

Date 0 ^h UT1	Julian Date	G. SIDEREAL TIME (GHA of the Equinox)				Equation of Equinoxes at 0 ^h UT1	GSD at 0 ^h GMST	UT1 at 0 ^h GMST (Greenwich Transit of the Mean Equinox)			
		Apparent			Mean			h	m	s	
	245	h	m	s	s	s	246	h	m	s	
Feb. 15	5607.5	9	38	37.8689	36.7306	+1.1383	2332.0	Feb. 15	14	19	02.1516
16	5608.5	9	42	34.4293	33.2860	+1.1433	2333.0	16	14	15	06.2422
17	5609.5	9	46	30.9869	29.8414	+1.1455	2334.0	17	14	11	10.3327
18	5610.5	9	50	27.5406	26.3967	+1.1439	2335.0	18	14	07	14.4232
19	5611.5	9	54	24.0906	22.9521	+1.1385	2336.0	19	14	03	18.5138
20	5612.5	9	58	20.6382	19.5075	+1.1308	2337.0	20	13	59	22.6043
21	5613.5	10	02	17.1856	16.0628	+1.1228	2338.0	21	13	55	26.6948
22	5614.5	10	06	13.7349	12.6182	+1.1167	2339.0	22	13	51	30.7854
23	5615.5	10	10	10.2873	09.1736	+1.1137	2340.0	23	13	47	34.8759
24	5616.5	10	14	06.8430	05.7289	+1.1141	2341.0	24	13	43	38.9664
25	5617.5	10	18	03.4013	02.2843	+1.1170	2342.0	25	13	39	43.0570
26	5618.5	10	21	59.9610	58.8397	+1.1213	2343.0	26	13	35	47.1475
27	5619.5	10	25	56.5207	55.3950	+1.1257	2344.0	27	13	31	51.2380
28	5620.5	10	29	53.0793	51.9504	+1.1289	2345.0	28	13	27	55.3285
Mar. 1	5621.5	10	33	49.6357	48.5058	+1.1300	2346.0	Mar. 1	13	23	59.4191
2	5622.5	10	37	46.1897	45.0611	+1.1286	2347.0	2	13	20	03.5096
3	5623.5	10	41	42.7410	41.6165	+1.1245	2348.0	3	13	16	07.6001
4	5624.5	10	45	39.2901	38.1719	+1.1182	2349.0	4	13	12	11.6907
5	5625.5	10	49	35.8375	34.7272	+1.1103	2350.0	5	13	08	15.7812
6	5626.5	10	53	32.3841	31.2826	+1.1015	2351.0	6	13	04	19.8717
7	5627.5	10	57	28.9308	27.8380	+1.0929	2352.0	7	13	00	23.9623
8	5628.5	11	01	25.4786	24.3933	+1.0852	2353.0	8	12	56	28.0528
9	5629.5	11	05	22.0280	20.9487	+1.0793	2354.0	9	12	52	32.1433
10	5630.5	11	09	18.5798	17.5041	+1.0757	2355.0	10	12	48	36.2339
11	5631.5	11	13	15.1340	14.0594	+1.0745	2356.0	11	12	44	40.3244
12	5632.5	11	17	11.6905	10.6148	+1.0757	2357.0	12	12	40	44.4149
13	5633.5	11	21	08.2488	07.1702	+1.0786	2358.0	13	12	36	48.5054
14	5634.5	11	25	04.8079	03.7256	+1.0824	2359.0	14	12	32	52.5960
15	5635.5	11	29	01.3666	00.2809	+1.0857	2360.0	15	12	28	56.6865
16	5636.5	11	32	57.9234	56.8363	+1.0871	2361.0	16	12	25	00.7770
17	5637.5	11	36	54.4770	53.3917	+1.0854	2362.0	17	12	21	04.8676
18	5638.5	11	40	51.0271	49.9470	+1.0801	2363.0	18	12	17	08.9581
19	5639.5	11	44	47.5742	46.5024	+1.0718	2364.0	19	12	13	13.0486
20	5640.5	11	48	44.1200	43.0578	+1.0623	2365.0	20	12	09	17.1392
21	5641.5	11	52	40.6670	39.6131	+1.0539	2366.0	21	12	05	21.2297
22	5642.5	11	56	37.2169	36.1685	+1.0484	2367.0	22	12	01	25.3202
23	5643.5	12	00	33.7706	32.7239	+1.0467	2368.0	23	11	57	29.4108
24	5644.5	12	04	30.3276	29.2792	+1.0483	2369.0	24	11	53	33.5013
25	5645.5	12	08	26.8866	25.8346	+1.0520	2370.0	25	11	49	37.5918
26	5646.5	12	12	23.4460	22.3900	+1.0560	2371.0	26	11	45	41.6823
27	5647.5	12	16	20.0045	18.9453	+1.0591	2372.0	27	11	41	45.7729
28	5648.5	12	20	16.5610	15.5007	+1.0603	2373.0	28	11	37	49.8634
29	5649.5	12	24	13.1150	12.0561	+1.0589	2374.0	29	11	33	53.9539
30	5650.5	12	28	09.6665	08.6114	+1.0550	2375.0	30	11	29	58.0445
31	5651.5	12	32	06.2156	05.1668	+1.0488	2376.0	31	11	26	02.1350
Apr. 1	5652.5	12	36	02.7631	01.7222	+1.0409	2377.0	Apr. 1	11	22	06.2255
2	5653.5	12	39	59.3096	58.2775	+1.0321	2378.0	2	11	18	10.3161

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		Apparent			Mean			h	m	s	
	245	h	m	s	s	s	246	h	m	s	
Apr. 1	5652.5	12	36	02.7631	01.7222	+1.0409	2377.0	Apr. 1	11	22	06.2255
2	5653.5	12	39	59.3096	58.2775	+1.0321	2378.0	2	11	18	10.3161
3	5654.5	12	43	55.8561	54.8329	+1.0232	2379.0	3	11	14	14.4066
4	5655.5	12	47	52.4035	51.3883	+1.0152	2380.0	4	11	10	18.4971
5	5656.5	12	51	48.9525	47.9436	+1.0088	2381.0	5	11	06	22.5877
6	5657.5	12	55	45.5038	44.4990	+1.0047	2382.0	6	11	02	26.6782
7	5658.5	12	59	42.0575	41.0544	+1.0031	2383.0	7	10	58	30.7687
8	5659.5	13	03	38.6137	37.6097	+1.0039	2384.0	8	10	54	34.8592
9	5660.5	13	07	35.1717	34.1651	+1.0066	2385.0	9	10	50	38.9498
10	5661.5	13	11	31.7307	30.7205	+1.0102	2386.0	10	10	46	43.0403
11	5662.5	13	15	28.2897	27.2759	+1.0138	2387.0	11	10	42	47.1308
12	5663.5	13	19	24.8472	23.8312	+1.0160	2388.0	12	10	38	51.2214
13	5664.5	13	23	21.4023	20.3866	+1.0158	2389.0	13	10	34	55.3119
14	5665.5	13	27	17.9543	16.9420	+1.0124	2390.0	14	10	30	59.4024
15	5666.5	13	31	14.5033	13.4973	+1.0060	2391.0	15	10	27	03.4930
16	5667.5	13	35	11.0504	10.0527	+0.9977	2392.0	16	10	23	07.5835
17	5668.5	13	39	07.5976	06.6081	+0.9896	2393.0	17	10	19	11.6740
18	5669.5	13	43	04.1471	03.1634	+0.9837	2394.0	18	10	15	15.7646
19	5670.5	13	46	60.7003	59.7188	+0.9815	2395.0	19	10	11	19.8551
20	5671.5	13	50	57.2575	56.2742	+0.9833	2396.0	20	10	07	23.9456
21	5672.5	13	54	53.8176	52.8295	+0.9880	2397.0	21	10	03	28.0361
22	5673.5	13	58	50.3789	49.3849	+0.9940	2398.0	22	9	59	32.1267
23	5674.5	14	02	46.9398	45.9403	+0.9995	2399.0	23	9	55	36.2172
24	5675.5	14	06	43.4989	42.4956	+1.0033	2400.0	24	9	51	40.3077
25	5676.5	14	10	40.0555	39.0510	+1.0045	2401.0	25	9	47	44.3983
26	5677.5	14	14	36.6094	35.6064	+1.0030	2402.0	26	9	43	48.4888
27	5678.5	14	18	33.1608	32.1617	+0.9991	2403.0	27	9	39	52.5793
28	5679.5	14	22	29.7104	28.7171	+0.9933	2404.0	28	9	35	56.6699
29	5680.5	14	26	26.2589	25.2725	+0.9864	2405.0	29	9	32	00.7604
30	5681.5	14	30	22.8072	21.8278	+0.9794	2406.0	30	9	28	04.8509
May 1	5682.5	14	34	19.3562	18.3832	+0.9730	2407.0	May 1	9	24	08.9415
2	5683.5	14	38	15.9067	14.9386	+0.9681	2408.0	2	9	20	13.0320
3	5684.5	14	42	12.4594	11.4939	+0.9655	2409.0	3	9	16	17.1225
4	5685.5	14	46	09.0146	08.0493	+0.9653	2410.0	4	9	12	21.2130
5	5686.5	14	50	05.5724	04.6047	+0.9677	2411.0	5	9	08	25.3036
6	5687.5	14	54	02.1321	01.1601	+0.9721	2412.0	6	9	04	29.3941
7	5688.5	14	57	58.6931	57.7154	+0.9777	2413.0	7	9	00	33.4846
8	5689.5	15	01	55.2542	54.2708	+0.9834	2414.0	8	8	56	37.5752
9	5690.5	15	05	51.8141	50.8262	+0.9879	2415.0	9	8	52	41.6657
10	5691.5	15	09	48.3718	47.3815	+0.9903	2416.0	10	8	48	45.7562
11	5692.5	15	13	44.9267	43.9369	+0.9898	2417.0	11	8	44	49.8468
12	5693.5	15	17	41.4786	40.4923	+0.9863	2418.0	12	8	40	53.9373
13	5694.5										

MATRIX ELEMENTS FOR CONVERSION FROM GCRS TO EQUATOR AND EQUINOX OF DATE FOR 0^h TERRESTRIAL TIME

Table with columns: Date 0^h TT, M1,1-1, M1,2, M1,3, M2,1, M2,2-1, M2,3, M3,1, M3,2, M3,3-1. Rows include dates from April 1 to May 17.

M = NPB. Values are in units of 10⁻¹⁰. Matrix used with GAST (B13-B20). CIP is X = M3,1, Y = M3,2.

MATRIX ELEMENTS FOR CONVERSION FROM GCRS TO EQUATOR & CELESTIAL INTERMEDIATE ORIGIN OF DATE FOR 0^h TERRESTRIAL TIME

Table with columns: Julian Date, C1,1-1, C1,2, C1,3, C2,1, C2,2-1, C2,3, C3,1, C3,2, C3,3-1. Rows include Julian Dates from 5652.5 to 5698.5.

Values are in units of 10⁻¹⁰. Matrix used with ERA (B21-B24). CIP is X = C3,1, Y = C3,2.