

Aufgang/Untergang

Datum/Standort

Datum: 01-01-2010
 Zeitraum: 1 Jahr
 Br.: 50°28'24"N
 Län.: 7°51'7"O

Objekt

Sonne

Datum	Aufgang		Meridiandurchgang		Untergang		Sonne		Mond	
	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
01-01-2010	08:31	127°01' 06"	12:32	+16°32' 10"	16:33	233°01' 58"	08:31	16:32	17:37	09:01
02-01-2010	08:31	126°51' 45"	12:32	+16°37' 24"	16:34	233°11' 36"	08:31	16:34	19:06	09:34
03-01-2010	08:31	126°41' 36"	12:33	+16°43' 06"	16:35	233°22' 02"	08:31	16:35	20:34	10:00
04-01-2010	08:30	126°30' 38"	12:33	+16°49' 15"	16:36	233°33' 16"	08:30	16:36	21:59	10:21
05-01-2010	08:30	126°18' 53"	12:33	+16°55' 51"	16:37	233°45' 18"	08:30	16:37	23:21	10:39
06-01-2010	08:30	126°06' 21"	12:34	+17°02' 54"	16:38	233°58' 07"	08:30	16:38	---	10:56
07-01-2010	08:30	125°53' 02"	12:34	+17°10' 24"	16:39	234°11' 42"	08:30	16:39	00:41	11:15
08-01-2010	08:29	125°38' 58"	12:35	+17°18' 20"	16:41	234°26' 03"	08:29	16:41	01:59	11:35
09-01-2010	08:29	125°24' 08"	12:35	+17°26' 43"	16:42	234°41' 10"	08:29	16:42	03:16	12:00
10-01-2010	08:28	125°08' 34"	12:36	+17°35' 31"	16:43	234°57' 00"	08:28	16:43	04:29	12:30
11-01-2010	08:28	124°52' 16"	12:36	+17°44' 45"	16:45	235°13' 34"	08:28	16:45	05:37	13:10
12-01-2010	08:27	124°35' 15"	12:36	+17°54' 25"	16:46	235°30' 52"	08:27	16:46	06:36	13:59
13-01-2010	08:26	124°17' 32"	12:37	+18°04' 30"	16:48	235°48' 51"	08:26	16:48	07:23	14:57
14-01-2010	08:26	123°59' 08"	12:37	+18°14' 59"	16:49	236°07' 31"	08:26	16:49	08:01	16:02
15-01-2010	08:25	123°40' 02"	12:37	+18°25' 54"	16:51	236°26' 52"	08:25	16:51	08:29	17:10
16-01-2010	08:24	123°20' 18"	12:38	+18°37' 12"	16:52	236°46' 53"	08:24	16:52	08:52	18:18
17-01-2010	08:23	122°59' 54"	12:38	+18°48' 54"	16:54	237°07' 33"	08:23	16:54	09:10	19:27
18-01-2010	08:22	122°38' 52"	12:38	+19°01' 00"	16:55	237°28' 50"	08:22	16:55	09:26	20:34
19-01-2010	08:21	122°17' 13"	12:39	+19°13' 30"	16:57	237°50' 45"	08:21	16:57	09:40	21:41
20-01-2010	08:20	121°54' 57"	12:39	+19°26' 22"	16:58	238°13' 16"	08:20	16:58	09:54	22:49
21-01-2010	08:19	121°32' 06"	12:39	+19°39' 36"	17:00	238°36' 22"	08:19	17:00	10:09	23:58
22-01-2010	08:18	121°08' 41"	12:40	+19°53' 13"	17:02	239°00' 02"	08:18	17:02	10:26	---
23-01-2010	08:17	120°44' 41"	12:40	+20°07' 12"	17:03	239°24' 17"	08:17	17:03	10:46	01:10
24-01-2010	08:16	120°20' 09"	12:40	+20°21' 31"	17:05	239°49' 04"	08:16	17:05	11:12	02:25
25-01-2010	08:15	119°55' 05"	12:40	+20°36' 12"	17:07	240°14' 23"	08:15	17:07	11:48	03:40
26-01-2010	08:13	119°29' 29"	12:41	+20°51' 14"	17:08	240°40' 13"	08:13	17:08	12:36	04:53
27-01-2010	08:12	119°03' 24"	12:41	+21°06' 36"	17:10	241°06' 33"	08:12	17:10	13:41	05:57
28-01-2010	08:11	118°36' 48"	12:41	+21°22' 18"	17:12	241°33' 23"	08:11	17:12	15:00	06:49
29-01-2010	08:10	118°09' 44"	12:41	+21°38' 19"	17:13	242°00' 42"	08:10	17:13	16:28	07:28
30-01-2010	08:08	117°42' 11"	12:41	+21°54' 39"	17:15	242°28' 28"	08:08	17:15	17:59	07:58

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	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
31-01-2010	08:07	117°14'12"	12:42	+22°11'19"	17:17	242°56'41"	08:07	17:17	19:29	08:22
01-02-2010	08:05	116°45'46"	12:42	+22°28'16"	17:19	243°25'21"	08:05	17:19	20:55	08:42
02-02-2010	08:04	116°16'54"	12:42	+22°45'32"	17:20	243°54'27"	08:04	17:20	22:19	09:01
03-02-2010	08:02	115°47'37"	12:42	+23°03'05"	17:22	244°23'58"	08:02	17:22	23:41	09:19
04-02-2010	08:01	115°17'55"	12:42	+23°20'56"	17:24	244°53'52"	08:01	17:24	---	09:40
05-02-2010	07:59	114°47'51"	12:42	+23°39'03"	17:26	245°24'11"	07:59	17:26	01:01	10:03
06-02-2010	07:57	114°17'23"	12:42	+23°57'27"	17:27	245°54'51"	07:57	17:27	02:18	10:32
07-02-2010	07:56	113°46'33"	12:42	+24°16'08"	17:29	246°25'54"	07:56	17:29	03:29	11:09
08-02-2010	07:54	113°15'22"	12:42	+24°35'03"	17:31	246°57'18"	07:54	17:31	04:31	11:55
09-02-2010	07:52	112°43'51"	12:42	+24°54'14"	17:33	247°29'02"	07:52	17:33	05:22	12:50
10-02-2010	07:51	112°11'59"	12:42	+25°13'40"	17:35	248°01'06"	07:51	17:35	06:02	13:53
11-02-2010	07:49	111°39'49"	12:42	+25°33'20"	17:36	248°33'29"	07:49	17:36	06:33	15:00
12-02-2010	07:47	111°07'20"	12:42	+25°53'13"	17:38	249°06'10"	07:47	17:38	06:58	16:08
13-02-2010	07:45	110°34'33"	12:42	+26°13'21"	17:40	249°39'09"	07:45	17:40	07:17	17:17
14-02-2010	07:44	110°01'29"	12:42	+26°33'41"	17:42	250°12'24"	07:44	17:42	07:34	18:24
15-02-2010	07:42	109°28'10"	12:42	+26°54'14"	17:43	250°45'56"	07:42	17:43	07:49	19:32
16-02-2010	07:40	108°54'34"	12:42	+27°14'59"	17:45	251°19'43"	07:40	17:45	08:03	20:39
17-02-2010	07:38	108°20'43"	12:42	+27°35'56"	17:47	251°53'44"	07:38	17:47	08:18	21:48
18-02-2010	07:36	107°46'39"	12:42	+27°57'04"	17:49	252°28'00"	07:36	17:49	08:34	22:58
19-02-2010	07:34	107°12'20"	12:42	+28°18'23"	17:50	253°02'30"	07:34	17:50	08:52	---
20-02-2010	07:32	106°37'48"	12:42	+28°39'52"	17:52	253°37'12"	07:32	17:52	09:16	00:11
21-02-2010	07:30	106°03'04"	12:42	+29°01'31"	17:54	254°12'07"	07:30	17:54	09:46	01:24
22-02-2010	07:28	105°28'08"	12:42	+29°23'20"	17:56	254°47'13"	07:28	17:56	10:28	02:36
23-02-2010	07:26	104°53'01"	12:41	+29°45'18"	17:57	255°22'31"	07:26	17:57	11:23	03:42
24-02-2010	07:24	104°17'43"	12:41	+30°07'25"	17:59	255°57'59"	07:24	17:59	12:32	04:37
25-02-2010	07:22	103°42'15"	12:41	+30°29'40"	18:01	256°33'37"	07:22	18:01	13:54	05:21
26-02-2010	07:20	103°06'37"	12:41	+30°52'04"	18:02	257°09'24"	07:20	18:02	15:22	05:55
27-02-2010	07:18	102°30'50"	12:41	+31°14'34"	18:04	257°45'21"	07:18	18:04	16:51	06:21
28-02-2010	07:16	101°54'55"	12:41	+31°37'12"	18:06	258°21'26"	07:16	18:06	18:20	06:43
01-03-2010	07:14	101°18'51"	12:40	+31°59'57"	18:08	258°57'39"	07:14	18:08	19:46	07:03

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02-03-2010	07:12	100°42'39"	12:40	+32°42'49"	18:09	259°34'00"	07:12	18:09	21:12	07:22
03-03-2010	07:10	100°06'20"	12:40	+32°45'46"	18:11	260°10'28"	07:10	18:11	22:36	07:42
04-03-2010	07:08	99°29'53"	12:40	+33°08'50"	18:13	260°47'03"	07:08	18:13	23:57	08:05
05-03-2010	07:06	98°53'21"	12:40	+33°31'59"	18:14	261°23'44"	07:06	18:14	---	08:33
06-03-2010	07:04	98°16'42"	12:39	+33°55'13"	18:16	262°00'32"	07:04	18:16	01:13	09:08
07-03-2010	07:01	97°39'58"	12:39	+34°18'31"	18:18	262°37'24"	07:01	18:18	02:20	09:51
08-03-2010	06:59	97°03'09"	12:39	+34°41'54"	18:19	263°14'21"	06:59	18:19	03:16	10:44
09-03-2010	06:57	96°26'15"	12:39	+35°05'21"	18:21	263°51'23"	06:57	18:21	04:01	11:45
10-03-2010	06:55	95°49'17"	12:38	+35°28'51"	18:23	264°28'29"	06:55	18:23	04:35	12:50
11-03-2010	06:53	95°12'15"	12:38	+35°52'24"	18:24	265°05'38"	06:53	18:24	05:02	13:58
12-03-2010	06:51	94°35'11"	12:38	+36°16'00"	18:26	265°42'50"	06:51	18:26	05:23	15:06
13-03-2010	06:48	93°58'03"	12:38	+36°39'38"	18:28	266°20'04"	06:48	18:28	05:41	16:14
14-03-2010	06:46	93°20'53"	12:37	+37°03'18"	18:29	266°57'21"	06:46	18:29	05:56	17:21
15-03-2010	06:44	92°43'42"	12:37	+37°27'00"	18:31	267°34'39"	06:44	18:31	06:11	18:29
16-03-2010	06:42	92°06'29"	12:37	+37°50'43"	18:33	268°11'59"	06:42	18:33	06:26	19:38
17-03-2010	06:40	91°29'15"	12:36	+38°14'26"	18:34	268°49'18"	06:40	18:34	06:42	20:48
18-03-2010	06:37	90°52'01"	12:36	+38°38'10"	18:36	269°26'39"	06:37	18:36	07:00	22:00
19-03-2010	06:35	90°14'47"	12:36	+39°01'54"	18:37	270°03'58"	06:35	18:37	07:22	23:14
20-03-2010	06:33	89°37'33"	12:36	+39°25'37"	18:39	270°41'18"	06:33	18:39	07:50	---
21-03-2010	06:31	89°00'21"	12:35	+39°49'20"	18:41	271°18'35"	06:31	18:41	08:28	00:26
22-03-2010	06:29	88°23'09"	12:35	+40°13'01"	18:42	271°55'52"	06:29	18:42	09:17	01:32
23-03-2010	06:26	87°46'00"	12:35	+40°36'41"	18:44	272°33'06"	06:26	18:44	10:20	02:30
24-03-2010	06:24	87°08'53"	12:34	+41°00'18"	18:46	273°10'18"	06:24	18:46	11:34	03:16
25-03-2010	06:22	86°31'48"	12:34	+41°23'54"	18:47	273°47'27"	06:22	18:47	12:56	03:53
26-03-2010	06:20	85°54'46"	12:34	+41°47'27"	18:49	274°24'33"	06:20	18:49	14:22	04:21
27-03-2010	06:18	85°17'48"	12:33	+42°10'57"	18:50	275°01'35"	06:18	18:50	15:48	04:44
28-03-2010	07:15	84°40'53"	13:33	+42°34'23"	19:52	275°38'34"	07:15	19:52	18:13	06:05
29-03-2010	07:13	84°04'02"	13:33	+42°57'46"	19:54	276°15'28"	07:13	19:54	19:39	06:24
30-03-2010	07:11	83°27'16"	13:33	+43°21'06"	19:55	276°52'17"	07:11	19:55	21:04	06:44
31-03-2010	07:09	82°50'35"	13:32	+43°44'21"	19:57	277°29'02"	07:09	19:57	22:27	07:05

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	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
01-04-2010	07:07	82°13'59"	13:32	+44°07'31"	19:58	278°05'41"	07:07	19:58	23:48	07:31
02-04-2010	07:04	81°37'28"	13:32	+44°30'36"	20:00	278°42'14"	07:04	20:00	---	08:04
03-04-2010	07:02	81°01'03"	13:31	+44°53'37"	20:02	279°18'42"	07:02	20:02	01:01	08:44
04-04-2010	07:00	80°24'45"	13:31	+45°16'32"	20:03	279°55'02"	07:00	20:03	02:04	09:35
05-04-2010	06:58	79°48'33"	13:31	+45°39'20"	20:05	280°31'16"	06:58	20:05	02:55	10:34
06-04-2010	06:56	79°12'28"	13:31	+46°02'03"	20:06	281°07'22"	06:56	20:06	03:33	11:39
07-04-2010	06:54	78°36'31"	13:30	+46°24'39"	20:08	281°43'20"	06:54	20:08	04:03	12:46
08-04-2010	06:51	78°00'42"	13:30	+46°47'08"	20:10	282°19'10"	06:51	20:10	04:26	13:54
09-04-2010	06:49	77°25'02"	13:30	+47°09'30"	20:11	282°54'51"	06:49	20:11	04:46	15:02
10-04-2010	06:47	76°49'30"	13:29	+47°31'44"	20:13	283°30'23"	06:47	20:13	05:02	16:09
11-04-2010	06:45	76°14'08"	13:29	+47°53'50"	20:14	284°05'46"	06:45	20:14	05:17	17:17
12-04-2010	06:43	75°38'55"	13:29	+48°15'48"	20:16	284°40'58"	06:43	20:16	05:32	18:25
13-04-2010	06:41	75°03'53"	13:29	+48°37'37"	20:18	285°15'59"	06:41	20:18	05:48	19:35
14-04-2010	06:39	74°29'02"	13:28	+48°59'17"	20:19	285°50'49"	06:39	20:19	06:06	20:48
15-04-2010	06:37	73°54'22"	13:28	+49°20'48"	20:21	286°25'28"	06:37	20:21	06:27	22:01
16-04-2010	06:35	73°19'54"	13:28	+49°42'08"	20:22	286°59'54"	06:35	20:22	06:54	23:15
17-04-2010	06:32	72°45'38"	13:28	+50°03'19"	20:24	287°34'08"	06:32	20:24	07:29	---
18-04-2010	06:30	72°11'35"	13:27	+50°24'19"	20:26	288°08'09"	06:30	20:26	08:15	00:24
19-04-2010	06:28	71°37'45"	13:27	+50°45'08"	20:27	288°41'56"	06:28	20:27	09:14	01:25
20-04-2010	06:26	71°04'09"	13:27	+51°05'46"	20:29	289°15'28"	06:26	20:29	10:25	02:14
21-04-2010	06:24	70°30'47"	13:27	+51°26'12"	20:30	289°48'47"	06:24	20:30	11:43	02:53
22-04-2010	06:22	69°57'40"	13:27	+51°46'27"	20:32	290°21'50"	06:22	20:32	13:05	03:23
23-04-2010	06:20	69°24'48"	13:26	+52°06'29"	20:33	290°54'37"	06:20	20:33	14:28	03:47
24-04-2010	06:18	68°52'12"	13:26	+52°26'19"	20:35	291°27'08"	06:18	20:35	15:51	04:08
25-04-2010	06:17	68°19'52"	13:26	+52°45'57"	20:37	291°59'22"	06:17	20:37	17:13	04:27
26-04-2010	06:15	67°47'49"	13:26	+53°05'21"	20:38	292°31'20"	06:15	20:38	18:36	04:46
27-04-2010	06:13	67°16'03"	13:26	+53°24'31"	20:40	293°03'00"	06:13	20:40	19:59	05:07
28-04-2010	06:11	66°44'35"	13:26	+53°43'28"	20:41	293°34'21"	06:11	20:41	21:21	05:30
29-04-2010	06:09	66°13'26"	13:25	+54°02'11"	20:43	294°05'24"	06:09	20:43	22:38	06:00
30-04-2010	06:07	65°42'34"	13:25	+54°20'40"	20:44	294°36'08"	06:07	20:44	23:47	06:37

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01-05-2010	06:05	65° 12 ' 03"	13:25	+54° 38 ' 54"	20:46	295° 06 ' 32"	06:05	20:46	---	07:24
02-05-2010	06:04	64° 41 ' 51"	13:25	+54° 56 ' 53"	20:48	295° 36 ' 35"	06:04	20:48	00:44	08:20
03-05-2010	06:02	64° 11 ' 59"	13:25	+55° 14 ' 37"	20:49	296° 06 ' 18"	06:02	20:49	01:28	09:24
04-05-2010	06:00	63° 42 ' 29"	13:25	+55° 32 ' 05"	20:51	296° 35 ' 39"	06:00	20:51	02:02	10:32
05-05-2010	05:58	63° 13 ' 20"	13:25	+55° 49 ' 18"	20:52	297° 04 ' 38"	05:58	20:52	02:28	11:40
06-05-2010	05:57	62° 44 ' 33"	13:25	+56° 06 ' 14"	20:54	297° 33 ' 14"	05:57	20:54	02:49	12:48
07-05-2010	05:55	62° 16 ' 09"	13:25	+56° 22 ' 54"	20:55	298° 01 ' 27"	05:55	20:55	03:07	13:56
08-05-2010	05:53	61° 48 ' 09"	13:25	+56° 39 ' 17"	20:57	298° 29 ' 16"	05:53	20:57	03:22	15:02
09-05-2010	05:52	61° 20 ' 33"	13:25	+56° 55 ' 23"	20:58	298° 56 ' 41"	05:52	20:58	03:37	16:10
10-05-2010	05:50	60° 53 ' 21"	13:24	+57° 11 ' 11"	21:00	299° 23 ' 39"	05:50	21:00	03:53	17:19
11-05-2010	05:49	60° 26 ' 35"	13:24	+57° 26 ' 42"	21:01	299° 50 ' 12"	05:49	21:01	04:10	18:30
12-05-2010	05:47	60° 00 ' 15"	13:24	+57° 41 ' 55"	21:03	300° 16 ' 19"	05:47	21:03	04:30	19:44
13-05-2010	05:46	59° 34 ' 22"	13:24	+57° 56 ' 49"	21:04	300° 41 ' 57"	05:46	21:04	04:55	20:59
14-05-2010	05:44	59° 08 ' 57"	13:24	+58° 11 ' 25"	21:06	301° 07 ' 08"	05:44	21:06	05:27	22:11
15-05-2010	05:43	58° 43 ' 59"	13:24	+58° 25 ' 41"	21:07	301° 31 ' 50"	05:43	21:07	06:10	23:17
16-05-2010	05:41	58° 19 ' 30"	13:24	+58° 39 ' 39"	21:09	301° 56 ' 03"	05:41	21:09	07:06	---
17-05-2010	05:40	57° 55 ' 31"	13:24	+58° 53 ' 17"	21:10	302° 19 ' 45"	05:40	21:10	08:15	00:11
18-05-2010	05:39	57° 32 ' 02"	13:25	+59° 06 ' 35"	21:11	302° 42 ' 57"	05:39	21:11	09:33	00:53
19-05-2010	05:37	57° 09 ' 04"	13:25	+59° 19 ' 33"	21:13	303° 05 ' 37"	05:37	21:13	10:54	01:26
20-05-2010	05:36	56° 46 ' 37"	13:25	+59° 32 ' 11"	21:14	303° 27 ' 45"	05:36	21:14	12:17	01:52
21-05-2010	05:35	56° 24 ' 43"	13:25	+59° 44 ' 28"	21:15	303° 49 ' 21"	05:35	21:15	13:38	02:13
22-05-2010	05:34	56° 03 ' 21"	13:25	+59° 56 ' 25"	21:17	304° 10 ' 23"	05:34	21:17	14:59	02:32
23-05-2010	05:32	55° 42 ' 33"	13:25	+60° 08 ' 01"	21:18	304° 30 ' 50"	05:32	21:18	16:19	02:51
24-05-2010	05:31	55° 22 ' 19"	13:25	+60° 19 ' 15"	21:19	304° 50 ' 43"	05:31	21:19	17:40	03:10
25-05-2010	05:30	55° 02 ' 40"	13:25	+60° 30 ' 08"	21:20	305° 10 ' 01"	05:30	21:20	19:00	03:32
26-05-2010	05:29	54° 43 ' 36"	13:25	+60° 40 ' 39"	21:22	305° 28 ' 43"	05:29	21:22	20:18	03:59
27-05-2010	05:28	54° 25 ' 08"	13:25	+60° 50 ' 48"	21:23	305° 46 ' 48"	05:28	21:23	21:30	04:32
28-05-2010	05:27	54° 07 ' 17"	13:25	+61° 00 ' 35"	21:24	306° 04 ' 15"	05:27	21:24	22:32	05:14
29-05-2010	05:26	53° 50 ' 04"	13:25	+61° 10 ' 00"	21:25	306° 21 ' 05"	05:26	21:25	23:21	06:07
30-05-2010	05:26	53° 33 ' 28"	13:26	+61° 19 ' 02"	21:26	306° 37 ' 16"	05:26	21:26	---	07:08

Aufgang/Untergang

Datum/Standort

Datum: 01-01-2010
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 Br.: 50°28'24"N
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Objekt

Sonne

Datum	Aufgang		Meridiandurchgang		Untergang		Sonne		Mond	
	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
31-05-2010	05:25	53°17'31"	13:26	+61°27'42"	21:27	306°52'49"	05:25	21:27	00:00	08:16
01-06-2010	05:24	53°02'13"	13:26	+61°35'59"	21:28	307°07'41"	05:24	21:28	00:29	09:25
02-06-2010	05:23	52°47'35"	13:26	+61°43'53"	21:29	307°21'53"	05:23	21:29	00:52	10:34
03-06-2010	05:23	52°33'37"	13:26	+61°51'23"	21:30	307°35'24"	05:23	21:30	01:11	11:41
04-06-2010	05:22	52°20'20"	13:26	+61°58'30"	21:31	307°48'14"	05:22	21:31	01:27	12:48
05-06-2010	05:21	52°07'45"	13:27	+62°05'14"	21:32	308°00'22"	05:21	21:32	01:42	13:54
06-06-2010	05:21	51°55'52"	13:27	+62°11'33"	21:33	308°11'47"	05:21	21:33	01:57	15:02
07-06-2010	05:20	51°44'41"	13:27	+62°17'29"	21:34	308°22'30"	05:20	21:34	02:13	16:11
08-06-2010	05:20	51°34'13"	13:27	+62°23'01"	21:35	308°32'28"	05:20	21:35	02:32	17:24
09-06-2010	05:19	51°24'29"	13:27	+62°28'09"	21:36	308°41'43"	05:19	21:36	02:54	18:38
10-06-2010	05:19	51°15'28"	13:28	+62°32'53"	21:36	308°50'14"	05:19	21:36	03:23	19:52
11-06-2010	05:19	51°07'12"	13:28	+62°37'12"	21:37	308°58'00"	05:19	21:37	04:02	21:01
12-06-2010	05:19	50°59'40"	13:28	+62°41'06"	21:38	309°05'01"	05:19	21:38	04:53	22:02
13-06-2010	05:18	50°52'54"	13:28	+62°44'37"	21:38	309°11'17"	05:18	21:38	05:58	22:50
14-06-2010	05:18	50°46'53"	13:28	+62°47'42"	21:39	309°16'48"	05:18	21:39	07:15	23:27
15-06-2010	05:18	50°41'37"	13:29	+62°50'23"	21:39	309°21'32"	05:18	21:39	08:38	23:55
16-06-2010	05:18	50°37'07"	13:29	+62°52'39"	21:40	309°25'31"	05:18	21:40	10:03	---
17-06-2010	05:18	50°33'23"	13:29	+62°54'31"	21:40	309°28'43"	05:18	21:40	11:26	00:19
18-06-2010	05:18	50°30'26"	13:29	+62°55'58"	21:40	309°31'09"	05:18	21:40	12:48	00:39
19-06-2010	05:18	50°28'14"	13:29	+62°56'59"	21:41	309°32'49"	05:18	21:41	14:08	00:57
20-06-2010	05:18	50°26'49"	13:30	+62°57'37"	21:41	309°33'43"	05:18	21:41	15:28	01:16
21-06-2010	05:18	50°26'10"	13:30	+62°57'49"	21:41	309°33'50"	05:18	21:41	16:47	01:37
22-06-2010	05:19	50°26'17"	13:30	+62°57'37"	21:41	309°33'11"	05:19	21:41	18:04	02:01
23-06-2010	05:19	50°27'11"	13:30	+62°57'00"	21:42	309°31'46"	05:19	21:42	19:17	02:32
24-06-2010	05:19	50°28'51"	13:31	+62°55'58"	21:42	309°29'35"	05:19	21:42	20:22	03:10
25-06-2010	05:20	50°31'17"	13:31	+62°54'31"	21:42	309°26'37"	05:20	21:42	21:16	03:58
26-06-2010	05:20	50°34'29"	13:31	+62°52'40"	21:42	309°22'54"	05:20	21:42	21:58	04:56
27-06-2010	05:20	50°38'27"	13:31	+62°50'24"	21:42	309°18'25"	05:20	21:42	22:30	06:01
28-06-2010	05:21	50°43'10"	13:31	+62°47'44"	21:41	309°13'10"	05:21	21:41	22:55	07:10
29-06-2010	05:21	50°48'40"	13:32	+62°44'39"	21:41	309°07'10"	05:21	21:41	23:16	08:19

Aufgang/Untergang

Datum/Standort

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Objekt

Sonne

Datum	Aufgang		Meridiandurchgang		Untergang		Sonne		Mond	
	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
30-06-2010	05:22	50°54' 54"	13:32	+62°41' 09"	21:41	309°00' 25"	05:22	21:41	23:33	09:27
01-07-2010	05:23	51°01' 53"	13:32	+62°37' 15"	21:41	308°52' 56"	05:23	21:41	23:48	10:34
02-07-2010	05:23	51°09' 37"	13:32	+62°32' 58"	21:41	308°44' 42"	05:23	21:41	---	11:41
03-07-2010	05:24	51°18' 06"	13:32	+62°28' 15"	21:40	308°35' 44"	05:24	21:40	00:03	12:47
04-07-2010	05:25	51°27' 18"	13:32	+62°23' 09"	21:40	308°26' 03"	05:25	21:40	00:19	13:55
05-07-2010	05:26	51°37' 14"	13:33	+62°17' 39"	21:39	308°15' 39"	05:26	21:39	00:36	15:04
06-07-2010	05:26	51°47' 52"	13:33	+62°11' 45"	21:39	308°04' 32"	05:26	21:39	00:56	16:16
07-07-2010	05:27	51°59' 14"	13:33	+62°05' 28"	21:38	307°52' 42"	05:27	21:38	01:21	17:29
08-07-2010	05:28	52°11' 17"	13:33	+61°58' 47"	21:38	307°40' 12"	05:28	21:38	01:54	18:41
09-07-2010	05:29	52°24' 02"	13:33	+61°51' 42"	21:37	307°27' 00"	05:29	21:37	02:38	19:46
10-07-2010	05:30	52°37' 28"	13:33	+61°44' 15"	21:36	307°13' 07"	05:30	21:36	03:37	20:40
11-07-2010	05:31	52°51' 35"	13:34	+61°36' 24"	21:36	306°58' 35"	05:31	21:36	04:49	21:23
12-07-2010	05:32	53°06' 21"	13:34	+61°28' 11"	21:35	306°43' 23"	05:32	21:35	06:12	21:56
13-07-2010	05:33	53°21' 47"	13:34	+61°19' 35"	21:34	306°27' 33"	05:33	21:34	07:39	22:22
14-07-2010	05:34	53°37' 51"	13:34	+61°10' 37"	21:33	306°11' 05"	05:34	21:33	09:06	22:43
15-07-2010	05:35	53°54' 33"	13:34	+61°01' 16"	21:32	305°54' 00"	05:35	21:32	10:31	23:03
16-07-2010	05:36	54°11' 52"	13:34	+60°51' 34"	21:31	305°36' 18"	05:36	21:31	11:54	23:22
17-07-2010	05:38	54°29' 48"	13:34	+60°41' 30"	21:30	305°18' 00"	05:38	21:30	13:15	23:43
18-07-2010	05:39	54°48' 20"	13:34	+60°31' 05"	21:29	304°59' 06"	05:39	21:29	14:36	---
19-07-2010	05:40	55°07' 27"	13:34	+60°20' 18"	21:28	304°39' 38"	05:40	21:28	15:54	00:06
20-07-2010	05:41	55°27' 08"	13:34	+60°09' 11"	21:27	304°19' 37"	05:41	21:27	17:08	00:34
21-07-2010	05:42	55°47' 24"	13:35	+59°57' 43"	21:26	303°59' 01"	05:42	21:26	18:15	01:10
22-07-2010	05:44	56°08' 12"	13:35	+59°45' 54"	21:25	303°37' 54"	05:44	21:25	19:12	01:54
23-07-2010	05:45	56°29' 33"	13:35	+59°33' 45"	21:23	303°16' 14"	05:45	21:23	19:57	02:48
24-07-2010	05:46	56°51' 26"	13:35	+59°21' 16"	21:22	302°54' 03"	05:46	21:22	20:32	03:50
25-07-2010	05:48	57°13' 51"	13:35	+59°08' 28"	21:21	302°31' 21"	05:48	21:21	21:00	04:58
26-07-2010	05:49	57°36' 45"	13:35	+58°55' 19"	21:19	302°08' 09"	05:49	21:19	21:21	06:07
27-07-2010	05:50	58°00' 10"	13:35	+58°41' 52"	21:18	301°44' 28"	05:50	21:18	21:39	07:15
28-07-2010	05:52	58°24' 05"	13:35	+58°28' 06"	21:17	301°20' 18"	05:52	21:17	21:55	08:23
29-07-2010	05:53	58°48' 27"	13:35	+58°14' 00"	21:15	300°55' 40"	05:53	21:15	22:11	09:29

Aufgang/Untergang

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Objekt

Sonne

Datum	Aufgang		Meridiandurchgang		Untergang		Sonne		Mond	
	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
30-07-2010	05:54	59°13'18"	13:35	+57°59'37"	21:14	300°30'35"	05:54	21:14	22:26	10:35
31-07-2010	05:56	59°38'37"	13:34	+57°44'55"	21:12	300°05'02"	05:56	21:12	22:42	11:42
01-08-2010	05:57	60°04'22"	13:34	+57°29'55"	21:11	299°39'04"	05:57	21:11	23:00	12:50
02-08-2010	05:59	60°30'33"	13:34	+57°14'37"	21:09	299°12'39"	05:59	21:09	23:22	13:59
03-08-2010	06:00	60°57'10"	13:34	+56°59'03"	21:07	298°45'50"	06:00	21:07	23:51	15:10
04-08-2010	06:02	61°24'11"	13:34	+56°43'11"	21:06	298°18'37"	06:02	21:06	---	16:21
05-08-2010	06:03	61°51'37"	13:34	+56°27'02"	21:04	297°51'00"	06:03	21:04	00:29	17:28
06-08-2010	06:05	62°19'27"	13:34	+56°10'37"	21:02	297°22'59"	06:05	21:02	01:19	18:26
07-08-2010	06:06	62°47'39"	13:34	+55°53'55"	21:01	296°54'37"	06:06	21:01	02:23	19:14
08-08-2010	06:07	63°16'14"	13:34	+55°36'58"	20:59	296°25'52"	06:07	20:59	03:41	19:51
09-08-2010	06:09	63°45'11"	13:34	+55°19'45"	20:57	295°56'47"	06:09	20:57	05:06	20:21
10-08-2010	06:10	64°14'28"	13:33	+55°02'17"	20:55	295°27'20"	06:10	20:55	06:34	20:45
11-08-2010	06:12	64°44'06"	13:33	+54°44'34"	20:54	294°57'34"	06:12	20:54	08:02	21:07
12-08-2010	06:13	65°14'04"	13:33	+54°26'37"	20:52	294°27'29"	06:13	20:52	09:29	21:27
13-08-2010	06:15	65°44'21"	13:33	+54°08'25"	20:50	293°57'05"	06:15	20:50	10:54	21:47
14-08-2010	06:16	66°14'56"	13:33	+53°50'00"	20:48	293°26'22"	06:16	20:48	12:18	22:10
15-08-2010	06:18	66°45'50"	13:33	+53°31'21"	20:46	292°55'23"	06:18	20:46	13:40	22:38
16-08-2010	06:19	67°17'01"	13:32	+53°12'29"	20:44	292°24'06"	06:19	20:44	14:57	23:11
17-08-2010	06:21	67°48'29"	13:32	+52°53'23"	20:42	291°52'33"	06:21	20:42	16:07	23:53
18-08-2010	06:22	68°20'13"	13:32	+52°34'06"	20:40	291°20'43"	06:22	20:40	17:08	---
19-08-2010	06:24	68°52'14"	13:32	+52°14'36"	20:38	290°48'38"	06:24	20:38	17:56	00:44
20-08-2010	06:26	69°24'29"	13:32	+51°54'54"	20:36	290°16'19"	06:26	20:36	18:34	01:43
21-08-2010	06:27	69°57'00"	13:31	+51°35'00"	20:34	289°43'44"	06:27	20:34	19:04	02:49
22-08-2010	06:29	70°29'45"	13:31	+51°14'56"	20:32	289°10'56"	06:29	20:32	19:27	03:57
23-08-2010	06:30	71°02'44"	13:31	+50°54'40"	20:30	288°37'54"	06:30	20:30	19:46	05:05
24-08-2010	06:32	71°35'56"	13:30	+50°34'13"	20:28	288°04'38"	06:32	20:28	20:03	06:13
25-08-2010	06:33	72°09'22"	13:30	+50°13'35"	20:26	287°31'10"	06:33	20:26	20:19	07:20
26-08-2010	06:35	72°43'01"	13:30	+49°52'48"	20:24	286°57'30"	06:35	20:24	20:34	08:26
27-08-2010	06:36	73°16'51"	13:30	+49°31'51"	20:22	286°23'37"	06:36	20:22	20:49	09:32
28-08-2010	06:38	73°50'54"	13:29	+49°10'44"	20:20	285°49'33"	06:38	20:20	21:07	10:39

Aufgang/Untergang

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Objekt

Sonne

Datum	Aufgang		Meridiandurchgang		Untergang		Sonne		Mond	
	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
29-08-2010	06:39	74°25'08"	13:29	+48°49'28"	20:18	285°15'18"	06:39	20:18	21:28	11:47
30-08-2010	06:41	74°59'33"	13:29	+48°28'02"	20:16	284°40'52"	06:41	20:16	21:54	12:57
31-08-2010	06:42	75°34'08"	13:28	+48°06'29"	20:14	284°06'16"	06:42	20:14	22:27	14:06
01-09-2010	06:44	76°08'54"	13:28	+47°44'46"	20:12	283°31'30"	06:44	20:12	23:10	15:13
02-09-2010	06:45	76°43'50"	13:28	+47°22'56"	20:09	282°56'34"	06:45	20:09	---	16:13
03-09-2010	06:47	77°18'55"	13:27	+47°00'58"	20:07	282°21'30"	06:47	20:07	00:07	17:04
04-09-2010	06:48	77°54'08"	13:27	+46°38'53"	20:05	281°46'17"	06:48	20:05	01:16	17:45
05-09-2010	06:50	78°29'31"	13:27	+46°16'40"	20:03	281°10'55"	06:50	20:03	02:35	18:18
06-09-2010	06:51	79°05'01"	13:26	+45°54'21"	20:01	280°35'26"	06:51	20:01	04:00	18:45
07-09-2010	06:53	79°40'39"	13:26	+45°31'56"	19:58	279°59'50"	06:53	19:58	05:28	19:07
08-09-2010	06:54	80°16'24"	13:26	+45°09'25"	19:56	279°24'07"	06:54	19:56	06:56	19:29
09-09-2010	06:56	80°52'16"	13:25	+44°46'48"	19:54	278°48'17"	06:56	19:54	08:23	19:50
10-09-2010	06:57	81°28'13"	13:25	+44°24'05"	19:52	278°12'22"	06:57	19:52	09:50	20:12
11-09-2010	06:59	82°04'17"	13:25	+44°01'18"	19:50	277°36'21"	06:59	19:50	11:15	20:38
12-09-2010	07:00	82°40'26"	13:24	+43°38'26"	19:47	277°00'15"	07:00	19:47	12:37	21:10
13-09-2010	07:02	83°16'40"	13:24	+43°15'31"	19:45	276°24'04"	07:02	19:45	13:53	21:50
14-09-2010	07:03	83°52'59"	13:24	+42°52'31"	19:43	275°47'49"	07:03	19:43	14:59	22:39
15-09-2010	07:05	84°29'22"	13:23	+42°29'27"	19:41	275°11'29"	07:05	19:41	15:52	23:37
16-09-2010	07:07	85°05'48"	13:23	+42°06'21"	19:38	274°35'07"	07:07	19:38	16:34	---
17-09-2010	07:08	85°42'18"	13:23	+41°43'11"	19:36	273°58'41"	07:08	19:36	17:06	00:41
18-09-2010	07:10	86°18'51"	13:22	+41°19'59"	19:34	273°22'12"	07:10	19:34	17:32	01:48
19-09-2010	07:11	86°55'27"	13:22	+40°56'45"	19:32	272°45'41"	07:11	19:32	17:52	02:56
20-09-2010	07:13	87°32'05"	13:22	+40°33'28"	19:30	272°09'07"	07:13	19:30	18:10	04:04
21-09-2010	07:14	88°08'45"	13:21	+40°10'11"	19:27	271°32'32"	07:14	19:27	18:26	05:10
22-09-2010	07:16	88°45'27"	13:21	+39°46'51"	19:25	270°55'55"	07:16	19:25	18:41	06:17
23-09-2010	07:17	89°22'10"	13:20	+39°23'31"	19:23	270°19'17"	07:17	19:23	18:57	07:23
24-09-2010	07:19	89°58'54"	13:20	+39°00'10"	19:21	269°42'39"	07:19	19:21	19:15	08:30
25-09-2010	07:20	90°35'39"	13:20	+38°36'49"	19:18	269°06'00"	07:20	19:18	19:35	09:38
26-09-2010	07:22	91°12'23"	13:19	+38°13'27"	19:16	268°29'21"	07:22	19:16	19:59	10:47
27-09-2010	07:23	91°49'08"	13:19	+37°50'06"	19:14	267°52'42"	07:23	19:14	20:30	11:56

Aufgang/Untergang

Datum/Standort

Datum: 01-01-2010
 Zeitraum: 1 Jahr
 Br.: 50°28'24"N
 Län.: 7°51'7"O

Objekt

Sonne

Datum	Aufgang		Meridiandurchgang		Untergang		Sonne		Mond	
	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
28-09-2010	07:25	92°25'52"	13:19	+37°26'46"	19:12	267°16'04"	07:25	19:12	21:09	13:03
29-09-2010	07:26	93°02'36"	13:18	+37°03'26"	19:09	266°39'27"	07:26	19:09	22:00	14:05
30-09-2010	07:28	93°39'18"	13:18	+36°40'08"	19:07	266°02'51"	07:28	19:07	23:03	14:58
01-10-2010	07:30	94°15'58"	13:18	+36°16'51"	19:05	265°26'18"	07:30	19:05	---	15:41
02-10-2010	07:31	94°52'36"	13:17	+35°53'36"	19:03	264°49'46"	07:31	19:03	00:16	16:16
03-10-2010	07:33	95°29'12"	13:17	+35°30'24"	19:01	264°13'17"	07:33	19:01	01:35	16:44
04-10-2010	07:34	96°05'45"	13:17	+35°07'14"	18:58	263°36'52"	07:34	18:58	02:59	17:08
05-10-2010	07:36	96°42'15"	13:17	+34°44'08"	18:56	263°00'30"	07:36	18:56	04:24	17:29
06-10-2010	07:37	97°18'40"	13:16	+34°21'05"	18:54	262°24'12"	07:37	18:54	05:49	17:50
07-10-2010	07:39	97°55'02"	13:16	+33°58'06"	18:52	261°47'58"	07:39	18:52	07:16	18:12
08-10-2010	07:41	98°31'18"	13:16	+33°35'11"	18:50	261°11'50"	07:41	18:50	08:42	18:37
09-10-2010	07:42	99°07'29"	13:15	+33°12'21"	18:48	260°35'47"	07:42	18:48	10:08	19:07
10-10-2010	07:44	99°43'35"	13:15	+32°49'36"	18:46	259°59'50"	07:44	18:46	11:29	19:44
11-10-2010	07:45	100°19'34"	13:15	+32°26'56"	18:43	259°24'00"	07:46	18:43	12:41	20:31
12-10-2010	07:47	100°55'26"	13:15	+32°04'22"	18:41	258°48'16"	07:47	18:41	13:42	21:26
13-10-2010	07:49	101°31'11"	13:14	+31°41'55"	18:39	258°12'40"	07:49	18:39	14:29	22:30
14-10-2010	07:50	102°06'48"	13:14	+31°19'34"	18:37	257°37'12"	07:50	18:37	15:06	23:37
15-10-2010	07:52	102°42'17"	13:14	+30°57'20"	18:35	257°01'52"	07:52	18:35	15:34	---
16-10-2010	07:54	103°17'38"	13:14	+30°35'13"	18:33	256°26'41"	07:54	18:33	15:57	00:46
17-10-2010	07:55	103°52'49"	13:13	+30°13'14"	18:31	255°51'40"	07:55	18:31	16:15	01:53
18-10-2010	07:57	104°27'50"	13:13	+29°51'23"	18:29	255°16'48"	07:57	18:29	16:32	03:00
19-10-2010	07:59	105°02'42"	13:13	+29°29'41"	18:27	254°42'07"	07:59	18:27	16:48	04:06
20-10-2010	08:00	105°37'22"	13:13	+29°08'07"	18:25	254°07'36"	08:00	18:25	17:04	05:12
21-10-2010	08:02	106°11'52"	13:13	+28°46'43"	18:23	253°33'17"	08:02	18:23	17:21	06:19
22-10-2010	08:04	106°46'09"	13:13	+28°25'28"	18:21	252°59'09"	08:04	18:21	17:40	07:27
23-10-2010	08:05	107°20'15"	13:12	+28°04'23"	18:19	252°25'14"	08:05	18:19	18:04	08:36
24-10-2010	08:07	107°54'08"	13:12	+27°43'28"	18:17	251°51'32"	08:07	18:17	18:33	09:46
25-10-2010	08:09	108°27'47"	13:12	+27°22'44"	18:15	251°18'04"	08:09	18:15	19:10	10:55
26-10-2010	08:10	109°01'12"	13:12	+27°02'11"	18:13	250°44'49"	08:10	18:13	19:58	11:58
27-10-2010	08:12	109°34'23"	13:12	+26°41'50"	18:11	250°11'49"	08:12	18:11	20:57	12:54

Aufgang/Untergang

Datum/Standort

Datum: 01-01-2010
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 Br.: 50°28'24"N
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Objekt

Sonne

Datum	Aufgang		Meridiandurchgang		Untergang		Sonne		Mond	
	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
28-10-2010	08:14	110°07'19"	13:12	+26°21'40"	18:09	249°39'05"	08:14	18:09	22:06	13:40
29-10-2010	08:15	110°40'00"	13:12	+26°01'43"	18:08	249°06'36"	08:15	18:08	23:22	14:16
30-10-2010	08:17	111°12'24"	13:12	+25°41'58"	18:06	248°34'24"	08:17	18:06	---	14:46
31-10-2010	07:19	111°44'30"	12:12	+25°22'27"	17:04	248°02'28"	07:19	17:04	00:42	14:10
01-11-2010	07:20	112°16'20"	12:12	+25°03'09"	17:02	247°30'51"	07:20	17:02	01:03	14:32
02-11-2010	07:22	112°47'51"	12:12	+24°44'04"	17:01	246°59'32"	07:22	17:01	02:25	14:52
03-11-2010	07:24	113°19'02"	12:12	+24°25'15"	16:59	246°28'33"	07:24	16:59	03:48	15:13
04-11-2010	07:26	113°49'54"	12:12	+24°06'39"	16:57	245°57'53"	07:26	16:57	05:12	15:36
05-11-2010	07:27	114°20'26"	12:12	+23°48'19"	16:56	245°27'34"	07:27	16:55	06:36	16:03
06-11-2010	07:29	114°50'36"	12:12	+23°30'15"	16:54	244°57'37"	07:29	16:54	08:00	16:36
07-11-2010	07:31	115°20'24"	12:12	+23°12'27"	16:52	244°28'01"	07:31	16:52	09:17	17:19
08-11-2010	07:32	115°49'49"	12:12	+22°54'55"	16:51	243°58'49"	07:32	16:51	10:25	18:12
09-11-2010	07:34	116°18'51"	12:12	+22°37'40"	16:49	243°30'01"	07:34	16:49	11:19	19:13
10-11-2010	07:36	116°47'28"	12:12	+22°20'42"	16:48	243°01'37"	07:36	16:48	12:02	20:21
11-11-2010	07:37	117°15'41"	12:12	+22°04'02"	16:46	242°33'38"	07:37	16:46	12:34	21:31
12-11-2010	07:39	117°43'27"	12:12	+21°47'40"	16:45	242°06'06"	07:39	16:45	12:59	22:40
13-11-2010	07:41	118°10'46"	12:12	+21°31'37"	16:43	241°39'00"	07:41	16:43	13:19	23:47
14-11-2010	07:42	118°37'38"	12:13	+21°15'52"	16:42	241°12'22"	07:42	16:42	13:37	---
15-11-2010	07:44	119°04'02"	12:13	+21°00'27"	16:41	240°46'12"	07:44	16:41	13:53	00:54
16-11-2010	07:46	119°29'56"	12:13	+20°45'21"	16:39	240°20'32"	07:46	16:39	14:09	01:59
17-11-2010	07:47	119°55'21"	12:13	+20°30'35"	16:38	239°55'22"	07:47	16:38	14:25	03:05
18-11-2010	07:49	120°20'15"	12:13	+20°16'09"	16:37	239°30'42"	07:49	16:37	14:44	04:13
19-11-2010	07:51	120°44'37"	12:13	+20°02'05"	16:36	239°06'34"	07:51	16:36	15:06	05:22
20-11-2010	07:52	121°08'27"	12:14	+19°48'21"	16:35	238°42'59"	07:52	16:35	15:33	06:32
21-11-2010	07:54	121°31'44"	12:14	+19°34'59"	16:34	238°19'57"	07:54	16:34	16:08	07:42
22-11-2010	07:55	121°54'27"	12:14	+19°21'58"	16:33	237°57'29"	07:55	16:33	16:53	08:48
23-11-2010	07:57	122°16'35"	12:14	+19°09'20"	16:32	237°35'36"	07:57	16:32	17:50	09:48
24-11-2010	07:58	122°38'07"	12:15	+18°57'04"	16:31	237°14'19"	07:58	16:31	18:57	10:38
25-11-2010	08:00	122°59'03"	12:15	+18°45'11"	16:30	236°53'39"	08:00	16:30	20:12	11:17
26-11-2010	08:01	123°19'21"	12:15	+18°33'41"	16:29	236°33'36"	08:01	16:29	21:31	11:49

Aufgang/Untergang

Datum/Standort

Datum: 01-01-2010
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Objekt

Sonne

Datum	Aufgang		Meridiandurchgang		Untergang		Sonne		Mond	
	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
27-11-2010	08:03	123°39' 01"	12:16	+18°22' 35"	16:28	236°14' 12"	08:03	16:28	22:51	12:15
28-11-2010	08:04	123°58' 02"	12:16	+18°11' 52"	16:27	235°55' 26"	08:04	16:27	---	12:37
29-11-2010	08:06	124°16' 23"	12:16	+18°01' 34"	16:26	235°37' 21"	08:06	16:26	00:11	12:57
30-11-2010	08:07	124°34' 04"	12:17	+17°51' 40"	16:26	235°19' 56"	08:07	16:26	01:31	13:17
01-12-2010	08:09	124°51' 03"	12:17	+17°42' 11"	16:25	235°03' 13"	08:09	16:25	02:52	13:38
02-12-2010	08:10	125°07' 20"	12:17	+17°33' 07"	16:25	234°47' 12"	08:10	16:25	04:14	14:02
03-12-2010	08:11	125°22' 53"	12:18	+17°24' 28"	16:24	234°31' 55"	08:11	16:24	05:35	14:32
04-12-2010	08:13	125°37' 43"	12:18	+17°16' 15"	16:24	234°17' 21"	08:13	16:24	06:54	15:10
05-12-2010	08:14	125°51' 49"	12:19	+17°08' 28"	16:23	234°03' 32"	08:14	16:23	08:06	15:57
06-12-2010	08:15	126°05' 09"	12:19	+17°01' 07"	16:23	233°50' 29"	08:15	16:23	09:06	16:55
07-12-2010	08:16	126°17' 43"	12:19	+16°54' 12"	16:23	233°38' 11"	08:16	16:23	09:54	18:01
08-12-2010	08:17	126°29' 30"	12:20	+16°47' 44"	16:22	233°26' 40"	08:17	16:22	10:31	19:11
09-12-2010	08:18	126°40' 31"	12:20	+16°41' 43"	16:22	233°15' 57"	08:18	16:22	11:00	20:22
10-12-2010	08:20	126°50' 43"	12:21	+16°36' 09"	16:22	233°06' 01"	08:20	16:22	11:22	21:31
11-12-2010	08:21	127°00' 08"	12:21	+16°31' 02"	16:22	232°56' 53"	08:21	16:22	11:41	22:39
12-12-2010	08:22	127°08' 43"	12:22	+16°26' 22"	16:22	232°48' 35"	08:22	16:22	11:58	23:45
13-12-2010	08:22	127°16' 29"	12:22	+16°22' 10"	16:22	232°41' 05"	08:22	16:22	12:14	---
14-12-2010	08:23	127°23' 26"	12:23	+16°18' 25"	16:22	232°34' 26"	08:23	16:22	12:30	00:50
15-12-2010	08:24	127°29' 33"	12:23	+16°15' 08"	16:22	232°28' 36"	08:24	16:22	12:47	01:56
16-12-2010	08:25	127°34' 49"	12:24	+16°12' 19"	16:22	232°23' 37"	08:25	16:22	13:07	03:04
17-12-2010	08:26	127°39' 14"	12:24	+16°09' 58"	16:22	232°19' 28"	08:26	16:22	13:32	04:13
18-12-2010	08:26	127°42' 49"	12:25	+16°08' 05"	16:23	232°16' 11"	08:26	16:23	14:03	05:23
19-12-2010	08:27	127°45' 32"	12:25	+16°06' 40"	16:23	232°13' 44"	08:27	16:23	14:44	06:32
20-12-2010	08:28	127°47' 25"	12:26	+16°05' 43"	16:23	232°12' 09"	08:28	16:23	15:36	07:35
21-12-2010	08:28	127°48' 25"	12:26	+16°05' 15"	16:24	232°11' 26"	08:28	16:24	16:41	08:30
22-12-2010	08:29	127°48' 35"	12:27	+16°05' 15"	16:24	232°11' 34"	08:29	16:24	17:55	09:15
23-12-2010	08:29	127°47' 52"	12:27	+16°05' 42"	16:25	232°12' 33"	08:29	16:25	19:16	09:50
24-12-2010	08:30	127°46' 19"	12:28	+16°06' 39"	16:26	232°14' 24"	08:30	16:26	20:38	10:19
25-12-2010	08:30	127°43' 53"	12:28	+16°08' 03"	16:26	232°17' 07"	08:30	16:26	22:00	10:42
26-12-2010	08:30	127°40' 36"	12:29	+16°09' 56"	16:27	232°20' 41"	08:30	16:27	23:20	11:03

Aufgang/Untergang

Datum/Standort

Datum: 01-01-2010
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Objekt

Sonne

Datum	Aufgang		Meridiandurchgang		Untergang		Sonne		Mond	
	Ortszeit	Azm	Ortszeit	Höhe	Ortszeit	Azm	Aufgang	Untergang	Aufgang	Untergang
27-12-2010	08:31	127°36' 28"	12:29	+16°12' 16"	16:28	232°25' 06"	08:31	16:28	---	11:23
28-12-2010	08:31	127°31' 29"	12:30	+16°15' 05"	16:29	232°30' 22"	08:31	16:29	00:41	11:44
29-12-2010	08:31	127°25' 39"	12:30	+16°18' 23"	16:29	232°36' 29"	08:31	16:29	02:01	12:06
30-12-2010	08:31	127°18' 59"	12:31	+16°22' 08"	16:30	232°43' 27"	08:31	16:30	03:21	12:34
31-12-2010	08:31	127°11' 29"	12:31	+16°26' 21"	16:31	232°51' 14"	08:31	16:31	04:39	13:07