CIRCULAR T 212 ISSN 1143-1393
2005 SEPTEMBER 09, 16h UTC

BUREAU INTERNATIONAL DES POIDS ET MESURES
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1 - Coordinated Universal Time UTC and its local realizations UTC(k). Computed values of [*UTC-UTC*(*k*)].
From 1999 January 1, 0h UTC, *TAI-UTC* = 32 s. From 2006 January 1, 0h UTC, *TAI-UTC* = 33 s.

Date 2005 0h UTC	JUL 28	AUG 2	AUG 7	AUG 12	AUG 17	AUG 22	AUG 27	Uncertainty/ns			Notes
MJD	53579	53584	53589	53594	53599	53604	53609	u_A	u_B	u	(1)
Laboratory *k*				[*UTC-UTC*(*k*)]/ns							
AOS (Borowiec)	0.7	-3.7	-3.0	-11.8	5.4	-2.4	-0.8	1.6	5.2	5.5	
APL (Laurel)	10.3	6.6	-1.4	-13.7	-14.9	-17.9	-17.6	1.6	5.3	5.5	
AUS (Sydney)	-638.1	-647.1	-653.6	-639.0	-645.4	-653.1	-655.1	3.2	6.4	7.2	
BEV (Wien)	-65.6	-69.6	-70.2	-67.8	-78.1	-77.1	-86.1	1.6	5.2	5.5	
BIRM (Beijing)	-681.0	-706.2	-	-	-	-	-	2.8	20.4	20.6	
CAO (Cagliari)	-2451.5	-2427.7	-2434.4	-2434.1	-2419.3	-2406.1	-2383.2	1.6	7.2	7.3	
CH (Bern)	0.5	-9.9	-9.8	-10.6	-14.1	-15.9	-13.9	0.8	5.2	5.2	
CNM (Queretaro)	60.7	58.8	62.2	67.2	67.3	62.5	60.9	5.0	20.3	20.9	
CNMP (Panama)	-3266.4	-3274.0	-3308.4	-3343.3	-3377.1	-3413.8	-3430.6	4.0	7.2	8.2	
CSIR (Pretoria)	4847.6	4787.2	4728.7	4670.9	4603.7	4523.2	4452.4	3.0	20.1	20.3	
DLR (Oberpfaffenhofen)	-66.4	-67.2	-65.4	-61.0	-61.6	-68.1	-73.1	0.8	5.2	5.3	
DTAG (Darmstadt)	199.9	183.2	183.7	181.0	165.6	150.8	141.2	3.0	10.1	10.5	
HKO (Hong Kong)	23.6	27.8	20.3	19.4	21.8	20.9	23.4	3.2	6.4	7.2	
IEN (Torino)	18.1	24.1	22.7	31.4	50.2	58.7	72.4	0.7	2.2	2.3	
IFAG (Wettzell)	-232.9	-223.4	-215.7	-221.4	-215.3	-198.8	-186.9	0.8	5.2	5.3	
IGMA (Buenos Aires)	412.6	396.7	357.6	372.5	409.5	423.5	439.3	5.0	20.1	20.7	
INPL (Jerusalem)	-921.2	-937.4	-962.7	-976.1	-987.8	-1005.9	-1026.6	4.0	10.1	10.9	
JATC (Lintong)	-9768.6	-9766.8	-9770.4	-9774.8	-9786.1	-9786.3	-9786.3	2.7	21.0	21.2	
JV (Kjeller)	-5892.1	-5877.8	-5856.4	-5842.0	-5827.8	-5774.8	-5759.8	5.0	20.0	20.6	
KRIS (Daejeon)	-4.8	-8.5	3.3	-1.6	-11.4	-11.2	-12.1	2.7	6.4	7.0	
LDS (Leeds)	3106.0	3147.7	3175.2	3231.2	3254.5	3299.9	3333.6	3.0	20.0	20.3	
LT (Vilnius)	494.6	525.8	570.3	593.5	638.1	668.1	676.3	1.6	5.2	5.5	
MIKE (Espoo)	3871.0	3777.9	3708.1	3619.1	3525.3	3441.0	3358.8	5.0	20.1	20.7	
MSL (Lower Hutt)	-179.5	-208.4	-221.2	-223.0	-191.0	-194.3	-182.9	2.3	20.4	20.5	
NAO (Mizusawa)	51.9	56.0	72.0	65.5	65.0	74.0	79.2	3.2	19.9	20.2	
NICT (Tokyo)	14.5	14.2	16.3	16.0	16.1	16.1	15.9	1.2	4.0	4.2	
NIM (Beijing)	-43.8	-50.5	-45.9	-46.6	-46.0	-51.8	-49.1	3.2	20.2	20.4	
NIMB (Bucharest)	-489.1	-508.2	-520.5	-507.9	-521.8	-516.1	-518.2	2.5	20.1	20.2	
NIMT (Bangkok)	-2574.3	-2644.9	-2799.3	-	-	-	-	1.6	20.4	20.5	
NIS (Cairo)	-	-25.6	-20.6	-16.5	-9.8	14.9	37.7	3.0	20.1	20.3	

Date 2005 0h UTC	JUL 28	AUG 2	AUG 7	AUG 12	AUG 17	AUG 22	AUG 27	Uncertainty/ns			Notes
MJD	53579	53584	53589	53594	53599	53604	53609	u_A	u_B	u	(1)
Laboratory *k*				[*UTC*-*UTC*(*k*)]/ns							
NIST (Boulder)	-1.9	-3.3	-6.1	-7.7	-10.3	-12.0	-11.6	0.6	4.9	4.9	
NMC (Sofiya)	-3944.5	-3982.4	-3998.7	-4006.9	-4022.2	-4027.3	-4046.3	5.0	20.0	20.6	
NMIJ (Tsukuba)	-2.0	-10.4	-2.9	3.1	8.7	11.1	4.6	1.4	6.4	6.5	
NMLS (Shah Alam)	-263.1	-257.2	-256.4	-262.2	-262.5	-268.3	-271.1	3.2	20.4	20.6	
NPL (Teddington)	11.0	11.7	11.9	13.3	14.8	17.0	19.5	0.7	2.1	2.2	
NPLI (New-Delhi)	404.2	406.5	431.1	440.7	452.4	462.7	458.8	2.5	7.2	7.6	
NRC (Ottawa)	-30.4	-28.9	-26.4	-18.8	-19.9	-22.0	-21.7	3.0	14.7	15.0	
NTSC (Lintong)	21.0	19.4	19.5	15.2	8.8	4.0	1.4	2.7	6.3	6.9	
OMH (Budapest)	10262.1	10262.1	10284.8	10304.1	10321.3	10334.0	10349.5	2.5	20.0	20.2	
ONBA (Buenos Aires)	-2268.4	-2306.0	-2386.8	-2383.1	-2420.0	-2416.9	-2473.1	5.0	7.2	8.8	
ONRJ (Rio de Janeiro)	3836.8	3900.7	3954.4	4011.8	4065.8	4115.5	4176.4	5.0	20.6	21.2	
OP (Paris)	24.1	26.8	25.1	23.7	23.8	27.2	22.9	0.6	2.1	2.2	
ORB (Bruxelles)	43.4	40.3	35.9	31.9	26.9	20.7	14.4	0.8	5.2	5.3	
PL (Warszawa)	15.1	16.1	16.0	19.5	26.3	36.2	32.0	1.5	5.0	5.3	
PTB (Braunschweig)	12.7	14.7	19.7	23.8	21.4	20.3	19.9	0.4	1.6	1.6	
ROA (San Fernando)	-28.2	-36.8	-40.8	-44.3	-64.1	-63.0	-62.7	0.8	5.2	5.3	
SCL (Hong Kong)	3.3	-4.9	-12.4	-14.2	-10.8	-11.2	-9.3	4.2	10.8	11.5	
SG (Singapore)	-12.6	-6.5	-0.1	3.3	14.5	28.7	28.9	3.2	20.1	20.4	
SMU (Bratislava)	-72.2	-78.5	-87.1	-93.7	-93.1	-82.9	-89.8	5.0	20.0	20.7	
SP (Boras)	61.9	55.0	48.0	42.9	42.7	41.4	40.1	0.8	9.8	9.8	
SU (Moskva)	18.0	17.4	14.0	11.2	8.2	7.1	4.3	3.0	5.2	6.0	
TCC (Concepcion)	-1780.0	-1790.4	-1799.5	-1791.0	-1826.9	-1849.1	-1884.5	5.0	20.4	21.0	
TL (Chung-Li)	59.5	57.4	55.4	56.0	56.1	55.6	55.7	1.4	6.3	6.5	
TP (Praha)	50.2	36.7	33.9	30.9	34.3	29.4	18.3	2.5	5.2	5.8	
UME (Gebze-Kocaeli)	854.7	856.4	861.5	868.0	872.0	872.5	865.6	15.0	20.1	25.1	
USNO (Washington DC)	0.2	0.3	0.2	0.4	0.0	-1.1	-1.1	0.5	1.6	1.7	
VSL (Delft)	87.7	63.1	58.5	47.7	34.7	25.6	8.9	0.7	3.4	3.4	

- Note on section 1:

(1) u is the combined standard uncertainty in [*UTC*-*UTC*(*k*)]. u_A and u_B are the components of this uncertainty calculated from the Type A and Type B components listed in Section 6. These uncertainties are valid only for the period MJD 53579 - 53609.
Ref.: Lewandowski W., Matsakis D., Panfilo G., Tavella P., 'First evaluation and experimental results on the determination of uncertainties in [*UTC* - *UTC*(*k*)]', Proc. 36th PTTI, 2004, pp. 247-261.

2 - International Atomic Time TAI and Local atomic time scales TA(k). Computed values of [*TAI-TA*(*k*)].

Date 2005 0h UTC	JUL 28	AUG 2	AUG 7	AUG 12	AUG 17	AUG 22	AUG 27	
MJD	53579	53584	53589	53594	53599	53604	53609	
Laboratory *k*				[*TAI-TA*(*k*)]/ns				
CH (Bern)	50555.7	50601.0	50650.8	50699.8	50746.0	50794.0	50845.7	
F (Paris)	168728.1	168719.9	168710.1	168696.3	168684.2	168672.9	168660.4	
IEN (Torino)	45794.6	45899.5	45995.4	46098.6	46202.3	46292.5	46389.2	
JATC (Lintong)	-37506.6	-37526.8	-37551.4	-37577.8	-37612.1	-37631.3	-37654.3	
KRIS (Daejeon)	9335.9	9358.9	9395.5	9417.3	9435.0	9461.7	9487.1	
NICT (Tokyo)	205828.8	206038.1	206248.7	206458.9	206672.5	206883.3	207093.1	
NIST (Boulder)	-45281198.3	-45281392.2	-45281587.5	-45281781.6	-45281976.7	-45282171.9	-45282366.5	
NRC (Ottawa)	29165.5	29171.5	29178.3	29190.2	29193.3	29195.6	29200.1	
NTSC (Lintong)	1442.8	1461.5	1486.0	1508.7	1531.6	1554.2	1578.5	
PL (Warszawa)	-3200.3	-3208.7	-3214.1	-3220.9	-3226.3	-3227.2	-3238.5	
PTB (Braunschweig)	-358657.9	-358648.3	-358636.0	-358624.5	-358619.3	-358612.9	-358605.9	
SU (Moskva)	27241509.8	27241520.8	27241529.1	27241538.0	27241546.6	27241557.2	27241566.1	(1)
TL (Chung-Li)	106.7	107.0	110.1	110.6	116.3	118.9	123.8	
USNO (Washington DC)	-34958641.1	-34958947.1	-34959254.6	-34959561.2	-34959869.7	-34960177.3	-34960484.7	

- Note on section 2:

(1) SU : Listed values are *TAI-TA*(SU) - 2.80 seconds.

3 - Difference between the normalized frequencies of EAL (free atomic time scale) and TAI.

	Interval of validity	*f*(*EAL*)-*f*(*TAI*)	
Steering correction	53579 - 53609	6.876×10^{-13}	(2005 JUL 28 - 2005 AUG 27)
New correction	53609 - 53639	6.870×10^{-13}	(2005 AUG 27 - 2005 SEP 26)
New correction foreseen	53639 - 53674	6.868×10^{-13}	(2005 SEP 26 - 2005 OCT 31)

4 - Duration of the TAI scale interval.

TAI is a realization of coordinate time TT. The following tables give the fractional deviation *d* of the scale interval of TAI from that of TT (the SI second on the geoid), i.e. the fractional frequency deviation of TAI with the opposite sign: $d = -y_{TAI}$. In this section, a frequency over a time interval is defined as the ratio of the end-point phase difference to the duration of the interval. Whenever needed, the instability of EAL should be expressed as the quadratic sum of three components with τ in days: (1) a white frequency noise of $6.0 \times 10^{-15} / \sqrt{\tau}$, (2) a flicker frequency noise of 0.6×10^{-15} and (3) a random walk frequency noise of $1.6 \times 10^{-16} \times \sqrt{\tau}$. The relation between EAL and TAI is given in *Circular T* and *the Annual Report of the BIPM Time Section*.

In the first table, *d* is obtained, on the given periods of estimation by comparison of the TAI frequency with that of the given individual Primary Frequency Standards (PFS). In this table: u_A is the uncertainty originating in the instability of the PFS, u_B is the combined uncertainty from systematic effects, Ref(u_B) is a reference giving information on the stated value of u_B or is the *Circular T* where this reference was first given, $u_{l/lab}$ is the uncertainty in the link between the PFS and the clock participating to TAI, including the uncertainty due to the dead-time, $u_{l/TAI}$ is the uncertainty in the link to TAI, u is the quadratic sum of all four uncertainty values. All values are expressed in 10^{-15}.

Standard	Period of Estimation		*d*	u_A	u_B	Ref(u_B)	$u_{l/Lab}$	$u_{l/Tai}$	*u*	Note
SYRTE-JPO	53514	53534	7.6	0.5	6.3	T160	0.3	1.5	6.5	(1)
SYRTE-JPO	53554	53569	5.1	0.8	6.3	T160	0.3	2.0	6.7	(1)
SYRTE-JPO	53579	53589	0.8	1.0	6.3	T160	0.3	3.0	7.1	(2)
SYRTE-JPO	53594	53609	3.7	0.6	6.3	T160	0.3	2.0	6.6	(2)
IEN-CSF1	53559	53584	2.4	0.4	0.9	T191	0.3	1.2	1.6	(3)
PTB-CS1	53579	53609	-4.8	5.0	8.0	T148	0.0	1.0	9.5	(4)
PTB-CS2	53579	53609	-3.0	3.0	12.0	T148	0.0	1.0	12.4	(4)

Notes:
(1) Corrected values. Erroneous values have been published in Circular T211.
(2) Report 6 September 2005 by LNE-SYRTE.
(3) Report 3 August 2005 by IEN.
(4) Continuously operating as a clock participating to TAI.

The second table gives the BIPM estimate of *d*, based on all available PFS measurements over the period MJD 53219-53609, taking into account their individual uncertainties and characterizing the instability of EAL as noted above. *u* is the computed standard uncertainty of *d*

Period of estimation	*d*	*u*	
53579-53609	3.0×10^{-15}	1.9×10^{-15}	(2005 JUL 28 - 2005 AUG 27)

5 - Relations of UTC and TAI with GPS time and GLONASS time.

[*UTC-GPS time*] = -13 s + C_0, [*TAI-GPS time*] = 19 s + C_0, global uncertainty is of order 10 ns.
[*UTC-GLONASS time*] = 0 s + C_1, [*TAI-GLONASS time*] = 32 s + C_1, global uncertainty is of order hundreds ns.

The C_0 values are obtained using the values [*UTC-UTC*(OP)] and the GPS data taken at the Paris Observatory, corrected for IGS precise orbits, clocks and ionosphere maps. The C_1 values are obtained using the values [*UTC-UTC*(AOS)] and the GLONASS data taken at the Astrogeodynamical Observatory Borowiec (AOS). N_0 and N_1 are the numbers of measurements, when N_0 or N_1 is 0, the corresponding values of C_0 or C_1 are interpolated.
The standard deviations σ_0 and σ_1 characterize the dispersion of individual measurements. The actual uncertainty of user's access to GPS and GLONASS times may differ from these values.
For this circular, σ_0 = 1.9 ns, σ_1 = 14.7 ns

Date 2005 0h UTC	MJD	C_0/ns	N_0	C_1/ns	N_1
JUL 28	53579	-6.9	42	63.4	83
JUL 29	53580	-8.2	47	55.1	72
JUL 30	53581	-8.5	46	37.5	82
JUL 31	53582	-9.7	47	34.8	72
AUG 1	53583	-9.8	46	38.2	68
AUG 2	53584	-10.5	46	33.1	69
AUG 3	53585	-8.5	47	26.7	15
AUG 4	53586	-6.8	45	26.9	0
AUG 5	53587	-5.1	46	27.5	0
AUG 6	53588	-4.9	45	28.5	0
AUG 7	53589	-4.5	47	30.0	0
AUG 8	53590	-2.6	47	32.2	0
AUG 9	53591	-0.9	47	35.0	0
AUG 10	53592	-2.4	47	38.3	0
AUG 11	53593	-5.9	48	41.8	0
AUG 12	53594	-6.8	47	45.2	0
AUG 13	53595	-6.1	47	48.0	0
AUG 14	53596	-4.9	46	50.3	0
AUG 15	53597	-9.1	48	51.8	0
AUG 16	53598	-10.1	35	52.6	0
AUG 17	53599	-8.0	46	53.0	0
AUG 18	53600	-7.9	46	58.1	76
AUG 19	53601	-8.5	46	56.1	84
AUG 20	53602	-6.9	46	50.8	89
AUG 21	53603	-6.8	46	51.8	75
AUG 22	53604	-10.2	45	51.4	65
AUG 23	53605	-10.9	45	46.6	76
AUG 24	53606	-8.4	45	61.3	80
AUG 25	53607	-6.0	43	63.8	84
AUG 26	53608	-4.3	44	46.5	89
AUG 27	53609	-3.3	46	43.5	87

6 - Time links used for the computation of TAI and their uncertainties.

The time links used in the elaboration of this *Circular T* are listed in this section. The technique for the link is indicated as follows: GPS SC for GPS common-view single-channel C/A data; GPS MC for GPS common-view multi-channel C/A data; GPS P3 for GPS common-view multi-channel dual-frequency P code data; GPS GT for 'GPS time' observations; INT LK for internal cable link and TWSTFT for two-way satellite time and frequency transfer data.

For each link, the following uncertainties are provided: u_A is the statistical uncertainty evaluated by taking into account the level of phase noise in the raw data, the interpolation interval between data points and the effects with typical duration between 5 and 30 days. u_B is the uncertainty on the calibration, estimated by the BIPM.

The calibration type of the link is indicated as: GPS EC for GPS equipment calibration; TW EC for two-way equipment calibration; LC (technique) for a link calibrated using 'technique'; BC (technique) for a link calibrated using 'technique' to transfer a past equipment calibration through a discontinuity of link operation.

The calibration dates indicate: the most recent calibration results for the two laboratories in the case of EC and the most recent calibration of the link in the case of LC and BC,
NA stands for not available, in this case estimated values are provided

Link	Type	u_A/ns	u_B/ns	Calibration Type	Calibration Dates
AOS /PTB	GPS MC	1.5	5.0	GPS EC /GPS EC	2003 Sep/2003 Aug
APL /USNO	GPS MC	1.5	5.0	GPS EC /GPS EC	2003 Dec/2003 Dec
AUS /NICT	GPS MC	3.0	5.0	GPS EC/GPS EC	2002 Sep/2003 Nov
BEV /PTB	GPS MC	1.5	5.0	GPS EC/GPS EC	2001 Dec/2003 Aug
BIRM/NICT	GPS MC	2.5	20.0	NA /GPS EC	NA /2003 Nov
CAO /PTB	GPS MC	1.5	7.0	GPS EC/GPS EC	2004 Nov/2003 Aug
CH /PTB	GPS P3	0.7	5.0	GPS EC/GPS EC	2004 Nov/2004 Aug
CNM /NIST	GPS SC	5.0	20.0	NA /GPS EC	NA /2003 Dec
CNMP/USNO	GPS MC	4.0	7.0	GPS EC/GPS EC	2002 Oct/2003 Dec
CSIR/PTB	GPS MC	3.0	20.0	NA /GPS EC	NA /2003 Aug
DLR /PTB	GPS P3	0.7	5.0	GPS EC/GPS EC	2003 Apr/2004 Aug
DTAG/PTB	GPS SC	3.0	10.0	GPS EC/GPS EC	1998 May/2003 Aug
HKO /NICT	GPS MC	3.0	5.0	GPS EC/GPS EC	2004 Apr/2003 Nov
IEN /PTB	TWSTFT	0.5	1.5	BC (TWSTFT)	2005 May
IFAG/PTB	GPS P3	0.7	5.0	GPS EC/GPS EC	2003 Jun/2004 Aug
IGMA/USNO	GPS MC	5.0	20.0	NA /GPS EC	NA /2003 Dec
INPL/PTB	GPS SC	4.0	10.0	GPS EC/GPS EC	1987 Jun/2003 Jun
JATC/NTSC	INT LK	0.2	20.0	NA	NA
JV /PTB	GPS GT	5.0	20.0	NA /GPS EC	NA /2003 Aug
KRIS/NICT	GPS MC	2.5	5.0	GPS EC/GPS EC	2003 Oct/2003 Nov

Link	Type	u_A/ns	u_B/ns	Calibration Type	Calibration Dates
LDS /PTB	GPS SC	3.0	20.0	NA /GPS EC	NA /2003 Aug
LT /PTB	GPS MC	1.5	5.0	GPS EC/GPS EC	2001 Nov/2003 Aug
MIKE/PTB	GPS MC	5.0	20.0	NA /GPS EC	NA /2003 Aug
MSL /NICT	GPS P3	2.0	20.0	NA /GPS EC	NA /2005 Jun
NAO /NICT	GPS SC	3.0	20.0	NA /GPS EC	NA /2003 Nov
NICT/PTB	GPS P3	1.5	5.0	GPS EC/GPS EC	2005 Jun/2004 Aug
NIM /NICT	GPS SC	3.0	20.0	NA /GPS EC	NA /2003 Nov
NIMB/PTB	GPS MC	2.5	20.0	NA /GPS EC	NA /2003 Aug
NIMT/NICT	GPS P3	1.0	20.0	NA /GPS EC	NA /2005 Jun
NIS /PTB	GPS MC	3.0	20.0	NA /GPS EC	NA /2003 Aug
NIST/PTB	TWSTFT	0.5	5.0	BC(GPS P3)	2005 May
NMC /PTB	GPS SC	5.0	20.0	NA /GPS EC	NA /2003 Aug
NMIJ/NICT	GPS P3	0.7	5.0	GPS EC/GPS EC	2002 Apr/2005 Jun
NMLS/NICT	GPS MC	3.0	20.0	NA /GPS EC	NA /2003 Nov
NPL /PTB	TWSTFT	0.5	1.5	BC(GPS P3)	2005 May
NPLI/PTB	GPS MC	2.5	7.0	GPS EC/GPS EC	2005 Jul/2003 Aug
NRC /USNO	GPS SC	3.0	15.0	GPS EC/GPS EC	1982 /2003 Dec
NTSC/NICT	GPS MC	2.5	5.0	GPS EC/GPS EC	2002 Aug/2003 Oct
OMH /PTB	GPS SC	2.5	20.0	NA /GPS EC	NA /2003 Aug
ONBA/USNO	GPS MC	5.0	7.0	GPS EC/GPS EC	2000 Oct/2003 Dec
ONRJ/NIST	GPS SC	5.0	20.0	NA /GPS EC	NA /2003 Dec
OP /PTB	TWSTFT	0.5	1.5	BC(GPS P3)	2005 May
ORB /PTB	GPS P3	0.7	5.0	GPS EC/GPS EC	2003 Jul/2004 Aug
PL /PTB	GPS MC	1.5	5.0	GPS EC/GPS EC	2001 Oct/2003 Aug
ROA /PTB	TWSTFT	0.7	5.0	BC(GPS P3)	2005 May
SCL /NICT	GPS SC	4.0	10.0	GPS EC/GPS EC	1993 May/2003 Nov
SG /NICT	GPS MC	3.0	20.0	NA /GPS EC	NA /2003 Nov
SMU /PTB	GPS SC	5.0	20.0	NA /GPS EC	NA /2003 Aug
SP /PTB	GPS P3	0.7	10.0	LC(GPS SC)	2004 Nov
SU /PTB	GPS SC	3.0	5.0	GPS EC/GPS EC	2003 Apr/2003 Aug
TCC /NIST	GPS SC	5.0	20.0	NA /GPS EC	NA /2003 Dec
TL /NICT	GPS P3	0.7	5.0	GPS EC/GPS EC	2005 May/2005 Jun
TP /PTB	GPS SC	2.5	5.0	GPS EC/GPS EC	2001 Oct/2003 Aug
UME /PTB	GPS SC	15.0	20.0	NA /GPS EC	NA /2003 Aug
USNO/PTB	TWSTFT	0.5	1.1	BC(TW X-Band)	2005 May
VSL /PTB	TWSTFT	0.5	3.0	BC(GPS SC)	2005 May