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 Following IAU Conventions 2000, IERS provides new products dX, dY, celestial pole offsets with respect to the new IAU2000A Precession-Nutation theory.

The present Bulletin B version includes the celestial pole offsets dX, dY:

$$dX = X_{obs} - X_{IAU2000A} \text{ and } dY = Y_{obs} - Y_{IAU2000A}$$

where

X\_obs, Y\_obs are the observed coordinates of the Celestial Intermediate Pole (CIP) in the Geocentric Celestial Reference System, and

X\_IAU2000A, Y\_IAU2000A are the celestial pole coordinates provided by using the IAU2000A Precession-Nutation theory.

The current Bulletin B including (dpsi,deps)\_1980 will be maintained until December 2004.

For more details refer to IERS Messages 38, on IAU 2000 Resolution Compliancy Information.

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Contents are described in the Explanatory Supplement available at  
<http://hpiers.obspm.fr/eop-pc/>

1 - EARTH ORIENTATION PARAMETERS (IERS evaluation).

The values in this section are samplings of section 2 given at five-day intervals.

Date 2004 (0h UTC)	MJD	x "	y "	UT1R-UTC s	UT1R-TAI s	dX 0.001"	dY 0.001"
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Final Bulletin B values.

JAN	5	53009	.02159	.15480	-.389940	-32.389940	.01	-.23
JAN	10	53014	.00771	.15763	-.392584	-32.392584	.15	-.29
JAN	15	53019	-.00328	.16136	-.396256	-32.396256	-.01	.19
JAN	20	53024	-.01618	.16722	-.399406	-32.399406	.08	-.04
JAN	25	53029	-.02788	.17443	-.401666	-32.401666	-.12	-.08
JAN	30	53034	-.03595	.18293	-.403713	-32.403713	.08	-.11
FEB	4	53039	-.05120	.18897	-.405146	-32.405146	.09	-.06

Preliminary extension, to be updated weekly in Bulletin A and monthly in Bulletin B.

FEB	9	53044	-.06254	.19532	-.406421	-32.406421	-.07	-.24
FEB	14	53049	-.07674	.20443	-.408555	-32.408555	.00	.00
FEB	19	53054	-.08650	.21483	-.410924	-32.410924	.00	.00
FEB	24	53059	-.09984	.22640	-.413728	-32.413728	.00	.00
FEB	29	53064	-.10830	.23797	-.416888	-32.416888	.00	.00
MAR	5	53069	-.11611	.24925	-.420029	-32.420029	.00	.00
MAR	10	53074	-.12167	.26208	-.424087	-32.424087	.00	.00
MAR	15	53079	-.12644	.27532	-.428223	-32.428223	.00	.00
MAR	20	53084	-.13023	.28891	-.432335	-32.432335	.00	.00
MAR	25	53089	-.13303	.30276	-.436417	-32.436417	.00	.00
MAR	30	53094	-.13478	.31677	-.440430	-32.440430	.00	.00
APR	4	53099	-.13545	.33087	-.444336	-32.444336	.00	.00
APR	9	53104	-.13507	.34496	-.448105	-32.448105	.00	.00
APR	14	53109	-.13361	.35896	-.451675	-32.451675	.00	.00
APR	19	53114	-.13112	.37279	-.455017	-32.455017	.00	.00
APR	24	53119	-.12760	.38636	-.458084	-32.458084	.00	.00

APR 29 53124 -.12309 .39960 -.460846 -32.460846 .00 .00

Note. In UT1R, the effects of zonal tides with periods shorter than 35 days are removed ; UT1-UT1R (smaller than 0.0025s in absolute value) should be added after quadratic interpolation of UT1R. Section 2 of this Bulletin gives the daily interpolation of x, y, UT1, duration of day, dX, and dY.

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2 - SMOOTHED VALUES OF x, y, UT1, D, dX, dY (IERS EVALUATION) at one-day intervals. For smoothing characteristics, see Table2 in the explanatory supplement. The reference system is described in the 2002 IERS Annual Report.

2004		MJD	x	y	UT1-UTC	UT1-UT1R	D	dX	dY
(0 h UTC)			"	"	s	ms	ms	0.001"	0.001"
JAN	5	53009	.02159	.15480	-.390620	-.680	-.061	.01	-.23
JAN	6	53010	.01879	.15544	-.390524	-.193	-.095	.07	-.13
JAN	7	53011	.01596	.15615	-.390452	.350	-.042	.18	-.01
JAN	8	53012	.01299	.15685	-.390466	.876	.074	.24	-.01
JAN	9	53013	.01015	.15736	-.390623	1.310	.256	.23	-.12
JAN	10	53014	.00771	.15763	-.390998	1.586	.484	.15	-.29
JAN	11	53015	.00538	.15784	-.391602	1.657	.729	.08	-.41
JAN	12	53016	.00303	.15832	-.392455	1.506	.990	.05	-.38
JAN	13	53017	.00115	.15901	-.393569	1.156	1.215	.04	-.21
JAN	14	53018	-.00094	.15999	-.394859	.664	1.299	.04	.12
JAN	15	53019	-.00328	.16136	-.396132	.124	1.226	-.01	.19
JAN	16	53020	-.00539	.16261	-.397273	-.352	1.080	-.08	-.04
JAN	17	53021	-.00754	.16370	-.398261	-.660	.858	-.09	-.27
JAN	18	53022	-.01017	.16503	-.398977	-.733	.570	-.03	-.31
JAN	19	53023	-.01322	.16628	-.399414	-.573	.323	.04	-.18
JAN	20	53024	-.01618	.16722	-.399658	-.252	.191	.08	-.04
JAN	21	53025	-.01864	.16831	-.399841	.107	.191	.09	-.05
JAN	22	53026	-.02109	.16999	-.400079	.372	.287	.08	-.19
JAN	23	53027	-.02383	.17179	-.400435	.450	.450	.03	-.25
JAN	24	53028	-.02622	.17312	-.400975	.314	.624	-.05	-.17
JAN	25	53029	-.02788	.17443	-.401661	.005	.755	-.12	-.08
JAN	26	53030	-.02911	.17587	-.402454	-.398	.835	-.13	-.10
JAN	27	53031	-.03022	.17742	-.403302	-.803	.832	-.07	-.13
JAN	28	53032	-.03161	.17916	-.404094	-1.128	.702	.00	-.12
JAN	29	53033	-.03349	.18100	-.404691	-1.314	.478	.05	-.07
JAN	30	53034	-.03595	.18293	-.405042	-1.329	.249	.08	-.11
JAN	31	53035	-.03895	.18464	-.405190	-1.164	.047	.09	-.25
FEB	1	53036	-.04202	.18589	-.405146	-.833	-.123	.06	-.37
FEB	2	53037	-.04493	.18697	-.404960	-.374	-.227	.04	-.35
FEB	3	53038	-.04797	.18803	-.404712	.159	-.267	.05	-.18
FEB	4	53039	-.05120	.18897	-.404451	.695	-.266	.09	-.06
FEB	5	53040	-.05416	.18977	-.404207	1.155	-.179	.13	-.09
FEB	6	53041	-.05665	.19070	-.404117	1.467	.008	.10	-.25
FEB	7	53042	-.05878	.19196	-.404238	1.572	.273	.02	-.39
FEB	8	53043	-.06062	.19354	-.404665	1.445	.547	-.04	-.39
FEB	9	53044	-.06254	.19532	-.405318	1.103	.743	-.07	-.24
FEB	10	53045	-.06487	.19713	-.406123	.612	.877	-.07	-.05
FEB	11	53046	-.06765	.19905	-.407036	.068	.938	-.05	.07
FEB	12	53047	-.07073	.20089	-.407960	-.413	.875	-.02	.08
FEB	13	53048	-.07376	.20260	-.408757	-.731	.714	.02	.00
FEB	14	53049	-.07674	.20443	-.409376	-.821	.495	.00	.00
FEB	15	53050	-.07942	.20618	-.409755	-.675	.253	.00	.00
FEB	16	53051	-.08150	.20804	-.409911	-.349	.081	.00	.00
FEB	17	53052	-.08293	.21009	-.409959	.050	.055	.00	.00
FEB	18	53053	-.08432	.21230	-.410063	.395	.179	.00	.00
FEB	19	53054	-.08650	.21483	-.410346	.578	.393	.00	.00
FEB	20	53055	-.08989	.21731	-.410857	.540	.633	.00	.00
FEB	21	53056	-.09301	.21954	-.411598	.291	.850	.00	.00
FEB	22	53057	-.09563	.22198	-.412529	-.101	1.013	.00	.00
FEB	23	53058	-.09787	.22429	-.413590	-.543	1.083	.00	.00
FEB	24	53059	-.09984	.22640	-.414665	-.937	1.030	.00	.00
FEB	25	53060	-.10127	.22863	-.415628	-1.206	.857	.00	.00
FEB	26	53061	-.10241	.23099	-.416389	-1.301	.624	.00	.00

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3 - NORMAL VALUES OF THE EARTH ORIENTATION PARAMETERS AT FIVE-DAY INTERVALS  
(IERS evaluation).

		Raw normal values					Uncertainties				
2004	MJD	x	y	UT1-UTC	dX	dY	x	y	UT1	dX	dY
(0 h UTC)		"	"	s	0.001"		0.001"	0.0001s	0.001"		
JAN 5	53009	.02160	.15481	-.390620	.029	-.282	.01	.01	.02	.02	.03
JAN 10	53014	.00771	.15763	-.390994	.148	-.238	.02	.01	.02	.04	.04
JAN 15	53019	-.00328	.16136	-.396131	-.050	.148	.02	.02	.02	.02	.02
JAN 20	53024	-.01617	.16722	-.399658	.055	-.003	.02	.02	.02	.02	.03
JAN 25	53029	-.02789	.17443	-.401662	-.106	-.072	.02	.02	.02	.03	.03
JAN 30	53034	-.03595	.18294	-.405043	.072	-.197	.01	.02	.02	.02	.03
FEB 4	53039	-.05120	.18897	-.404450	.097	-.044	.01	.02	.02	.02	.03
FEB 9	53044	-.06253	.19532	-.405313	-.071	-.242	.02	.02	.03	.04	.04
FEB 14	53049	-.07674	.20443	-.409377	-	-	.02	.02	.04	-	-
FEB 19	53054	-.08650	.21483	-.410345	-	-	.02	.02	.03	-	-
FEB 24	53059	-.09983	.22640	-.414657	-	-	.02	.02	.04	-	-

4 - DURATION OF THE DAY AND ANGULAR VELOCITY OF THE EARTH (IERS evaluation).

The data of this section are smoothed, with the same characteristics as UT1R in section 1. They are corrected for the effects of zonal tides with periods up to 35 days. Section 2 gives the daily interpolation of D.

Date (0h UTC)	DR	OmegaR		
2004 MJD	s	(microrad/s)		
JAN 5	53009	.00038	72.921	15114
JAN 10	53014	.00067		15090
JAN 15	53019	.00070		15087
JAN 20	53024	.00056		15100
JAN 25	53029	.00039		15114
JAN 30	53034	.00033		15119
FEB 4	53039	.00025		15126

5 - INFORMATION ON TIME SCALES

No leap second was introduced in UTC on 31 December 2003.

No leap second will be introduced in UTC on 30 June 2004.

All information concerning time scales : announcements of the leap seconds (Bulletin C) and of the value of DUT1 (Bulletin D) can be found in our web/ftp site :

World Wide Web : <http://hpiers.obspm.fr>

Anonymous ftp : [hpiers.obspm.fr](ftp://hpiers.obspm.fr) or 145.238.100.28

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6 - SUMMARY OF CONTRIBUTED EARTH ORIENTATION PARAMETERS SERIES

This section gives the average precision of the individual series contributing to the combination and their average agreement with it. The periods covered start at the beginning of the first month in Section 1 and end with the last available value in the individual series considered.

Units : 0.001" for x,y , 0.0001s for UT1, 0.001" for dX, dY.

EOP series		Mean formal uncertainty						
Periods covered		Weighted RMS agreement with Bulletin B						
		x	y	UT	D	dX	dY	Data Number
VLBI								
EOP(AUS)	1 R 01	.26	.32	.16	-	-	-	12

53010.20 to 53048.27	.23	.21	.13	-	-	-	
EOP(BKG) 3 R 04	.12	.10	.04	-	-	-	13
53010.20 to 53048.27	.22	.17	.06	-	-	-	
EOP(BKG) 3 R 02	-	-	.17	-	-	-	25
53009.79 to 53059.79	-	-	.13	-	-	-	
EOP(GSFC) 3 R 06	.07	.07	.03	-	-	-	13
53010.20 to 53048.27	.22	.10	.06	-	-	-	
EOP(GSFC) 3 R 05	-	-	.17	-	-	-	33
53009.79 to 53060.79	-	-	.16	-	-	-	
EOP(IAA) 3 R 04	.07	.07	.03	-	.12	.05	12
53010.20 to 53048.27	.13	.17	.06	-	.18	.04	
EOP(IAA) 3 R 03	-	-	.14	-	-	-	31
53009.79 to 53059.79	-	-	.16	-	-	-	
EOP(SPB) 3 R 03	.36	.39	.22	-	-	-	9
53010.20 to 53045.21	.23	.19	.09	-	-	-	
EOP(SPB) 2 R 01	-	-	.16	-	-	-	20
53009.79 to 53046.79	-	-	.14	-	-	-	
EOP(MAO) 3 R 01	.10	.10	.04	-	.17	.07	13
53010.14 to 53048.27	.38	.22	.07	-	.21	.13	
EOP(USNO) 3 R 04	.09	.09	.04	-	-	-	12
53010.20 to 53048.27	.12	.06	.06	-	-	-	
EOP(IVS) 0 R 01	.05	.05	.02	-	-	-	4
53010.00 to 53020.00	.11	.04	.05	-	-	-	
GPS							
EOP(CODE) 98 P 01	.01	.01	-	.24	-	-	52
53009.50 to 53060.50	.05	.07	-	.21	-	-	
EOP(EMR) 96 P 03	.03	.03	-	.04	-	-	52
53009.50 to 53060.50	.06	.09	-	.38	-	-	
EOP(ESOC) 96 P 01	.02	.02	-	.03	-	-	52
53009.50 to 53060.50	.18	.06	-	.23	-	-	
EOP(GFZ) 96 P 02	.01	.01	-	.01	-	-	52
53009.50 to 53060.50	.09	.07	-	.24	-	-	
EOP(IAA) 1 P 01	.03	.03	-	.06	-	-	52
53009.50 to 53060.50	.17	.18	-	.27	-	-	
EOP(JPL) 96 P 03	.03	.03	-	.11	-	-	49
53009.50 to 53057.50	.08	.06	-	.47	-	-	
EOP(NOAA) 96 P 01	.01	.01	-	.02	-	-	51
53009.50 to 53059.50	.27	.30	-	.57	-	-	
EOP(SIO) 96 P 01	.05	.05	-	.11	-	-	52
53009.50 to 53060.50	.09	.12	-	.23	-	-	
EOP(IGS F) 95 P 02	.02	.03	.08	.05	-	-	41
53009.50 to 53049.50	.04	.06	.19	.16	-	-	
EOP(IGS R) 96 P 02	.03	.04	.20	.06	-	-	52
53009.50 to 53060.50	.05	.06	.72	.22	-	-	
EOP(IERS) 97 P 01	.04	.05	.21	.14	-	-	52
53009.50 to 53060.50	.03	.02	.46	.17	-	-	
SLR							
EOP(ASI) 3 L 02	.07	.07	-	.24	-	-	52
53009.50 to 53060.50	.26	.27	-	1.35	-	-	
EOP(CSR) 95 L 01	.26	.26	.22	-	-	-	13
53010.01 to 53045.25	.49	.67	1.51	-	-	-	
EOP(DUT) 98 L 01	.10	.10	-	-	-	-	40
53022.00 to 53061.00	.24	.31	-	-	-	-	
EOP(IAA) 2 L 01	.04	.04	.03	.03	-	-	53
53009.00 to 53061.00	.13	.13	.26	.15	-	-	

EOP(MCC) 97 L 01	.06	.05	-	.10	-	-	40
53009.00 to 53054.00	.17	.16	-	.53	-	-	
Bulletin A							
EOP(NEOS) 97 C 01	.05	.07	.08	-	-	-	53
53009.00 to 53061.00	.05	.06	.20	-	-	-	