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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:

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

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.

MAY	4	53129	-.11706	.41347	-.456294	-32.456294	.07	-.03
MAY	9	53134	-.11108	.42616	-.459859	-32.459859	-.07	-.13
MAY	14	53139	-.10223	.43999	-.462999	-32.462999	.16	.06
MAY	19	53144	-.09888	.44815	-.466505	-32.466505	.04	-.06
MAY	24	53149	-.09317	.45497	-.469485	-32.469485	.02	.05
MAY	29	53154	-.08826	.46305	-.470524	-32.470524	.26	.07
JUN	3	53159	-.07986	.47066	-.470402	-32.470402	.20	.05

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

JUN	8	53164	-.07175	.47824	-.470656	-32.470656	.01	.06
JUN	13	53169	-.06269	.48585	-.470962	-32.470962	.13	.18
JUN	18	53174	-.04823	.49335	-.471259	-32.471259	.04	.02
JUN	23	53179	-.03171	.50095	-.470881	-32.470881	.00	.00
JUN	28	53184	-.01620	.50711	-.469475	-32.469475	.00	.00
JUL	3	53189	-.00179	.51229	-.467819	-32.467819	.00	.00
JUL	8	53194	.01236	.51510	-.465759	-32.465759	.00	.00
JUL	13	53199	.02658	.51654	-.463829	-32.463829	.00	.00
JUL	18	53204	.04083	.51683	-.461990	-32.461990	.00	.00
JUL	23	53209	.05502	.51608	-.460197	-32.460197	.00	.00
JUL	28	53214	.06907	.51429	-.458450	-32.458450	.00	.00
AUG	2	53219	.08292	.51148	-.456795	-32.456795	.00	.00
AUG	7	53224	.09646	.50768	-.455269	-32.455269	.00	.00
AUG	12	53229	.10963	.50291	-.453941	-32.453941	.00	.00
AUG	17	53234	.12234	.49721	-.452858	-32.452858	.00	.00
AUG	22	53239	.13453	.49062	-.452034	-32.452034	.00	.00

AUG 27 53244 .14613 .48317 -.451508 -32.451508 .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 2003 IERS Annual Report.

2004		MJD	x	y	UT1-UTC	UT1-UT1R	D	dX	dY
(0 h UTC)		"	"	s	ms	ms	0.001"	0.001"	
MAY	4	53129	-.11706	.41347	-.456709	-.415	1.120	.07	-.03
MAY	5	53130	-.11579	.41638	-.457781	-.843	.960	.11	-.20
MAY	6	53131	-.11493	.41910	-.458606	-1.000	.720	.18	-.15
MAY	7	53132	-.11392	.42155	-.459234	-.879	.528	.13	-.06
MAY	8	53133	-.11248	.42388	-.459701	-.559	.374	.01	-.06
MAY	9	53134	-.11108	.42616	-.460031	-.171	.315	-.07	-.13
MAY	10	53135	-.10962	.42873	-.460371	.148	.410	-.02	-.15
MAY	11	53136	-.10792	.43163	-.460874	.303	.595	.11	-.10
MAY	12	53137	-.10599	.43446	-.461563	.255	.751	.22	-.06
MAY	13	53138	-.10392	.43721	-.462361	.026	.893	.23	-.02
MAY	14	53139	-.10223	.43999	-.463325	-.326	1.024	.16	.06
MAY	15	53140	-.10123	.44228	-.464380	-.718	1.074	.07	.15
MAY	16	53141	-.10059	.44405	-.465447	-1.069	1.011	.02	.15
MAY	17	53142	-.10012	.44555	-.466381	-1.306	.858	.02	.05
MAY	18	53143	-.09963	.44688	-.467150	-1.379	.695	.02	-.04
MAY	19	53144	-.09888	.44815	-.467768	-1.263	.505	.04	-.06
MAY	20	53145	-.09762	.44948	-.468166	-.962	.284	.04	-.05
MAY	21	53146	-.09623	.45099	-.468352	-.509	.123	.00	-.03
MAY	22	53147	-.09512	.45230	-.468434	.040	.027	-.06	-.05
MAY	23	53148	-.09421	.45352	-.468430	.616	-.059	-.06	-.03
MAY	24	53149	-.09317	.45497	-.468340	1.145	-.087	.02	.05
MAY	25	53150	-.09182	.45661	-.468276	1.557	-.023	.13	.07
MAY	26	53151	-.09080	.45829	-.468311	1.794	.099	.26	-.12
MAY	27	53152	-.09010	.45982	-.468484	1.816	.270	.28	-.29
MAY	28	53153	-.08929	.46143	-.468853	1.605	.437	.26	-.23
MAY	29	53154	-.08826	.46305	-.469344	1.180	.548	.26	.07
MAY	30	53155	-.08705	.46443	-.469919	.609	.586	.19	.36
MAY	31	53156	-.08555	.46562	-.470473	.005	.518	.04	.35
JUN	1	53157	-.08374	.46712	-.470909	-.494	.357	-.02	.12
JUN	2	53158	-.08190	.46899	-.471155	-.771	.135	.08	-.02
JUN	3	53159	-.07986	.47066	-.471176	-.774	-.085	.20	.05
JUN	4	53160	-.07761	.47216	-.471014	-.540	-.241	.19	.12
JUN	5	53161	-.07573	.47370	-.470741	-.187	-.272	.05	.05
JUN	6	53162	-.07444	.47539	-.470518	.140	-.200	-.08	-.06
JUN	7	53163	-.07328	.47693	-.470375	.315	-.075	-.09	-.04
JUN	8	53164	-.07175	.47824	-.470377	.279	.121	.01	.06
JUN	9	53165	-.06989	.47988	-.470602	.043	.324	.15	.07
JUN	10	53166	-.06831	.48154	-.470997	-.330	.430	.24	.00
JUN	11	53167	-.06666	.48296	-.471431	-.750	.470	.22	.00
JUN	12	53168	-.06488	.48442	-.471911	-1.131	.476	.16	.11
JUN	13	53169	-.06269	.48585	-.472363	-1.401	.360	.13	.18
JUN	14	53170	-.06033	.48725	-.472619	-1.510	.136	.17	.13
JUN	15	53171	-.05780	.48857	-.472630	-1.434	-.085	.25	.06
JUN	16	53172	-.05487	.48988	-.472414	-1.173	-.316	.17	-.01
JUN	17	53173	-.05148	.49147	-.472012	-.751	-.478	.07	.02
JUN	18	53174	-.04823	.49335	-.471478	-.219	-.598	.04	.02
JUN	19	53175	-.04504	.49534	-.470841	.358	-.598	.00	.00
JUN	20	53176	-.04190	.49697	-.470226	.906	-.575	.00	.00
JUN	21	53177	-.03838	.49832	-.469714	1.353	-.438	.00	.00
JUN	22	53178	-.03517	.49969	-.469366	1.642	-.328	.00	.00
JUN	23	53179	-.03171	.50095	-.469146	1.734	-.185	.00	.00
JUN	24	53180	-.02856	.50216	-.469056	1.614	.007	.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"		
MAY 4	53129	-.11706	.41347	-.456705	.069	.018	.02	.02	.02	.02	.02
MAY 9	53134	-.11108	.42616	-.460032	-.066	-.122	.01	.01	.02	.01	.01
MAY 14	53139	-.10223	.43999	-.463325	.190	-.028	.01	.02	.02	.04	.05
MAY 19	53144	-.09888	.44815	-.467768	.055	-.074	.01	.02	.02	.02	.02
MAY 24	53149	-.09317	.45497	-.468341	.014	.089	.02	.02	.03	.04	.04
MAY 29	53154	-.08828	.46305	-.469342	.282	.060	.02	.02	.03	.05	.05
JUN 3	53159	-.07985	.47066	-.471176	.187	-.001	.02	.02	.02	.03	.04
JUN 8	53164	-.07174	.47825	-.470375	-.030	.075	.02	.02	.03	.05	.05
JUN 13	53169	-.06268	.48585	-.472362	.149	.193	.02	.02	.04	.06	.07
JUN 18	53174	-.04823	.49335	-.471478	.033	.019	.02	.02	.03	.05	.07
JUN 23	53179	-.03171	.50094	-.469144	-	-	.01	.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)		
MAY 4	53129	.00058	72.921	15097
MAY 9	53134	.00069		15088
MAY 14	53139	.00064		15092
MAY 19	53144	.00072		15086
MAY 24	53149	.00040		15113
MAY 29	53154	.00004		15143
JUN 3	53159	.00005		15143

5 - INFORMATION ON TIME SCALES

No leap second was 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 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 Periods covered	Mean formal uncertainty Weighted RMS agreement with Bulletin B							Data Number
	x	y	UT	D	dX	dY		
VLBI								
EOP(AUS) 1 R 01	.80	.88	.49	-	-	-		12
53129.21 to 53167.27	.12	.19	.09	-	-	-		

EOP(BKG) 3 R 04	.11	.10	.04	-	-	-	13
53129.21 to 53174.27	.17	.15	.07	-	-	-	
EOP(BKG) 3 R 02	-	-	.14	-	-	-	38
53129.79 to 53179.79	-	-	.22	-	-	-	
EOP(GSFC) 4 R 02	.15	.10	.12	-	-	-	15
53129.21 to 53174.27	.13	.07	.05	-	-	-	
EOP(GSFC) 4 R 01	-	-	.16	-	-	-	35
53129.79 to 53179.79	-	-	.15	-	-	-	
EOP(IAA) 3 R 04	.08	.08	.03	-	.13	.05	12
53129.21 to 53167.27	.09	.08	.06	-	.17	.06	
EOP(IAA) 3 R 03	-	-	.16	-	-	-	35
53129.79 to 53179.79	-	-	.19	-	-	-	
EOP(SPBU) 3 R 03	.25	.30	.17	-	-	-	6
53129.21 to 53145.27	.07	.21	.11	-	-	-	
EOP(SPBU) 2 R 01	-	-	.14	-	-	-	23
53129.79 to 53150.79	-	-	.22	-	-	-	
EOP(MAO) 3 R 01	.09	.09	.04	-	.15	.06	12
53129.23 to 53167.31	.11	.08	.12	-	.21	.09	
EOP(USNO) 4 R 01	.08	.08	.03	-	-	-	14
53129.21 to 53174.27	.10	.09	.06	-	-	-	
EOP(IVS) 0 R 01	.06	.06	.03	-	-	-	10
53129.00 to 53160.00	.15	.09	.09	-	-	-	
GPS							
EOP(CODE) 98 P 01	.01	.01	-	.23	-	-	51
53129.50 to 53179.50	.05	.09	-	.30	-	-	
EOP(EMR) 96 P 03	.03	.03	-	.04	-	-	51
53129.50 to 53179.50	.07	.09	-	.47	-	-	
EOP(ESOC) 96 P 01	.01	.02	-	.02	-	-	51
53129.50 to 53179.50	.21	.07	-	.37	-	-	
EOP(GFZ) 96 P 02	.01	.01	-	.01	-	-	51
53129.50 to 53179.50	.10	.05	-	.30	-	-	
EOP(IAA) 1 P 01	.03	.03	-	.06	-	-	46
53129.50 to 53174.50	.13	.20	-	.74	-	-	
EOP(JPL) 96 P 03	.03	.03	-	.10	-	-	51
53129.50 to 53179.50	.04	.06	-	.54	-	-	
EOP(NOAA) 96 P 01	.01	.01	-	.02	-	-	51
53129.50 to 53179.50	.22	.21	-	.55	-	-	
EOP(SIO) 96 P 01	.05	.05	-	.11	-	-	51
53129.50 to 53179.50	.05	.06	-	.43	-	-	
EOP(IGS F)95 P 02	.02	.03	.07	.04	-	-	40
53129.50 to 53168.50	.04	.05	.27	.21	-	-	
EOP(IGS R)96 P 02	.03	.03	.19	.06	-	-	51
53129.50 to 53179.50	.11	.04	.96	.29	-	-	
EOP(IERS) 97 P 01	.03	.04	.17	.12	-	-	51
53129.50 to 53179.50	.02	.02	.49	.29	-	-	
SLR							
EOP(ASI) 3 L 02	.06	.07	-	.16	-	-	51
53129.50 to 53179.50	.23	.23	-	.91	-	-	
EOP(CSR) 95 L 01	.29	.32	.26	-	-	-	17
53130.17 to 53177.97	.31	.19	.83	-	-	-	
EOP(DUT) 98 L 01	.13	.14	-	-	-	-	19
53162.00 to 53180.00	.33	.34	-	-	-	-	
EOP(IAA) 2 L 01	.04	.05	.03	.03	-	-	52
53129.00 to 53180.00	.16	.14	.25	.17	-	-	
EOP(MCC) 97 L 01	.06	.06	-	.10	-	-	52
53129.00 to 53180.00	.20	.15	-	.49	-	-	

Bulletin A

EOP(NEOS) 97 C 01

53129.00 to 53180.00

.05	.06	.06	-	-	-
.08	.08	.31	-	-	-