



EVENT TIME TABLES

13.04.2012 - 22.04.2012

Author: Andrew BAUER

May 13, 2025

Disclaimer: These are computer generated tables. They focus on times of rising and setting events and are rounded to the second (not primarily intended for navigation). Meridian Passage times of the sun, moon and four planets are included. All times are in UT (=UT1). The author claims no liability for any consequences arising from use of these tables.

DUT1 = UT1-UTC = -0.5258 sec $\Delta T = TT-UT1 = +66.7098$ sec

2012 April 13 to Apr. 14 UT

13 April 2012								
Lat.	Twilight		Sunrise	Sunset	Twilight		Moonrise	Moonset
	Naut.	Civil			Civil	Naut.		
N 72°	////	02:12:46	03:48:33	20:16:01	21:55:12	////	■	■
N 70°	////	02:45:22	04:03:59	19:59:56	21:20:23	////	04:24:20	07:52:13
68°	01:05:43	03:08:36	04:16:18	19:47:10	20:56:02	23:09:00	03:41:22	08:34:17
66°	01:54:22	03:26:28	04:26:24	19:36:44	20:37:28	22:12:44	03:12:18	09:02:34
64°	02:23:55	03:40:50	04:34:52	19:27:59	20:22:38	21:41:17	02:50:12	09:23:58
62°	02:45:35	03:52:42	04:42:06	19:20:32	20:10:23	21:18:39	02:32:26	09:41:05
60°	03:02:40	04:02:45	04:48:22	19:14:05	20:00:04	21:00:58	02:17:38	09:55:18
N 58°	03:16:40	04:11:23	04:53:52	19:08:25	19:51:13	20:46:32	02:05:02	10:07:22
56°	03:28:28	04:18:55	04:58:45	19:03:24	19:43:30	20:34:26	01:54:05	10:17:49
54°	03:38:35	04:25:33	05:03:07	18:58:55	19:36:43	20:24:04	01:44:26	10:27:01
52°	03:47:24	04:31:27	05:07:04	18:54:53	19:30:41	20:15:03	01:35:49	10:35:11
50°	03:55:09	04:36:44	05:10:39	18:51:12	19:25:16	20:07:07	01:28:04	10:42:32
45°	04:11:07	04:47:54	05:18:23	18:43:17	19:13:52	19:50:51	01:11:32	10:58:10
N 40°	04:23:33	04:56:54	05:24:48	18:36:42	19:04:42	19:38:11	00:57:56	11:10:57
35°	04:33:34	05:04:21	05:30:18	18:31:05	18:57:07	19:27:59	00:46:21	11:21:48
30°	04:41:50	05:10:40	05:35:07	18:26:10	18:50:40	19:19:35	00:36:13	11:31:16
20°	04:54:44	05:20:58	05:43:22	18:17:44	18:40:10	19:06:27	00:18:45	11:47:29
N 10°	05:04:23	05:29:12	05:50:30	18:10:27	18:31:46	18:56:37	00:03:30	12:01:34
0°	05:11:51	05:36:10	05:57:06	18:03:43	18:24:40	18:48:59	12:14:41
S 10°	05:17:46	05:42:22	06:03:36	17:57:05	18:18:19	18:42:56	12:27:45
20°	05:22:27	05:48:10	06:10:25	17:50:09	18:12:23	18:38:06	12:41:37
30°	05:26:02	05:53:54	06:18:03	17:42:22	18:06:30	18:34:20	12:57:25
35°	05:27:26	05:56:51	06:22:25	17:37:55	18:03:27	18:32:51	23:54:32	13:06:34
40°	05:28:30	05:59:58	06:27:19	17:32:55	18:00:15	18:31:40	23:44:59	13:16:57
45°	05:29:14	06:03:18	06:32:59	17:27:09	17:56:48	18:30:49	23:33:46	13:29:06
S 50°	05:29:31	06:07:00	06:39:43	17:20:18	17:52:58	18:30:22	23:20:08	13:43:47
52°	05:29:29	06:08:37	06:42:50	17:17:09	17:51:18	18:30:20	23:13:46	13:50:38
54°	05:29:21	06:10:20	06:46:13	17:13:42	17:49:31	18:30:24	23:06:42	13:58:12
56°	05:29:05	06:12:10	06:49:58	17:09:53	17:47:36	18:30:35	22:58:47	14:06:39
58°	05:28:41	06:14:09	06:54:07	17:05:40	17:45:33	18:30:53	22:49:51	14:16:10
S 60°	05:28:07	06:16:19	06:58:47	17:00:56	17:43:18	18:31:21	22:39:37	14:27:01

Apr 13	SHA	Mer.pass
Venus	294°18.9	14:56:08
Mars	203°21.7	20:56:41
Jupiter	316°12.1	13:27:09
Saturn	154°30.5	00:15:35

14 April 2012								
Lat.	Twilight		Sunrise	Sunset	Twilight		Moonrise	Moonset
	Naut.	Civil			Civil	Naut.		
N 72°	////	02:03:49	03:42:50	20:21:20	22:04:14	////	04:35:19	09:29:25
N 70°	////	02:38:45	03:59:04	20:04:26	21:26:42	////	04:02:02	10:01:18
68°	00:50:21	03:03:13	04:11:57	19:51:04	21:01:02	23:30:45	03:37:48	10:24:19
66°	01:46:42	03:21:52	04:22:30	19:40:09	20:41:38	22:20:24	03:18:54	10:42:09
64°	02:18:13	03:36:48	04:31:21	19:31:02	20:26:12	21:46:41	03:03:31	10:56:35
62°	02:40:55	03:49:06	04:38:53	19:23:16	20:13:31	21:22:55	02:50:39	11:08:35
60°	02:58:40	03:59:30	04:45:25	19:16:33	20:02:51	21:04:32	02:39:40	11:18:47
N 58°	03:13:09	04:08:25	04:51:09	19:10:40	19:53:42	20:49:36	02:30:08	11:27:37
56°	03:25:18	04:16:11	04:56:13	19:05:27	19:45:45	20:37:07	02:21:44	11:35:21
54°	03:35:43	04:23:01	05:00:46	19:00:47	19:38:45	20:26:27	02:14:15	11:42:14
52°	03:44:47	04:29:06	05:04:52	18:56:35	19:32:32	20:17:11	02:07:32	11:48:24
50°	03:52:45	04:34:34	05:08:35	18:52:46	19:26:58	20:09:03	02:01:26	11:53:58
45°	04:09:07	04:46:04	05:16:38	18:44:32	19:15:13	19:52:21	01:48:19	12:05:54
N 40°	04:21:52	04:55:19	05:23:18	18:37:43	19:05:47	19:39:22	01:37:26	12:15:45
35°	04:32:08	05:03:00	05:29:00	18:31:54	18:57:58	19:28:56	01:28:06	12:24:08
30°	04:40:37	05:09:31	05:34:00	18:26:47	18:51:20	19:20:18	01:19:53	12:31:29
20°	04:53:52	05:20:09	05:42:34	18:18:02	18:40:30	19:06:49	01:05:42	12:44:07
N 10°	05:03:49	05:28:40	05:49:59	18:10:28	18:31:49	18:56:42	00:53:15	12:55:06
0°	05:11:33	05:35:54	05:56:51	18:03:28	18:24:26	18:48:48	00:41:34	13:05:20
S 10°	05:17:44	05:42:21	06:03:37	17:56:35	18:17:51	18:42:28	00:29:51	13:15:32
20°	05:22:41	05:48:26	06:10:42	17:49:22	18:11:38	18:37:22	00:17:19	13:26:19
30°	05:26:36	05:54:28	06:18:39	17:41:16	18:05:26	18:33:17	00:02:56	13:38:35
35°	05:28:10	05:57:37	06:23:12	17:36:38	18:02:12	18:31:38	13:45:38
40°	05:29:27	06:00:56	06:28:19	17:31:26	17:58:48	18:30:14	13:53:38
45°	05:30:24	06:04:30	06:34:14	17:25:25	17:55:07	18:29:09	14:02:55
S 50°	05:30:59	06:08:29	06:41:16	17:18:16	17:51:00	18:28:26	14:14:03
52°	05:31:04	06:10:13	06:44:30	17:14:59	17:49:12	18:28:16	14:19:12
54°	05:31:04	06:12:05	06:48:03	17:11:23	17:47:17	18:28:12	14:24:52
56°	05:30:58	06:14:05	06:51:57	17:07:25	17:45:13	18:28:13	14:31:08
58°	05:30:44	06:16:14	06:56:18	17:03:00	17:42:59	18:28:21	14:38:08
S 60°	05:30:21	06:18:35	07:01:11	16:58:03	17:40:33	18:28:38	14:46:03

Apr 14	SHA	Mer.pass
Venus	293°26.1	14:55:41
Mars	203°23.1	20:52:42
Jupiter	315°58.5	13:24:07
Saturn	154°34.9	00:11:21

Day	Sun		Moon		
	Eqn.of Time	Mer.	Mer.Pass.		Age
	00 ^h mm:ss	Pass hh:mm:ss	Upper hh:mm:ss	Lower hh:mm:ss	
13	00:32	00:24	12:00:24	06:02:02	22(55%)
14	00:17	00:10	12:00:10	06:53:33	23(44%)

DUT1 = UT1-UTC = -0.5283 sec $\Delta T = TT-UT1 = +66.7123$ sec

2012 April 15 to Apr. 16 UT

15 April 2012								
Lat.	Twilight		Sunrise	Sunset	Twilight		Moonrise	Moonset
	Naut.	Civil			Civil	Naut.		
N 72°	////	01:54:19	03:37:04	20:26:43	22:13:58	////	04:07:31	11:36:57
N 70°	////	02:31:58	03:54:06	20:08:57	21:33:15	////	03:48:57	11:53:44
68°	00:28:08	02:57:44	04:07:36	19:54:58	21:06:08	////	03:34:11	12:06:57
66°	01:38:33	03:17:14	04:18:37	19:43:35	20:45:52	22:28:41	03:22:05	12:17:43
64°	02:12:21	03:32:44	04:27:50	19:34:05	20:29:49	21:52:16	03:11:55	12:26:41
62°	02:36:10	03:45:30	04:35:41	19:26:00	20:16:41	21:27:17	03:03:14	12:34:18
60°	02:54:37	03:56:14	04:42:28	19:19:01	20:05:39	21:08:09	02:55:41	12:40:53
N 58°	03:09:36	04:05:27	04:48:26	19:12:54	19:56:12	20:52:42	02:49:04	12:46:39
56°	03:22:08	04:13:27	04:53:42	19:07:29	19:48:00	20:39:50	02:43:10	12:51:45
54°	03:32:51	04:20:30	04:58:25	19:02:39	19:40:48	20:28:51	02:37:53	12:56:18
52°	03:42:10	04:26:46	05:02:40	18:58:18	19:34:23	20:19:20	02:33:06	13:00:24
50°	03:50:20	04:32:23	05:06:33	18:54:20	19:28:39	20:10:59	02:28:44	13:04:08
45°	04:07:07	04:44:14	05:14:53	18:45:48	19:16:35	19:53:52	02:19:18	13:12:10
N 40°	04:20:11	04:53:45	05:21:48	18:38:44	19:06:52	19:40:34	02:11:24	13:18:50
35°	04:30:42	05:01:39	05:27:43	18:32:42	18:58:49	19:29:52	02:04:36	13:24:33
30°	04:39:24	05:08:22	05:32:54	18:27:24	18:51:59	19:21:02	01:58:36	13:29:34
20°	04:53:01	05:19:20	05:41:47	18:18:20	18:40:50	19:07:12	01:48:11	13:38:12
N 10°	05:03:15	05:28:08	05:49:29	18:10:29	18:31:52	18:56:47	01:39:01	13:45:43
0°	05:11:16	05:35:38	05:56:36	18:03:14	18:24:14	18:48:37	01:30:24	13:52:44
S 10°	05:17:42	05:42:21	06:03:37	17:56:05	18:17:22	18:42:01	01:21:46	13:59:43
20°	05:22:56	05:48:42	06:10:59	17:48:36	18:10:53	18:36:38	01:12:32	14:07:05
30°	05:27:09	05:55:03	06:19:16	17:40:11	18:04:22	18:32:15	01:01:58	14:15:26
35°	05:28:54	05:58:22	06:23:59	17:35:22	18:00:58	18:30:25	00:55:50	14:20:13
40°	05:30:23	06:01:53	06:29:19	17:29:57	17:57:22	18:28:49	00:48:51	14:25:38
45°	05:31:35	06:05:42	06:35:28	17:23:42	17:53:26	18:27:30	00:40:42	14:31:53
S 50°	05:32:25	06:09:57	06:42:48	17:16:15	17:49:04	18:26:31	00:30:53	14:39:20
52°	05:32:39	06:11:50	06:46:11	17:12:50	17:47:08	18:26:14	00:26:18	14:42:46
54°	05:32:47	06:13:50	06:49:52	17:09:05	17:45:04	18:26:01	00:21:16	14:46:31
56°	05:32:50	06:15:59	06:53:57	17:04:56	17:42:51	18:25:53	00:15:40	14:50:39
58°	05:32:46	06:18:19	06:58:29	17:00:20	17:40:26	18:25:51	00:09:24	14:55:15
S 60°	05:32:35	06:20:52	07:03:35	16:55:10	17:37:48	18:25:56	00:02:17	15:00:24

Apr 15	SHA	Mer.pass
Venus	292°34.1	14:55:11
Mars	203°23.8	20:48:46
Jupiter	315°44.8	13:21:06
Saturn	154°39.2	00:07:08

16 April 2012								
Lat.	Twilight		Sunrise	Sunset	Twilight		Moonrise	Moonset
	Naut.	Civil			Civil	Naut.		
N 72°	////	01:44:08	03:31:13	20:32:11	22:24:36	////	03:48:49	13:29:53
N 70°	////	02:24:57	03:49:07	20:13:32	21:40:03	////	03:38:48	13:37:39
68°	////	02:52:11	04:03:14	19:58:54	21:11:21	////	03:30:34	13:43:57
66°	01:29:48	03:12:32	04:14:43	19:47:02	20:50:09	22:37:46	03:23:41	13:49:11
64°	02:06:17	03:28:39	04:24:19	19:37:08	20:33:28	21:58:05	03:17:49	13:53:36
62°	02:31:20	03:41:52	04:32:29	19:28:44	20:19:52	21:31:46	03:12:44	13:57:24
60°	02:50:31	03:52:58	04:39:32	19:21:29	20:08:28	21:11:50	03:08:17	14:00:42
N 58°	03:06:01	04:02:29	04:45:43	19:15:09	19:58:43	20:55:51	03:04:21	14:03:37
56°	03:18:57	04:10:44	04:51:11	19:09:32	19:50:16	20:42:34	03:00:49	14:06:12
54°	03:29:59	04:18:00	04:56:05	19:04:31	19:42:50	20:31:16	02:57:39	14:08:31
52°	03:39:32	04:24:27	05:00:30	19:00:00	19:36:15	20:21:30	02:54:46	14:10:37
50°	03:47:56	04:30:13	05:04:30	18:55:54	19:30:21	20:12:56	02:52:07	14:12:32
45°	04:05:08	04:42:24	05:13:09	18:47:04	19:17:56	19:55:23	02:46:23	14:16:39
N 40°	04:18:31	04:52:12	05:20:19	18:39:45	19:07:57	19:41:46	02:41:34	14:20:06
35°	04:29:17	05:00:20	05:26:26	18:33:30	18:59:41	19:30:49	02:37:25	14:23:03
30°	04:38:12	05:07:14	05:31:48	18:28:02	18:52:39	19:21:46	02:33:44	14:25:39
20°	04:52:09	05:18:31	05:41:01	18:18:38	18:41:10	19:07:35	02:27:19	14:30:07
N 10°	05:02:41	05:27:37	05:48:59	18:10:31	18:31:55	18:56:52	02:21:41	14:34:01
0°	05:10:58	05:35:22	05:56:22	18:03:00	18:24:01	18:48:26	02:16:22	14:37:39
S 10°	05:17:40	05:42:20	06:03:38	17:55:36	18:16:55	18:41:35	02:11:03	14:41:15
20°	05:23:11	05:48:58	06:11:17	17:47:50	18:10:09	18:35:55	02:05:22	14:45:04
30°	05:27:43	05:55:38	06:19:52	17:39:06	18:03:20	18:31:14	01:58:53	14:49:21
35°	05:29:38	05:59:08	06:24:47	17:34:07	17:59:45	18:29:13	01:55:09	14:51:49
40°	05:31:19	06:02:51	06:30:19	17:28:30	17:55:56	18:27:26	01:50:53	14:54:34
45°	05:32:45	06:06:53	06:36:43	17:22:00	17:51:47	18:25:53	01:45:56	14:57:46
S 50°	05:33:52	06:11:25	06:44:20	17:14:15	17:47:08	18:24:37	01:40:00	15:01:33
52°	05:34:12	06:13:25	06:47:51	17:10:42	17:45:04	18:24:12	01:37:15	15:03:17
54°	05:34:29	06:15:34	06:51:42	17:06:48	17:42:52	18:23:51	01:34:14	15:05:10
56°	05:34:41	06:17:52	06:55:57	17:02:29	17:40:30	18:23:35	01:30:54	15:07:15
58°	05:34:48	06:20:23	07:00:41	16:57:42	17:37:55	18:23:23	01:27:10	15:09:33
S 60°	05:34:48	06:23:07	07:05:59	16:52:19	17:35:05	18:23:17	01:22:58	15:12:07

Apr 16	SHA	Mer.pass
Venus	291°42.8	14:54:37
Mars	203°23.9	20:44:52
Jupiter	315°31.0	13:18:05
Saturn	154°43.5	00:02:55

Day	Sun			Moon		
	Eqn.of Time 00 ^h mm:ss	12 ^h mm:ss	Mer. Pass hh:mm:ss	Mer.Pass.		Age
				Upper hh:mm:ss	Lower hh:mm:ss	
15	00:02	00:05	11:59:55	07:41:38	20:04:38	24(34%)
16	00:12	00:19	11:59:41	08:27:03	20:49:02	25(25%)

DUT1 = UT1-UTC = -0.5309 sec $\Delta T = TT-UT1 = +66.7149$ sec

2012 April 17 to Apr. 18 UT

17 April 2012							
Lat.	Twilight		Sunrise	Sunset	Twilight		Moonrise
	Naut.	Civil			Civil	Naut.	
N 72°	////	01:33:03	03:25:19	20:37:43	22:36:31	////	03:33:20
N 70°	////	02:17:43	03:44:06	20:18:09	21:47:08	////	03:29:52
68°	////	02:46:31	03:58:51	20:02:52	21:16:41	////	03:26:59
66°	01:20:16	03:07:48	04:10:50	19:50:29	20:54:30	22:47:58	03:24:33
64°	02:00:01	03:24:33	04:20:49	19:40:12	20:37:10	22:04:10	03:22:28
62°	02:26:24	03:38:14	04:29:17	19:31:29	20:23:04	21:36:21	03:20:40
60°	02:46:23	03:49:42	04:36:37	19:23:58	20:11:17	21:15:35	03:19:04
N 58°	03:02:25	03:59:30	04:43:01	19:17:23	20:01:14	20:59:02	03:17:39
56°	03:15:45	04:08:01	04:48:42	19:11:35	19:52:32	20:45:20	03:16:23
54°	03:27:06	04:15:29	04:53:46	19:06:23	19:44:54	20:33:43	03:15:14
52°	03:36:55	04:22:07	04:58:20	19:01:43	19:38:07	20:23:41	03:14:12
50°	03:45:32	04:28:04	05:02:29	18:57:28	19:32:03	20:14:53	03:13:15
45°	04:03:09	04:40:35	05:11:25	18:48:20	19:19:18	19:56:55	03:11:10
N 40°	04:16:51	04:50:39	05:18:50	18:40:46	19:09:02	19:42:59	03:09:25
35°	04:27:53	04:59:00	05:25:10	18:34:19	19:00:33	19:31:46	03:07:55
30°	04:37:00	05:06:06	05:30:43	18:28:39	18:53:19	19:22:30	03:06:35
20°	04:51:19	05:17:43	05:40:15	18:18:57	18:41:31	19:07:58	03:04:16
N 10°	05:02:08	05:27:06	05:48:30	18:10:33	18:31:59	18:56:58	03:02:13
0°	05:10:41	05:35:06	05:56:08	18:02:47	18:23:49	18:48:16	03:00:19
S 10°	05:17:39	05:42:20	06:03:40	17:55:08	18:16:27	18:41:09	02:58:24
20°	05:23:26	05:49:14	06:11:35	17:47:05	18:09:25	18:35:13	02:56:23
30°	05:28:16	05:56:13	06:20:29	17:38:02	18:02:18	18:30:13	02:54:05
35°	05:30:22	05:59:53	06:25:34	17:32:52	17:58:32	18:28:02	02:52:45
40°	05:32:15	06:03:48	06:31:19	17:27:03	17:54:32	18:26:03	02:51:15
45°	05:33:54	06:08:05	06:37:57	17:20:18	17:50:09	18:24:17	02:49:31
S 50°	05:35:18	06:12:53	06:45:53	17:12:16	17:45:13	18:22:44	02:47:26
52°	05:35:46	06:15:01	06:49:32	17:08:34	17:43:02	18:22:12	02:46:28
54°	05:36:11	06:17:18	06:53:32	17:04:31	17:40:41	18:21:43	02:45:25
56°	05:36:32	06:19:46	06:57:57	17:00:03	17:38:10	18:21:17	02:44:16
58°	05:36:48	06:22:26	07:02:52	16:55:04	17:35:25	18:20:56	02:42:59
S 60°	05:37:00	06:25:23	07:08:23	16:49:28	17:32:24	18:20:38	02:41:32

Apr 17	SHA	Mer.pass
Venus	290°52.3	14:54:01
Mars	203°23.2	20:41:01
Jupiter	315°17.2	13:15:04
Saturn	154°47.9	23:54:29

18 April 2012							
Lat.	Twilight		Sunrise	Sunset	Twilight		Moonrise
	Naut.	Civil			Civil	Naut.	
N 72°	////	01:20:42	03:19:21	20:43:22	22:50:23	////	03:18:55
N 70°	////	02:10:11	03:39:04	20:22:49	21:54:34	////	03:21:24
68°	////	02:40:44	03:54:28	20:06:51	21:22:10	////	03:23:28
66°	01:09:38	03:03:01	04:06:56	19:53:58	20:58:55	22:59:52	03:25:13
64°	01:53:30	03:20:25	04:17:18	19:43:17	20:40:54	22:10:33	03:26:43
62°	02:21:22	03:34:35	04:26:06	19:34:14	20:26:18	21:41:05	03:28:01
60°	02:42:12	03:46:26	04:33:42	19:26:26	20:14:08	21:19:25	03:29:10
N 58°	02:58:48	03:56:33	04:40:20	19:19:38	20:03:47	21:02:16	03:30:12
56°	03:12:33	04:05:18	04:46:13	19:13:37	19:54:49	20:48:08	03:31:07
54°	03:24:13	04:13:00	04:51:27	19:08:15	19:46:57	20:36:11	03:31:57
52°	03:34:18	04:19:49	04:56:11	19:03:25	19:39:59	20:25:52	03:32:43
50°	03:43:08	04:25:55	05:00:29	18:59:02	19:33:46	20:16:51	03:33:24
45°	04:01:11	04:38:47	05:09:43	18:49:36	19:20:39	19:58:27	03:34:56
N 40°	04:15:12	04:49:07	05:17:22	18:41:47	19:10:08	19:44:12	03:36:13
35°	04:26:29	04:57:42	05:23:55	18:35:07	19:01:25	19:32:44	03:37:20
30°	04:35:49	05:04:59	05:29:39	18:29:17	18:54:00	19:23:15	03:38:20
20°	04:50:28	05:16:56	05:39:29	18:19:16	18:41:51	19:08:22	03:40:05
N 10°	05:01:35	05:26:35	05:48:01	18:10:36	18:32:03	18:57:04	03:41:38
0°	05:10:24	05:34:51	05:55:54	18:02:34	18:23:38	18:48:06	03:43:07
S 10°	05:17:37	05:42:21	06:03:42	17:54:39	18:16:01	18:40:44	03:44:37
20°	05:23:41	05:49:31	06:11:53	17:46:21	18:08:43	18:34:32	03:46:14
30°	05:28:49	05:56:47	06:21:05	17:36:59	18:01:17	18:29:14	03:48:05
35°	05:31:06	06:00:39	06:26:22	17:31:38	17:57:21	18:26:52	03:49:10
40°	05:33:10	06:04:45	06:32:19	17:25:36	17:53:08	18:24:41	03:50:24
45°	05:35:03	06:09:16	06:39:12	17:18:38	17:48:32	18:22:41	03:51:50
S 50°	05:36:43	06:14:21	06:47:25	17:10:18	17:43:19	18:20:53	03:53:33
52°	05:37:19	06:16:37	06:51:12	17:06:28	17:41:00	18:20:14	03:54:21
54°	05:37:52	06:19:02	06:55:21	17:02:16	17:38:31	18:19:36	03:55:14
56°	05:38:22	06:21:39	06:59:56	16:57:37	17:35:51	18:19:02	03:56:12
58°	05:38:48	06:24:30	07:05:03	16:52:27	17:32:56	18:18:30	03:57:16
S 60°	05:39:11	06:27:38	07:10:48	16:46:38	17:29:43	18:18:02	03:58:29

Apr 18	SHA	Mer.pass
Venus	290°02.7	14:53:20
Mars	203°21.8	20:37:13
Jupiter	315°03.4	13:12:03
Saturn	154°52.2	23:50:16

Day	Sun			Moon		
	Eqn.of Time		Mer. Pass	Mer.Pass.		Age
	00 ^h mm:ss	12 ^h mm:ss		Upper hh:mm:ss	Lower hh:mm:ss	
17	00:26	00:33	11:59:27	09:10:40	21:32:04	26(17%)
18	00:39	00:46	11:59:14	09:53:20	22:14:34	27(10%)

DUT1 = UT1-UTC = -0.5335 sec $\Delta T = TT-UT1 = +66.7175$ sec

2012 April 19 to Apr. 20 UT

19 April 2012								
Lat.	Twilight		Sunrise	Sunset	Twilight		Moonrise	Moonset
	Naut.	Civil			Civil	Naut.		
N 72°	////	01:06:25	03:13:18	20:49:07	23:07:47	////	03:04:11	18:46:31
N 70°	////	02:02:20	03:33:59	20:27:32	22:02:25	////	03:12:53	18:32:05
68°	////	02:34:50	03:50:03	20:10:52	21:27:48	////	03:20:02	18:20:36
66°	00:57:18	02:58:10	04:03:02	19:57:28	21:03:25	23:14:50	03:26:02	18:11:12
64°	01:46:41	03:16:16	04:13:48	19:46:22	20:44:41	22:17:19	03:31:10	18:03:19
62°	02:16:13	03:30:56	04:22:56	19:36:59	20:29:34	21:45:56	03:35:37	17:56:35
60°	02:37:57	03:43:10	04:30:48	19:28:55	20:17:00	21:23:18	03:39:31	17:50:46
N 58°	02:55:09	03:53:35	04:37:40	19:21:53	20:06:19	21:05:32	03:42:59	17:45:39
56°	03:09:19	04:02:36	04:43:44	19:15:40	19:57:06	20:50:57	03:46:05	17:41:07
54°	03:21:19	04:10:30	04:49:10	19:10:07	19:49:01	20:38:40	03:48:52	17:37:04
52°	03:31:40	04:17:31	04:54:03	19:05:08	19:41:52	20:28:05	03:51:25	17:33:24
50°	03:40:44	04:23:47	04:58:29	19:00:36	19:35:28	20:18:50	03:53:44	17:30:04
45°	03:59:13	04:36:59	05:08:01	18:50:52	19:22:01	20:00:00	03:58:48	17:22:53
N 40°	04:13:33	04:47:36	05:15:56	18:42:48	19:11:13	19:45:25	04:03:04	17:16:53
35°	04:25:06	04:56:24	05:22:41	18:35:56	19:02:17	19:33:41	04:06:45	17:11:45
30°	04:34:38	05:03:53	05:28:36	18:29:54	18:54:40	19:24:00	04:10:02	17:07:14
20°	04:49:39	05:16:09	05:38:45	18:19:35	18:42:12	19:08:46	04:15:45	16:59:25
N 10°	05:01:03	05:26:05	05:47:32	18:10:38	18:32:07	18:57:11	04:20:48	16:52:35
0°	05:10:08	05:34:37	05:55:41	18:02:22	18:23:27	18:47:57	04:25:36	16:46:10
S 10°	05:17:36	05:42:21	06:03:44	17:54:12	18:15:34	18:40:20	04:30:24	16:39:47
20°	05:23:56	05:49:47	06:12:11	17:45:37	18:08:00	18:33:51	04:35:34	16:33:00
30°	05:29:23	05:57:22	06:21:42	17:35:57	18:00:16	18:28:15	04:41:29	16:25:18
35°	05:31:49	06:01:24	06:27:10	17:30:25	17:56:10	18:25:43	04:44:55	16:20:52
40°	05:34:06	06:05:43	06:33:19	17:24:11	17:51:46	18:23:21	04:48:49	16:15:51
45°	05:36:12	06:10:27	06:40:26	17:16:58	17:46:55	18:21:07	04:53:22	16:10:03
S 50°	05:38:08	06:15:49	06:48:57	17:08:21	17:41:26	18:19:03	04:58:50	16:03:07
52°	05:38:51	06:18:12	06:52:52	17:04:23	17:39:00	18:18:16	05:01:22	15:59:56
54°	05:39:32	06:20:45	06:57:10	17:00:01	17:36:23	18:17:31	05:04:09	15:56:27
56°	05:40:11	06:23:31	07:01:56	16:55:13	17:33:33	18:16:48	05:07:13	15:52:36
58°	05:40:48	06:26:33	07:07:14	16:49:51	17:30:28	18:16:06	05:10:39	15:48:20
S 60°	05:41:21	06:29:52	07:13:12	16:43:49	17:27:04	18:15:27	05:14:31	15:43:33

Apr 19	SHA	Mer.pass
Venus	289°14.0	14:52:36
Mars	203°19.8	20:33:28
Jupiter	314°49.5	13:09:03
Saturn	154°56.5	23:46:03

20 April 2012								
Lat.	Twilight		Sunrise	Sunset	Twilight		Moonrise	Moonset
	Naut.	Civil			Civil	Naut.		
N 72°	////	00:48:36	03:07:09	20:54:58	23:36:04	////	02:47:35	20:38:48
N 70°	////	01:54:05	03:28:51	20:32:18	22:10:45	////	03:03:46	20:13:00
68°	////	02:28:48	03:45:38	20:14:54	21:33:36	////	03:16:45	19:53:35
66°	00:41:55	02:53:15	03:59:08	20:00:58	21:08:00	23:39:13	03:27:29	19:38:13
64°	01:39:31	03:12:05	04:10:19	19:49:28	20:48:30	22:24:31	03:36:31	19:25:38
62°	02:10:57	03:27:16	04:19:46	19:39:45	20:32:51	21:50:57	03:44:17	19:15:04
60°	02:33:39	03:39:53	04:27:54	19:31:24	20:19:53	21:27:16	03:51:02	19:06:02
N 58°	02:51:28	03:50:37	04:35:01	19:24:08	20:08:53	21:08:51	03:56:59	18:58:10
56°	03:06:05	03:59:54	04:41:17	19:17:43	19:59:24	20:53:48	04:02:17	18:51:15
54°	03:18:26	04:08:01	04:46:53	19:11:59	19:51:06	20:41:10	04:07:03	18:45:06
52°	03:29:03	04:15:14	04:51:55	19:06:50	19:43:45	20:30:18	04:11:22	18:39:34
50°	03:38:20	04:21:40	04:56:30	19:02:10	19:37:11	20:20:49	04:15:18	18:34:33
45°	03:57:16	04:35:13	05:06:20	18:52:08	19:23:23	20:01:32	04:23:51	18:23:46
N 40°	04:11:55	04:46:05	05:14:29	18:43:49	19:12:19	19:46:38	04:31:00	18:14:51
35°	04:23:43	04:55:07	05:21:27	18:36:44	19:03:09	19:34:39	04:37:11	18:07:13
30°	04:33:28	05:02:47	05:27:33	18:30:32	18:55:21	19:24:45	04:42:39	18:00:31
20°	04:48:49	05:15:23	05:38:01	18:19:54	18:42:34	19:09:10	04:52:09	17:48:59
N 10°	05:00:31	05:25:35	05:47:04	18:10:41	18:32:12	18:57:18	05:00:33	17:38:54
0°	05:09:51	05:34:22	05:55:28	18:02:09	18:23:16	18:47:48	05:08:28	17:29:29
S 10°	05:17:35	05:42:22	06:03:46	17:53:45	18:15:09	18:39:56	05:16:26	17:20:04
20°	05:24:11	05:50:04	06:12:29	17:44:53	18:07:19	18:33:12	05:24:57	17:10:05
30°	05:29:56	05:57:57	06:22:19	17:34:55	17:59:17	18:27:17	05:34:45	16:58:43
35°	05:32:33	06:02:09	06:27:57	17:29:13	17:55:00	18:24:35	05:40:26	16:52:09
40°	05:35:01	06:06:40	06:34:19	17:22:46	17:50:24	18:22:01	05:46:54	16:44:43
45°	05:37:21	06:11:38	06:41:41	17:15:19	17:45:20	18:19:34	05:54:28	16:36:05
S 50°	05:39:33	06:17:16	06:50:29	17:06:25	17:39:35	18:17:14	06:03:35	16:25:43
52°	05:40:23	06:19:46	06:54:32	17:02:18	17:37:01	18:16:20	06:07:50	16:20:55
54°	05:41:12	06:22:28	06:58:59	16:57:48	17:34:16	18:15:27	06:12:30	16:15:40
56°	05:42:00	06:25:24	07:03:55	16:52:49	17:31:17	18:14:35	06:17:41	16:09:50
58°	05:42:46	06:28:35	07:09:25	16:47:16	17:28:01	18:13:44	06:23:30	16:03:20
S 60°	05:43:31	06:32:06	07:15:36	16:41:01	17:24:26	18:12:54	06:30:04	15:56:00

Apr 20	SHA	Mer.pass
Venus	288°26.3	14:51:48
Mars	203°17.0	20:29:45
Jupiter	314°35.6	13:06:02
Saturn	155°00.9	23:41:49

Day	Sun			Moon		
	Eqn.of Time		Mer. Pass	Mer.Pass.		Age
	00 ^h mm:ss	12 ^h mm:ss		Upper hh:mm:ss	Lower hh:mm:ss	
19	00:52	00:59	11:59:01	10:35:52	22:57:18	28(5%)
20	01:05	01:11	11:58:49	11:18:56	23:40:51	29(2%)

DUT1 = UT1-UTC = -0.5359 sec $\Delta T = TT-UT1 = +66.7199$ sec

2012 April 21 to Apr. 22 UT

21 April 2012							
Lat.	Twilight		Sunrise	Sunset	Twilight		Moonrise
	Naut.	Civil			Civil	Naut.	
N 72°	////	00:19:57	03:00:55	21:00:57	////	////	02:26:00
N 70°	////	01:45:22	03:23:42	20:37:08	22:19:43	////	02:53:10
68°	////	02:22:36	03:41:12	20:18:59	21:39:35	////	03:13:45
66°	00:17:08	02:48:17	03:55:14	20:04:30	21:12:40	////	03:30:09
64°	01:31:55	03:07:52	04:06:49	19:52:34	20:52:22	22:32:16	03:43:39
62°	02:05:32	03:23:35	04:16:37	19:42:31	20:36:10	21:56:09	03:55:02
60°	02:29:17	03:36:37	04:25:02	19:33:53	20:22:47	21:31:19	04:04:49
N 58°	02:47:45	03:47:40	04:32:22	19:26:23	20:11:27	21:12:12	04:13:21
56°	03:02:50	03:57:12	04:38:51	19:19:45	20:01:42	20:56:41	04:20:54
54°	03:15:31	04:05:33	04:44:37	19:13:51	19:53:10	20:43:41	04:27:38
52°	03:26:26	04:12:57	04:49:49	19:08:33	19:45:38	20:32:32	04:33:43
50°	03:35:57	04:19:33	04:54:32	19:03:44	19:38:53	20:22:49	04:39:14
45°	03:55:19	04:33:26	05:04:41	18:53:24	19:24:45	20:03:06	04:51:08
N 40°	04:10:18	04:44:35	05:13:04	18:44:51	19:13:25	19:47:52	05:01:03
35°	04:22:21	04:53:50	05:20:14	18:37:33	19:04:01	19:35:37	05:09:33
30°	04:32:19	05:01:42	05:26:31	18:31:10	18:56:02	19:25:30	05:17:04
20°	04:48:01	05:14:37	05:37:17	18:20:13	18:42:55	19:09:35	05:30:04
N 10°	05:00:00	05:25:06	05:46:37	18:10:45	18:32:17	18:57:25	05:41:31
0°	05:09:35	05:34:08	05:55:16	18:01:58	18:23:06	18:47:40	05:52:18
S 10°	05:17:35	05:42:23	06:03:49	17:53:18	18:14:44	18:39:32	06:03:08
20°	05:24:26	05:50:21	06:12:48	17:44:11	18:06:38	18:32:32	06:14:44
30°	05:30:29	05:58:32	06:22:56	17:33:55	17:58:18	18:26:20	06:28:05
35°	05:33:16	06:02:55	06:28:45	17:28:01	17:53:51	18:23:28	06:35:50
40°	05:35:56	06:07:37	06:35:19	17:21:23	17:49:03	18:20:42	06:44:42
45°	05:38:29	06:12:48	06:42:55	17:13:41	17:43:46	18:18:02	06:55:06
S 50°	05:40:57	06:18:43	06:52:00	17:04:29	17:37:44	18:15:27	07:07:43
52°	05:41:55	06:21:21	06:56:12	17:00:15	17:35:03	18:14:25	07:13:37
54°	05:42:52	06:24:11	07:00:49	16:55:35	17:32:10	18:13:24	07:20:09
56°	05:43:48	06:27:16	07:05:54	16:50:26	17:29:01	18:12:24	07:27:26
58°	05:44:44	06:30:37	07:11:35	16:44:42	17:25:36	18:11:23	07:35:39
S 60°	05:45:39	06:34:20	07:18:00	16:38:13	17:21:49	18:10:22	07:45:02

Apr 21	SHA	Mer.pass
Venus	287°39.5	14:50:56
Mars	203°13.7	20:26:05
Jupiter	314°21.7	13:03:02
Saturn	155°05.2	23:37:36

22 April 2012							
Lat.	Twilight		Sunrise	Sunset	Twilight		Moonrise
	Naut.	Civil			Civil	Naut.	
N 72°	////	////	02:54:34	21:07:03	////	////	01:47:03
N 70°	////	01:36:01	03:18:30	20:42:02	22:29:30	////	02:38:49
68°	////	02:16:14	03:36:45	20:23:05	21:45:48	////	03:11:15
66°	////	02:43:14	03:51:20	20:08:03	21:17:26	////	03:35:08
64°	01:23:47	03:03:37	04:03:20	19:55:41	20:56:17	22:40:45	03:53:56
62°	01:59:58	03:19:53	04:13:28	19:45:17	20:39:30	22:01:32	04:09:22
60°	02:24:50	03:33:20	04:22:10	19:36:23	20:25:41	21:35:28	04:22:22
N 58°	02:44:00	03:44:43	04:29:44	19:28:38	20:14:02	21:15:37	04:33:34
56°	02:59:34	03:54:31	04:36:25	19:21:48	20:04:00	20:59:36	04:43:20
54°	03:12:37	04:03:06	04:42:22	19:15:43	19:55:15	20:46:13	04:52:00
52°	03:23:48	04:10:41	04:47:44	19:10:15	19:47:31	20:34:47	04:59:45
50°	03:33:33	04:17:27	04:52:35	19:05:18	19:40:36	20:24:50	05:06:46
45°	03:53:22	04:31:41	05:03:02	18:54:39	19:26:07	20:04:39	05:21:46
N 40°	04:08:41	04:43:06	05:11:40	18:45:52	19:14:31	19:49:05	05:34:10
35°	04:20:59	04:52:35	05:19:02	18:38:22	19:04:54	19:36:36	05:44:46
30°	04:31:10	05:00:38	05:25:30	18:31:48	18:56:43	19:26:16	05:54:04
20°	04:47:13	05:13:52	05:36:34	18:20:33	18:43:17	19:10:00	06:10:08
N 10°	04:59:29	05:24:37	05:46:10	18:10:48	18:32:23	18:57:33	06:24:13
0°	05:09:20	05:33:55	05:55:04	18:01:47	18:22:57	18:47:33	06:37:27
S 10°	05:17:34	05:42:24	06:03:51	17:52:52	18:14:19	18:39:10	06:50:45
20°	05:24:42	05:50:38	06:13:07	17:43:29	18:05:58	18:31:54	07:05:00
30°	05:31:02	05:59:07	06:23:33	17:32:55	17:57:20	18:25:24	07:21:24
35°	05:34:00	06:03:40	06:29:33	17:26:51	17:52:43	18:22:22	07:30:58
40°	05:36:51	06:08:34	06:36:19	17:20:00	17:47:44	18:19:25	07:41:56
45°	05:39:37	06:13:59	06:44:09	17:12:04	17:42:13	18:16:32	07:54:51
S 50°	05:42:20	06:20:09	06:53:32	17:02:35	17:35:55	18:13:41	08:10:37
52°	05:43:25	06:22:55	06:57:52	16:58:12	17:33:06	18:12:32	08:18:03
54°	05:44:30	06:25:54	07:02:37	16:53:24	17:30:05	18:11:23	08:26:18
56°	05:45:35	06:29:07	07:07:53	16:48:05	17:26:48	18:10:14	08:35:35
58°	05:46:41	06:32:39	07:13:46	16:42:09	17:23:12	18:09:04	08:46:09
S 60°	05:47:47	06:36:33	07:20:24	16:35:27	17:19:14	18:07:53	08:58:21

Apr 22	SHA	Mer.pass
Venus	286°53.9	14:49:59
Mars	203°09.6	20:22:27
Jupiter	314°07.7	13:00:02
Saturn	155°09.5	23:33:23

Day	Sun			Moon		
	Eqn.of Time		Mer. Pass	Mer.Pass.		Age
	00 ^h mm:ss	12 ^h mm:ss		Upper hh:mm:ss	Lower hh:mm:ss	
21	01:17	01:23	11:58:37	12:03:04	--	0(0%)
22	01:29	01:35	11:58:25	12:48:35	00:25:39	1(0%)