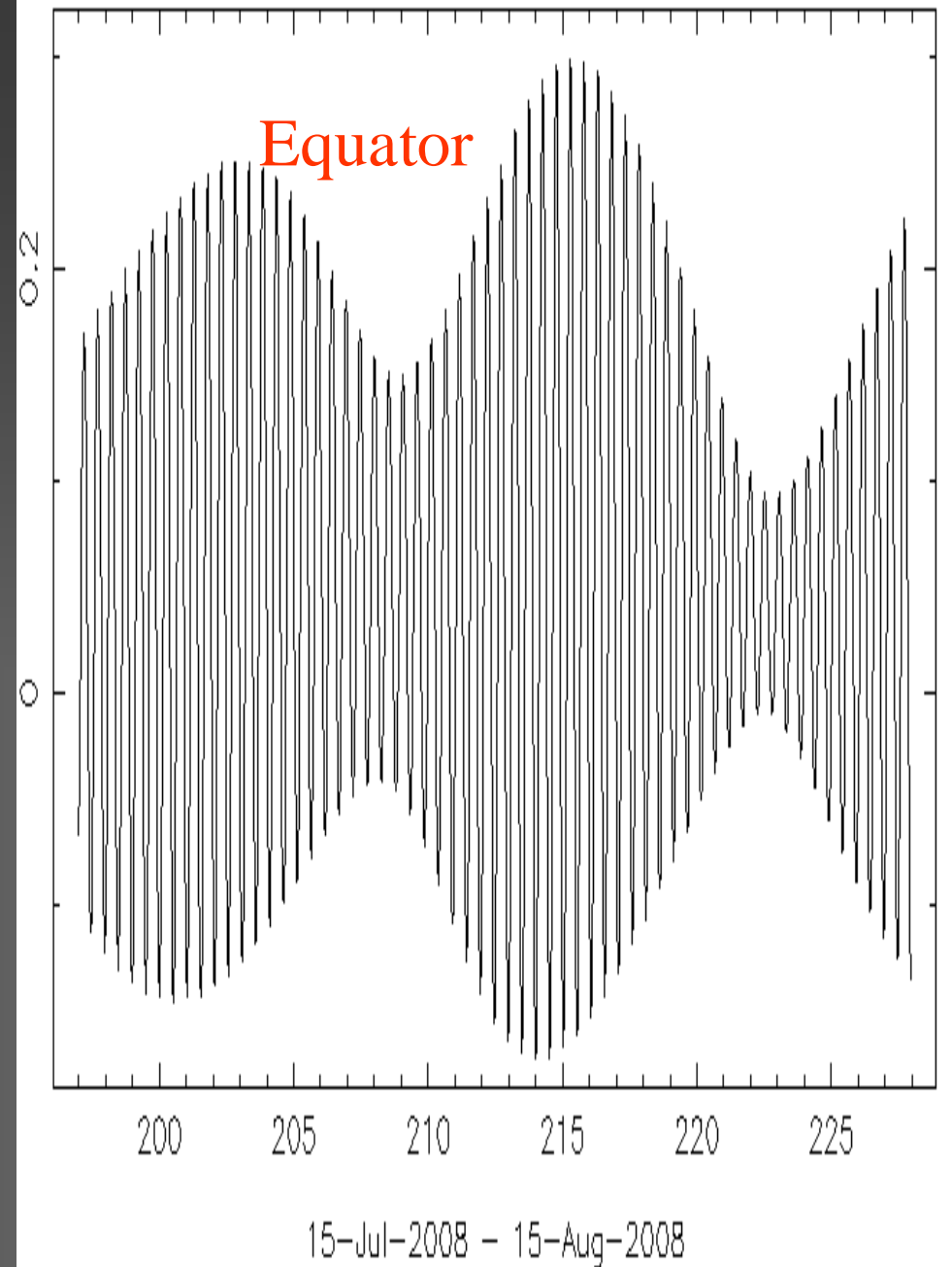
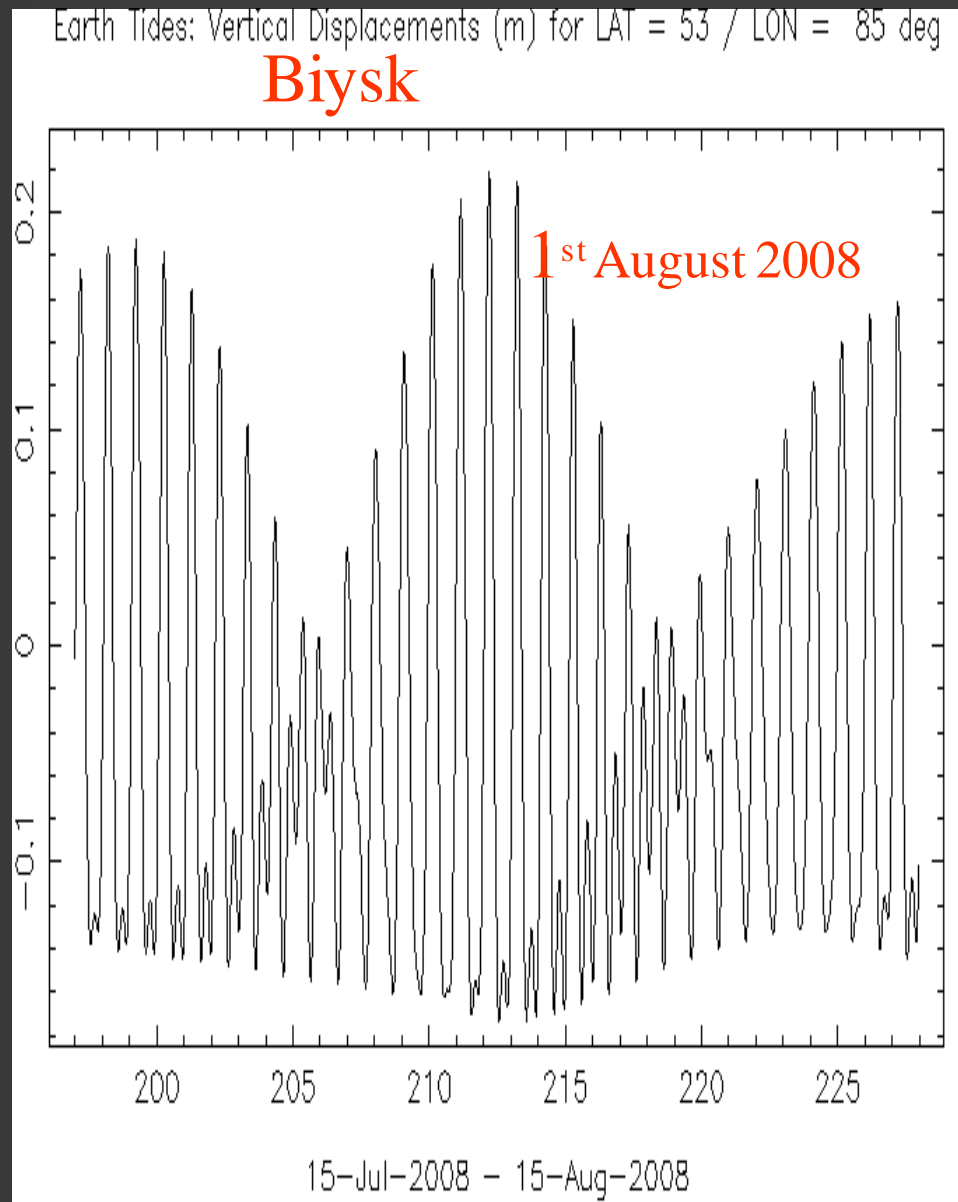
Lunastices (Lunar soltices)

weekly amplitude change in LOD: $10^3 \times$ weekly average dissipation



Earth Tides: Vertical Displacements (m) for LAT = 47 / LONG = 127 deg
 23-04-2007 = 25-04-2007
 125 127 129

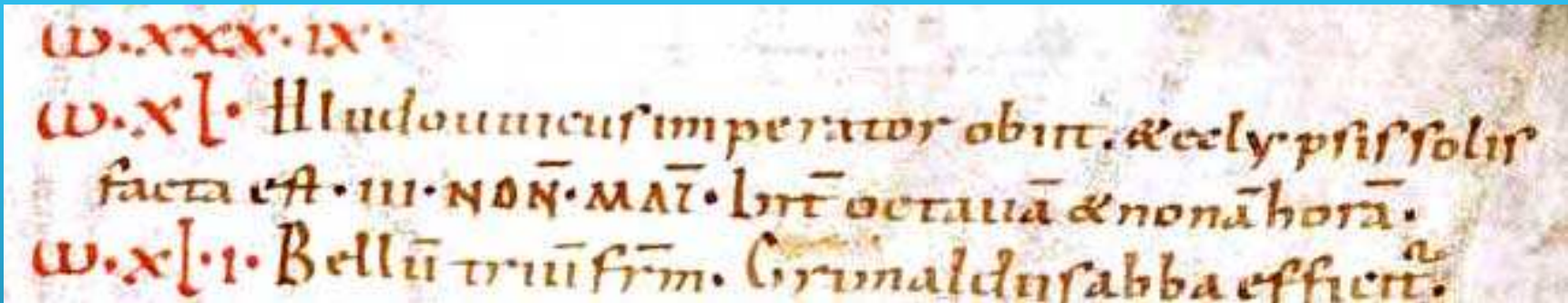






Codices Electronici Sangallenses 915:

years 775 et 900 (pp.200-206) : similar calligraphy then, changes.



SE 840.05.05...the very first event dated in terms of CE (Common Era)

Death of LOUIS I, usually assumed : 840.06.20 /

Sunrise at St-Gallen: 03:17 UT add 8h30, gives 12:47 UT while 5MCSE retrodicts 12:38 UT....

Probably a copy 60 years after facts: the Common Era Dating System was not yet in use, and the chronological order is not respected,

Eclipse's report corroborated by "Chronicon" of **ANDREAS Presbyter Bergomas** :

Indictione tertia sic fuit sol obscuratus in hoc mundo, et stellas in celo apparebant,

3. Nonas Magias, ora nona, in laetaniis Domini, quasi media ora.

Facta est tribulatio magna. Cumque hoc populus intenderent, multi extimabant, quod iam amplius hoc seculum non staret; sed dum haec angustia contemplant, refulsit sol et quasi tremidus in antea umbraculam fugire cepit. Ipsa vero nocte sequenti prope matutino facta est lux quasi in die. Haec signa in celo conperta, doctores in suorum monitiones dixerunt: Estote, fratres, parati; quia adimpletum est quod in evangelio Dominus dixit: cum haec signa videritis, scitote, quia prope est die Domini magnus et manifestus?

Sequenti autem mense Iunio Hludowicus imperator defunctus est, suosque dies finivit in pace.

Indictione tertia : 3rd year of the 35th indiction, an ecclesiastic fiscal period introduced by CONSTANTIN after victory over MAXENTIUS on 312.10.28.

In laetiniis Domini refers to Rogation-Monday, -Tuesday & -Wednesday **before Holy Thursday**: 840.05.05 was a Wednesday !

Probably a contemporary report: chronological order respected, eclipse followed by the emperor's death.

Léon GAUMONT

1912.04.17 / 12:09:49 UT

Carrefour de la Grande Croix

$N48.8006^\circ / E1.9206^\circ$

8 frames published by

Bull. Soc. d'Astronomie

Jul. 1912, p.323



-1337.05.14/12:19UT

Total Solar Eclipse : 4 minutes

10 New Moon later... **-1336.03.05**

AKHENATON (-1341 / -1324)

in ryV founded his capital AKHET-ATON



Chronology comforted by:

SE -1311.06.24 over Hattusa
Mursili II ryX (letter to Horemheb)

25° 40' 52,1" N <-> 25,68114°	(éclipse partielle de soleil)					
32° 37' 45,8" E <-> 32,62939°						
Degré d'obscurité : 94,03%	Max:	Grandeur de l'éclipse : 0,94054 Rapport Lune/Soleil : 1,07578				
Phase (ΔT=31191,1s)	Date	Heure (TU)	Alt	Azi	P	V
Début de l'éclipse partielle (C1)	14/05/-1337	11:02:25,1	+68,3°	244,5°	260°	05,1
Maximum de l'éclipse	14/05/-1337	12:25:29,1	+50,3°	262,6°	347°	02,6
Fin de l'éclipse partielle (C4)	14/05/-1337	13:39:46,6	+33,6°	271,5°	073°	11,9

Thebes