

SIDEREAL TIME

MIRA Oliver Observing Sta., Monterey/Chews Ridge

Location: W121°34'12.0", N36°18'18.0", 1525m

(Longitude referred to Ephemeris meridian)

Date	Time (TT)	Ephemeris				Local				Equation of the Equinoxes
		Sidereal Time				Sidereal Time				
		Mean	App.	Mean	App.	Mean	App.	Mean	App.	
h	m	s	s	h	m	s	s	s		
2008	Jan 01	00:00:00.0	6 40	07.0564	07.5883	22 33	50.2564	50.7883	+0.5320	
2008	Jan 02	00:00:00.0	6 44	03.6117	04.1424	22 37	46.8117	47.3424	+0.5307	
2008	Jan 03	00:00:00.0	6 48	00.1671	00.6988	22 41	43.3671	43.8988	+0.5317	
2008	Jan 04	00:00:00.0	6 51	56.7225	57.2575	22 45	39.9225	40.4575	+0.5351	
2008	Jan 05	00:00:00.0	6 55	53.2778	53.8187	22 49	36.4778	37.0187	+0.5409	
2008	Jan 06	00:00:00.0	6 59	49.8332	50.3819	22 53	33.0332	33.5819	+0.5487	
2008	Jan 07	00:00:00.0	7 03	46.3886	46.9462	22 57	29.5886	30.1462	+0.5577	
2008	Jan 08	00:00:00.0	7 07	42.9439	43.5107	23 01	26.1439	26.7107	+0.5668	
2008	Jan 09	00:00:00.0	7 11	39.4993	40.0741	23 05	22.6993	23.2741	+0.5748	
2008	Jan 10	00:00:00.0	7 15	36.0547	36.6354	23 09	19.2547	19.8354	+0.5807	
2008	Jan 11	00:00:00.0	7 19	32.6100	33.1938	23 13	15.8100	16.3938	+0.5837	
2008	Jan 12	00:00:00.0	7 23	29.1654	29.7490	23 17	12.3654	12.9490	+0.5836	
2008	Jan 13	00:00:00.0	7 27	25.7208	26.3016	23 21	08.9208	09.5016	+0.5808	
2008	Jan 14	00:00:00.0	7 31	22.2761	22.8527	23 25	05.4761	06.0527	+0.5766	
2008	Jan 15	00:00:00.0	7 35	18.8315	19.4040	23 29	02.0315	02.6040	+0.5725	
2008	Jan 16	00:00:00.0	7 39	15.3869	15.9572	23 32	58.5869	59.1572	+0.5703	
2008	Jan 17	00:00:00.0	7 43	11.9422	12.5138	23 36	55.1422	55.7138	+0.5716	
2008	Jan 18	00:00:00.0	7 47	08.4976	09.0745	23 40	51.6976	52.2745	+0.5769	
2008	Jan 19	00:00:00.0	7 51	05.0530	05.6390	23 44	48.2530	48.8390	+0.5860	
2008	Jan 20	00:00:00.0	7 55	01.6083	02.2059	23 48	44.8083	45.4059	+0.5975	
2008	Jan 21	00:00:00.0	7 58	58.1637	58.7730	23 52	41.3637	41.9730	+0.6093	
2008	Jan 22	00:00:00.0	8 02	54.7191	55.3382	23 56	37.9191	38.5382	+0.6191	
2008	Jan 23	00:00:00.0	8 06	51.2745	51.8998	0 00	34.4745	35.0998	+0.6253	
2008	Jan 24	00:00:00.0	8 10	47.8298	48.4572	0 04	31.0298	31.6572	+0.6273	
2008	Jan 25	00:00:00.0	8 14	44.3852	45.0109	0 08	27.5852	28.2109	+0.6257	
2008	Jan 26	00:00:00.0	8 18	40.9406	41.5620	0 12	24.1406	24.7620	+0.6214	
2008	Jan 27	00:00:00.0	8 22	37.4959	38.1120	0 16	20.6959	21.3120	+0.6161	
2008	Jan 28	00:00:00.0	8 26	34.0513	34.6622	0 20	17.2513	17.8622	+0.6109	
2008	Jan 29	00:00:00.0	8 30	30.6067	31.2137	0 24	13.8067	14.4137	+0.6071	
2008	Jan 30	00:00:00.0	8 34	27.1620	27.7672	0 28	10.3620	10.9672	+0.6052	
2008	Jan 31	00:00:00.0	8 38	23.7174	24.3231	0 32	06.9174	07.5231	+0.6057	
2008	Feb 01	00:00:00.0	8 42	20.2728	20.8814	0 36	03.4728	04.0814	+0.6086	

2008 Feb 02 00:00:00.0	8 46	16.8281	17.4417	0 40	00.0281	00.6417	+0.6136
2008 Feb 03 00:00:00.0	8 50	13.3835	14.0034	0 43	56.5835	57.2034	+0.6199
2008 Feb 04 00:00:00.0	8 54	09.9389	10.5657	0 47	53.1389	53.7657	+0.6268
2008 Feb 05 00:00:00.0	8 58	06.4942	07.1273	0 51	49.6942	50.3273	+0.6331
2008 Feb 06 00:00:00.0	9 02	03.0496	03.6871	0 55	46.2496	46.8871	+0.6375
2008 Feb 07 00:00:00.0	9 05	59.6050	60.2441	0 59	42.8050	43.4441	+0.6391
2008 Feb 08 00:00:00.0	9 09	56.1603	56.7979	1 03	39.3603	39.9979	+0.6375
2008 Feb 09 00:00:00.0	9 13	52.7157	53.3486	1 07	35.9157	36.5486	+0.6329
2008 Feb 10 00:00:00.0	9 17	49.2711	49.8973	1 11	32.4711	33.0973	+0.6262
2008 Feb 11 00:00:00.0	9 21	45.8265	46.4458	1 15	29.0265	29.6458	+0.6193
2008 Feb 12 00:00:00.0	9 25	42.3818	42.9958	1 19	25.5818	26.1958	+0.6139
2008 Feb 13 00:00:00.0	9 29	38.9372	39.5488	1 23	22.1372	22.7488	+0.6117
2008 Feb 14 00:00:00.0	9 33	35.4926	36.1058	1 27	18.6926	19.3058	+0.6132
2008 Feb 15 00:00:00.0	9 37	32.0479	32.6665	1 31	15.2479	15.8665	+0.6185
2008 Feb 16 00:00:00.0	9 41	28.6033	29.2297	1 35	11.8033	12.4297	+0.6264
2008 Feb 17 00:00:00.0	9 45	25.1587	25.7936	1 39	08.3587	08.9936	+0.6349
2008 Feb 18 00:00:00.0	9 49	21.7140	22.3563	1 43	04.9140	05.5563	+0.6423
2008 Feb 19 00:00:00.0	9 53	18.2694	18.9161	1 47	01.4694	02.1161	+0.6467
2008 Feb 20 00:00:00.0	9 57	14.8248	15.4721	1 50	58.0248	58.6721	+0.6474
2008 Feb 21 00:00:00.0	10 01	11.3801	12.0244	1 54	54.5801	55.2244	+0.6442
2008 Feb 22 00:00:00.0	10 05	07.9355	08.5736	1 58	51.1355	51.7736	+0.6381
2008 Feb 23 00:00:00.0	10 09	04.4909	05.1212	2 02	47.6909	48.3212	+0.6303
2008 Feb 24 00:00:00.0	10 13	01.0462	01.6685	2 06	44.2462	44.8685	+0.6222
2008 Feb 25 00:00:00.0	10 16	57.6016	58.2167	2 10	40.8016	41.4167	+0.6151
2008 Feb 26 00:00:00.0	10 20	54.1570	54.7669	2 14	37.3570	37.9669	+0.6099
2008 Feb 27 00:00:00.0	10 24	50.7123	51.3194	2 18	33.9123	34.5194	+0.6071
2008 Feb 28 00:00:00.0	10 28	47.2677	47.8743	2 22	30.4677	31.0743	+0.6066
2008 Feb 29 00:00:00.0	10 32	43.8231	44.4315	2 26	27.0231	27.6315	+0.6084
2008 Mar 01 00:00:00.0	10 36	40.3785	40.9902	2 30	23.5785	24.1902	+0.6118
2008 Mar 02 00:00:00.0	10 40	36.9338	37.5498	2 34	20.1338	20.7498	+0.6160
2008 Mar 03 00:00:00.0	10 44	33.4892	34.1093	2 38	16.6892	17.3093	+0.6201
2008 Mar 04 00:00:00.0	10 48	30.0446	30.6675	2 42	13.2446	13.8675	+0.6229
2008 Mar 05 00:00:00.0	10 52	26.5999	27.2234	2 46	09.7999	10.4234	+0.6235
2008 Mar 06 00:00:00.0	10 56	23.1553	23.7762	2 50	06.3553	06.9762	+0.6209
2008 Mar 07 00:00:00.0	11 00	19.7107	20.3259	2 54	02.9107	03.5259	+0.6152
2008 Mar 08 00:00:00.0	11 04	16.2660	16.8730	2 57	59.4660	60.0730	+0.6070
2008 Mar 09 00:00:00.0	11 08	12.8214	13.4192	3 01	56.0214	56.6192	+0.5978
2008 Mar 10 00:00:00.0	11 12	09.3768	09.9665	3 05	52.5768	53.1665	+0.5898
2008 Mar 11 00:00:00.0	11 16	05.9321	06.5168	3 09	49.1321	49.7168	+0.5847
2008 Mar 12 00:00:00.0	11 20	02.4875	03.0712	3 13	45.6875	46.2712	+0.5836
2008 Mar 13 00:00:00.0	11 23	59.0429	59.6295	3 17	42.2429	42.8295	+0.5866
2008 Mar 14 00:00:00.0	11 27	55.5982	56.1906	3 21	38.7982	39.3906	+0.5924
2008 Mar 15 00:00:00.0	11 31	52.1536	52.7528	3 25	35.3536	35.9528	+0.5992
2008 Mar 16 00:00:00.0	11 35	48.7090	49.3142	3 29	31.9090	32.5142	+0.6052
2008 Mar 17 00:00:00.0	11 39	45.2643	45.8730	3 33	28.4643	29.0730	+0.6087

2008 Mar 18 00:00:00.0	11 43	41.8197	42.4284	3 37	25.0197	25.6284	+0.6087
2008 Mar 19 00:00:00.0	11 47	38.3751	38.9802	3 41	21.5751	22.1802	+0.6051
2008 Mar 20 00:00:00.0	11 51	34.9304	35.5289	3 45	18.1304	18.7289	+0.5985
2008 Mar 21 00:00:00.0	11 55	31.4858	32.0757	3 49	14.6858	15.2757	+0.5899
2008 Mar 22 00:00:00.0	11 59	28.0412	28.6218	3 53	11.2412	11.8218	+0.5806
2008 Mar 23 00:00:00.0	12 03	24.5966	25.1686	3 57	07.7966	08.3686	+0.5720
2008 Mar 24 00:00:00.0	12 07	21.1519	21.7171	4 01	04.3519	04.9171	+0.5651
2008 Mar 25 00:00:00.0	12 11	17.7073	18.2679	4 05	00.9073	01.4679	+0.5606
2008 Mar 26 00:00:00.0	12 15	14.2627	14.8213	4 08	57.4627	58.0213	+0.5586
2008 Mar 27 00:00:00.0	12 19	10.8180	11.3770	4 12	54.0180	54.5770	+0.5590
2008 Mar 28 00:00:00.0	12 23	07.3734	07.9346	4 16	50.5734	51.1346	+0.5612
2008 Mar 29 00:00:00.0	12 27	03.9288	04.4933	4 20	47.1288	47.6933	+0.5645
2008 Mar 30 00:00:00.0	12 31	00.4841	01.0522	4 24	43.6841	44.2522	+0.5681
2008 Mar 31 00:00:00.0	12 34	57.0395	57.6104	4 28	40.2395	40.8104	+0.5709
2008 Apr 01 00:00:00.0	12 38	53.5949	54.1667	4 32	36.7949	37.3667	+0.5719
2008 Apr 02 00:00:00.0	12 42	50.1502	50.7205	4 36	33.3502	33.9205	+0.5703
2008 Apr 03 00:00:00.0	12 46	46.7056	47.2714	4 40	29.9056	30.4714	+0.5658
2008 Apr 04 00:00:00.0	12 50	43.2610	43.8195	4 44	26.4610	27.0195	+0.5585
2008 Apr 05 00:00:00.0	12 54	39.8163	40.3660	4 48	23.0163	23.5660	+0.5496
2008 Apr 06 00:00:00.0	12 58	36.3717	36.9128	4 52	19.5717	20.1128	+0.5411
2008 Apr 07 00:00:00.0	13 02	32.9271	33.4621	4 56	16.1271	16.6621	+0.5350
2008 Apr 08 00:00:00.0	13 06	29.4824	30.0155	5 00	12.6824	13.2155	+0.5330
2008 Apr 09 00:00:00.0	13 10	26.0378	26.5735	5 04	09.2378	09.7735	+0.5357
2008 Apr 10 00:00:00.0	13 14	22.5932	23.1351	5 08	05.7932	06.3351	+0.5419
2008 Apr 11 00:00:00.0	13 18	19.1486	19.6985	5 12	02.3486	02.8985	+0.5499
2008 Apr 12 00:00:00.0	13 22	15.7039	16.2613	5 15	58.9039	59.4613	+0.5574
2008 Apr 13 00:00:00.0	13 26	12.2593	12.8218	5 19	55.4593	56.0218	+0.5626
2008 Apr 14 00:00:00.0	13 30	08.8147	09.3790	5 23	52.0147	52.5790	+0.5643
2008 Apr 15 00:00:00.0	13 34	05.3700	05.9325	5 27	48.5700	49.1325	+0.5624
2008 Apr 16 00:00:00.0	13 38	01.9254	02.4828	5 31	45.1254	45.6828	+0.5574
2008 Apr 17 00:00:00.0	13 41	58.4808	59.0310	5 35	41.6808	42.2310	+0.5503
2008 Apr 18 00:00:00.0	13 45	55.0361	55.5784	5 39	38.2361	38.7784	+0.5422
2008 Apr 19 00:00:00.0	13 49	51.5915	52.1261	5 43	34.7915	35.3261	+0.5346
2008 Apr 20 00:00:00.0	13 53	48.1469	48.6753	5 47	31.3469	31.8753	+0.5285
2008 Apr 21 00:00:00.0	13 57	44.7022	45.2268	5 51	27.9022	28.4268	+0.5246
2008 Apr 22 00:00:00.0	14 01	41.2576	41.7808	5 55	24.4576	24.9808	+0.5232
2008 Apr 23 00:00:00.0	14 05	37.8130	38.3374	5 59	21.0130	21.5374	+0.5244
2008 Apr 24 00:00:00.0	14 09	34.3683	34.8960	6 03	17.5683	18.0960	+0.5276
2008 Apr 25 00:00:00.0	14 13	30.9237	31.4559	6 07	14.1237	14.6559	+0.5322
2008 Apr 26 00:00:00.0	14 17	27.4791	28.0164	6 11	10.6791	11.2164	+0.5373
2008 Apr 27 00:00:00.0	14 21	24.0344	24.5763	6 15	07.2344	07.7763	+0.5418
2008 Apr 28 00:00:00.0	14 25	20.5898	21.1348	6 19	03.7898	04.3348	+0.5450
2008 Apr 29 00:00:00.0	14 29	17.1452	17.6911	6 23	00.3452	00.8911	+0.5459
2008 Apr 30 00:00:00.0	14 33	13.7005	14.2447	6 26	56.9005	57.4447	+0.5442
2008 May 01 00:00:00.0	14 37	10.2559	10.7957	6 30	53.4559	53.9957	+0.5397

2008	May	02	00:00:00.0	14	41	06.8113	07.3446	6	34	50.0113	50.5446	+0.5334
2008	May	03	00:00:00.0	14	45	03.3667	03.8931	6	38	46.5667	47.0931	+0.5265
2008	May	04	00:00:00.0	14	48	59.9220	60.4431	6	42	43.1220	43.6431	+0.5211
2008	May	05	00:00:00.0	14	52	56.4774	56.9968	6	46	39.6774	40.1968	+0.5194
2008	May	06	00:00:00.0	14	56	53.0328	53.5552	6	50	36.2328	36.7552	+0.5224
2008	May	07	00:00:00.0	15	00	49.5881	50.1182	6	54	32.7881	33.3182	+0.5301
2008	May	08	00:00:00.0	15	04	46.1435	46.6841	6	58	29.3435	29.8841	+0.5406
2008	May	09	00:00:00.0	15	08	42.6989	43.2503	7	02	25.8989	26.4503	+0.5514
2008	May	10	00:00:00.0	15	12	39.2542	39.8146	7	06	22.4542	23.0146	+0.5603
2008	May	11	00:00:00.0	15	16	35.8096	36.3753	7	10	19.0096	19.5753	+0.5657
2008	May	12	00:00:00.0	15	20	32.3650	32.9322	7	14	15.5650	16.1322	+0.5672
2008	May	13	00:00:00.0	15	24	28.9203	29.4856	7	18	12.1203	12.6856	+0.5652
2008	May	14	00:00:00.0	15	28	25.4757	26.0365	7	22	08.6757	09.2365	+0.5608
2008	May	15	00:00:00.0	15	32	22.0311	22.5862	7	26	05.2311	05.7862	+0.5552
2008	May	16	00:00:00.0	15	36	18.5864	19.1361	7	30	01.7864	02.3361	+0.5497
2008	May	17	00:00:00.0	15	40	15.1418	15.6873	7	33	58.3418	58.8873	+0.5454
2008	May	18	00:00:00.0	15	44	11.6972	12.2405	7	37	54.8972	55.4405	+0.5433
2008	May	19	00:00:00.0	15	48	08.2525	08.7961	7	41	51.4525	51.9961	+0.5436
2008	May	20	00:00:00.0	15	52	04.8079	05.3544	7	45	48.0079	48.5544	+0.5464
2008	May	21	00:00:00.0	15	56	01.3633	01.9148	7	49	44.5633	45.1148	+0.5515
2008	May	22	00:00:00.0	15	59	57.9187	58.4767	7	53	41.1187	41.6767	+0.5581
2008	May	23	00:00:00.0	16	03	54.4740	55.0393	7	57	37.6740	38.2393	+0.5653
2008	May	24	00:00:00.0	16	07	51.0294	51.6016	8	01	34.2294	34.8016	+0.5722
2008	May	25	00:00:00.0	16	11	47.5848	48.1626	8	05	30.7848	31.3626	+0.5779
2008	May	26	00:00:00.0	16	15	44.1401	44.7216	8	09	27.3401	27.9216	+0.5814
2008	May	27	00:00:00.0	16	19	40.6955	41.2780	8	13	23.8955	24.4780	+0.5825
2008	May	28	00:00:00.0	16	23	37.2509	37.8317	8	17	20.4509	21.0317	+0.5809
2008	May	29	00:00:00.0	16	27	33.8062	34.3834	8	21	17.0062	17.5834	+0.5772
2008	May	30	00:00:00.0	16	31	30.3616	30.9340	8	25	13.5616	14.1340	+0.5724
2008	May	31	00:00:00.0	16	35	26.9170	27.4854	8	29	10.1170	10.6854	+0.5684
2008	Jun	01	00:00:00.0	16	39	23.4723	24.0393	8	33	06.6723	07.2393	+0.5669
2008	Jun	02	00:00:00.0	16	43	20.0277	20.5975	8	37	03.2277	03.7975	+0.5698
2008	Jun	03	00:00:00.0	16	47	16.5831	17.1605	8	40	59.7831	60.3605	+0.5774
2008	Jun	04	00:00:00.0	16	51	13.1384	13.7275	8	44	56.3384	56.9275	+0.5891
2008	Jun	05	00:00:00.0	16	55	09.6938	10.2963	8	48	52.8938	53.4963	+0.6025
2008	Jun	06	00:00:00.0	16	59	06.2492	06.8640	8	52	49.4492	50.0640	+0.6148
2008	Jun	07	00:00:00.0	17	03	02.8045	03.4286	8	56	46.0045	46.6286	+0.6240
2008	Jun	08	00:00:00.0	17	06	59.3599	59.9889	9	00	42.5599	43.1889	+0.6289
2008	Jun	09	00:00:00.0	17	10	55.9153	56.5451	9	04	39.1153	39.7451	+0.6298
2008	Jun	10	00:00:00.0	17	14	52.4707	53.0983	9	08	35.6707	36.2983	+0.6277
2008	Jun	11	00:00:00.0	17	18	49.0260	49.6499	9	12	32.2260	32.8499	+0.6239
2008	Jun	12	00:00:00.0	17	22	45.5814	46.2012	9	16	28.7814	29.4012	+0.6199
2008	Jun	13	00:00:00.0	17	26	42.1368	42.7535	9	20	25.3368	25.9535	+0.6168
2008	Jun	14	00:00:00.0	17	30	38.6921	39.3076	9	24	21.8921	22.5076	+0.6155
2008	Jun	15	00:00:00.0	17	34	35.2475	35.8641	9	28	18.4475	19.0641	+0.6166

2008	Jun	16	00:00:00.0	17	38	31.8029	32.4231	9	32	15.0029	15.6231	+0.6203
2008	Jun	17	00:00:00.0	17	42	28.3582	28.9843	9	36	11.5582	12.1843	+0.6261
2008	Jun	18	00:00:00.0	17	46	24.9136	25.5472	9	40	08.1136	08.7472	+0.6336
2008	Jun	19	00:00:00.0	17	50	21.4690	22.1109	9	44	04.6690	05.3109	+0.6419
2008	Jun	20	00:00:00.0	17	54	18.0243	18.6744	9	48	01.2243	01.8744	+0.6501
2008	Jun	21	00:00:00.0	17	58	14.5797	15.2368	9	51	57.7797	58.4368	+0.6571
2008	Jun	22	00:00:00.0	18	02	11.1351	11.7972	9	55	54.3351	54.9972	+0.6621
2008	Jun	23	00:00:00.0	18	06	07.6904	08.3550	9	59	50.8904	51.5550	+0.6645
2008	Jun	24	00:00:00.0	18	10	04.2458	04.9100	10	03	47.4458	48.1100	+0.6642
2008	Jun	25	00:00:00.0	18	14	00.8012	01.4628	10	07	44.0012	44.6628	+0.6616
2008	Jun	26	00:00:00.0	18	17	57.3565	58.0142	10	11	40.5565	41.2142	+0.6577
2008	Jun	27	00:00:00.0	18	21	53.9119	54.5657	10	15	37.1119	37.7657	+0.6538
2008	Jun	28	00:00:00.0	18	25	50.4673	51.1191	10	19	33.6673	34.3191	+0.6518
2008	Jun	29	00:00:00.0	18	29	47.0227	47.6758	10	23	30.2227	30.8758	+0.6531
2008	Jun	30	00:00:00.0	18	33	43.5780	44.2370	10	27	26.7780	27.4370	+0.6589
2008	Jul	01	00:00:00.0	18	37	40.1334	40.8024	10	31	23.3334	24.0024	+0.6690
2008	Jul	02	00:00:00.0	18	41	36.6888	37.3706	10	35	19.8888	20.5706	+0.6819
2008	Jul	03	00:00:00.0	18	45	33.2441	33.9392	10	39	16.4441	17.1392	+0.6951
2008	Jul	04	00:00:00.0	18	49	29.7995	30.5056	10	43	12.9995	13.7056	+0.7061
2008	Jul	05	00:00:00.0	18	53	26.3549	27.0679	10	47	09.5549	10.2679	+0.7131
2008	Jul	06	00:00:00.0	18	57	22.9102	23.6258	10	51	06.1102	06.8258	+0.7156
2008	Jul	07	00:00:00.0	19	01	19.4656	20.1799	10	55	02.6656	03.3799	+0.7143
2008	Jul	08	00:00:00.0	19	05	16.0210	16.7316	10	58	59.2210	59.9316	+0.7106
2008	Jul	09	00:00:00.0	19	09	12.5763	13.2826	11	02	55.7763	56.4826	+0.7062
2008	Jul	10	00:00:00.0	19	13	09.1317	09.8341	11	06	52.3317	53.0341	+0.7024
2008	Jul	11	00:00:00.0	19	17	05.6871	06.3872	11	10	48.8871	49.5872	+0.7001
2008	Jul	12	00:00:00.0	19	21	02.2424	02.9426	11	14	45.4424	46.1426	+0.7001
2008	Jul	13	00:00:00.0	19	24	58.7978	59.5004	11	18	41.9978	42.7004	+0.7025
2008	Jul	14	00:00:00.0	19	28	55.3532	56.0604	11	22	38.5532	39.2604	+0.7072
2008	Jul	15	00:00:00.0	19	32	51.9085	52.6222	11	26	35.1085	35.8222	+0.7137
2008	Jul	16	00:00:00.0	19	36	48.4639	49.1851	11	30	31.6639	32.3851	+0.7212
2008	Jul	17	00:00:00.0	19	40	45.0193	45.7480	11	34	28.2193	28.9480	+0.7287
2008	Jul	18	00:00:00.0	19	44	41.5746	42.3099	11	38	24.7746	25.5099	+0.7352
2008	Jul	19	00:00:00.0	19	48	38.1300	38.8699	11	42	21.3300	22.0699	+0.7398
2008	Jul	20	00:00:00.0	19	52	34.6854	35.4273	11	46	17.8854	18.6273	+0.7419
2008	Jul	21	00:00:00.0	19	56	31.2408	31.9818	11	50	14.4408	15.1818	+0.7410
2008	Jul	22	00:00:00.0	20	00	27.7961	28.5338	11	54	10.9961	11.7338	+0.7377
2008	Jul	23	00:00:00.0	20	04	24.3515	25.0841	11	58	07.5515	08.2841	+0.7326
2008	Jul	24	00:00:00.0	20	08	20.9069	21.6341	12	02	04.1069	04.8341	+0.7273
2008	Jul	25	00:00:00.0	20	12	17.4622	18.1854	12	06	00.6622	01.3854	+0.7232
2008	Jul	26	00:00:00.0	20	16	14.0176	14.7395	12	09	57.2176	57.9395	+0.7219
2008	Jul	27	00:00:00.0	20	20	10.5730	11.2975	12	13	53.7730	54.4975	+0.7245
2008	Jul	28	00:00:00.0	20	24	07.1283	07.8595	12	17	50.3283	51.0595	+0.7312
2008	Jul	29	00:00:00.0	20	28	03.6837	04.4247	12	21	46.8837	47.6247	+0.7410
2008	Jul	30	00:00:00.0	20	32	00.2391	00.9912	12	25	43.4391	44.1912	+0.7521

2008	Jul	31	00:00:00.0	20	35	56.7944	57.5566	12	29	39.9944	40.7566	+0.7621
2008	Aug	01	00:00:00.0	20	39	53.3498	54.1188	12	33	36.5498	37.3188	+0.7690
2008	Aug	02	00:00:00.0	20	43	49.9052	50.6767	12	37	33.1052	33.8767	+0.7715
2008	Aug	03	00:00:00.0	20	47	46.4605	47.2303	12	41	29.6605	30.4303	+0.7698
2008	Aug	04	00:00:00.0	20	51	43.0159	43.7809	12	45	26.2159	26.9809	+0.7650
2008	Aug	05	00:00:00.0	20	55	39.5713	40.3299	12	49	22.7713	23.5299	+0.7587
2008	Aug	06	00:00:00.0	20	59	36.1266	36.8791	12	53	19.3266	20.0791	+0.7525
2008	Aug	07	00:00:00.0	21	03	32.6820	33.4296	12	57	15.8820	16.6296	+0.7476
2008	Aug	08	00:00:00.0	21	07	29.2374	29.9822	13	01	12.4374	13.1822	+0.7449
2008	Aug	09	00:00:00.0	21	11	25.7928	26.5373	13	05	08.9928	09.7373	+0.7445
2008	Aug	10	00:00:00.0	21	15	22.3481	23.0946	13	09	05.5481	06.2946	+0.7465
2008	Aug	11	00:00:00.0	21	19	18.9035	19.6539	13	13	02.1035	02.8539	+0.7504
2008	Aug	12	00:00:00.0	21	23	15.4589	16.2144	13	16	58.6589	59.4144	+0.7555
2008	Aug	13	00:00:00.0	21	27	12.0142	12.7752	13	20	55.2142	55.9752	+0.7610
2008	Aug	14	00:00:00.0	21	31	08.5696	09.3354	13	24	51.7696	52.5354	+0.7658
2008	Aug	15	00:00:00.0	21	35	05.1250	05.8939	13	28	48.3250	49.0939	+0.7689
2008	Aug	16	00:00:00.0	21	39	01.6803	02.4500	13	32	44.8803	45.6500	+0.7696
2008	Aug	17	00:00:00.0	21	42	58.2357	59.0031	13	36	41.4357	42.2031	+0.7674
2008	Aug	18	00:00:00.0	21	46	54.7911	55.5535	13	40	37.9911	38.7535	+0.7625
2008	Aug	19	00:00:00.0	21	50	51.3464	52.1019	13	44	34.5464	35.3019	+0.7554
2008	Aug	20	00:00:00.0	21	54	47.9018	48.6495	13	48	31.1018	31.8495	+0.7477
2008	Aug	21	00:00:00.0	21	58	44.4572	45.1981	13	52	27.6572	28.3981	+0.7409
2008	Aug	22	00:00:00.0	22	02	41.0125	41.7491	13	56	24.2125	24.9491	+0.7366
2008	Aug	23	00:00:00.0	22	06	37.5679	38.3038	14	00	20.7679	21.5038	+0.7359
2008	Aug	24	00:00:00.0	22	10	34.1233	34.8623	14	04	17.3233	18.0623	+0.7391
2008	Aug	25	00:00:00.0	22	14	30.6786	31.4241	14	08	13.8786	14.6241	+0.7455
2008	Aug	26	00:00:00.0	22	18	27.2340	27.9875	14	12	10.4340	11.1875	+0.7535
2008	Aug	27	00:00:00.0	22	22	23.7894	24.5506	14	16	06.9894	07.7506	+0.7612
2008	Aug	28	00:00:00.0	22	26	20.3448	21.1113	14	20	03.5448	04.3113	+0.7666
2008	Aug	29	00:00:00.0	22	30	16.9001	17.6683	14	24	00.1001	00.8683	+0.7681
2008	Aug	30	00:00:00.0	22	34	13.4555	14.2211	14	27	56.6555	57.4211	+0.7656
2008	Aug	31	00:00:00.0	22	38	10.0109	10.7704	14	31	53.2109	53.9704	+0.7596
2008	Sep	01	00:00:00.0	22	42	06.5662	07.3177	14	35	49.7662	50.5177	+0.7515
2008	Sep	02	00:00:00.0	22	46	03.1216	03.8645	14	39	46.3216	47.0645	+0.7429
2008	Sep	03	00:00:00.0	22	49	59.6770	60.4122	14	43	42.8770	43.6122	+0.7353
2008	Sep	04	00:00:00.0	22	53	56.2323	56.9620	14	47	39.4323	40.1620	+0.7296
2008	Sep	05	00:00:00.0	22	57	52.7877	53.5142	14	51	35.9877	36.7142	+0.7265
2008	Sep	06	00:00:00.0	23	01	49.3431	50.0688	14	55	32.5431	33.2688	+0.7258
2008	Sep	07	00:00:00.0	23	05	45.8984	46.6256	14	59	29.0984	29.8256	+0.7271
2008	Sep	08	00:00:00.0	23	09	42.4538	43.1838	15	03	25.6538	26.3838	+0.7300
2008	Sep	09	00:00:00.0	23	13	39.0092	39.7427	15	07	22.2092	22.9427	+0.7335
2008	Sep	10	00:00:00.0	23	17	35.5645	36.3013	15	11	18.7645	19.5013	+0.7367
2008	Sep	11	00:00:00.0	23	21	32.1199	32.8586	15	15	15.3199	16.0586	+0.7387
2008	Sep	12	00:00:00.0	23	25	28.6753	29.4139	15	19	11.8753	12.6139	+0.7386
2008	Sep	13	00:00:00.0	23	29	25.2306	25.9664	15	23	08.4306	09.1664	+0.7358

2008 Sep 14 00:00:00.0	23 33	21.7860	22.5161	15 27	04.9860	05.7161	+0.7301
2008 Sep 15 00:00:00.0	23 37	18.3414	19.0634	15 31	01.5414	02.2634	+0.7220
2008 Sep 16 00:00:00.0	23 41	14.8967	15.6095	15 34	58.0967	58.8095	+0.7128
2008 Sep 17 00:00:00.0	23 45	11.4521	12.1562	15 38	54.6521	55.3562	+0.7040
2008 Sep 18 00:00:00.0	23 49	08.0075	08.7051	15 42	51.2075	51.9051	+0.6976
2008 Sep 19 00:00:00.0	23 53	04.5629	05.2575	15 46	47.7629	48.4575	+0.6947
2008 Sep 20 00:00:00.0	23 57	01.1182	01.8141	15 50	44.3182	45.0141	+0.6959
2008 Sep 21 00:00:00.0	0 00	57.6736	58.3741	15 54	40.8736	41.5741	+0.7005
2008 Sep 22 00:00:00.0	0 04	54.2290	54.9361	15 58	37.4290	38.1361	+0.7071
2008 Sep 23 00:00:00.0	0 08	50.7843	51.4981	16 02	33.9843	34.6981	+0.7137
2008 Sep 24 00:00:00.0	0 12	47.3397	48.0581	16 06	30.5397	31.2581	+0.7184
2008 Sep 25 00:00:00.0	0 16	43.8951	44.6149	16 10	27.0951	27.8149	+0.7198
2008 Sep 26 00:00:00.0	0 20	40.4504	41.1678	16 14	23.6504	24.3678	+0.7174
2008 Sep 27 00:00:00.0	0 24	37.0058	37.7173	16 18	20.2058	20.9173	+0.7115
2008 Sep 28 00:00:00.0	0 28	33.5612	34.2643	16 22	16.7612	17.4643	+0.7032
2008 Sep 29 00:00:00.0	0 32	30.1165	30.8105	16 26	13.3165	14.0105	+0.6939
2008 Sep 30 00:00:00.0	0 36	26.6719	27.3572	16 30	09.8719	10.5572	+0.6853
2008 Oct 01 00:00:00.0	0 40	23.2273	23.9057	16 34	06.4273	07.1057	+0.6784
2008 Oct 02 00:00:00.0	0 44	19.7826	20.4566	16 38	02.9826	03.6566	+0.6739
2008 Oct 03 00:00:00.0	0 48	16.3380	17.0101	16 41	59.5380	60.2101	+0.6721
2008 Oct 04 00:00:00.0	0 52	12.8934	13.5660	16 45	56.0934	56.7660	+0.6726
2008 Oct 05 00:00:00.0	0 56	09.4487	10.1236	16 49	52.6487	53.3236	+0.6749
2008 Oct 06 00:00:00.0	1 00	06.0041	06.6822	16 53	49.2041	49.8822	+0.6781
2008 Oct 07 00:00:00.0	1 04	02.5595	03.2409	16 57	45.7595	46.4409	+0.6814
2008 Oct 08 00:00:00.0	1 07	59.1149	59.7987	17 01	42.3149	42.9987	+0.6838
2008 Oct 09 00:00:00.0	1 11	55.6702	56.3548	17 05	38.8702	39.5548	+0.6845
2008 Oct 10 00:00:00.0	1 15	52.2256	52.9085	17 09	35.4256	36.1085	+0.6829
2008 Oct 11 00:00:00.0	1 19	48.7810	49.4596	17 13	31.9810	32.6596	+0.6786
2008 Oct 12 00:00:00.0	1 23	45.3363	46.0082	17 17	28.5363	29.2082	+0.6719
2008 Oct 13 00:00:00.0	1 27	41.8917	42.5552	17 21	25.0917	25.7552	+0.6635
2008 Oct 14 00:00:00.0	1 31	38.4471	39.1020	17 25	21.6471	22.3020	+0.6549
2008 Oct 15 00:00:00.0	1 35	35.0024	35.6506	17 29	18.2024	18.8506	+0.6481
2008 Oct 16 00:00:00.0	1 39	31.5578	32.2026	17 33	14.7578	15.4026	+0.6448
2008 Oct 17 00:00:00.0	1 43	28.1132	28.7590	17 37	11.3132	11.9590	+0.6459
2008 Oct 18 00:00:00.0	1 47	24.6685	25.3196	17 41	07.8685	08.5196	+0.6511
2008 Oct 19 00:00:00.0	1 51	21.2239	21.8828	17 45	04.4239	05.0828	+0.6589
2008 Oct 20 00:00:00.0	1 55	17.7793	18.4465	17 49	00.9793	01.6465	+0.6672
2008 Oct 21 00:00:00.0	1 59	14.3346	15.0085	17 52	57.5346	58.2085	+0.6738
2008 Oct 22 00:00:00.0	2 03	10.8900	11.5673	17 56	54.0900	54.7673	+0.6773
2008 Oct 23 00:00:00.0	2 07	07.4454	08.1224	18 00	50.6454	51.3224	+0.6770
2008 Oct 24 00:00:00.0	2 11	04.0007	04.6739	18 04	47.2007	47.8739	+0.6732
2008 Oct 25 00:00:00.0	2 15	00.5561	01.2229	18 08	43.7561	44.4229	+0.6668
2008 Oct 26 00:00:00.0	2 18	57.1115	57.7707	18 12	40.3115	40.9707	+0.6592
2008 Oct 27 00:00:00.0	2 22	53.6669	54.3188	18 16	36.8669	37.5188	+0.6519
2008 Oct 28 00:00:00.0	2 26	50.2222	50.8683	18 20	33.4222	34.0683	+0.6461

2008 Oct 29 00:00:00.0	2	30	46.7776	47.4202	18	24	29.9776	30.6202	+0.6426
2008 Oct 30 00:00:00.0	2	34	43.3330	43.9747	18	28	26.5330	27.1747	+0.6418
2008 Oct 31 00:00:00.0	2	38	39.8883	40.5318	18	32	23.0883	23.7318	+0.6435
2008 Nov 01 00:00:00.0	2	42	36.4437	37.0909	18	36	19.6437	20.2909	+0.6472
2008 Nov 02 00:00:00.0	2	46	32.9991	33.6512	18	40	16.1991	16.8512	+0.6521
2008 Nov 03 00:00:00.0	2	50	29.5544	30.2118	18	44	12.7544	13.4118	+0.6574
2008 Nov 04 00:00:00.0	2	54	26.1098	26.7719	18	48	09.3098	09.9719	+0.6621
2008 Nov 05 00:00:00.0	2	58	22.6652	23.3305	18	52	05.8652	06.5305	+0.6653
2008 Nov 06 00:00:00.0	3	02	19.2205	19.8871	18	56	02.4205	03.0871	+0.6666
2008 Nov 07 00:00:00.0	3	06	15.7759	16.4413	18	59	58.9759	59.6413	+0.6654
2008 Nov 08 00:00:00.0	3	10	12.3313	12.9930	19	03	55.5313	56.1930	+0.6617
2008 Nov 09 00:00:00.0	3	14	08.8866	09.5429	19	07	52.0866	52.7429	+0.6563
2008 Nov 10 00:00:00.0	3	18	05.4420	06.0920	19	11	48.6420	49.2920	+0.6500
2008 Nov 11 00:00:00.0	3	22	01.9974	02.6421	19	15	45.1974	45.8421	+0.6447
2008 Nov 12 00:00:00.0	3	25	58.5527	59.1949	19	19	41.7527	42.3949	+0.6422
2008 Nov 13 00:00:00.0	3	29	55.1081	55.7521	19	23	38.3081	38.9521	+0.6440
2008 Nov 14 00:00:00.0	3	33	51.6635	52.3140	19	27	34.8635	35.5140	+0.6505
2008 Nov 15 00:00:00.0	3	37	48.2189	48.8796	19	31	31.4189	32.0796	+0.6608
2008 Nov 16 00:00:00.0	3	41	44.7742	45.4468	19	35	27.9742	28.6468	+0.6725
2008 Nov 17 00:00:00.0	3	45	41.3296	42.0128	19	39	24.5296	25.2128	+0.6833
2008 Nov 18 00:00:00.0	3	49	37.8850	38.5758	19	43	21.0850	21.7758	+0.6909
2008 Nov 19 00:00:00.0	3	53	34.4403	35.1347	19	47	17.6403	18.3347	+0.6944
2008 Nov 20 00:00:00.0	3	57	30.9957	31.6897	19	51	14.1957	14.8897	+0.6940
2008 Nov 21 00:00:00.0	4	01	27.5511	28.2418	19	55	10.7511	11.4418	+0.6908
2008 Nov 22 00:00:00.0	4	05	24.1064	24.7924	19	59	07.3064	07.9924	+0.6860
2008 Nov 23 00:00:00.0	4	09	20.6618	21.3430	20	03	03.8618	04.5430	+0.6812
2008 Nov 24 00:00:00.0	4	13	17.2172	17.8948	20	07	00.4172	01.0948	+0.6776
2008 Nov 25 00:00:00.0	4	17	13.7725	14.4486	20	10	56.9725	57.6486	+0.6761
2008 Nov 26 00:00:00.0	4	21	10.3279	11.0051	20	14	53.5279	54.2051	+0.6772
2008 Nov 27 00:00:00.0	4	25	06.8833	07.5641	20	18	50.0833	50.7641	+0.6808
2008 Nov 28 00:00:00.0	4	29	03.4386	04.1252	20	22	46.6386	47.3252	+0.6866
2008 Nov 29 00:00:00.0	4	32	59.9940	60.6878	20	26	43.1940	43.8878	+0.6938
2008 Nov 30 00:00:00.0	4	36	56.5494	57.2509	20	30	39.7494	40.4509	+0.7016
2008 Dec 01 00:00:00.0	4	40	53.1047	53.8137	20	34	36.3047	37.0137	+0.7089
2008 Dec 02 00:00:00.0	4	44	49.6601	50.3751	20	38	32.8601	33.5751	+0.7150
2008 Dec 03 00:00:00.0	4	48	46.2155	46.9346	20	42	29.4155	30.1346	+0.7191
2008 Dec 04 00:00:00.0	4	52	42.7708	43.4917	20	46	25.9708	26.6917	+0.7209
2008 Dec 05 00:00:00.0	4	56	39.3262	40.0464	20	50	22.5262	23.2464	+0.7202
2008 Dec 06 00:00:00.0	5	00	35.8816	36.5992	20	54	19.0816	19.7992	+0.7176
2008 Dec 07 00:00:00.0	5	04	32.4370	33.1507	20	58	15.6370	16.3507	+0.7138
2008 Dec 08 00:00:00.0	5	08	28.9923	29.7025	21	02	12.1923	12.9025	+0.7102
2008 Dec 09 00:00:00.0	5	12	25.5477	26.2562	21	06	08.7477	09.4562	+0.7085
2008 Dec 10 00:00:00.0	5	16	22.1031	22.8133	21	10	05.3031	06.0133	+0.7103
2008 Dec 11 00:00:00.0	5	20	18.6584	19.3751	21	14	01.8584	02.5751	+0.7167
2008 Dec 12 00:00:00.0	5	24	15.2138	15.9413	21	17	58.4138	59.1413	+0.7275

2008 Dec 13 00:00:00.0	5	28	11.7692	12.5104	21	21	54.9692	55.7104	+0.7412
2008 Dec 14 00:00:00.0	5	32	08.3245	09.0797	21	25	51.5245	52.2797	+0.7552
2008 Dec 15 00:00:00.0	5	36	04.8799	05.6467	21	29	48.0799	48.8467	+0.7668
2008 Dec 16 00:00:00.0	5	40	01.4353	02.2094	21	33	44.6353	45.4094	+0.7741
2008 Dec 17 00:00:00.0	5	43	57.9906	58.7676	21	37	41.1906	41.9676	+0.7770
2008 Dec 18 00:00:00.0	5	47	54.5460	55.3221	21	41	37.7460	38.5221	+0.7761
2008 Dec 19 00:00:00.0	5	51	51.1014	51.8745	21	45	34.3014	35.0745	+0.7732
2008 Dec 20 00:00:00.0	5	55	47.6567	48.4264	21	49	30.8567	31.6264	+0.7697
2008 Dec 21 00:00:00.0	5	59	44.2121	44.9792	21	53	27.4121	28.1792	+0.7671
2008 Dec 22 00:00:00.0	6	03	40.7675	41.5339	21	57	23.9675	24.7339	+0.7664
2008 Dec 23 00:00:00.0	6	07	37.3228	38.0910	22	01	20.5228	21.2910	+0.7681
2008 Dec 24 00:00:00.0	6	11	33.8782	34.6505	22	05	17.0782	17.8505	+0.7723
2008 Dec 25 00:00:00.0	6	15	30.4336	31.2122	22	09	13.6336	14.4122	+0.7786
2008 Dec 26 00:00:00.0	6	19	26.9890	27.7755	22	13	10.1890	10.9755	+0.7865
2008 Dec 27 00:00:00.0	6	23	23.5443	24.3394	22	17	06.7443	07.5394	+0.7951
2008 Dec 28 00:00:00.0	6	27	20.0997	20.9031	22	21	03.2997	04.1031	+0.8034
2008 Dec 29 00:00:00.0	6	31	16.6551	17.4655	22	24	59.8551	60.6655	+0.8105
2008 Dec 30 00:00:00.0	6	35	13.2104	14.0261	22	28	56.4104	57.2261	+0.8156