

Introduction to Reports Generated by Astronomy Lab 2

In all reports, times and dates are in standard time (not daylight savings time or summer time). Times are in 24 hour format.

Abbreviations used in reports:

AU	Astronomical Units
D	Degrees
DEC	Declination
DIST	Distance
DSO	December Solstice
E	East
FM	Full Moon
FQ	First Quarter Moon
H	Hours
ILL FR, ILLUM FRAC	Illuminated Fraction
JSO	June Solstice
KM	Kilometers
LE	Lunar Eclipse
LQ	Last Quarter Moon
M	Minutes
MEQ	March Equinox
MR	Moon Rise
MS	Moon Set
N	North
NM	New Moon
RA	Right Ascension
S	South, Seconds
SE	Solar Eclipse
SEQ	September Equinox
SR	Sunrise
SS	Sunset
UT	Universal Time
W	West
ZHR	Zenithal Hourly Rate

Calendar Report for 1/ 1/2011 to 12/31/2011

January 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 SR: 7:49 SS: 17:10 MR: 5:27 MS: 14:49
2 SR: 7:49 SS: 17:11 MR: 6:26 MS: 15:46	3 SR: 7:50 SS: 17:11 MR: 7:17 MS: 16:47	4 SR: 7:50 SS: 17:12 MR: 8:01 MS: 17:50 NM: 2:05 SE: 1:55	5 SR: 7:50 SS: 17:13 MR: 8:37 MS: 18:53	6 SR: 7:49 SS: 17:14 MR: 9:07 MS: 19:55	7 SR: 7:49 SS: 17:15 MR: 9:34 MS: 20:56	8 SR: 7:49 SS: 17:16 MR: 9:58 MS: 21:54
9 SR: 7:49 SS: 17:17 MR: 10:22 MS: 22:52	10 SR: 7:49 SS: 17:18 MR: 10:45 MS: 23:51	11 SR: 7:49 SS: 17:19 MR: 11:09 MS: None	12 SR: 7:48 SS: 17:20 MR: 11:36 MS: 0:50 FQ: 4:33	13 SR: 7:48 SS: 17:21 MR: 12:06 MS: 1:50	14 SR: 7:48 SS: 17:23 MR: 12:42 MS: 2:52	15 SR: 7:47 SS: 17:24 MR: 13:25 MS: 3:54
16 SR: 7:47 SS: 17:25 MR: 14:18 MS: 4:55	17 SR: 7:46 SS: 17:26 MR: 15:19 MS: 5:51	18 SR: 7:46 SS: 17:27 MR: 16:28 MS: 6:42	19 SR: 7:45 SS: 17:28 MR: 17:41 MS: 7:27 FM: 14:23	20 SR: 7:45 SS: 17:29 MR: 18:57 MS: 8:05	21 SR: 7:44 SS: 17:31 MR: 20:12 MS: 8:39	22 SR: 7:44 SS: 17:32 MR: 21:26 MS: 9:10
23 SR: 7:43 SS: 17:33 MR: 22:40 MS: 9:40	24 SR: 7:42 SS: 17:34 MR: 23:52 MS: 10:10	25 SR: 7:42 SS: 17:35 MR: None MS: 10:42	26 SR: 7:41 SS: 17:36 MR: 1:04 MS: 11:18 LQ: 5:59	27 SR: 7:40 SS: 17:38 MR: 2:14 MS: 11:59	28 SR: 7:39 SS: 17:39 MR: 3:20 MS: 12:46	29 SR: 7:38 SS: 17:40 MR: 4:20 MS: 13:39
30 SR: 7:37 SS: 17:41 MR: 5:13 MS: 14:38	31 SR: 7:37 SS: 17:43 MR: 5:58 MS: 15:39					

February 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		SR: 7:36	SR: 7:35	SR: 7:34	SR: 7:33	SR: 7:32
		SS: 17:44	SS: 17:45	SS: 17:46	SS: 17:48	SS: 17:49
		MR: 6:36	MR: 7:09	MR: 7:37	MR: 8:02	MR: 8:26
		MS: 16:42	MS: 17:44	MS: 18:45	MS: 19:44	MS: 20:42
			NM: 19:33			
6	7	8	9	10	11	12
SR: 7:31	SR: 7:29	SR: 7:28	SR: 7:27	SR: 7:26	SR: 7:25	SR: 7:24
SS: 17:50	SS: 17:51	SS: 17:52	SS: 17:54	SS: 17:55	SS: 17:56	SS: 17:57
MR: 8:49	MR: 9:12	MR: 9:38	MR: 10:06	MR: 10:39	MR: 11:18	MR: 12:05
MS: 21:40	MS: 22:39	MS: 23:38	MS: None	MS: 0:38	MS: 1:39	MS: 2:39
					FQ: 0:20	
13	14	15	16	17	18	19
SR: 7:22	SR: 7:21	SR: 7:20	SR: 7:18	SR: 7:17	SR: 7:16	SR: 7:14
SS: 17:58	SS: 18:00	SS: 18:01	SS: 18:02	SS: 18:03	SS: 18:04	SS: 18:06
MR: 13:00	MR: 14:03	MR: 15:14	MR: 16:28	MR: 17:45	MR: 19:01	MR: 20:18
MS: 3:36	MS: 4:29	MS: 5:16	MS: 5:57	MS: 6:34	MS: 7:07	MS: 7:38
					FM: 1:37	
20	21	22	23	24	25	26
SR: 7:13	SR: 7:12	SR: 7:10	SR: 7:09	SR: 7:07	SR: 7:06	SR: 7:04
SS: 18:07	SS: 18:08	SS: 18:09	SS: 18:10	SS: 18:11	SS: 18:13	SS: 18:14
MR: 21:34	MR: 22:49	MR: None	MR: 0:02	MR: 1:11	MR: 2:14	MR: 3:10
MS: 8:09	MS: 8:42	MS: 9:18	MS: 9:58	MS: 10:44	MS: 11:36	MS: 12:33
				LQ: 16:28		
27	28					
SR: 7:03	SR: 7:01					
SS: 18:15	SS: 18:16					
MR: 3:57	MR: 4:37					
MS: 13:33	MS: 14:35					

March 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		SR: 7:00	SR: 6:58	SR: 6:57	SR: 6:55	SR: 6:54
		SS: 18:17	SS: 18:18	SS: 18:19	SS: 18:21	SS: 18:22
		MR: 5:11	MR: 5:40	MR: 6:06	MR: 6:30	MR: 6:54
		MS: 15:37	MS: 16:37	MS: 17:36	MS: 18:35	MS: 19:33
					NM: 13:48	
6	7	8	9	10	11	12
SR: 6:52	SR: 6:51	SR: 6:49	SR: 6:48	SR: 6:46	SR: 6:44	SR: 6:43
SS: 18:23	SS: 18:24	SS: 18:25	SS: 18:26	SS: 18:27	SS: 18:28	SS: 18:29
MR: 7:17	MR: 7:42	MR: 8:10	MR: 8:41	MR: 9:17	MR: 9:59	MR: 10:50
MS: 20:31	MS: 21:30	MS: 22:29	MS: 23:29	MS: None	MS: 0:28	MS: 1:25
						FQ: 16:46
13	14	15	16	17	18	19
SR: 6:41	SR: 6:39	SR: 6:38	SR: 6:36	SR: 6:35	SR: 6:33	SR: 6:31
SS: 18:30	SS: 18:31	SS: 18:33	SS: 18:34	SS: 18:35	SS: 18:36	SS: 18:37
MR: 11:47	MR: 12:52	MR: 14:03	MR: 15:16	MR: 16:32	MR: 17:48	MR: 19:05
MS: 2:18	MS: 3:06	MS: 3:48	MS: 4:26	MS: 5:00	MS: 5:33	MS: 6:04
						FM: 11:11
20	21	22	23	24	25	26
SR: 6:30	SR: 6:28	SR: 6:26	SR: 6:25	SR: 6:23	SR: 6:21	SR: 6:20
SS: 18:38	SS: 18:39	SS: 18:40	SS: 18:41	SS: 18:42	SS: 18:43	SS: 18:44
MR: 20:23	MR: 21:40	MR: 22:54	MR: None	MR: 0:02	MR: 1:02	MR: 1:54
MS: 6:37	MS: 7:12	MS: 7:52	MS: 8:38	MS: 9:29	MS: 10:26	MS: 11:27
						LQ: 5:08
MEQ:16:19						
27	28	29	30	31		
SR: 6:18	SR: 6:16	SR: 6:15	SR: 6:13	SR: 6:12		
SS: 18:45	SS: 18:46	SS: 18:47	SS: 18:48	SS: 18:49		
MR: 2:36	MR: 3:12	MR: 3:43	MR: 4:10	MR: 4:35		
MS: 12:29	MS: 13:31	MS: 14:31	MS: 15:30	MS: 16:29		

April 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
					SR: 6:10	SR: 6:08
					SS: 18:50	SS: 18:51
					MR: 4:58	MR: 5:22
					MS: 17:27	MS: 18:24
3	4	5	6	7	8	9
SR: 6:07	SR: 6:05	SR: 6:03	SR: 6:02	SR: 6:00	SR: 5:59	SR: 5:57
SS: 18:52	SS: 18:54	SS: 18:55	SS: 18:56	SS: 18:57	SS: 18:58	SS: 18:59
MR: 5:47	MR: 6:14	MR: 6:44	MR: 7:18	MR: 7:59	MR: 8:46	MR: 9:40
MS: 19:23	MS: 20:22	MS: 21:22	MS: 22:21	MS: 23:18	MS: None	MS: 0:12
NM: 7:34						
10	11	12	13	14	15	16
SR: 5:55	SR: 5:54	SR: 5:52	SR: 5:51	SR: 5:49	SR: 5:48	SR: 5:46
SS: 19:00	SS: 19:01	SS: 19:02	SS: 19:03	SS: 19:04	SS: 19:05	SS: 19:06
MR: 10:41	MR: 11:47	MR: 12:57	MR: 14:08	MR: 15:22	MR: 16:36	MR: 17:53
MS: 1:00	MS: 1:44	MS: 2:22	MS: 2:56	MS: 3:28	MS: 3:59	MS: 4:31
	FQ: 5:06					
17	18	19	20	21	22	23
SR: 5:45	SR: 5:43	SR: 5:42	SR: 5:40	SR: 5:39	SR: 5:37	SR: 5:36
SS: 19:07	SS: 19:08	SS: 19:09	SS: 19:10	SS: 19:11	SS: 19:12	SS: 19:13
MR: 19:10	MR: 20:27	MR: 21:40	MR: 22:46	MR: 23:44	MR: None	MR: 0:31
MS: 5:05	MS: 5:43	MS: 6:26	MS: 7:16	MS: 8:13	MS: 9:14	MS: 10:18
FM: 19:44						
24	25	26	27	28	29	30
SR: 5:35	SR: 5:33	SR: 5:32	SR: 5:30	SR: 5:29	SR: 5:28	SR: 5:26
SS: 19:14	SS: 19:15	SS: 19:16	SS: 19:17	SS: 19:18	SS: 19:19	SS: 19:20
MR: 1:11	MR: 1:44	MR: 2:12	MR: 2:38	MR: 3:02	MR: 3:26	MR: 3:50
MS: 11:21	MS: 12:23	MS: 13:23	MS: 14:22	MS: 15:20	MS: 16:18	MS: 17:16
LQ: 19:47						

May 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
SR: 5:25	SR: 5:24	SR: 5:23	SR: 5:21	SR: 5:20	SR: 5:19	SR: 5:18
SS: 19:22	SS: 19:23	SS: 19:24	SS: 19:25	SS: 19:26	SS: 19:27	SS: 19:28
MR: 4:17	MR: 4:46	MR: 5:19	MR: 5:58	MR: 6:44	MR: 7:36	MR: 8:35
MS: 18:15	MS: 19:15	MS: 20:15	MS: 21:13	MS: 22:08	MS: 22:58	MS: 23:43
	NM: 23:51					
8	9	10	11	12	13	14
SR: 5:17	SR: 5:16	SR: 5:15	SR: 5:14	SR: 5:13	SR: 5:12	SR: 5:11
SS: 19:29	SS: 19:30	SS: 19:31	SS: 19:32	SS: 19:33	SS: 19:34	SS: 19:35
MR: 9:39	MR: 10:46	MR: 11:55	MR: 13:06	MR: 14:17	MR: 15:30	MR: 16:45
MS: None	MS: 0:22	MS: 0:56	MS: 1:28	MS: 1:58	MS: 2:28	MS: 3:00
		FQ: 13:33				
15	16	17	18	19	20	21
SR: 5:10	SR: 5:09	SR: 5:08	SR: 5:07	SR: 5:06	SR: 5:05	SR: 5:04
SS: 19:36	SS: 19:37	SS: 19:37	SS: 19:38	SS: 19:39	SS: 19:40	SS: 19:41
MR: 18:00	MR: 19:15	MR: 20:25	MR: 21:28	MR: 22:21	MR: 23:05	MR: 23:42
MS: 3:35	MS: 4:15	MS: 5:02	MS: 5:56	MS: 6:56	MS: 8:01	MS: 9:06
		FM: 4:08				
22	23	24	25	26	27	28
SR: 5:04	SR: 5:03	SR: 5:02	SR: 5:02	SR: 5:01	SR: 5:00	SR: 5:00
SS: 19:42	SS: 19:43	SS: 19:44	SS: 19:45	SS: 19:46	SS: 19:46	SS: 19:47
MR: None	MR: 0:13	MR: 0:40	MR: 1:05	MR: 1:29	MR: 1:53	MR: 2:19
MS: 10:10	MS: 11:12	MS: 12:12	MS: 13:11	MS: 14:09	MS: 15:07	MS: 16:06
		LQ: 11:52				
29	30	31				
SR: 4:59	SR: 4:59	SR: 4:58				
SS: 19:48	SS: 19:49	SS: 19:49				
MR: 2:47	MR: 3:19	MR: 3:56				
MS: 17:05	MS: 18:05	MS: 19:05				

June 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
			SR: 4:58	SR: 4:57	SR: 4:57	SR: 4:57
			SS: 19:50	SS: 19:51	SS: 19:52	SS: 19:52
			MR: 4:40	MR: 5:31	MR: 6:28	MR: 7:32
			MS: 20:02	MS: 20:54	MS: 21:41	MS: 22:23
			NM: 14:03			
			SE: 14:16			
5	6	7	8	9	10	11
SR: 4:56	SR: 4:56	SR: 4:56	SR: 4:55	SR: 4:55	SR: 4:55	SR: 4:55
SS: 19:53	SS: 19:54	SS: 19:54	SS: 19:55	SS: 19:55	SS: 19:56	SS: 19:56
MR: 8:39	MR: 9:47	MR: 10:57	MR: 12:07	MR: 13:17	MR: 14:29	MR: 15:42
MS: 22:59	MS: 23:31	MS: None	MS: 0:01	MS: 0:30	MS: 1:00	MS: 1:33
			FQ: 19:10			
12	13	14	15	16	17	18
SR: 4:55	SR: 4:55	SR: 4:55	SR: 4:55	SR: 4:55	SR: 4:55	SR: 4:55
SS: 19:57	SS: 19:57	SS: 19:58	SS: 19:58	SS: 19:59	SS: 19:59	SS: 19:59
MR: 16:55	MR: 18:06	MR: 19:11	MR: 20:09	MR: 20:57	MR: 21:38	MR: 22:11
MS: 2:09	MS: 2:52	MS: 3:42	MS: 4:39	MS: 5:42	MS: 6:47	MS: 7:53
			FM: 13:13			
			LE: 13:14			
19	20	21	22	23	24	25
SR: 4:55	SR: 4:55	SR: 4:56	SR: 4:56	SR: 4:56	SR: 4:56	SR: 4:57
SS: 19:59	SS: 20:00	SS: 20:00	SS: 20:00	SS: 20:00	SS: 20:00	SS: 20:00
MR: 22:41	MR: 23:07	MR: 23:31	MR: 23:56	MR: None	MR: 0:20	MR: 0:47
MS: 8:57	MS: 9:59	MS: 10:59	MS: 11:58	MS: 12:56	MS: 13:54	MS: 14:53
				LQ: 4:49		
		JSO:10:15				
26	27	28	29	30		
SR: 4:57	SR: 4:57	SR: 4:58	SR: 4:58	SR: 4:59		
SS: 20:01	SS: 20:01	SS: 20:01	SS: 20:01	SS: 20:00		
MR: 1:17	MR: 1:52	MR: 2:33	MR: 3:21	MR: 4:17		
MS: 15:53	MS: 16:53	MS: 17:51	MS: 18:46	MS: 19:36		

July 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
					SR: 4:59	SR: 5:00
					SS: 20:00	SS: 20:00
					MR: 5:20	MR: 6:27
					MS: 20:20	MS: 20:59
					NM: 1:54	
					SE: 1:37	
3	4	5	6	7	8	9
SR: 5:00	SR: 5:01	SR: 5:01	SR: 5:02	SR: 5:02	SR: 5:03	SR: 5:04
SS: 20:00	SS: 20:00	SS: 20:00	SS: 19:59	SS: 19:59	SS: 19:59	SS: 19:58
MR: 7:37	MR: 8:47	MR: 9:58	MR: 11:08	MR: 12:20	MR: 13:31	MR: 14:43
MS: 21:33	MS: 22:05	MS: 22:34	MS: 23:04	MS: 23:35	MS: None	MS: 0:10
				FQ: 23:30		
10	11	12	13	14	15	16
SR: 5:04	SR: 5:05	SR: 5:06	SR: 5:07	SR: 5:07	SR: 5:08	SR: 5:09
SS: 19:58	SS: 19:57	SS: 19:57	SS: 19:56	SS: 19:56	SS: 19:55	SS: 19:55
MR: 15:53	MR: 16:59	MR: 17:58	MR: 18:50	MR: 19:33	MR: 20:10	MR: 20:41
MS: 0:49	MS: 1:35	MS: 2:28	MS: 3:27	MS: 4:31	MS: 5:37	MS: 6:42
				FM: 23:39		
17	18	19	20	21	22	23
SR: 5:10	SR: 5:10	SR: 5:11	SR: 5:12	SR: 5:13	SR: 5:14	SR: 5:15
SS: 19:54	SS: 19:53	SS: 19:53	SS: 19:52	SS: 19:51	SS: 19:50	SS: 19:50
MR: 21:08	MR: 21:34	MR: 21:58	MR: 22:23	MR: 22:49	MR: 23:17	MR: 23:49
MS: 7:45	MS: 8:46	MS: 9:46	MS: 10:44	MS: 11:43	MS: 12:41	MS: 13:40
					LQ: 22:04	
24	25	26	27	28	29	30
SR: 5:16	SR: 5:16	SR: 5:17	SR: 5:18	SR: 5:19	SR: 5:20	SR: 5:21
SS: 19:49	SS: 19:48	SS: 19:47	SS: 19:46	SS: 19:45	SS: 19:44	SS: 19:43
MR: None	MR: 0:27	MR: 1:12	MR: 2:04	MR: 3:03	MR: 4:09	MR: 5:19
MS: 14:40	MS: 15:38	MS: 16:34	MS: 17:26	MS: 18:13	MS: 18:55	MS: 19:32
						NM: 11:40
31						
SR: 5:22						
SS: 19:42						
MR: 6:31						
MS: 20:05						

August 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
	SR: 5:23	SR: 5:24	SR: 5:25	SR: 5:26	SR: 5:27	SR: 5:28
	SS: 19:41	SS: 19:40	SS: 19:39	SS: 19:38	SS: 19:37	SS: 19:35
	MR: 7:43	MR: 8:56	MR: 10:09	MR: 11:21	MR: 12:34	MR: 13:44
	MS: 20:37	MS: 21:07	MS: 21:39	MS: 22:12	MS: 22:50	MS: 23:34
						FQ: 4:09
7	8	9	10	11	12	13
SR: 5:29	SR: 5:30	SR: 5:31	SR: 5:32	SR: 5:33	SR: 5:33	SR: 5:34
SS: 19:34	SS: 19:33	SS: 19:32	SS: 19:30	SS: 19:29	SS: 19:28	SS: 19:26
MR: 14:51	MR: 15:52	MR: 16:45	MR: 17:30	MR: 18:09	MR: 18:42	MR: 19:10
MS: None	MS: 0:24	MS: 1:20	MS: 2:21	MS: 3:25	MS: 4:29	MS: 5:33
						FM: 11:58
14	15	16	17	18	19	20
SR: 5:35	SR: 5:36	SR: 5:37	SR: 5:38	SR: 5:39	SR: 5:40	SR: 5:41
SS: 19:25	SS: 19:24	SS: 19:22	SS: 19:21	SS: 19:20	SS: 19:18	SS: 19:17
MR: 19:37	MR: 20:02	MR: 20:26	MR: 20:52	MR: 21:19	MR: 21:49	MR: 22:24
MS: 6:34	MS: 7:34	MS: 8:33	MS: 9:32	MS: 10:30	MS: 11:29	MS: 12:27
21	22	23	24	25	26	27
SR: 5:42	SR: 5:43	SR: 5:44	SR: 5:45	SR: 5:46	SR: 5:47	SR: 5:48
SS: 19:15	SS: 19:14	SS: 19:12	SS: 19:11	SS: 19:09	SS: 19:08	SS: 19:06
MR: 23:05	MR: 23:53	MR: None	MR: 0:48	MR: 1:49	MR: 2:57	MR: 4:08
MS: 13:25	MS: 14:22	MS: 15:15	MS: 16:03	MS: 16:47	MS: 17:26	MS: 18:02
LQ: 14:57						
28	29	30	31			
SR: 5:49	SR: 5:50	SR: 5:51	SR: 5:52			
SS: 19:05	SS: 19:03	SS: 19:01	SS: 19:00			
MR: 5:21	MR: 6:35	MR: 7:50	MR: 9:05			
MS: 18:34	MS: 19:06	MS: 19:38	MS: 20:12			
NM: 20:04						

September 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				SR: 5:53	SR: 5:54	SR: 5:55
				SS: 18:58	SS: 18:57	SS: 18:55
				MR: 10:20	MR: 11:33	MR: 12:42
				MS: 20:50	MS: 21:33	MS: 22:21
4	5	6	7	8	9	10
SR: 5:56	SR: 5:57	SR: 5:58	SR: 5:59	SR: 6:00	SR: 6:01	SR: 6:02
SS: 18:53	SS: 18:52	SS: 18:50	SS: 18:48	SS: 18:47	SS: 18:45	SS: 18:43
MR: 13:46	MR: 14:42	MR: 15:29	MR: 16:09	MR: 16:43	MR: 17:13	MR: 17:40
MS: 23:16	MS: None	MS: 0:16	MS: 1:18	MS: 2:22	MS: 3:24	MS: 4:26
FQ: 10:40						
11	12	13	14	15	16	17
SR: 6:03	SR: 6:04	SR: 6:05	SR: 6:05	SR: 6:06	SR: 6:07	SR: 6:08
SS: 18:42	SS: 18:40	SS: 18:38	SS: 18:37	SS: 18:35	SS: 18:33	SS: 18:32
MR: 18:06	MR: 18:30	MR: 18:55	MR: 19:22	MR: 19:52	MR: 20:25	MR: 21:03
MS: 5:26	MS: 6:25	MS: 7:23	MS: 8:21	MS: 9:20	MS: 10:18	MS: 11:16
	FM: 2:27					
18	19	20	21	22	23	24
SR: 6:09	SR: 6:10	SR: 6:11	SR: 6:12	SR: 6:13	SR: 6:14	SR: 6:15
SS: 18:30	SS: 18:28	SS: 18:27	SS: 18:25	SS: 18:23	SS: 18:22	SS: 18:20
MR: 21:47	MR: 22:37	MR: 23:35	MR: None	MR: 0:38	MR: 1:45	MR: 2:56
MS: 12:12	MS: 13:05	MS: 13:54	MS: 14:39	MS: 15:19	MS: 15:55	MS: 16:29
		LQ: 6:40				
					SEQ: 2:03	
25	26	27	28	29	30	
SR: 6:16	SR: 6:17	SR: 6:18	SR: 6:19	SR: 6:20	SR: 6:21	
SS: 18:18	SS: 18:17	SS: 18:15	SS: 18:13	SS: 18:12	SS: 18:10	
MR: 4:08	MR: 5:23	MR: 6:39	MR: 7:56	MR: 9:12	MR: 10:26	
MS: 17:01	MS: 17:34	MS: 18:08	MS: 18:45	MS: 19:27	MS: 20:15	
		NM: 4:09				

October 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
						SR: 6:22
						SS: 18:08
						MR: 11:35
						MS: 21:09
2	3	4	5	6	7	8
SR: 6:23	SR: 6:24	SR: 6:25	SR: 6:26	SR: 6:27	SR: 6:28	SR: 6:29
SS: 18:07	SS: 18:05	SS: 18:03	SS: 18:02	SS: 18:00	SS: 17:59	SS: 17:57
MR: 12:35	MR: 13:26	MR: 14:09	MR: 14:45	MR: 15:16	MR: 15:44	MR: 16:10
MS: 22:09	MS: 23:12	MS: None	MS: 0:15	MS: 1:18	MS: 2:20	MS: 3:20
	FQ: 20:16					
9	10	11	12	13	14	15
SR: 6:30	SR: 6:31	SR: 6:32	SR: 6:33	SR: 6:35	SR: 6:36	SR: 6:37
SS: 17:55	SS: 17:54	SS: 17:52	SS: 17:51	SS: 17:49	SS: 17:48	SS: 17:46
MR: 16:34	MR: 17:00	MR: 17:26	MR: 17:55	MR: 18:27	MR: 19:03	MR: 19:45
MS: 4:18	MS: 5:17	MS: 6:15	MS: 7:13	MS: 8:11	MS: 9:09	MS: 10:05
		FM: 19:07				
16	17	18	19	20	21	22
SR: 6:38	SR: 6:39	SR: 6:40	SR: 6:41	SR: 6:42	SR: 6:43	SR: 6:44
SS: 17:45	SS: 17:43	SS: 17:42	SS: 17:40	SS: 17:39	SS: 17:37	SS: 17:36
MR: 20:33	MR: 21:27	MR: 22:26	MR: 23:30	MR: None	MR: 0:37	MR: 1:46
MS: 10:59	MS: 11:49	MS: 12:34	MS: 13:15	MS: 13:51	MS: 14:25	MS: 14:57
			LQ: 20:32			
23	24	25	26	27	28	29
SR: 6:45	SR: 6:47	SR: 6:48	SR: 6:49	SR: 6:50	SR: 6:51	SR: 6:52
SS: 17:34	SS: 17:33	SS: 17:32	SS: 17:30	SS: 17:29	SS: 17:28	SS: 17:27
MR: 2:57	MR: 4:10	MR: 5:26	MR: 6:43	MR: 8:00	MR: 9:13	MR: 10:20
MS: 15:28	MS: 16:01	MS: 16:36	MS: 17:16	MS: 18:02	MS: 18:55	MS: 19:55
			NM: 12:57			
30	31					
SR: 6:53	SR: 6:55					
SS: 17:25	SS: 17:24					
MR: 11:17	MR: 12:05					
MS: 20:59	MS: 22:04					

November 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		SR: 6:56	SR: 6:57	SR: 6:58	SR: 6:59	SR: 7:00
		SS: 17:23	SS: 17:22	SS: 17:20	SS: 17:19	SS: 17:18
		MR: 12:44	MR: 13:18	MR: 13:47	MR: 14:13	MR: 14:38
		MS: 23:09	MS: None	MS: 0:12	MS: 1:13	MS: 2:12
			FQ: 9:39			
6	7	8	9	10	11	12
SR: 7:02	SR: 7:03	SR: 7:04	SR: 7:05	SR: 7:06	SR: 7:07	SR: 7:09
SS: 17:17	SS: 17:16	SS: 17:15	SS: 17:14	SS: 17:13	SS: 17:12	SS: 17:11
MR: 15:03	MR: 15:29	MR: 15:57	MR: 16:28	MR: 17:03	MR: 17:44	MR: 18:30
MS: 3:10	MS: 4:08	MS: 5:06	MS: 6:04	MS: 7:03	MS: 8:00	MS: 8:55
				FM: 13:18		
13	14	15	16	17	18	19
SR: 7:10	SR: 7:11	SR: 7:12	SR: 7:13	SR: 7:14	SR: 7:16	SR: 7:17
SS: 17:10	SS: 17:09	SS: 17:09	SS: 17:08	SS: 17:07	SS: 17:06	SS: 17:06
MR: 19:23	MR: 20:20	MR: 21:22	MR: 22:26	MR: 23:32	MR: None	MR: 0:40
MS: 9:46	MS: 10:33	MS: 11:14	MS: 11:51	MS: 12:25	MS: 12:56	MS: 13:26
					LQ: 8:10	
20	21	22	23	24	25	26
SR: 7:18	SR: 7:19	SR: 7:20	SR: 7:21	SR: 7:22	SR: 7:23	SR: 7:25
SS: 17:05	SS: 17:04	SS: 17:04	SS: 17:03	SS: 17:03	SS: 17:02	SS: 17:02
MR: 1:50	MR: 3:01	MR: 4:15	MR: 5:31	MR: 6:46	MR: 7:57	MR: 9:00
MS: 13:57	MS: 14:30	MS: 15:06	MS: 15:48	MS: 16:37	MS: 17:34	MS: 18:38
				NM: 23:11		
				SE: 23:24		
27	28	29	30			
SR: 7:26	SR: 7:27	SR: 7:28	SR: 7:29			
SS: 17:01	SS: 17:01	SS: 17:00	SS: 17:00			
MR: 9:54	MR: 10:38	MR: 11:16	MR: 11:47			
MS: 19:45	MS: 20:53	MS: 21:59	MS: 23:02			

December 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				SR: 7:30	SR: 7:31	SR: 7:32
				SS: 17:00	SS: 17:00	SS: 16:59
				MR: 12:15	MR: 12:41	MR: 13:06
				MS: None	MS: 0:03	MS: 1:02
					FQ: 2:53	
4	5	6	7	8	9	10
SR: 7:33	SR: 7:34	SR: 7:35	SR: 7:36	SR: 7:36	SR: 7:37	SR: 7:38
SS: 16:59	SS: 16:59	SS: 16:59	SS: 16:59	SS: 16:59	SS: 16:59	SS: 16:59
MR: 13:32	MR: 13:59	MR: 14:29	MR: 15:02	MR: 15:41	MR: 16:26	MR: 17:17
MS: 2:00	MS: 2:58	MS: 3:56	MS: 4:54	MS: 5:52	MS: 6:48	MS: 7:42
						FM: 7:38
						LE: 7:31
11	12	13	14	15	16	17
SR: 7:39	SR: 7:40	SR: 7:41	SR: 7:41	SR: 7:42	SR: 7:43	SR: 7:43
SS: 16:59	SS: 16:59	SS: 16:59	SS: 17:00	SS: 17:00	SS: 17:00	SS: 17:01
MR: 18:14	MR: 19:15	MR: 20:19	MR: 21:25	MR: 22:31	MR: 23:39	MR: None
MS: 8:30	MS: 9:14	MS: 9:53	MS: 10:28	MS: 10:59	MS: 11:29	MS: 11:59
						LQ: 17:49
18	19	20	21	22	23	24
SR: 7:44	SR: 7:45	SR: 7:45	SR: 7:46	SR: 7:46	SR: 7:47	SR: 7:47
SS: 17:01	SS: 17:01	SS: 17:02	SS: 17:02	SS: 17:03	SS: 17:03	SS: 17:04
MR: 0:48	MR: 1:58	MR: 3:10	MR: 4:23	MR: 5:34	MR: 6:40	MR: 7:39
MS: 12:29	MS: 13:03	MS: 13:40	MS: 14:25	MS: 15:16	MS: 16:16	MS: 17:21
						NM: 11:08
			DSO:22:31			
25	26	27	28	29	30	31
SR: 7:48	SR: 7:48	SR: 7:48	SR: 7:49	SR: 7:49	SR: 7:49	SR: 7:49
SS: 17:04	SS: 17:05	SS: 17:06	SS: 17:06	SS: 17:07	SS: 17:08	SS: 17:09
MR: 8:28	MR: 9:10	MR: 9:45	MR: 10:15	MR: 10:42	MR: 11:08	MR: 11:34
MS: 18:30	MS: 19:38	MS: 20:44	MS: 21:48	MS: 22:49	MS: 23:48	MS: None
						FQ: 23:16

Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
Local Time = UT - 7.00 hours Elevation: 1704 meters Year 2011
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Seasons Report for 2011

MEQ: 3/20/2011 16:19	Winter Length:	88.99 days
JSO: 6/21/2011 10:15	Spring Length:	92.75 days
SEQ: 9/23/2011 2:03	Summer Length:	93.66 days
DSO: 12/21/2011 22:31	Autumn Length:	89.85 days

Dates of Easter Report for 2011

4/24/2011

Lunar Eclipse Report for 2011

Lunar eclipse on 6/15/2011
Moon rise: 20:09
Moon set: 4:39
Magnitude: 1.71
Partial phase begins: 11:25
Total phase begins: 12:25
Time of maximum eclipse: 13:14
Total phase ends: 14:04
Partial phase ends: 15:04

Lunar eclipse on 12/10/2011
Moon rise: 17:17
Moon set: 7:42
Magnitude: 1.11
Partial phase begins: 5:46
Total phase begins: 7:06
Time of maximum eclipse: 7:31
Total phase ends: 7:57
Partial phase ends: 9:17

Solar Eclipse Report for 2011

Solar eclipse on 1/ 4/2011
Sun rise: 7:50
Sun set: 17:12
Time of maximum eclipse: 1:55
Eclipse is partial, maximum magnitude = 0.86
Eclipse is visible in the northern hemisphere

Solar eclipse on 6/ 1/2011
Sun rise: 4:58
Sun set: 19:50
Time of maximum eclipse: 14:16
Eclipse is partial, maximum magnitude = 0.60
Eclipse is visible in the northern hemisphere

Solar eclipse on 7/ 1/2011
Sun rise: 4:59
Sun set: 20:00
Time of maximum eclipse: 1:37
Eclipse is partial, maximum magnitude = 0.10
Eclipse is visible in the southern hemisphere

Solar eclipse on 11/24/2011
Sun rise: 7:22

Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
 Local Time = UT - 7.00 hours Elevation: 1704 meters Year 2011
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Sun set: 17:03
 Time of maximum eclipse: 23:24
 Eclipse is partial, maximum magnitude = 0.90
 Eclipse is visible in the southern hemisphere

The time of maximum eclipse (above) does not necessarily specify when the eclipse will be maximal when viewed from the specified location.

To see how the eclipse will look at the specified location, run a Planetarium movie of the eclipse.

Planet View Info Report for 1/ 1/2011 to 12/31/2011

Mercury

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
1/ 1/2011	6:10	15:48	17h16m41s	-20°13'03"	20°33'34"	0.382	0.83651
1/ 8/2011	6:08	15:37	17h35m06s	-21°23'34"	23°12'45"	0.600	0.98290
1/15/2011	6:18	15:39	18h07m56s	-22°34'08"	22°39'29"	0.737	1.11178
1/22/2011	6:33	15:50	18h47m52s	-23°06'56"	20°36'26"	0.824	1.21552
1/29/2011	6:47	16:08	19h31m31s	-22°45'10"	17°43'39"	0.883	1.29470
2/ 5/2011	6:59	16:33	20h17m13s	-21°21'01"	14°14'08"	0.926	1.35087
2/12/2011	7:08	17:03	21h04m04s	-18°50'30"	10°09'29"	0.961	1.38437
2/19/2011	7:14	17:38	21h51m39s	-15°11'48"	5°29'53"	0.987	1.39305
2/26/2011	7:17	18:17	22h39m51s	-10°25'17"	1°54'35"	0.998	1.37068
3/ 5/2011	7:17	18:58	23h28m21s	-4°37'51"	6°56'14"	0.968	1.30564
3/12/2011	7:15	19:39	0h15m24s	1°44'07"	13°09'18"	0.846	1.18443
3/19/2011	7:06	20:10	0h55m32s	7°36'30"	17°44'49"	0.601	1.01039
3/26/2011	6:49	20:16	1h20m20s	11°31'29"	18°05'58"	0.313	0.82280
4/ 2/2011	6:21	19:50	1h24m10s	12°25'58"	12°36'39"	0.094	0.67278
4/ 9/2011	5:48	18:59	1h10m46s	10°16'55"	2°56'03"	0.004	0.59152
4/16/2011	5:17	18:04	0h54m33s	6°43'32"	10°32'53"	0.045	0.58394
4/23/2011	4:54	17:25	0h49m01s	4°08'53"	19°38'50"	0.160	0.63303
4/30/2011	4:37	17:07	0h57m28s	3°35'52"	24°48'34"	0.288	0.71631
5/ 7/2011	4:25	17:06	1h17m29s	4°55'10"	26°32'08"	0.408	0.81841
5/14/2011	4:17	17:19	1h46m25s	7°39'29"	25°36'51"	0.523	0.93127
5/21/2011	4:13	17:43	2h23m07s	11°23'07"	22°32'52"	0.642	1.04965
5/28/2011	4:15	18:18	3h07m51s	15°40'59"	17°32'58"	0.774	1.16608
6/ 4/2011	4:25	19:03	4h01m44s	19°59'16"	10°42'57"	0.909	1.26486
6/11/2011	4:46	19:53	5h04m35s	23°24'33"	2°31'44"	0.995	1.31907
6/18/2011	5:19	20:38	6h11m29s	24°56'36"	6°20'16"	0.968	1.30675
6/25/2011	5:58	21:07	7h14m28s	24°16'51"	13°55'39"	0.858	1.23711
7/ 2/2011	6:35	21:21	8h08m41s	21°56'10"	19°52'43"	0.732	1.13740
7/ 9/2011	7:05	21:22	8h53m07s	18°37'18"	24°03'44"	0.616	1.02765
7/16/2011	7:25	21:14	9h27m53s	14°56'28"	26°24'09"	0.508	0.91765
7/23/2011	7:35	20:56	9h52m42s	11°25'04"	26°36'59"	0.397	0.81245
7/30/2011	7:29	20:31	10h06m05s	8°36'38"	24°07'00"	0.275	0.71719
8/ 6/2011	7:04	19:57	10h05m33s	7°13'03"	18°06'15"	0.143	0.64184
8/13/2011	6:18	19:16	9h50m39s	7°54'39"	8°39'56"	0.033	0.60570
8/20/2011	5:21	18:38	9h30m03s	10°27'52"	6°36'24"	0.023	0.63510
8/27/2011	4:37	18:15	9h21m42s	13°07'57"	14°52'13"	0.167	0.74478
9/ 3/2011	4:24	18:09	9h37m31s	14°00'17"	18°06'29"	0.436	0.91874
9/10/2011	4:42	18:12	10h14m43s	12°13'06"	15°49'07"	0.728	1.10961
9/17/2011	5:17	18:17	11h01m59s	8°09'05"	10°25'26"	0.917	1.26368
9/24/2011	5:56	18:19	11h50m02s	2°55'07"	4°23'36"	0.989	1.35982
10/ 1/2011	6:33	18:18	12h35m37s	-2°34'11"	2°04'24"	0.998	1.40601
10/ 8/2011	7:06	18:15	13h18m50s	-7°50'20"	6°47'29"	0.982	1.41500
10/15/2011	7:38	18:12	14h00m34s	-12°39'36"	11°10'25"	0.954	1.39516
10/22/2011	8:07	18:10	14h41m35s	-16°53'55"	15°01'00"	0.917	1.35037

Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
 Local Time = UT - 7.00 hours Elevation: 1704 meters Year 2011

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10/29/2011	8:34	18:09	15h22m16s	-20°26'11"	18°19'34"	0.867	1.28133
11/ 5/2011	8:57	18:11	16h02m08s	-23°08'25"	20°59'38"	0.796	1.18687
11/12/2011	9:13	18:12	16h39m07s	-24°50'50"	22°36'27"	0.685	1.06553
11/19/2011	9:14	18:10	17h07m39s	-25°21'30"	22°01'11"	0.505	0.91972
11/26/2011	8:46	17:51	17h15m29s	-24°23'32"	16°33'43"	0.234	0.76951
12/ 3/2011	7:38	17:06	16h49m44s	-21°37'52"	3°21'07"	0.009	0.68047
12/10/2011	6:27	16:19	16h15m37s	-18°39'12"	12°28'55"	0.132	0.73001
12/17/2011	5:59	15:52	16h12m19s	-18°21'45"	20°19'46"	0.433	0.87667
12/24/2011	6:02	15:43	16h35m00s	-19°58'19"	21°49'08"	0.657	1.03388
12/31/2011	6:18	15:44	17h10m26s	-21°53'18"	20°27'14"	0.790	1.16619

Venus

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
1/ 1/2011	4:04	14:21	15h28m19s	-15°16'30"	46°44'33"	0.460	0.61602
1/ 8/2011	4:11	14:16	15h56m20s	-16°49'59"	46°57'27"	0.499	0.66917
1/15/2011	4:18	14:13	16h26m07s	-18°16'39"	46°49'54"	0.534	0.72240
1/22/2011	4:27	14:12	16h57m25s	-19°30'30"	46°25'55"	0.568	0.77552
1/29/2011	4:36	14:14	17h30m01s	-20°26'19"	45°48'48"	0.598	0.82826
2/ 5/2011	4:44	14:18	18h03m40s	-20°59'48"	45°01'19"	0.627	0.88041
2/12/2011	4:51	14:24	18h38m00s	-21°07'50"	44°05'23"	0.654	0.93185
2/19/2011	4:57	14:33	19h12m45s	-20°48'30"	43°02'16"	0.680	0.98254
2/26/2011	5:01	14:44	19h47m36s	-20°01'02"	41°53'03"	0.704	1.03239
3/ 5/2011	5:03	14:56	20h22m16s	-18°45'52"	40°38'50"	0.727	1.08123
3/12/2011	5:03	15:09	20h56m31s	-17°04'34"	39°20'21"	0.748	1.12900
3/19/2011	5:01	15:24	21h30m13s	-14°59'33"	37°57'56"	0.769	1.17568
3/26/2011	4:57	15:38	22h03m18s	-12°33'42"	36°31'58"	0.789	1.22123
4/ 2/2011	4:52	15:53	22h35m47s	-9°50'24"	35°02'56"	0.807	1.26549
4/ 9/2011	4:46	16:07	23h07m45s	-6°53'20"	33°31'10"	0.825	1.30835
4/16/2011	4:39	16:22	23h39m18s	-3°46'16"	31°56'43"	0.842	1.34979
4/23/2011	4:32	16:37	0h10m37s	-0°32'54"	30°19'43"	0.858	1.38975
4/30/2011	4:25	16:52	0h41m54s	2°42'58"	28°40'27"	0.874	1.42806
5/ 7/2011	4:17	17:07	1h13m21s	5°57'29"	26°59'07"	0.889	1.46458
5/14/2011	4:11	17:22	1h45m09s	9°06'43"	25°15'45"	0.903	1.49921
5/21/2011	4:05	17:38	2h17m30s	12°06'46"	23°30'25"	0.916	1.53190
5/28/2011	4:00	17:54	2h50m34s	14°53'38"	21°43'21"	0.928	1.56250
6/ 4/2011	3:57	18:10	3h24m28s	17°23'17"	19°54'48"	0.940	1.59082
6/11/2011	3:55	18:25	3h59m16s	19°31'40"	18°04'50"	0.950	1.61676
6/18/2011	3:56	18:41	4h34m57s	21°15'00"	16°13'31"	0.960	1.64026
6/25/2011	4:00	18:55	5h11m24s	22°29'55"	14°21'09"	0.969	1.66125
7/ 2/2011	4:07	19:07	5h48m26s	23°13'42"	12°28'03"	0.976	1.67956
7/ 9/2011	4:16	19:17	6h25m46s	23°24'31"	10°34'22"	0.983	1.69510
7/16/2011	4:27	19:25	7h03m07s	23°01'39"	8°40'22"	0.989	1.70787
7/23/2011	4:41	19:30	7h40m09s	22°05'34"	6°46'34"	0.993	1.71788
7/30/2011	4:56	19:32	8h16m37s	20°37'48"	4°53'57"	0.996	1.72506
8/ 6/2011	5:12	19:32	8h52m20s	18°40'55"	3°05'03"	0.999	1.72937
8/13/2011	5:29	19:29	9h27m11s	16°18'13"	1°33'39"	1.000	1.73087
8/20/2011	5:46	19:25	10h01m10s	13°33'23"	1°39'21"	1.000	1.72967
8/27/2011	6:02	19:19	10h34m20s	10°30'24"	3°12'51"	0.998	1.72580
9/ 3/2011	6:19	19:12	11h06m52s	7°13'24"	5°00'22"	0.996	1.71927
9/10/2011	6:35	19:05	11h38m54s	3°46'35"	6°50'23"	0.993	1.71019
9/17/2011	6:52	18:57	12h10m40s	0°14'08"	8°40'37"	0.989	1.69873
9/24/2011	7:08	18:49	12h42m25s	-3°19'51"	10°30'13"	0.984	1.68498
10/ 1/2011	7:25	18:41	13h14m23s	-6°51'11"	12°18'52"	0.978	1.66899
10/ 8/2011	7:42	18:34	13h46m49s	-10°15'31"	14°06'29"	0.971	1.65083
10/15/2011	7:59	18:28	14h19m53s	-13°28'25"	15°52'55"	0.963	1.63069
10/22/2011	8:16	18:24	14h53m49s	-16°25'29"	17°37'57"	0.955	1.60868
10/29/2011	8:34	18:21	15h28m43s	-19°02'10"	19°21'31"	0.946	1.58484
11/ 5/2011	8:51	18:21	16h04m37s	-21°14'00"	21°03'42"	0.936	1.55919

Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
 Local Time = UT - 7.00 hours Elevation: 1704 meters Year 2011

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11/12/2011	9:07	18:23	16h41m27s	-22°56'48"	22°44'26"	0.925	1.53186
11/19/2011	9:22	18:29	17h19m04s	-24°07'05"	24°23'34"	0.914	1.50297
11/26/2011	9:35	18:37	17h57m09s	-24°42'11"	26°01'02"	0.902	1.47252
12/ 3/2011	9:45	18:48	18h35m23s	-24°40'41"	27°36'54"	0.889	1.44049
12/10/2011	9:52	19:02	19h13m20s	-24°02'31"	29°11'09"	0.876	1.40693
12/17/2011	9:57	19:17	19h50m40s	-22°49'04"	30°43'31"	0.861	1.37195
12/24/2011	9:58	19:34	20h27m06s	-21°02'49"	32°13'54"	0.846	1.33554
12/31/2011	9:56	19:50	21h02m26s	-18°47'16"	33°42'16"	0.830	1.29763

Mars

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
1/ 1/2011	8:27	17:42	19h20m12s	-23°09'30"	8°14'05"	0.998	2.37886
1/ 8/2011	8:19	17:42	19h43m30s	-22°20'36"	6°32'58"	0.998	2.37927
1/15/2011	8:10	17:42	20h06m36s	-21°19'18"	4°54'23"	0.999	2.37891
1/22/2011	8:00	17:42	20h29m27s	-20°06'17"	3°19'22"	1.000	2.37794
1/29/2011	7:49	17:42	20h52m00s	-18°42'21"	1°52'09"	1.000	2.37648
2/ 5/2011	7:38	17:43	21h14m13s	-17°08'28"	1°04'52"	1.000	2.37453
2/12/2011	7:26	17:44	21h36m06s	-15°25'43"	1°57'19"	1.000	2.37210
2/19/2011	7:13	17:45	21h57m38s	-13°35'12"	3°20'55"	1.000	2.36934
2/26/2011	6:59	17:45	22h18m50s	-11°38'06"	4°48'37"	0.999	2.36631
3/ 5/2011	6:45	17:46	22h39m44s	-9°35'33"	6°16'53"	0.998	2.36298
3/12/2011	6:31	17:46	23h00m21s	-7°28'46"	7°44'50"	0.998	2.35930
3/19/2011	6:16	17:47	23h20m44s	-5°18'58"	9°12'11"	0.997	2.35534
3/26/2011	6:01	17:47	23h40m54s	-3°07'17"	10°39'05"	0.996	2.35113
4/ 2/2011	5:46	17:47	0h00m56s	-0°54'49"	12°05'47"	0.994	2.34658
4/ 9/2011	5:31	17:47	0h20m51s	1°17'20"	13°32'25"	0.993	2.34159
4/16/2011	5:15	17:46	0h40m42s	3°28'01"	14°59'03"	0.991	2.33616
4/23/2011	5:00	17:46	1h00m32s	5°36'17"	16°25'55"	0.990	2.33027
4/30/2011	4:45	17:45	1h20m24s	7°41'08"	17°53'24"	0.988	2.32380
5/ 7/2011	4:31	17:45	1h40m19s	9°41'38"	19°21'44"	0.986	2.31659
5/14/2011	4:16	17:44	2h00m19s	11°36'49"	20°51'02"	0.983	2.30858
5/21/2011	4:02	17:43	2h20m26s	13°25'52"	22°21'28"	0.981	2.29973
5/28/2011	3:48	17:42	2h40m41s	15°08'00"	23°53'28"	0.979	2.28992
6/ 4/2011	3:35	17:41	3h01m04s	16°42'28"	25°27'19"	0.976	2.27893
6/11/2011	3:22	17:40	3h21m36s	18°08'34"	27°03'07"	0.974	2.26667
6/18/2011	3:10	17:38	3h42m15s	19°25'44"	28°41'01"	0.971	2.25311
6/25/2011	2:59	17:36	4h03m00s	20°33'28"	30°21'23"	0.968	2.23810
7/ 2/2011	2:48	17:33	4h23m51s	21°31'21"	32°04'33"	0.965	2.22144
7/ 9/2011	2:38	17:29	4h44m44s	22°19'06"	33°50'40"	0.962	2.20302
7/16/2011	2:29	17:25	5h05m36s	22°56'31"	35°39'47"	0.958	2.18281
7/23/2011	2:20	17:20	5h26m25s	23°23'33"	37°32'15"	0.955	2.16069
7/30/2011	2:12	17:15	5h47m07s	23°40'18"	39°28'27"	0.951	2.13649
8/ 6/2011	2:04	17:08	6h07m39s	23°46'55"	41°28'34"	0.948	2.11009
8/13/2011	1:57	17:00	6h27m56s	23°43'44"	43°32'39"	0.944	2.08148
8/20/2011	1:51	16:51	6h47m57s	23°31'10"	45°40'57"	0.940	2.05060
8/27/2011	1:44	16:42	7h07m38s	23°09'44"	47°53'55"	0.936	2.01732
9/ 3/2011	1:38	16:31	7h26m56s	22°40'03"	50°11'50"	0.932	1.98154
9/10/2011	1:32	16:20	7h45m48s	22°02'48"	52°34'47"	0.929	1.94330
9/17/2011	1:26	16:07	8h04m14s	21°18'43"	55°02'58"	0.925	1.90262
9/24/2011	1:20	15:54	8h22m10s	20°28'34"	57°36'56"	0.921	1.85941
10/ 1/2011	1:14	15:40	8h39m37s	19°33'12"	60°17'06"	0.917	1.81365
10/ 8/2011	1:07	15:25	8h56m32s	18°33'30"	63°03'41"	0.914	1.76544
10/15/2011	1:00	15:10	9h12m54s	17°30'19"	65°56'58"	0.910	1.71488
10/22/2011	0:52	14:54	9h28m43s	16°24'30"	68°57'35"	0.907	1.66199
10/29/2011	0:44	14:37	9h43m57s	15°17'01"	72°06'18"	0.905	1.60683
11/ 5/2011	0:36	14:20	9h58m35s	14°08'51"	75°23'38"	0.902	1.54961
11/12/2011	0:26	14:02	10h12m34s	13°00'54"	78°50'08"	0.900	1.49056
11/19/2011	0:16	13:43	10h25m53s	11°54'07"	82°26'48"	0.899	1.42983

Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
 Local Time = UT - 7.00 hours Elevation: 1704 meters Year 2011

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11/26/2011	0:05	13:24	10h38m29s	10°49'36"	86°15'02"	0.899	1.36763
12/ 3/2011	23:51	13:05	10h50m16s	9°48'28"	90°16'04"	0.899	1.30432
12/10/2011	23:37	12:45	11h01m10s	8°51'50"	94°31'12"	0.901	1.24034
12/17/2011	23:22	12:24	11h11m06s	8°00'51"	99°02'17"	0.904	1.17604
12/24/2011	23:06	12:03	11h19m53s	7°16'52"	103°51'59"	0.908	1.11189
12/31/2011	22:48	11:40	11h27m22s	6°41'22"	109°02'59"	0.914	1.04854

Jupiter

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
1/ 1/2011	11:37	23:24	23h49m28s	-2°31'15"	76°22'36"	0.991	5.09029
1/ 8/2011	11:12	23:02	23h53m05s	-2°06'04"	70°14'19"	0.991	5.19671
1/15/2011	10:47	22:40	23h57m07s	-1°38'18"	64°13'00"	0.992	5.29920
1/22/2011	10:22	22:19	0h01m31s	-1°08'14"	58°18'13"	0.993	5.39673
1/29/2011	9:57	21:58	0h06m16s	-0°36'08"	52°29'16"	0.994	5.48848
2/ 5/2011	9:33	21:37	0h11m18s	-0°02'15"	46°45'42"	0.995	5.57359
2/12/2011	9:08	21:17	0h16m35s	0°33'10"	41°07'21"	0.996	5.65124
2/19/2011	8:44	20:57	0h22m06s	1°09'49"	35°33'53"	0.997	5.72085
2/26/2011	8:20	20:38	0h27m49s	1°47'29"	30°04'41"	0.997	5.78197
3/ 5/2011	7:57	20:18	0h33m41s	2°25'57"	24°39'18"	0.998	5.83414
3/12/2011	7:33	19:59	0h39m42s	3°04'57"	19°17'35"	0.999	5.87692
3/19/2011	7:09	19:40	0h45m48s	3°44'17"	13°59'25"	0.999	5.91010
3/26/2011	6:46	19:21	0h52m00s	4°23'42"	8°44'47"	1.000	5.93357
4/ 2/2011	6:22	19:02	0h58m15s	5°03'03"	3°36'39"	1.000	5.94720
4/ 9/2011	5:58	18:43	1h04m31s	5°42'07"	2°03'40"	1.000	5.95088
4/16/2011	5:35	18:23	1h10m48s	6°20'41"	7°01'00"	1.000	5.94469
4/23/2011	5:11	18:04	1h17m04s	6°58'36"	12°08'24"	1.000	5.92881
4/30/2011	4:48	17:45	1h23m17s	7°35'41"	17°16'41"	0.999	5.90338
5/ 7/2011	4:24	17:26	1h29m26s	8°11'46"	22°25'26"	0.998	5.86855
5/14/2011	4:01	17:06	1h35m29s	8°46'42"	27°34'44"	0.998	5.82466
5/21/2011	3:37	16:47	1h41m26s	9°20'17"	32°45'01"	0.997	5.77213
5/28/2011	3:14	16:27	1h47m13s	9°52'26"	37°57'01"	0.996	5.71134
6/ 4/2011	2:50	16:07	1h52m50s	10°22'59"	43°11'24"	0.995	5.64268
6/11/2011	2:26	15:46	1h58m14s	10°51'46"	48°28'32"	0.994	5.56673
6/18/2011	2:02	15:25	2h03m24s	11°18'40"	53°48'58"	0.993	5.48415
6/25/2011	1:38	15:04	2h08m17s	11°43'34"	59°13'35"	0.992	5.39557
7/ 2/2011	1:13	14:43	2h12m52s	12°06'21"	64°43'14"	0.991	5.30164
7/ 9/2011	0:49	14:20	2h17m05s	12°26'50"	70°18'28"	0.991	5.20322
7/16/2011	0:24	13:58	2h20m55s	12°44'57"	75°59'51"	0.990	5.10125
7/23/2011	23:55	13:34	2h24m19s	13°00'34"	81°48'20"	0.990	4.99667
7/30/2011	23:30	13:11	2h27m15s	13°13'34"	87°44'53"	0.989	4.89044
8/ 6/2011	23:04	12:46	2h29m40s	13°23'50"	93°50'08"	0.989	4.78377
8/13/2011	22:38	12:21	2h31m32s	13°31'16"	100°04'33"	0.990	4.67796
8/20/2011	22:11	11:55	2h32m48s	13°35'49"	106°28'52"	0.990	4.57427
8/27/2011	21:44	11:28	2h33m28s	13°37'23"	113°03'56"	0.991	4.47405
9/ 3/2011	21:17	11:00	2h33m29s	13°35'56"	119°50'04"	0.992	4.37882
9/10/2011	20:49	10:32	2h32m52s	13°31'30"	126°47'10"	0.993	4.29018
9/17/2011	20:20	10:02	2h31m37s	13°24'09"	133°55'10"	0.995	4.20959
9/24/2011	19:52	9:32	2h29m46s	13°14'01"	141°14'01"	0.996	4.13850
10/ 1/2011	19:22	9:01	2h27m22s	13°01'19"	148°42'59"	0.997	4.07845
10/ 8/2011	18:53	8:30	2h24m29s	12°46'25"	156°20'31"	0.998	4.03081
10/15/2011	18:23	7:58	2h21m13s	12°29'46"	164°04'42"	0.999	3.99662
10/22/2011	17:53	7:26	2h17m42s	12°11'56"	171°52'06"	1.000	3.97671
10/29/2011	17:23	6:54	2h14m03s	11°53'30"	178°31'09"	1.000	3.97176
11/ 5/2011	16:53	6:22	2h10m24s	11°35'14"	171°59'22"	1.000	3.98202
11/12/2011	16:23	5:50	2h06m53s	11°17'51"	164°07'40"	0.999	4.00729
11/19/2011	15:53	5:18	2h03m39s	11°02'02"	156°16'02"	0.998	4.04705
11/26/2011	15:24	4:47	2h00m48s	10°48'24"	148°28'19"	0.997	4.10060
12/ 3/2011	14:55	4:16	1h58m26s	10°37'31"	140°46'52"	0.996	4.16685

Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
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12/10/2011	14:26	3:47	1h56m38s	10°29'47"	133°13'23"	0.995	4.24439
12/17/2011	13:57	3:18	1h55m26s	10°25'28"	125°48'39"	0.994	4.33172
12/24/2011	13:29	2:50	1h54m53s	10°24'42"	118°33'11"	0.992	4.42734
12/31/2011	13:02	2:22	1h54m58s	10°27'32"	111°27'33"	0.991	4.52959

Saturn

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
1/ 1/2011	1:01	12:35	13h05m33s	-4°21'58"	83°26'11"	0.997	9.65936
1/ 8/2011	0:35	12:08	13h06m36s	-4°26'22"	90°17'54"	0.997	9.54334
1/15/2011	0:08	11:41	13h07m20s	-4°28'47"	97°14'25"	0.997	9.42743
1/22/2011	23:37	11:14	13h07m45s	-4°29'12"	104°15'35"	0.998	9.31337
1/29/2011	23:09	10:47	13h07m51s	-4°27'38"	111°21'30"	0.998	9.20281
2/ 5/2011	22:41	10:19	13h07m37s	-4°24'06"	118°32'01"	0.998	9.09750
2/12/2011	22:13	9:52	13h07m04s	-4°18'42"	125°46'33"	0.998	8.99924
2/19/2011	21:44	9:24	13h06m13s	-4°11'33"	133°04'27"	0.999	8.90967
2/26/2011	21:15	8:55	13h05m05s	-4°02'49"	140°25'22"	0.999	8.83024
3/ 5/2011	20:45	8:27	13h03m41s	-3°52'43"	147°48'43"	0.999	8.76233
3/12/2011	20:16	7:59	13h02m05s	-3°41'28"	155°13'11"	1.000	8.70725
3/19/2011	19:46	7:30	13h00m19s	-3°29'25"	162°36'46"	1.000	8.66594
3/26/2011	19:15	7:01	12h58m24s	-3°16'49"	169°54'51"	1.000	8.63903
4/ 2/2011	18:45	6:33	12h56m26s	-3°04'01"	176°27'27"	1.000	8.62701
4/ 9/2011	18:15	6:04	12h54m26s	-2°51'21"	174°08'13"	1.000	8.63013
4/16/2011	17:45	5:35	12h52m28s	-2°39'10"	167°07'34"	1.000	8.64824
4/23/2011	17:15	5:06	12h50m34s	-2°27'45"	159°53'27"	1.000	8.68087
4/30/2011	16:45	4:38	12h48m49s	-2°17'25"	152°39'28"	0.999	8.72743
5/ 7/2011	16:15	4:09	12h47m13s	-2°08'24"	145°28'26"	0.999	8.78712
5/14/2011	15:46	3:40	12h45m51s	-2°00'56"	138°21'50"	0.999	8.85880
5/21/2011	15:17	3:12	12h44m43s	-1°55'10"	131°20'16"	0.998	8.94116
5/28/2011	14:49	2:44	12h43m50s	-1°51'14"	124°23'50"	0.998	9.03290
6/ 4/2011	14:20	2:16	12h43m15s	-1°49'13"	117°32'44"	0.998	9.13262
6/11/2011	13:53	1:48	12h42m57s	-1°49'10"	110°47'18"	0.998	9.23873
6/18/2011	13:25	1:21	12h42m58s	-1°51'05"	104°07'32"	0.997	9.34962
6/25/2011	12:58	0:53	12h43m16s	-1°54'56"	97°33'00"	0.997	9.46380
7/ 2/2011	12:32	0:26	12h43m52s	-2°00'40"	91°03'22"	0.997	9.57980
7/ 9/2011	12:06	23:55	12h44m46s	-2°08'12"	84°38'35"	0.997	9.69603
7/16/2011	11:40	23:28	12h45m57s	-2°17'27"	78°18'25"	0.997	9.81100
7/23/2011	11:14	23:02	12h47m23s	-2°28'17"	72°02'14"	0.997	9.92339
7/30/2011	10:49	22:35	12h49m05s	-2°40'36"	65°49'28"	0.998	10.03194
8/ 6/2011	10:25	22:09	12h51m00s	-2°54'16"	59°39'50"	0.998	10.13534
8/13/2011	10:00	21:42	12h53m09s	-3°09'09"	53°33'06"	0.998	10.23239
8/20/2011	9:36	21:16	12h55m29s	-3°25'05"	47°28'37"	0.999	10.32210
8/27/2011	9:12	20:50	12h58m01s	-3°41'58"	41°25'45"	0.999	10.40356
9/ 3/2011	8:48	20:25	13h00m41s	-3°59'37"	35°24'13"	0.999	10.47580
9/10/2011	8:24	19:59	13h03m30s	-4°17'54"	29°23'51"	0.999	10.53801
9/17/2011	8:01	19:33	13h06m26s	-4°36'40"	23°24'20"	1.000	10.58961
9/24/2011	7:37	19:08	13h09m27s	-4°55'46"	17°25'27"	1.000	10.63005
10/ 1/2011	7:14	18:42	13h12m33s	-5°15'03"	11°28'17"	1.000	10.65880
10/ 8/2011	6:51	18:17	13h15m42s	-5°34'23"	5°40'14"	1.000	10.67548
10/15/2011	6:27	17:51	13h18m53s	-5°53'36"	2°24'37"	1.000	10.67997
10/22/2011	6:04	17:26	13h22m04s	-6°12'33"	7°18'34"	1.000	10.67216
10/29/2011	5:41	17:00	13h25m14s	-6°31'07"	13°16'39"	1.000	10.65201
11/ 5/2011	5:17	16:35	13h28m21s	-6°49'08"	19°23'11"	1.000	10.61965
11/12/2011	4:54	16:09	13h31m24s	-7°06'26"	25°34'01"	1.000	10.57546
11/19/2011	4:30	15:44	13h34m22s	-7°22'56"	31°48'37"	0.999	10.51989
11/26/2011	4:07	15:18	13h37m13s	-7°38'27"	38°07'02"	0.999	10.45341
12/ 3/2011	3:43	14:52	13h39m55s	-7°52'53"	44°29'11"	0.999	10.37673
12/10/2011	3:18	14:27	13h42m26s	-8°06'05"	50°55'02"	0.998	10.29081
12/17/2011	2:54	14:01	13h44m47s	-8°17'57"	57°24'53"	0.998	10.19665

Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
Local Time = UT - 7.00 hours Elevation: 1704 meters Year 2011

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12/24/2011	2:29	13:35	13h46m54s	-8°28'22"	63°59'06"	0.998	10.09528
12/31/2011	2:04	13:08	13h48m46s	-8°37'13"	70°37'41"	0.998	9.98798

Uranus

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
1/ 1/2011	11:35	23:26	23h50m00s	-1°53'07"	76°45'07"	0.999	20.29331
1/ 8/2011	11:08	23:00	23h50m38s	-1°48'45"	69°47'19"	0.999	20.40911
1/15/2011	10:41	22:33	23h51m24s	-1°43'31"	62°52'01"	1.000	20.51988
1/22/2011	10:14	22:07	23h52m18s	-1°37'27"	55°59'18"	1.000	20.62407
1/29/2011	9:47	21:41	23h53m18s	-1°30'39"	49°08'57"	1.000	20.72036
2/ 5/2011	9:20	21:15	23h54m25s	-1°23'10"	42°20'55"	1.000	20.80741
2/12/2011	8:53	20:49	23h55m38s	-1°15'07"	35°35'25"	1.000	20.88399
2/19/2011	8:27	20:23	23h56m55s	-1°06'35"	28°52'31"	1.000	20.94917
2/26/2011	8:00	19:58	23h58m16s	-0°57'39"	22°11'56"	1.000	21.00223
3/ 5/2011	7:33	19:32	23h59m40s	-0°48'24"	15°33'29"	1.000	21.04250
3/12/2011	7:07	19:07	0h01m07s	-0°38'57"	8°57'33"	1.000	21.06944
3/19/2011	6:40	18:41	0h02m35s	-0°29'24"	2°27'30"	1.000	21.08285
3/26/2011	6:14	18:16	0h04m03s	-0°19'51"	4°15'05"	1.000	21.08271
4/ 2/2011	5:47	17:50	0h05m30s	-0°10'23"	10°44'27"	1.000	21.06903
4/ 9/2011	5:20	17:24	0h06m56s	-0°01'05"	17°14'14"	1.000	21.04201
4/16/2011	4:54	16:59	0h08m20s	0°07'56"	23°43'06"	1.000	21.00210
4/23/2011	4:27	16:33	0h09m41s	0°16'35"	30°11'13"	1.000	20.94993
4/30/2011	4:00	16:07	0h10m58s	0°24'48"	36°39'04"	1.000	20.88616
5/ 7/2011	3:34	15:41	0h12m10s	0°32'30"	43°06'51"	1.000	20.81155
5/14/2011	3:07	15:15	0h13m17s	0°39'35"	49°34'37"	1.000	20.72716
5/21/2011	2:40	14:49	0h14m19s	0°46'00"	56°02'40"	1.000	20.63412
5/28/2011	2:13	14:23	0h15m13s	0°51'41"	62°31'31"	0.999	20.53356
6/ 4/2011	1:46	13:56	0h16m00s	0°56'35"	69°01'32"	0.999	20.42672
6/11/2011	1:19	13:30	0h16m40s	1°00'38"	75°32'45"	0.999	20.31506
6/18/2011	0:52	13:03	0h17m12s	1°03'48"	82°05'21"	0.999	20.20008
6/25/2011	0:24	12:36	0h17m35s	1°06'04"	88°39'50"	0.999	20.08321
7/ 2/2011	23:53	12:09	0h17m50s	1°07'24"	95°16'35"	0.999	19.96595
7/ 9/2011	23:26	11:41	0h17m56s	1°07'47"	101°55'33"	0.999	19.84999
7/16/2011	22:58	11:14	0h17m53s	1°07'14"	108°36'48"	0.999	19.73694
7/23/2011	22:30	10:46	0h17m42s	1°05'46"	115°20'38"	0.999	19.62832
7/30/2011	22:03	10:18	0h17m22s	1°03'25"	122°07'24"	1.000	19.52565
8/ 6/2011	21:35	9:50	0h16m55s	1°00'13"	128°56'58"	1.000	19.43051
8/13/2011	21:07	9:21	0h16m20s	0°56'14"	135°49'08"	1.000	19.34437
8/20/2011	20:39	8:53	0h15m38s	0°51'32"	142°44'01"	1.000	19.26846
8/27/2011	20:11	8:24	0h14m50s	0°46'13"	149°41'47"	1.000	19.20396
9/ 3/2011	19:43	7:55	0h13m57s	0°40'23"	156°42'10"	1.000	19.15202
9/10/2011	19:15	7:27	0h13m00s	0°34'09"	163°44'40"	1.000	19.11353
9/17/2011	18:47	6:58	0h12m00s	0°27'38"	170°48'45"	1.000	19.08908
9/24/2011	18:19	6:29	0h10m59s	0°20'58"	177°49'19"	1.000	19.07913
10/ 1/2011	17:50	6:00	0h09m57s	0°14'18"	174°49'50"	1.000	19.08403
10/ 8/2011	17:22	5:31	0h08m56s	0°07'46"	167°41'39"	1.000	19.10377
10/15/2011	16:54	5:02	0h07m57s	0°01'29"	160°31'06"	1.000	19.13802
10/22/2011	16:26	4:33	0h07m01s	-0°04'23"	153°19'25"	1.000	19.18631
10/29/2011	15:58	4:05	0h06m10s	-0°09'44"	146°07'05"	1.000	19.24801
11/ 5/2011	15:30	3:36	0h05m25s	-0°14'26"	138°54'46"	1.000	19.32217
11/12/2011	15:02	3:08	0h04m46s	-0°18'23"	131°42'56"	1.000	19.40754
11/19/2011	14:34	2:40	0h04m15s	-0°21'31"	124°31'40"	1.000	19.50283
11/26/2011	14:06	2:12	0h03m52s	-0°23'45"	117°21'10"	1.000	19.60663
12/ 3/2011	13:39	1:44	0h03m37s	-0°25'02"	110°11'57"	0.999	19.71729
12/10/2011	13:11	1:16	0h03m32s	-0°25'19"	103°04'27"	0.999	19.83301
12/17/2011	12:44	0:49	0h03m35s	-0°24'36"	95°58'43"	0.999	19.95206
12/24/2011	12:16	0:21	0h03m48s	-0°22'52"	88°54'46"	0.999	20.07270
12/31/2011	11:49	23:51	0h04m11s	-0°20'09"	81°52'56"	0.999	20.19308

Neptune

Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
1/ 1/2011	10:21	20:54	21h56m32s	-13°03'12"	46°32'24"	1.000	30.68182
1/ 8/2011	9:54	20:28	21h57m20s	-12°58'56"	39°36'41"	1.000	30.76473
1/15/2011	9:27	20:01	21h58m12s	-12°54'20"	32°42'13"	1.000	30.83646
1/22/2011	9:00	19:35	21h59m07s	-12°49'26"	25°49'07"	1.000	30.89608
1/29/2011	8:33	19:09	22h00m05s	-12°44'18"	18°57'12"	1.000	30.94285
2/ 5/2011	8:06	18:43	22h01m05s	-12°39'00"	12°06'27"	1.000	30.97609
2/12/2011	7:40	18:16	22h02m06s	-12°33'35"	5°17'35"	1.000	30.99532
2/19/2011	7:13	17:50	22h03m07s	-12°28'07"	1°36'29"	1.000	31.00040
2/26/2011	6:46	17:24	22h04m08s	-12°22'39"	8°19'51"	1.000	30.99138
3/ 5/2011	6:19	16:58	22h05m09s	-12°17'16"	15°05'31"	1.000	30.96836
3/12/2011	5:52	16:32	22h06m07s	-12°12'01"	21°50'20"	1.000	30.93167
3/19/2011	5:25	16:05	22h07m04s	-12°06'58"	28°34'01"	1.000	30.88195
3/26/2011	4:58	15:39	22h07m58s	-12°02'10"	35°16'47"	1.000	30.81998
4/ 2/2011	4:31	15:13	22h08m49s	-11°57'41"	41°59'00"	1.000	30.74656
4/ 9/2011	4:05	14:46	22h09m35s	-11°53'33"	48°40'37"	1.000	30.66270
4/16/2011	3:37	14:19	22h10m18s	-11°49'50"	55°21'34"	1.000	30.56966
4/23/2011	3:10	13:53	22h10m55s	-11°46'33"	62°02'05"	1.000	30.46876
4/30/2011	2:43	13:26	22h11m27s	-11°43'45"	68°42'36"	1.000	30.36129
5/ 7/2011	2:16	12:59	22h11m54s	-11°41'29"	75°23'12"	1.000	30.24872
5/14/2011	1:49	12:32	22h12m15s	-11°39'45"	82°03'50"	1.000	30.13267
5/21/2011	1:21	12:05	22h12m30s	-11°38'34"	88°44'38"	1.000	30.01476
5/28/2011	0:54	11:37	22h12m39s	-11°37'57"	95°26'03"	1.000	29.89650
6/ 4/2011	0:26	11:10	22h12m41s	-11°37'55"	102°08'17"	1.000	29.77951
6/11/2011	23:55	10:42	22h12m38s	-11°38'26"	108°51'12"	1.000	29.66552
6/18/2011	23:27	10:14	22h12m29s	-11°39'30"	115°34'51"	1.000	29.55610
6/25/2011	23:00	9:47	22h12m14s	-11°41'06"	122°19'36"	1.000	29.45270
7/ 2/2011	22:32	9:19	22h11m53s	-11°43'12"	129°05'41"	1.000	29.35680
7/ 9/2011	22:04	8:50	22h11m28s	-11°45'45"	135°52'56"	1.000	29.26987
7/16/2011	21:36	8:22	22h10m57s	-11°48'42"	142°41'14"	1.000	29.19316
7/23/2011	21:08	7:54	22h10m23s	-11°52'01"	149°30'52"	1.000	29.12770
7/30/2011	20:40	7:26	22h09m46s	-11°55'37"	156°21'59"	1.000	29.07450
8/ 6/2011	20:12	6:57	22h09m06s	-11°59'28"	163°14'23"	1.000	29.03448
8/13/2011	19:44	6:29	22h08m23s	-12°03'27"	170°07'40"	1.000	29.00824
8/20/2011	19:16	6:00	22h07m40s	-12°07'32"	177°00'21"	1.000	28.99613
8/27/2011	18:48	5:32	22h06m56s	-12°11'38"	175°58'00"	1.000	28.99843
9/ 3/2011	18:20	5:03	22h06m12s	-12°15'40"	169°02'00"	1.000	29.01523
9/10/2011	17:52	4:35	22h05m30s	-12°19'33"	162°04'02"	1.000	29.04632
9/17/2011	17:24	4:06	22h04m50s	-12°23'14"	155°05'06"	1.000	29.09119
9/24/2011	16:57	3:38	22h04m13s	-12°26'38"	148°05'08"	1.000	29.14928
10/ 1/2011	16:29	3:10	22h03m39s	-12°29'42"	141°04'19"	1.000	29.21984
10/ 8/2011	16:01	2:42	22h03m09s	-12°32'21"	134°03'06"	1.000	29.30180
10/15/2011	15:33	2:14	22h02m44s	-12°34'33"	127°01'38"	1.000	29.39388
10/22/2011	15:05	1:46	22h02m25s	-12°36'16"	119°59'46"	1.000	29.49478
10/29/2011	14:38	1:18	22h02m11s	-12°37'27"	112°57'37"	1.000	29.60308
11/ 5/2011	14:10	0:50	22h02m04s	-12°38'04"	105°55'33"	1.000	29.71711
11/12/2011	13:42	0:23	22h02m02s	-12°38'07"	98°53'49"	1.000	29.83511
11/19/2011	13:15	23:51	22h02m08s	-12°37'35"	91°52'20"	1.000	29.95538
11/26/2011	12:48	23:24	22h02m19s	-12°36'28"	84°51'04"	1.000	30.07619
12/ 3/2011	12:20	22:57	22h02m37s	-12°34'47"	77°50'23"	1.000	30.19568
12/10/2011	11:53	22:30	22h03m02s	-12°32'32"	70°50'34"	1.000	30.31204
12/17/2011	11:26	22:03	22h03m32s	-12°29'45"	63°51'33"	1.000	30.42362
12/24/2011	10:59	21:36	22h04m08s	-12°26'28"	56°53'14"	1.000	30.52886
12/31/2011	10:32	21:10	22h04m49s	-12°22'43"	49°55'54"	1.000	30.62615

Pluto

Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
 Local Time = UT - 7.00 hours Elevation: 1704 meters Year 2011
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Date	Rise	Set	RA	Dec	Elongation	Ill Fr	DIST(AU)
1/ 1/2011	7:09	16:59	18h22m28s	-18°49'38"	6°37'59"	1.000	32.93246
1/ 8/2011	6:43	16:32	18h23m31s	-18°49'34"	12°34'43"	1.000	32.91869
1/15/2011	6:16	16:06	18h24m33s	-18°49'23"	19°09'42"	1.000	32.89087
1/22/2011	5:50	15:39	18h25m33s	-18°49'05"	25°53'59"	1.000	32.84952
1/29/2011	5:23	15:13	18h26m30s	-18°48'40"	32°42'01"	1.000	32.79528
2/ 5/2011	4:57	14:46	18h27m24s	-18°48'11"	39°31'59"	1.000	32.72889
2/12/2011	4:30	14:20	18h28m14s	-18°47'37"	46°22'51"	1.000	32.65137
2/19/2011	4:03	13:53	18h29m00s	-18°47'02"	53°14'04"	1.000	32.56399
2/26/2011	3:36	13:26	18h29m40s	-18°46'24"	60°05'37"	1.000	32.46804
3/ 5/2011	3:09	12:59	18h30m15s	-18°45'47"	66°57'31"	1.000	32.36487
3/12/2011	2:42	12:32	18h30m44s	-18°45'10"	73°49'28"	1.000	32.25605
3/19/2011	2:15	12:05	18h31m07s	-18°44'36"	80°41'13"	1.000	32.14329
3/26/2011	1:48	11:38	18h31m24s	-18°44'04"	87°32'52"	1.000	32.02823
4/ 2/2011	1:20	11:10	18h31m34s	-18°43'38"	94°24'36"	1.000	31.91250
4/ 9/2011	0:53	10:43	18h31m37s	-18°43'17"	101°16'15"	1.000	31.79786
4/16/2011	0:25	10:15	18h31m34s	-18°43'02"	108°07'32"	1.000	31.68609
4/23/2011	23:53	9:48	18h31m25s	-18°42'54"	114°58'30"	1.000	31.57880
4/30/2011	23:26	9:20	18h31m10s	-18°42'54"	121°49'21"	1.000	31.47751
5/ 7/2011	22:58	8:52	18h30m49s	-18°43'02"	128°39'56"	1.000	31.38377
5/14/2011	22:30	8:24	18h30m22s	-18°43'18"	135°29'51"	1.000	31.29906
5/21/2011	22:02	7:56	18h29m52s	-18°43'43"	142°18'51"	1.000	31.22458
5/28/2011	21:34	7:28	18h29m16s	-18°44'17"	149°06'47"	1.000	31.16137
6/ 4/2011	21:06	7:00	18h28m38s	-18°44'58"	155°52'44"	1.000	31.11046
6/11/2011	20:37	6:31	18h27m57s	-18°45'49"	162°34'02"	1.000	31.07269
6/18/2011	20:09	6:03	18h27m13s	-18°46'46"	169°02'34"	1.000	31.04857
6/25/2011	19:41	5:35	18h26m29s	-18°47'52"	174°31'02"	1.000	31.03843
7/ 2/2011	19:13	5:06	18h25m44s	-18°49'04"	174°10'53"	1.000	31.04255
7/ 9/2011	18:45	4:38	18h24m59s	-18°50'23"	168°32'21"	1.000	31.06096
7/16/2011	18:17	4:10	18h24m16s	-18°51'47"	162°02'51"	1.000	31.09335
7/23/2011	17:48	3:41	18h23m35s	-18°53'16"	155°22'17"	1.000	31.13927
7/30/2011	17:20	3:13	18h22m57s	-18°54'50"	148°37'39"	1.000	31.19820
8/ 6/2011	16:52	2:45	18h22m22s	-18°56'27"	141°51'18"	1.000	31.26938
8/13/2011	16:25	2:17	18h21m51s	-18°58'06"	135°04'17"	1.000	31.35174
8/20/2011	15:57	1:49	18h21m26s	-18°59'47"	128°16'52"	1.000	31.44415
8/27/2011	15:29	1:21	18h21m05s	-19°01'29"	121°29'00"	1.000	31.54542
9/ 3/2011	15:01	0:53	18h20m50s	-19°03'11"	114°40'53"	1.000	31.65420
9/10/2011	14:34	0:25	18h20m41s	-19°04'52"	107°52'50"	1.000	31.76889
9/17/2011	14:06	23:54	18h20m38s	-19°06'31"	101°04'47"	1.000	31.88791
9/24/2011	13:39	23:26	18h20m42s	-19°08'08"	94°16'27"	1.000	32.00973
10/ 1/2011	13:12	22:59	18h20m52s	-19°09'41"	87°27'52"	1.000	32.13266
10/ 8/2011	12:45	22:31	18h21m09s	-19°11'09"	80°39'17"	1.000	32.25493
10/15/2011	12:18	22:04	18h21m32s	-19°12'33"	73°50'41"	1.000	32.37485
10/22/2011	11:51	21:37	18h22m01s	-19°13'50"	67°01'49"	1.000	32.49086
10/29/2011	11:24	21:10	18h22m36s	-19°15'01"	60°12'37"	1.000	32.60136
11/ 5/2011	10:57	20:43	18h23m16s	-19°16'04"	53°23'23"	1.000	32.70473
11/12/2011	10:30	20:16	18h24m01s	-19°16'59"	46°34'16"	1.000	32.79955
11/19/2011	10:04	19:49	18h24m51s	-19°17'46"	39°45'11"	1.000	32.88460
11/26/2011	9:37	19:23	18h25m45s	-19°18'24"	32°56'17"	1.000	32.95870
12/ 3/2011	9:11	18:56	18h26m42s	-19°18'54"	26°08'19"	1.000	33.02073
12/10/2011	8:44	18:30	18h27m41s	-19°19'14"	19°22'50"	1.000	33.06987
12/17/2011	8:18	18:03	18h28m43s	-19°19'26"	12°43'51"	1.000	33.10555
12/24/2011	7:51	17:37	18h29m46s	-19°19'29"	6°32'31"	1.000	33.12727
12/31/2011	7:25	17:10	18h30m50s	-19°19'24"	4°15'04"	1.000	33.13465

Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
 Local Time = UT - 7.00 hours Elevation: 1704 meters Year 2011
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Planet Apsides Report for 2011

Earth

1/ 3/2011 Perihelion Distance from Sun: 0.98 AU
 7/ 5/2011 Aphelion Distance from Sun: 1.02 AU

Mercury

3/16/2011 Perihelion Distance from Sun: 0.31 AU
 6/12/2011 Perihelion Distance from Sun: 0.31 AU
 9/ 7/2011 Perihelion Distance from Sun: 0.31 AU
 12/ 4/2011 Perihelion Distance from Sun: 0.31 AU
 1/31/2011 Aphelion Distance from Sun: 0.47 AU
 4/29/2011 Aphelion Distance from Sun: 0.47 AU
 7/26/2011 Aphelion Distance from Sun: 0.47 AU
 10/21/2011 Aphelion Distance from Sun: 0.47 AU

Venus

8/ 9/2011 Perihelion Distance from Sun: 0.72 AU
 4/18/2011 Aphelion Distance from Sun: 0.73 AU
 11/29/2011 Aphelion Distance from Sun: 0.73 AU

Mars

3/ 9/2011 Perihelion Distance from Sun: 1.38 AU

Jupiter

3/16/2011 Perihelion Distance from Sun: 4.95 AU

Saturn

No Apsis

Planet Conjunction/Opposition Report for 1/ 1/2011 to 12/31/2011

Mercury

Date	Hour	Event
2/25/2011	2	Superior Conjunction
4/ 9/2011	17	Inferior Conjunction
6/12/2011	17	Superior Conjunction
8/16/2011	18	Inferior Conjunction
9/28/2011	17	Superior Conjunction
12/ 4/2011	2	Inferior Conjunction

Venus

Date	Hour	Event
8/16/2011	5	Superior Conjunction

Mars

Date	Hour	Event
2/ 4/2011	17	Conjunction

Jupiter

Date	Hour	Event
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Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
 Local Time = UT - 7.00 hours Elevation: 1704 meters Year 2011
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4/ 6/2011 17 Conjunction
 10/28/2011 19 Opposition

Saturn

Date Hour Event
 10/13/2011 17 Conjunction
 4/ 3/2011 20 Opposition

Uranus

Date Hour Event
 3/21/2011 17 Conjunction
 9/25/2011 17 Opposition

Neptune

Date Hour Event
 2/17/2011 3 Conjunction
 8/22/2011 17 Opposition

Pluto

Date Hour Event
 12/29/2011 1 Conjunction
 6/27/2011 22 Opposition

Planet Data Report

Planet	Mean Dist From Sun (AU)	Period of Revolution	Inclination	Equatorial Diameter (km)
Mercury	0.39	88 days	7°	4880
Venus	0.72	224.7 days	3.4°	12100
Earth	1.00	365.24 days	0°	12756
Mars	1.52	687 days	1.9°	6794
Jupiter	5.20	11.86 years	1.3°	143200
Saturn	9.54	29.46 years	2.5°	120000
Uranus	19.18	84 years	0.8°	52290
Neptune	30.06	165 years	1.8°	50450
Pluto	39.44	248 years	17.2°	2200-2300

Moon Apsides Report for 1/ 1/2011 to 12/31/2011

Date	Hour	Apsis	Distance (km)	Diameter
1/ 9/2011	23	Apogee	404977	0.4918°
1/21/2011	17	Perigee	362792	0.5490°
2/ 6/2011	16	Apogee	405911	0.4906°
2/19/2011	0	Perigee	358273	0.5559°
3/ 6/2011	1	Apogee	406586	0.4898°
3/19/2011	12	Perigee	356600	0.5585°
4/ 2/2011	2	Apogee	406656	0.4897°
4/16/2011	23	Perigee	358101	0.5561°

Midway, UT (J Clegg) Latitude: 40°30'43" N Longitude: 111°28'40" W
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4/29/2011	11	Apogee	406045	0.4905°
5/15/2011	4	Perigee	362139	0.5499°
5/27/2011	3	Apogee	405018	0.4917°
6/11/2011	19	Perigee	367185	0.5424°
6/23/2011	21	Apogee	404282	0.4926°
7/ 7/2011	7	Perigee	369558	0.5389°
7/21/2011	16	Apogee	404370	0.4925°
8/ 2/2011	14	Perigee	365772	0.5445°
8/18/2011	9	Apogee	405177	0.4915°
8/30/2011	11	Perigee	360868	0.5519°
9/15/2011	0	Apogee	406064	0.4905°
9/27/2011	18	Perigee	357566	0.5570°
10/12/2011	5	Apogee	406432	0.4900°
10/26/2011	6	Perigee	357066	0.5578°
11/ 8/2011	6	Apogee	406181	0.4903°
11/23/2011	16	Perigee	359702	0.5537°
12/ 5/2011	18	Apogee	405410	0.4912°
12/21/2011	20	Perigee	364798	0.5459°

Moon Nodes Report for 1/ 1/2011 to 12/31/2011

Date	Time	Node	Illuminated Fraction
1/ 3/2011	5:47	Ascending	0.01
1/17/2011	17:05	Descending	0.94
1/30/2011	11:28	Ascending	0.13
2/14/2011	1:13	Descending	0.77
2/26/2011	13:18	Ascending	0.34
3/13/2011	4:54	Descending	0.52
3/25/2011	14:08	Ascending	0.60
4/ 9/2011	5:48	Descending	0.27
4/21/2011	18:04	Ascending	0.83
5/ 6/2011	7:53	Descending	0.09
5/19/2011	2:02	Ascending	0.96
6/ 2/2011	13:20	Descending	0.00
6/15/2011	11:34	Ascending	1.00
6/29/2011	21:13	Descending	0.02
7/12/2011	19:26	Ascending	0.93
7/27/2011	5:03	Descending	0.15
8/ 8/2011	23:34	Ascending	0.77
8/23/2011	10:23	Descending	0.35
9/ 5/2011	0:35	Ascending	0.53
9/19/2011	12:37	Descending	0.60
10/ 2/2011	2:08	Ascending	0.28
10/16/2011	14:00	Descending	0.83
10/29/2011	7:58	Ascending	0.09
11/12/2011	17:34	Descending	0.97
11/25/2011	18:01	Ascending	0.00
12/10/2011	0:03	Descending	1.00
12/23/2011	4:35	Ascending	0.03

Meteor Showers Report for 1/ 1/2011 to 12/31/2011

Date	Meteor Shower	ZHR	RA	DEC	Illum. Frac.	Longitude
1/ 3/2011	Quadrantids	80	15h28m	50°	0.00	283°
4/11/2011	Virginids	5	14h04m	-9°	0.52	22°
4/22/2011	Lyrids	12	18h08m	32°	0.74	32°
4/28/2011	alpha-Scorpiids	5	16h32m	-24°	0.18	38°
5/ 5/2011	eta-Aquarids	35	22h20m	-1°	0.06	45°

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5/12/2011	alpha-Scorpiids	5	16h04m	-24°	0.71	52°
6/ 9/2011	Ophiuchids	5	17h56m	-23°	0.57	79°
6/20/2011	Ophiuchids	5	17h20m	-20°	0.76	89°
7/ 8/2011	Capricornids	5			0.55	106°
7/15/2011	Capricornids	5	20h44m	-15°	1.00	113°
7/20/2011	alpha-Cygnids	5	21h00m	48°	0.73	118°
7/25/2011	Capricornids	5	21h00m	-15°	0.27	123°
7/29/2011	delta-Aquarids	20	22h36m	-17°	0.02	126°
7/31/2011	Piscis Australids	5	22h40m	-30°	0.01	128°
8/ 2/2011	alpha-Capricornids	5	20h36m	-10°	0.12	130°
8/ 6/2011	iota-Aquarids	8	22h10m	-15°	0.53	134°
8/12/2011	Perseids	75	3h04m	58°	0.99	140°
8/21/2011	alpha-Cygnids	5	21h00m	48°	0.52	148°
9/ 8/2011	Piscids	10	0h36m	7°	0.87	166°
9/20/2011	Piscids	5	0h24m	0°	0.49	178°
10/13/2011	Piscids	??	1h44m	14°	0.98	200°
10/22/2011	Orionids	25	6h24m	15°	0.23	209°
11/ 3/2011	Taurids	8	3h44m	14°	0.60	221°
11/17/2011	Leonids	10	10h08m	22°	0.60	235°
12/ 9/2011	Puppids-Velids	15	9h00m	-48°	0.99	257°
12/14/2011	Geminids	75	7h28m	32°	0.83	262°
12/22/2011	Ursids	5	14h28m	78°	0.06	271°
12/25/2011	Puppids-Velids	15	9h20m	-65°	0.01	274°

Twilight Report for 1/ 1/2011 to 12/31/2011

Date	Sun		Astronomical		Nautical		Civil	
	Rise	Set	Begin	End	Begin	End	Begin	End
1/ 1/2011	7:49	17:10	6:06	18:53	6:40	18:20	7:14	17:45
1/ 8/2011	7:49	17:16	6:07	18:58	6:40	18:25	7:14	17:52
1/15/2011	7:47	17:24	6:06	19:05	6:39	18:32	7:12	17:59
1/22/2011	7:44	17:32	6:04	19:12	6:36	18:39	7:09	18:06
1/29/2011	7:38	17:40	6:00	19:19	6:32	18:47	7:05	18:14
2/ 5/2011	7:32	17:49	5:54	19:26	6:26	18:54	6:58	18:22
2/12/2011	7:24	17:57	5:47	19:34	6:19	19:02	6:51	18:30
2/19/2011	7:14	18:06	5:39	19:41	6:10	19:10	6:42	18:38
2/26/2011	7:04	18:14	5:30	19:49	6:01	19:17	6:33	18:46
3/ 5/2011	6:54	18:22	5:19	19:56	5:51	19:25	6:22	18:53
3/12/2011	6:43	18:29	5:08	20:04	5:40	19:32	6:11	19:01
3/19/2011	6:31	18:37	4:56	20:12	5:28	19:40	6:00	19:08
3/26/2011	6:20	18:44	4:43	20:21	5:16	19:48	5:48	19:16
4/ 2/2011	6:08	18:51	4:30	20:29	5:04	19:56	5:36	19:23
4/ 9/2011	5:57	18:59	4:17	20:39	4:52	20:04	5:25	19:31
4/16/2011	5:46	19:06	4:04	20:48	4:40	20:13	5:13	19:39
4/23/2011	5:36	19:13	3:51	20:58	4:28	20:21	5:03	19:47
4/30/2011	5:26	19:20	3:38	21:09	4:17	20:30	4:52	19:55
5/ 7/2011	5:18	19:28	3:26	21:20	4:06	20:39	4:43	20:02
5/14/2011	5:11	19:35	3:15	21:31	3:57	20:48	4:35	20:10
5/21/2011	5:04	19:41	3:05	21:41	3:49	20:57	4:28	20:18
5/28/2011	5:00	19:47	2:56	21:51	3:42	21:05	4:23	20:24
6/ 4/2011	4:57	19:52	2:50	21:59	3:38	21:11	4:19	20:30
6/11/2011	4:55	19:56	2:46	22:05	3:35	21:16	4:17	20:34
6/18/2011	4:55	19:59	2:45	22:09	3:34	21:20	4:17	20:37
6/25/2011	4:57	20:00	2:46	22:11	3:36	21:21	4:18	20:39
7/ 2/2011	5:00	20:00	2:51	22:09	3:40	21:20	4:22	20:38
7/ 9/2011	5:04	19:58	2:57	22:05	3:45	21:17	4:26	20:36
7/16/2011	5:09	19:55	3:06	21:58	3:52	21:12	4:32	20:32
7/23/2011	5:15	19:50	3:15	21:49	3:59	21:05	4:38	20:26
7/30/2011	5:21	19:43	3:25	21:39	4:07	20:57	4:45	20:19

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8/ 6/2011	5:28	19:35	3:36	21:27	4:16	20:47	4:53	20:10
8/13/2011	5:34	19:26	3:46	21:15	4:25	20:36	5:00	20:00
8/20/2011	5:41	19:17	3:56	21:02	4:33	20:25	5:08	19:50
8/27/2011	5:48	19:06	4:06	20:48	4:41	20:13	5:15	19:39
9/ 3/2011	5:55	18:55	4:15	20:35	4:49	20:00	5:23	19:27
9/10/2011	6:02	18:43	4:24	20:22	4:57	19:48	5:30	19:15
9/17/2011	6:08	18:32	4:32	20:08	5:05	19:35	5:37	19:03
9/24/2011	6:15	18:20	4:40	19:56	5:12	19:23	5:44	18:52
10/ 1/2011	6:22	18:08	4:47	19:43	5:19	19:11	5:51	18:40
10/ 8/2011	6:29	17:57	4:55	19:32	5:26	19:00	5:58	18:29
10/15/2011	6:37	17:46	5:02	19:21	5:33	18:50	6:05	18:18
10/22/2011	6:44	17:36	5:09	19:11	5:40	18:40	6:12	18:08
10/29/2011	6:52	17:27	5:16	19:03	5:48	18:31	6:20	17:59
11/ 5/2011	7:00	17:18	5:23	18:55	5:55	18:24	6:27	17:51
11/12/2011	7:09	17:11	5:30	18:50	6:02	18:18	6:35	17:45
11/19/2011	7:17	17:06	5:37	18:45	6:09	18:13	6:42	17:40
11/26/2011	7:25	17:02	5:44	18:42	6:16	18:10	6:50	17:36
12/ 3/2011	7:32	16:59	5:50	18:41	6:23	18:09	6:57	17:35
12/10/2011	7:38	16:59	5:55	18:42	6:28	18:09	7:03	17:35
12/17/2011	7:43	17:01	6:00	18:44	6:33	18:11	7:08	17:36
12/24/2011	7:47	17:04	6:04	18:47	6:37	18:14	7:11	17:40
12/31/2011	7:49	17:09	6:06	18:52	6:39	18:19	7:13	17:45