

ALPO Solar Section  
Ephemeris Computed by Brad Timerson, A.L.P.O. Solar Section

CALENDAR DATE	JULIAN DATE	ROTATION NUMBER	HELIOGRAPHIC			DIAMETER (arcmin)	RA (HH:MM)	DEC (deg)
			Lo	Bo	Po			
1/ 1/2013	2456293.5	2132	327.00	-3.03	1.96	32.531	18:47.2	-23.01
1/ 2/2013	2456294.5	2132	313.82	-3.15	1.48	32.531	18:51.6	-22.92
1/ 3/2013	2456295.5	2132	300.65	-3.27	1.00	32.531	18:56.0	-22.83
1/ 4/2013	2456296.5	2132	287.48	-3.38	0.51	32.531	18:60.4	-22.73
1/ 5/2013	2456297.5	2132	274.30	-3.49	0.03	32.531	19: 4.8	-22.62
1/ 6/2013	2456298.5	2132	261.13	-3.61	-0.46	32.531	19: 9.2	-22.50
1/ 7/2013	2456299.5	2132	247.96	-3.72	-0.94	32.530	19:13.6	-22.38
1/ 8/2013	2456300.5	2132	234.78	-3.83	-1.42	32.529	19:17.9	-22.25
1/ 9/2013	2456301.5	2132	221.67	-3.94	-1.90	32.528	19:22.3	-22.11
1/10/2013	2456302.5	2132	208.50	-4.04	-2.38	32.527	19:26.6	-21.96
1/11/2013	2456303.5	2132	195.33	-4.15	-2.86	32.526	19:31.0	-21.81
1/12/2013	2456304.5	2132	182.16	-4.25	-3.33	32.525	19:35.3	-21.65
1/13/2013	2456305.5	2132	168.99	-4.36	-3.80	32.523	19:39.6	-21.49
1/14/2013	2456306.5	2132	155.81	-4.46	-4.28	32.521	19:43.9	-21.31
1/15/2013	2456307.5	2132	142.64	-4.56	-4.74	32.519	19:48.2	-21.13
1/16/2013	2456308.5	2132	129.47	-4.66	-5.21	32.517	19:52.5	-20.95
1/17/2013	2456309.5	2132	116.30	-4.76	-5.67	32.515	19:56.8	-20.75
1/18/2013	2456310.5	2132	103.13	-4.85	-6.14	32.512	20: 1.1	-20.55
1/19/2013	2456311.5	2132	89.96	-4.95	-6.59	32.510	20: 5.3	-20.35
1/20/2013	2456312.5	2132	76.79	-5.04	-7.05	32.507	20: 9.6	-20.13
1/21/2013	2456313.5	2132	63.62	-5.13	-7.50	32.504	20:13.8	-19.91
1/22/2013	2456314.5	2132	50.45	-5.22	-7.95	32.501	20:18.0	-19.69
1/23/2013	2456315.5	2132	37.28	-5.31	-8.40	32.498	20:22.2	-19.46
1/24/2013	2456316.5	2132	24.11	-5.40	-8.84	32.495	20:26.4	-19.22
1/25/2013	2456317.5	2132	10.94	-5.48	-9.28	32.491	20:30.6	-18.98
1/26/2013	2456318.5	2133	357.77	-5.57	-9.71	32.487	20:34.7	-18.73
1/27/2013	2456319.5	2133	344.60	-5.65	-10.14	32.483	20:38.9	-18.47
1/28/2013	2456320.5	2133	331.43	-5.73	-10.57	32.479	20:43.0	-18.21
1/29/2013	2456321.5	2133	318.32	-5.81	-10.99	32.475	20:47.1	-17.95
1/30/2013	2456322.5	2133	305.15	-5.88	-11.41	32.471	20:51.3	-17.67
1/31/2013	2456323.5	2133	291.98	-5.96	-11.82	32.467	20:55.4	-17.40
2/ 1/2013	2456324.5	2133	278.81	-6.03	-12.23	32.462	20:59.4	-17.12
2/ 2/2013	2456325.5	2133	265.64	-6.10	-12.63	32.457	21: 3.5	-16.83
2/ 3/2013	2456326.5	2133	252.47	-6.17	-13.03	32.452	21: 7.6	-16.54
2/ 4/2013	2456327.5	2133	239.30	-6.23	-13.43	32.447	21:11.6	-16.24
2/ 5/2013	2456328.5	2133	226.13	-6.30	-13.82	32.442	21:15.6	-15.94
2/ 6/2013	2456329.5	2133	212.96	-6.36	-14.21	32.437	21:19.7	-15.64
2/ 7/2013	2456330.5	2133	199.79	-6.42	-14.59	32.431	21:23.7	-15.33
2/ 8/2013	2456331.5	2133	186.62	-6.48	-14.96	32.426	21:27.6	-15.01
2/ 9/2013	2456332.5	2133	173.45	-6.54	-15.33	32.420	21:31.6	-14.69
2/10/2013	2456333.5	2133	160.28	-6.59	-15.70	32.414	21:35.6	-14.37
2/11/2013	2456334.5	2133	147.11	-6.64	-16.06	32.408	21:39.5	-14.04
2/12/2013	2456335.5	2133	133.94	-6.69	-16.41	32.402	21:43.5	-13.71
2/13/2013	2456336.5	2133	120.77	-6.74	-16.76	32.396	21:47.4	-13.38
2/14/2013	2456337.5	2133	107.60	-6.79	-17.10	32.390	21:51.3	-13.04
2/15/2013	2456338.5	2133	94.43	-6.83	-17.44	32.383	21:55.2	-12.70
2/16/2013	2456339.5	2133	81.25	-6.87	-17.77	32.377	21:59.1	-12.35
2/17/2013	2456340.5	2133	68.08	-6.91	-18.10	32.370	22: 3.0	-12.00

2/18/2013	2456341.5	2133	54.97	-6.95	-18.42	32.363	22: 6.8	-11.65
2/19/2013	2456342.5	2133	41.80	-6.99	-18.73	32.356	22:10.7	-11.30
2/20/2013	2456343.5	2133	28.63	-7.02	-19.04	32.349	22:14.5	-10.94
2/21/2013	2456344.5	2133	15.46	-7.05	-19.35	32.342	22:18.4	-10.58
2/22/2013	2456345.5	2133	2.28	-7.08	-19.64	32.335	22:22.2	-10.22
2/23/2013	2456346.5	2134	349.11	-7.11	-19.93	32.328	22:26.0	-9.85
2/24/2013	2456347.5	2134	335.94	-7.13	-20.22	32.320	22:29.8	-9.48
2/25/2013	2456348.5	2134	322.76	-7.15	-20.50	32.313	22:33.6	-9.11
2/26/2013	2456349.5	2134	309.59	-7.17	-20.77	32.305	22:37.4	-8.74
2/27/2013	2456350.5	2134	296.41	-7.19	-21.04	32.297	22:41.2	-8.37
2/28/2013	2456351.5	2134	283.24	-7.20	-21.30	32.290	22:44.9	-7.99
3/ 1/2013	2456352.5	2134	270.06	-7.22	-21.55	32.282	22:48.7	-7.61
3/ 2/2013	2456353.5	2134	256.89	-7.23	-21.80	32.274	22:52.4	-7.23
3/ 3/2013	2456354.5	2134	243.71	-7.24	-22.04	32.266	22:56.2	-6.85
3/ 4/2013	2456355.5	2134	230.53	-7.24	-22.28	32.258	22:59.9	-6.46
3/ 5/2013	2456356.5	2134	217.36	-7.25	-22.51	32.249	23: 3.6	-6.08
3/ 6/2013	2456357.5	2134	204.18	-7.25	-22.73	32.241	23: 7.3	-5.69
3/ 7/2013	2456358.5	2134	191.00	-7.25	-22.95	32.233	23:11.0	-5.30
3/ 8/2013	2456359.5	2134	177.82	-7.25	-23.16	32.224	23:14.7	-4.91
3/ 9/2013	2456360.5	2134	164.64	-7.24	-23.36	32.216	23:18.4	-4.52
3/10/2013	2456361.5	2134	151.53	-7.24	-23.56	32.207	23:22.1	-4.13
3/11/2013	2456362.5	2134	138.35	-7.23	-23.75	32.199	23:25.8	-3.74
3/12/2013	2456363.5	2134	125.16	-7.21	-23.93	32.190	23:29.5	-3.34
3/13/2013	2456364.5	2134	111.98	-7.20	-24.11	32.181	23:33.2	-2.95
3/14/2013	2456365.5	2134	98.80	-7.19	-24.28	32.172	23:36.8	-2.55
3/15/2013	2456366.5	2134	85.62	-7.17	-24.44	32.164	23:40.5	-2.16
3/16/2013	2456367.5	2134	72.44	-7.15	-24.60	32.155	23:44.2	-1.76
3/17/2013	2456368.5	2134	59.25	-7.13	-24.75	32.146	23:47.8	-1.37
3/18/2013	2456369.5	2134	46.07	-7.10	-24.89	32.137	23:51.5	-0.97
3/19/2013	2456370.5	2134	32.88	-7.07	-25.02	32.128	23:55.1	-0.58
3/20/2013	2456371.5	2134	19.70	-7.05	-25.15	32.119	23:58.8	-0.18
3/21/2013	2456372.5	2134	6.51	-7.02	-25.28	32.110	00: 2.4	0.21
3/22/2013	2456373.5	2135	353.32	-6.98	-25.39	32.101	00: 6.1	0.61
3/23/2013	2456374.5	2135	340.13	-6.95	-25.50	32.092	00: 9.7	1.00
3/24/2013	2456375.5	2135	326.95	-6.91	-25.60	32.083	00:13.4	1.40
3/25/2013	2456376.5	2135	313.76	-6.87	-25.70	32.073	00:17.0	1.79
3/26/2013	2456377.5	2135	300.57	-6.83	-25.78	32.064	00:20.6	2.18
3/27/2013	2456378.5	2135	287.38	-6.79	-25.86	32.055	00:24.3	2.58
3/28/2013	2456379.5	2135	274.18	-6.74	-25.94	32.046	00:27.9	2.97
3/29/2013	2456380.5	2135	260.99	-6.69	-26.00	32.037	00:31.6	3.36
3/30/2013	2456381.5	2135	247.86	-6.65	-26.06	32.028	00:35.2	3.75
3/31/2013	2456382.5	2135	234.67	-6.59	-26.11	32.018	00:38.8	4.14
4/ 1/2013	2456383.5	2135	221.47	-6.54	-26.16	32.009	00:42.5	4.52
4/ 2/2013	2456384.5	2135	208.28	-6.49	-26.20	32.000	00:46.1	4.91
4/ 3/2013	2456385.5	2135	195.08	-6.43	-26.23	31.991	00:49.8	5.29
4/ 4/2013	2456386.5	2135	181.88	-6.37	-26.25	31.981	00:53.4	5.67
4/ 5/2013	2456387.5	2135	168.69	-6.31	-26.27	31.972	00:57.1	6.06
4/ 6/2013	2456388.5	2135	155.49	-6.25	-26.27	31.963	01:0 .8	6.44
4/ 7/2013	2456389.5	2135	142.29	-6.18	-26.28	31.954	01: 4.4	6.81
4/ 8/2013	2456390.5	2135	129.09	-6.12	-26.27	31.945	01: 8.1	7.19
4/ 9/2013	2456391.5	2135	115.89	-6.05	-26.26	31.936	01:11.8	7.56
4/10/2013	2456392.5	2135	102.68	-5.98	-26.24	31.927	01:15.4	7.93
4/11/2013	2456393.5	2135	89.48	-5.91	-26.21	31.917	01:19.1	8.30
4/12/2013	2456394.5	2135	76.28	-5.84	-26.17	31.908	01:22.8	8.67

4/13/2013	2456395.5	2135	63.07	-5.76	-26.13	31.899	01:26.5	9.03
4/14/2013	2456396.5	2135	49.87	-5.69	-26.08	31.890	01:30.2	9.39
4/15/2013	2456397.5	2135	36.66	-5.61	-26.02	31.881	01:33.9	9.75
4/16/2013	2456398.5	2135	23.46	-5.53	-25.96	31.873	01:37.6	10.11
4/17/2013	2456399.5	2135	10.25	-5.45	-25.89	31.864	01:41.3	10.46
4/18/2013	2456400.5	2136	357.04	-5.37	-25.81	31.855	01:45.0	10.81
4/19/2013	2456401.5	2136	343.89	-5.28	-25.72	31.846	01:48.7	11.16
4/20/2013	2456402.5	2136	330.68	-5.20	-25.63	31.837	01:52.4	11.51
4/21/2013	2456403.5	2136	317.47	-5.11	-25.53	31.829	01:56.2	11.85
4/22/2013	2456404.5	2136	304.26	-5.02	-25.42	31.820	01:59.9	12.19
4/23/2013	2456405.5	2136	291.05	-4.93	-25.30	31.811	02: 3.7	12.52
4/24/2013	2456406.5	2136	277.83	-4.84	-25.18	31.803	02: 7.4	12.85
4/25/2013	2456407.5	2136	264.62	-4.75	-25.05	31.795	02:11.2	13.18
4/26/2013	2456408.5	2136	251.41	-4.65	-24.91	31.786	02:15.0	13.50
4/27/2013	2456409.5	2136	238.19	-4.56	-24.76	31.778	02:18.8	13.83
4/28/2013	2456410.5	2136	224.97	-4.46	-24.61	31.770	02:22.6	14.14
4/29/2013	2456411.5	2136	211.76	-4.36	-24.45	31.761	02:26.4	14.46
4/30/2013	2456412.5	2136	198.54	-4.27	-24.28	31.753	02:30.2	14.76
5/ 1/2013	2456413.5	2136	185.32	-4.17	-24.11	31.745	02:34.0	15.07
5/ 2/2013	2456414.5	2136	172.10	-4.07	-23.93	31.737	02:37.8	15.37
5/ 3/2013	2456415.5	2136	158.88	-3.96	-23.74	31.729	02:41.6	15.67
5/ 4/2013	2456416.5	2136	145.66	-3.86	-23.54	31.722	02:45.5	15.96
5/ 5/2013	2456417.5	2136	132.44	-3.76	-23.34	31.714	02:49.3	16.25
5/ 6/2013	2456418.5	2136	119.21	-3.65	-23.13	31.706	02:53.2	16.53
5/ 7/2013	2456419.5	2136	105.99	-3.54	-22.91	31.699	02:57.1	16.81
5/ 8/2013	2456420.5	2136	92.77	-3.44	-22.69	31.691	03: 1.0	17.08
5/ 9/2013	2456421.5	2136	79.54	-3.33	-22.46	31.684	03: 4.9	17.35
5/10/2013	2456422.5	2136	66.38	-3.22	-22.22	31.677	03: 8.8	17.62
5/11/2013	2456423.5	2136	53.15	-3.11	-21.97	31.669	03:12.7	17.87
5/12/2013	2456424.5	2136	39.93	-3.00	-21.72	31.662	03:16.6	18.13
5/13/2013	2456425.5	2136	26.70	-2.89	-21.46	31.655	03:20.5	18.38
5/14/2013	2456426.5	2136	13.47	-2.78	-21.20	31.648	03:24.4	18.62
5/15/2013	2456427.5	2137	0.24	-2.66	-20.93	31.642	03:28.4	18.86
5/16/2013	2456428.5	2137	347.02	-2.55	-20.65	31.635	03:32.4	19.10
5/17/2013	2456429.5	2137	333.79	-2.43	-20.36	31.628	03:36.3	19.32
5/18/2013	2456430.5	2137	320.55	-2.32	-20.07	31.622	03:40.3	19.55
5/19/2013	2456431.5	2137	307.32	-2.20	-19.78	31.616	03:44.3	19.76
5/20/2013	2456432.5	2137	294.09	-2.09	-19.47	31.609	03:48.3	19.97
5/21/2013	2456433.5	2137	280.86	-1.97	-19.16	31.603	03:52.3	20.18
5/22/2013	2456434.5	2137	267.63	-1.85	-18.85	31.597	03:56.3	20.38
5/23/2013	2456435.5	2137	254.40	-1.74	-18.53	31.591	03:60.3	20.58
5/24/2013	2456436.5	2137	241.16	-1.62	-18.20	31.585	04: 4.3	20.76
5/25/2013	2456437.5	2137	227.93	-1.50	-17.86	31.580	04: 8.4	20.95
5/26/2013	2456438.5	2137	214.69	-1.38	-17.53	31.574	04:12.4	21.12
5/27/2013	2456439.5	2137	201.46	-1.26	-17.18	31.569	04:16.5	21.29
5/28/2013	2456440.5	2137	188.22	-1.14	-16.83	31.564	04:20.5	21.46
5/29/2013	2456441.5	2137	174.99	-1.02	-16.48	31.558	04:24.6	21.62
5/30/2013	2456442.5	2137	161.81	-0.90	-16.12	31.553	04:28.7	21.77
5/31/2013	2456443.5	2137	148.58	-0.78	-15.75	31.548	04:32.8	21.91
6/ 1/2013	2456444.5	2137	135.34	-0.66	-15.38	31.543	04:36.8	22.05
6/ 2/2013	2456445.5	2137	122.10	-0.54	-15.00	31.539	04:40.9	22.18
6/ 3/2013	2456446.5	2137	108.87	-0.42	-14.62	31.534	04:45.0	22.31
6/ 4/2013	2456447.5	2137	95.63	-0.30	-14.24	31.530	04:49.2	22.43
6/ 5/2013	2456448.5	2137	82.39	-0.18	-13.85	31.526	04:53.3	22.54

6/ 6/2013	2456449.5	2137	69.15	-0.06	-13.46	31.521	04:57.4	22.65
6/ 7/2013	2456450.5	2137	55.91	0.06	-13.06	31.517	05: 1.5	22.75
6/ 8/2013	2456451.5	2137	42.67	0.18	-12.65	31.513	05: 5.6	22.84
6/ 9/2013	2456452.5	2137	29.44	0.30	-12.25	31.510	05: 9.8	22.93
6/10/2013	2456453.5	2137	16.20	0.42	-11.84	31.506	05:13.9	23.01
6/11/2013	2456454.5	2137	2.96	0.54	-11.43	31.503	05:18.1	23.08
6/12/2013	2456455.5	2138	349.72	0.66	-11.01	31.499	05:22.2	23.15
6/13/2013	2456456.5	2138	336.48	0.78	-10.59	31.496	05:26.3	23.21
6/14/2013	2456457.5	2138	323.24	0.90	-10.17	31.493	05:30.5	23.26
6/15/2013	2456458.5	2138	310.00	1.02	-9.74	31.490	05:34.6	23.31
6/16/2013	2456459.5	2138	296.76	1.14	-9.31	31.487	05:38.8	23.35
6/17/2013	2456460.5	2138	283.52	1.26	-8.88	31.485	05:43.0	23.38
6/18/2013	2456461.5	2138	270.28	1.38	-8.44	31.482	05:47.1	23.41
6/19/2013	2456462.5	2138	257.10	1.50	-8.01	31.480	05:51.3	23.43
6/20/2013	2456463.5	2138	243.86	1.61	-7.57	31.478	05:55.4	23.44
6/21/2013	2456464.5	2138	230.62	1.73	-7.13	31.475	05:59.6	23.44
6/22/2013	2456465.5	2138	217.37	1.85	-6.68	31.474	06: 3.7	23.44
6/23/2013	2456466.5	2138	204.13	1.96	-6.24	31.472	06: 7.9	23.43
6/24/2013	2456467.5	2138	190.89	2.08	-5.79	31.470	06:12.1	23.42
6/25/2013	2456468.5	2138	177.65	2.19	-5.35	31.469	06:16.2	23.39
6/26/2013	2456469.5	2138	164.41	2.31	-4.90	31.467	06:20.4	23.36
6/27/2013	2456470.5	2138	151.17	2.42	-4.45	31.466	06:24.5	23.33
6/28/2013	2456471.5	2138	137.93	2.54	-4.00	31.465	06:28.7	23.28
6/29/2013	2456472.5	2138	124.69	2.65	-3.54	31.464	06:32.8	23.23
6/30/2013	2456473.5	2138	111.45	2.76	-3.09	31.463	06:36.9	23.18
7/ 1/2013	2456474.5	2138	98.21	2.87	-2.64	31.463	06:41.1	23.11
7/ 2/2013	2456475.5	2138	84.97	2.98	-2.18	31.462	06:45.2	23.04
7/ 3/2013	2456476.5	2138	71.73	3.09	-1.73	31.462	06:49.3	22.97
7/ 4/2013	2456477.5	2138	58.49	3.20	-1.28	31.462	06:53.5	22.88
7/ 5/2013	2456478.5	2138	45.25	3.31	-0.82	31.462	06:57.6	22.79
7/ 6/2013	2456479.5	2138	32.01	3.41	-0.37	31.462	07: 1.7	22.70
7/ 7/2013	2456480.5	2138	18.77	3.52	0.08	31.462	07: 5.8	22.59
7/ 8/2013	2456481.5	2138	5.54	3.62	0.53	31.463	07: 9.9	22.48
7/ 9/2013	2456482.5	2139	352.36	3.73	0.98	31.463	07:14.0	22.37
7/10/2013	2456483.5	2139	339.12	3.83	1.43	31.464	07:18.1	22.24
7/11/2013	2456484.5	2139	325.88	3.93	1.88	31.465	07:22.1	22.11
7/12/2013	2456485.5	2139	312.65	4.03	2.33	31.466	07:26.2	21.98
7/13/2013	2456486.5	2139	299.41	4.13	2.78	31.467	07:30.3	21.84
7/14/2013	2456487.5	2139	286.17	4.23	3.22	31.468	07:34.3	21.69
7/15/2013	2456488.5	2139	272.93	4.33	3.67	31.470	07:38.4	21.54
7/16/2013	2456489.5	2139	259.70	4.42	4.11	31.471	07:42.4	21.38
7/17/2013	2456490.5	2139	246.46	4.52	4.55	31.473	07:46.4	21.21
7/18/2013	2456491.5	2139	233.23	4.61	4.99	31.475	07:50.5	21.04
7/19/2013	2456492.5	2139	219.99	4.70	5.42	31.477	07:54.5	20.86
7/20/2013	2456493.5	2139	206.76	4.80	5.86	31.479	07:58.5	20.67
7/21/2013	2456494.5	2139	193.52	4.89	6.29	31.482	08: 2.5	20.48
7/22/2013	2456495.5	2139	180.29	4.97	6.72	31.484	08: 6.5	20.29
7/23/2013	2456496.5	2139	167.05	5.06	7.14	31.487	08:10.4	20.09
7/24/2013	2456497.5	2139	153.82	5.15	7.57	31.489	08:14.4	19.88
7/25/2013	2456498.5	2139	140.59	5.23	7.99	31.492	08:18.4	19.67
7/26/2013	2456499.5	2139	127.36	5.31	8.41	31.495	08:22.3	19.45
7/27/2013	2456500.5	2139	114.12	5.40	8.82	31.499	08:26.2	19.23
7/28/2013	2456501.5	2139	100.89	5.48	9.23	31.502	08:30.2	19.00
7/29/2013	2456502.5	2139	87.72	5.55	9.64	31.505	08:34.1	18.77

7/30/2013	2456503.5	2139	74.49	5.63	10.05	31.509	08:38.0	18.53
7/31/2013	2456504.5	2139	61.26	5.71	10.45	31.513	08:41.9	18.28
8/ 1/2013	2456505.5	2139	48.03	5.78	10.85	31.517	08:45.8	18.04
8/ 2/2013	2456506.5	2139	34.81	5.85	11.24	31.521	08:49.7	17.78
8/ 3/2013	2456507.5	2139	21.58	5.92	11.63	31.525	08:53.5	17.52
8/ 4/2013	2456508.5	2139	8.35	5.99	12.02	31.529	08:57.4	17.26
8/ 5/2013	2456509.5	2140	355.12	6.06	12.41	31.533	09: 1.2	16.99
8/ 6/2013	2456510.5	2140	341.90	6.13	12.79	31.538	09: 5.1	16.72
8/ 7/2013	2456511.5	2140	328.67	6.19	13.16	31.542	09: 8.9	16.44
8/ 8/2013	2456512.5	2140	315.44	6.25	13.53	31.547	09:12.7	16.16
8/ 9/2013	2456513.5	2140	302.22	6.31	13.90	31.552	09:16.5	15.87
8/10/2013	2456514.5	2140	288.99	6.37	14.27	31.557	09:20.3	15.59
8/11/2013	2456515.5	2140	275.77	6.43	14.63	31.562	09:24.1	15.29
8/12/2013	2456516.5	2140	262.54	6.48	14.98	31.568	09:27.9	14.99
8/13/2013	2456517.5	2140	249.32	6.54	15.33	31.573	09:31.6	14.69
8/14/2013	2456518.5	2140	236.10	6.59	15.68	31.579	09:35.4	14.38
8/15/2013	2456519.5	2140	222.88	6.64	16.02	31.584	09:39.2	14.07
8/16/2013	2456520.5	2140	209.66	6.69	16.36	31.590	09:42.9	13.76
8/17/2013	2456521.5	2140	196.44	6.73	16.69	31.596	09:46.6	13.44
8/18/2013	2456522.5	2140	183.28	6.78	17.02	31.602	09:50.4	13.12
8/19/2013	2456523.5	2140	170.06	6.82	17.34	31.608	09:54.1	12.80
8/20/2013	2456524.5	2140	156.84	6.86	17.66	31.614	09:57.8	12.47
8/21/2013	2456525.5	2140	143.62	6.90	17.97	31.621	10: 1.5	12.14
8/22/2013	2456526.5	2140	130.40	6.94	18.28	31.627	10: 5.2	11.81
8/23/2013	2456527.5	2140	117.19	6.97	18.58	31.634	10: 8.9	11.47
8/24/2013	2456528.5	2140	103.97	7.00	18.88	31.640	10:12.5	11.13
8/25/2013	2456529.5	2140	90.75	7.03	19.18	31.647	10:16.2	10.78
8/26/2013	2456530.5	2140	77.54	7.06	19.46	31.654	10:19.9	10.44
8/27/2013	2456531.5	2140	64.32	7.09	19.75	31.661	10:23.5	10.09
8/28/2013	2456532.5	2140	51.11	7.11	20.02	31.668	10:27.2	9.74
8/29/2013	2456533.5	2140	37.89	7.14	20.30	31.675	10:30.8	9.38
8/30/2013	2456534.5	2140	24.68	7.16	20.56	31.682	10:34.5	9.03
8/31/2013	2456535.5	2140	11.47	7.18	20.82	31.690	10:38.1	8.67
9/ 1/2013	2456536.5	2141	358.26	7.19	21.08	31.697	10:41.8	8.31
9/ 2/2013	2456537.5	2141	345.04	7.21	21.33	31.705	10:45.4	7.94
9/ 3/2013	2456538.5	2141	331.83	7.22	21.57	31.712	10:49.0	7.58
9/ 4/2013	2456539.5	2141	318.62	7.23	21.81	31.720	10:52.6	7.21
9/ 5/2013	2456540.5	2141	305.41	7.24	22.05	31.728	10:56.2	6.84
9/ 6/2013	2456541.5	2141	292.20	7.24	22.28	31.736	10:59.8	6.47
9/ 7/2013	2456542.5	2141	279.05	7.25	22.50	31.744	11: 3.4	6.09
9/ 8/2013	2456543.5	2141	265.85	7.25	22.71	31.752	11: 7.0	5.72
9/ 9/2013	2456544.5	2141	252.64	7.25	22.92	31.760	11:10.6	5.34
9/10/2013	2456545.5	2141	239.43	7.25	23.13	31.768	11:14.2	4.96
9/11/2013	2456546.5	2141	226.22	7.24	23.33	31.776	11:17.8	4.58
9/12/2013	2456547.5	2141	213.02	7.24	23.52	31.784	11:21.4	4.20
9/13/2013	2456548.5	2141	199.81	7.23	23.71	31.793	11:25.0	3.82
9/14/2013	2456549.5	2141	186.61	7.22	23.89	31.801	11:28.6	3.44
9/15/2013	2456550.5	2141	173.40	7.21	24.06	31.810	11:32.2	3.05
9/16/2013	2456551.5	2141	160.20	7.19	24.23	31.818	11:35.8	2.67
9/17/2013	2456552.5	2141	146.99	7.17	24.39	31.827	11:39.4	2.28
9/18/2013	2456553.5	2141	133.79	7.15	24.54	31.836	11:43.0	1.89
9/19/2013	2456554.5	2141	120.59	7.13	24.69	31.844	11:46.6	1.51
9/20/2013	2456555.5	2141	107.38	7.11	24.84	31.853	11:50.1	1.12
9/21/2013	2456556.5	2141	94.18	7.09	24.97	31.862	11:53.7	0.73

9/22/2013	2456557.5	2141	80.98	7.06	25.10	31.871	11:57.3	0.34
9/23/2013	2456558.5	2141	67.78	7.03	25.23	31.880	12:0 .9	-0.05
9/24/2013	2456559.5	2141	54.58	7.00	25.34	31.889	12: 4.5	-0.44
9/25/2013	2456560.5	2141	41.38	6.96	25.45	31.898	12: 8.1	-0.83
9/26/2013	2456561.5	2141	28.18	6.93	25.56	31.907	12:11.7	-1.22
9/27/2013	2456562.5	2141	14.98	6.89	25.65	31.916	12:15.3	-1.61
9/28/2013	2456563.5	2141	1.84	6.85	25.74	31.925	12:18.9	-2.00
9/29/2013	2456564.5	2142	348.64	6.81	25.82	31.934	12:22.5	-2.39
9/30/2013	2456565.5	2142	335.44	6.76	25.90	31.943	12:26.1	-2.78
10/ 1/2013	2456566.5	2142	322.25	6.72	25.97	31.952	12:29.8	-3.17
10/ 2/2013	2456567.5	2142	309.05	6.67	26.03	31.961	12:33.4	-3.55
10/ 3/2013	2456568.5	2142	295.85	6.62	26.09	31.970	12:37.0	-3.94
10/ 4/2013	2456569.5	2142	282.65	6.57	26.14	31.980	12:40.7	-4.33
10/ 5/2013	2456570.5	2142	269.46	6.51	26.18	31.989	12:44.3	-4.71
10/ 6/2013	2456571.5	2142	256.26	6.46	26.21	31.998	12:47.9	-5.10
10/ 7/2013	2456572.5	2142	243.06	6.40	26.24	32.007	12:51.6	-5.48
10/ 8/2013	2456573.5	2142	229.87	6.34	26.26	32.016	12:55.3	-5.86
10/ 9/2013	2456574.5	2142	216.67	6.28	26.27	32.026	12:58.9	-6.25
10/10/2013	2456575.5	2142	203.48	6.22	26.27	32.035	13: 2.6	-6.63
10/11/2013	2456576.5	2142	190.28	6.15	26.27	32.044	13: 6.3	-7.00
10/12/2013	2456577.5	2142	177.09	6.08	26.26	32.053	13:10.0	-7.38
10/13/2013	2456578.5	2142	163.90	6.01	26.25	32.062	13:13.7	-7.76
10/14/2013	2456579.5	2142	150.70	5.94	26.22	32.072	13:17.4	-8.13
10/15/2013	2456580.5	2142	137.51	5.87	26.19	32.081	13:21.1	-8.50
10/16/2013	2456581.5	2142	124.32	5.80	26.15	32.090	13:24.8	-8.87
10/17/2013	2456582.5	2142	111.12	5.72	26.10	32.099	13:28.6	-9.24
10/18/2013	2456583.5	2142	97.99	5.64	26.05	32.108	13:32.3	-9.60
10/19/2013	2456584.5	2142	84.80	5.56	25.99	32.117	13:36.1	-9.97
10/20/2013	2456585.5	2142	71.61	5.48	25.92	32.126	13:39.8	-10.33
10/21/2013	2456586.5	2142	58.42	5.40	25.84	32.135	13:43.6	-10.68
10/22/2013	2456587.5	2142	45.23	5.31	25.75	32.144	13:47.4	-11.04
10/23/2013	2456588.5	2142	32.03	5.23	25.66	32.153	13:51.2	-11.39
10/24/2013	2456589.5	2142	18.84	5.14	25.56	32.162	13:55.0	-11.74
10/25/2013	2456590.5	2142	5.65	5.05	25.45	32.171	13:58.8	-12.09
10/26/2013	2456591.5	2143	352.46	4.96	25.33	32.179	14: 2.7	-12.43
10/27/2013	2456592.5	2143	339.27	4.86	25.21	32.188	14: 6.5	-12.77
10/28/2013	2456593.5	2143	326.08	4.77	25.08	32.197	14:10.4	-13.11
10/29/2013	2456594.5	2143	312.89	4.67	24.94	32.205	14:14.2	-13.44
10/30/2013	2456595.5	2143	299.70	4.58	24.79	32.214	14:18.1	-13.77
10/31/2013	2456596.5	2143	286.52	4.48	24.63	32.222	14:22.0	-14.10
11/ 1/2013	2456597.5	2143	273.33	4.38	24.47	32.231	14:25.9	-14.42
11/ 2/2013	2456598.5	2143	260.14	4.28	24.30	32.239	14:29.8	-14.74
11/ 3/2013	2456599.5	2143	246.95	4.17	24.12	32.248	14:33.8	-15.05
11/ 4/2013	2456600.5	2143	233.76	4.07	23.93	32.256	14:37.7	-15.36
11/ 5/2013	2456601.5	2143	220.57	3.96	23.74	32.264	14:41.7	-15.67
11/ 6/2013	2456602.5	2143	207.39	3.86	23.53	32.272	14:45.7	-15.97
11/ 7/2013	2456603.5	2143	194.26	3.75	23.32	32.280	14:49.7	-16.27
11/ 8/2013	2456604.5	2143	181.07	3.64	23.10	32.288	14:53.7	-16.56
11/ 9/2013	2456605.5	2143	167.89	3.53	22.88	32.296	14:57.7	-16.85
11/10/2013	2456606.5	2143	154.70	3.42	22.64	32.303	15: 1.7	-17.13
11/11/2013	2456607.5	2143	141.51	3.30	22.40	32.311	15: 5.8	-17.41
11/12/2013	2456608.5	2143	128.33	3.19	22.15	32.319	15: 9.8	-17.69
11/13/2013	2456609.5	2143	115.14	3.08	21.89	32.326	15:13.9	-17.96
11/14/2013	2456610.5	2143	101.95	2.96	21.63	32.333	15:18.0	-18.22

11/15/2013	2456611.5	2143	88.77	2.84	21.36	32.341	15:22.1	-18.48
11/16/2013	2456612.5	2143	75.58	2.73	21.08	32.348	15:26.2	-18.73
11/17/2013	2456613.5	2143	62.40	2.61	20.79	32.355	15:30.3	-18.98
11/18/2013	2456614.5	2143	49.21	2.49	20.50	32.362	15:34.5	-19.22
11/19/2013	2456615.5	2143	36.03	2.37	20.19	32.369	15:38.6	-19.45
11/20/2013	2456616.5	2143	22.84	2.25	19.89	32.375	15:42.8	-19.68
11/21/2013	2456617.5	2143	9.66	2.13	19.57	32.382	15:47.0	-19.91
11/22/2013	2456618.5	2144	356.47	2.00	19.25	32.388	15:51.2	-20.13
11/23/2013	2456619.5	2144	343.29	1.88	18.92	32.395	15:55.4	-20.34
11/24/2013	2456620.5	2144	330.11	1.76	18.58	32.401	15:59.6	-20.54
11/25/2013	2456621.5	2144	316.92	1.63	18.24	32.407	16: 3.9	-20.74
11/26/2013	2456622.5	2144	303.74	1.51	17.88	32.413	16: 8.1	-20.94
11/27/2013	2456623.5	2144	290.62	1.38	17.53	32.419	16:12.4	-21.12
11/28/2013	2456624.5	2144	277.44	1.26	17.16	32.425	16:16.7	-21.30
11/29/2013	2456625.5	2144	264.25	1.13	16.79	32.430	16:21.0	-21.47
11/30/2013	2456626.5	2144	251.07	1.01	16.42	32.436	16:25.3	-21.64
12/ 1/2013	2456627.5	2144	237.89	0.88	16.04	32.441	16:29.6	-21.80
12/ 2/2013	2456628.5	2144	224.71	0.75	15.65	32.446	16:33.9	-21.95
12/ 3/2013	2456629.5	2144	211.53	0.62	15.25	32.451	16:38.2	-22.10
12/ 4/2013	2456630.5	2144	198.34	0.50	14.86	32.456	16:42.5	-22.23
12/ 5/2013	2456631.5	2144	185.16	0.37	14.45	32.461	16:46.9	-22.37
12/ 6/2013	2456632.5	2144	171.98	0.24	14.04	32.466	16:51.3	-22.49
12/ 7/2013	2456633.5	2144	158.80	0.11	13.62	32.470	16:55.6	-22.61
12/ 8/2013	2456634.5	2144	145.62	-0.02	13.20	32.474	16:60.0	-22.71
12/ 9/2013	2456635.5	2144	132.44	-0.14	12.78	32.479	17: 4.4	-22.82
12/10/2013	2456636.5	2144	119.26	-0.27	12.35	32.483	17: 8.8	-22.91
12/11/2013	2456637.5	2144	106.08	-0.40	11.91	32.487	17:13.2	-23.00
12/12/2013	2456638.5	2144	92.90	-0.53	11.47	32.490	17:17.6	-23.08
12/13/2013	2456639.5	2144	79.72	-0.66	11.03	32.494	17:22.0	-23.15
12/14/2013	2456640.5	2144	66.54	-0.78	10.58	32.497	17:26.4	-23.21
12/15/2013	2456641.5	2144	53.36	-0.91	10.13	32.500	17:30.8	-23.27
12/16/2013	2456642.5	2144	40.19	-1.04	9.68	32.504	17:35.2	-23.32
12/17/2013	2456643.5	2144	27.07	-1.16	9.22	32.507	17:39.7	-23.36
12/18/2013	2456644.5	2144	13.89	-1.29	8.76	32.509	17:44.1	-23.39
12/19/2013	2456645.5	2144	0.71	-1.42	8.30	32.512	17:48.5	-23.41
12/20/2013	2456646.5	2145	347.54	-1.54	7.83	32.514	17:53.0	-23.43
12/21/2013	2456647.5	2145	334.36	-1.67	7.36	32.517	17:57.4	-23.44
12/22/2013	2456648.5	2145	321.18	-1.79	6.89	32.519	18: 1.8	-23.44
12/23/2013	2456649.5	2145	308.01	-1.92	6.41	32.521	18: 6.3	-23.44
12/24/2013	2456650.5	2145	294.83	-2.04	5.94	32.523	18:10.7	-23.42
12/25/2013	2456651.5	2145	281.65	-2.16	5.46	32.524	18:15.1	-23.40
12/26/2013	2456652.5	2145	268.48	-2.29	4.98	32.526	18:19.6	-23.37
12/27/2013	2456653.5	2145	255.30	-2.41	4.50	32.527	18:24.0	-23.33
12/28/2013	2456654.5	2145	242.13	-2.53	4.02	32.528	18:28.4	-23.29
12/29/2013	2456655.5	2145	228.95	-2.65	3.54	32.529	18:32.9	-23.23
12/30/2013	2456656.5	2145	215.78	-2.77	3.05	32.530	18:37.3	-23.17
12/31/2013	2456657.5	2145	202.60	-2.89	2.57	32.530	18:41.7	-23.10