BUREAU INTERNATIONAL DES POIDS ET MESURES

(B I P M)

Circular T 11 (1988 December 28)

1 - COORDINATED UNIVERSAL TIME UTC. Computed values of UTC-UTC(k)

(Since 1988 January 1, 0h UTC, TAI-UTC = 24s)

Date 1988 (0h UTC)			NOV 4	NOV 14	NOV 24
MJD			47469	47479	47489
Laboratory k			UTC-UTC(k)	(Unit = 1 microsecond)	
AOS	(Borowiec)	(1)	1.58	1.96	1.98
APL	(Laurel)		-0.26	-0.26	-0.27
ASMW	(Berlin)		0.30	0.35	0.32
AUS	(Canberra)		-17.03	-17.26	-17.44
BEV	(Wien)		-1.67	-2.32	-2.84
CAO	(Cagliari)		4.75	4.64	4.61
CH	(Berne)		0.72	0.72	0.72
CRL	(Tokyo)		-1.85	-1.82	-1.80
CSAO	(Shaanxi)		1.51	1.61	1.58
FTZ	(Darmstadt)		17.83	17.79	17.79
IEN	(Torino)		1.77	1.69	1.57
IFAG	(Wettzell)		-1.13	-0.80	-0.64
INPL	(Jerusalem)		86.25	87.64	89.04
JATC	(Xian)		-	-	-
KSRI	(Daejeon)		-15.97	-16.59	-17.22
NAOM	(Mizusawa)		-34.40	-34.49	-34.55
NIM	(Beijing)		8.07	8.09	8.01
NIST	(Boulder)		-0.19	-0.14	-0.10
NPL	(Teddington)		3.71	3.54	3.34
NPLI	(New-Delhi)	(2)	-11.49	-11.53	-
NRC	(Ottawa)		-11.51	-11.80	-
NRLM	(Tsukuba)		-30.11	-30.53	-30.90
OMH	(Budapest)		-8.76	-8.84	-9.12
OP	(Paris)		-1.70	-1.72	-1.76
ORB	(Bruxelles)		-11.31	-11.49	-11.80
PKNM	(Warsaw)		2.87	2.74	2.61
PTB	(Braunschweig)		4.15	4.18	4.20
ROA	(San Fernando)		6.78	6.97	7.17
SO	(Shanghai)		1.95	2.12	2.13
STA	(Stockholm)		-0.71	-0.72	-0.84
SU	(Moscow)	(3)	17.71	17.58	-
TAO	(Tokyo)		-2.45	-2.46	-2.46
TL	(Taiwan)		-5.79	-5.83	-5.84
TP	(Praha)		-2.71	-2.27	-1.99
TUG	(Graz)		4.33	4.57	4.80
USNO	(Washington)	(USNO MC)	-1.80	-1.69	-1.61
VSL	(Delft)		3.68	3.68	3.71
YUZM	(Beograd)		8.29	8.03	7.88
ZIPE	(Potsdam)		0.08	-0.02	-0.12

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2 - INTERNATIONAL ATOMIC TIME TAI AND LOCAL ATOMIC TIME SCALES TA(k)

Computed values of TAI-TA(k)

Date 1988 (0h UTC)		NOV 4	NOV 14	NOV 24
MJD		47469	47479	47489
Laboratory k		TAI-TA(k)	(Unit = 1 microsecond)	
AOS (Borowiec)	(1)	-137.49	-139.21	-141.29
APL (Laurel)		-0.44	-0.44	-0.45
CH (Berne)		-53.08	-53.27	-53.45
CRL (Tokyo)		-3.50	-3.45	-3.42
CSAO(Shaanxi)		40.49	40.59	40.56
DDR (Berlin)		-30.63	-30.46	-30.35
F (Paris)		62.51	62.89	63.25
JATC(Xian)		-	-	-
NIM (Beijing)		-9.76	-9.79	-10.03
NISA(Boulder)	(4)	-45051.85	-45052.04	-45052.24
NIST(Boulder)		-45117.17	-45117.53	-45117.90
NRC (Ottawa)		19.56	19.27	-
PTB (Braunschweig)		-359.25	-359.22	-359.20
SO (Shanghai)		-45.82	-45.56	-45.47
SU (Moscow)	(3)	2827267.71	2827267.58	-
USNO(Washington)	(5)	-34567.97	-34568.52	-34569.02

3 - NOTES ON SECTIONS 1 AND 2

(1) AOS . Erratum. Correct values of UTC-UTC(AOS) and TAI-TA(AOS) for the previous Circular are

MJD	UTC-UTC(AOS)	TAI-TA(AOS)
47439	0.72	-132.05
47449	1.12	-133.76
47459	1.37	-135.60

(2) NPLI.

MJD	UTC-UTC(NPLI)
47449	-11.27
47459	-11.40

(3) SU . The data given in Sections 1 and 2, and in this note, have been obtained by linear interpolation of UTC-UTC(SU) obtained from the following clock transportations by SU:
1988 Oct. 20, to TUG (See Circular T 10)
1988 Nov. 18, to OP (See 4- below)

MJD	UTC-UTC(SU)	TAI-TA(SU)
47459	17.84	2827267.84

(4) TA(NISA) designates the scale AT1 of NIST.

(5) TA(USNO) designates the scale A1(MEAN) of USNO.

4 - MEASUREMENT OF UTC(j)-UTC(k)

Date 1988	MJD	Time comparisons (Unit : 1 microsecond)		uncert.	source	meth. (1)
NOV 9	47474.08	UTC(TAO) - UTC(NRLM)	=-27.901	0.008	TAO message	CT
NOV 14	47479.05	UTC(TAO) - UTC(CRL)	= 0.677	0.005	TAO message	CT
NOV 18	47483.38	UTC(SU) - UTC(OP)	=-19.26	0.05	SU telex	CT
NOV 24	47489.38	UTC(SU) - UTC(TP)	=-18.36	0.05	SU telex	CT

(1) method : CT clock transportation

5 - DURATION OF THE TAI SCALE INTERVAL : 1 second + D

D and its standard deviation s are expressed in 1*10*-14 second.

Note. Starting with Circular T 9, the following data are given
- for continuously operating primary standards (primary clocks), the average of D for the two previous months, with the last available estimate of the inaccuracy of the standard,
- for occasional measurements, the value of D for the measurement interval, as computed by BIPM (the BIPM uncertainty may be larger that the reported uncertainty on account of the time comparisons),
- the BIPM evaluation from all available measurements (from CRL, NIST, NRC, PTB, SU), with the uncertainty based on those of individual measurements, as reported.

Standards	Interval(MJD)	D	s
PTB-CS1	47429 - 47489	-0.5	3.0
PTB-CS2	47429 - 47489	+2.6	1.5
BIPM estimate	47429 - 47489	+2	2

New telephone numbers

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Access to the BIPM Data Service can be obtained by dialing
+33 1 45 34 99 77
The access is set for
Full Duplex
None Parity
ASCII code
Data Bit 8
Stop Bit 1
1200 Bauds - CCITT V22 modem

Password : TIME

The monthly Circular T of BIPM is available in G.E. MarkIII in the file "BIPMCRT".

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