

Mondephemeride für den Zeitraum 1. 1.2012 - 31.12.2012

Alle Zeiten gelten für den Standort Boden (50.5° N, 7.9° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

Datum	RA (2000.0)	D (2000.0)	Entferng.	Azim	Höhe	Phase	Hell.	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH.	Stb.
So 1. 1.2012	0:00	0h13'37.9" + 6°18'53.7"	402261 km	94°	+ 5°	+ 47%	-10.0	11:41	18:40	+49°	00:40	17:13	+46°	PSC
Mo 2. 1.2012	0:00	0h58'44.3" +10°32' 1.2"	404060 km	88°	+15°	+ 57%	-10.7	12:02	19:23	+53°	01:46	17:14	+45°	PSC
Di 3. 1.2012	0:00	1h44'55.0" +14°18'53.3"	404560 km	83°	+25°	+ 66%	-11.2	12:26	20:07	+57°	02:50	17:15	+43°	ARI
Mi 4. 1.2012	0:00	2h32'45.7" +17°30'54.3"	403807 km	76°	+34°	+ 74%	-11.7	12:56	20:53	+59°	03:55	17:16	+38°	ARI
Do 5. 1.2012	0:00	3h22'38.7" +19°58'46.7"	401937 km	67°	+43°	+ 82%	-12.1	13:32	21:42	+61°	04:57	17:17	+32°	TAU
Fr 6. 1.2012	0:00	4h14'37.3" +21°32'56.0"	399160 km	55°	+51°	+ 89%	-12.4	14:15	22:32	+62°	05:56	17:18	+25°	TAU
Sa 7. 1.2012	0:00	5h 8'22.6" +22° 4'42.3"	395734 km	39°	+57°	+ 94%	-12.6	15:09	23:24	+61°	06:48	17:19	+17°	TAU
So 8. 1.2012	0:00	6h 3'14.5" +21°28' 3.8"	391944 km	17°	+60°	+ 98%	-12.7	16:10	--:--	---°	07:34	17:20	+ 9°	ORI
Mo 9. 1.2012	0:00	6h58'22.5" +19°41'21.6"	388062 km	353°	+59°	+100%	-12.8	17:19	00:15	+59°	08:12	07:50	+ 2°	GEM
Di 10. 1.2012	0:00	7h52'60.0" +16°48'15.4"	384329 km	333°	+54°	- 99%	-12.8	18:32	01:07	+56°	08:44	07:49	+ 7°	CNC
Mi 11. 1.2012	0:00	8h46'37.9" +12°57'30.4"	380927 km	318°	+46°	- 97%	-12.7	19:48	01:57	+52°	09:12	07:49	+12°	CNC
Do 12. 1.2012	0:00	9h39'11.2" + 8°21'46.4"	377967 km	307°	+36°	- 92%	-12.5	21:04	02:46	+47°	09:36	07:48	+16°	LEO
Fr 13. 1.2012	0:00	10h30'58.0" + 3°16' 8.7"	375492 km	298°	+25°	- 85%	-12.2	22:20	03:34	+42°	09:58	07:48	+19°	SEX
Sa 14. 1.2012	0:00	11h22'33.1" - 2° 3' 3.5"	373495 km	291°	+14°	- 76%	-11.8	23:38	04:23	+36°	10:20	07:47	+21°	LEO
So 15. 1.2012	0:00	12h14'40.9" - 7°18'56.9"	371942 km	285°	+ 3°	- 66%	-11.2	--:--	05:13	+31°	10:43	07:47	+22°	VIR
Mo 16. 1.2012	0:00	13h 8' 7.1" -12°14'17.5"	370810 km	278°	- 9°	- 55%	-10.5	00:57	06:04	+26°	11:10	07:46	+22°	VIR
Di 17. 1.2012	0:00	14h 3'28.2" -16°31'38.8"	370105 km	271°	-20°	- 44%	-9.7	02:15	06:59	+22°	11:41	07:45	+21°	VIR
Mi 18. 1.2012	0:00	15h 1' 0.3" -19°53'59.2"	369877 km	263°	-31°	- 32%	-8.5	03:33	07:57	+18°	12:19	07:56	+18°	LIB
Do 19. 1.2012	0:00	16h 0'27.2" -22° 6'17.5"	370215 km	253°	-42°	- 22%	-7.1	04:45	08:57	+17°	13:08	08:56	+17°	SCO
Fr 20. 1.2012	0:00	17h 0'56.2" -22°58' 6.2"	371227 km	239°	-51°	- 14%	-5.3	05:49	09:58	+16°	14:06	09:57	+16°	OPH
Sa 21. 1.2012	0:00	18h 1' 8.2" -22°26' 9.0"	373005 km	220°	-57°	- 7%	-4.1	06:41	10:58	+17°	15:14	10:57	+17°	SGR
So 22. 1.2012	0:00	18h59'42.5" -20°35'27.8"	375589 km	196°	-59°	- 2%	-4.1	07:24	11:56	+20°	16:27	11:55	+20°	SGR
Mo 23. 1.2012	0:00	19h55'41.0" -17°38' 6.5"	378936 km	172°	-57°	- 0%	-4.1	07:57	12:49	+24°	17:43	12:48	+24°	CAP
Di 24. 1.2012	0:00	20h48'40.5" -13°50'10.4"	382906 km	154°	-51°	+ 1%	-4.1	08:23	13:39	+28°	18:56	13:38	+28°	AQR
Mi 25. 1.2012	0:00	21h38'49.8" - 9°28'37.9"	387266 km	141°	-43°	+ 3%	-4.1	08:46	14:26	+33°	20:07	14:25	+33°	CAP
Do 26. 1.2012	0:00	22h26'39.2" - 4°49' 9.4"	391716 km	131°	-34°	+ 8%	-4.1	09:07	15:10	+38°	21:16	15:09	+38°	AQR
Fr 27. 1.2012	0:00	23h12'50.5" - 0° 5'10.7"	395921 km	123°	-24°	+ 14%	-5.4	09:26	15:53	+43°	22:23	15:52	+43°	PSC
Sa 28. 1.2012	0:00	23h58' 9.2" + 4°32' 7.6"	399544 km	117°	-15°	+ 21%	-7.0	09:46	16:35	+47°	23:30	16:34	+47°	PSC
So 29. 1.2012	0:00	0h43'20.9" + 8°53'19.8"	402287 km	111°	- 5°	+ 30%	-8.2	10:06	17:17	+51°	--:--	17:16	+51°	PSC
Mo 30. 1.2012	0:00	1h29' 7.9" +12°50' 2.1"	403915 km	105°	+ 4°	+ 39%	-9.2	10:29	18:01	+55°	00:35	17:52	+55°	PSC
Di 31. 1.2012	0:00	2h16' 7.1" +16°14'10.2"	404280 km	99°	+13°	+ 48%	-10.0	10:56	18:46	+58°	01:40	17:53	+57°	ARI
Mi 1. 2.2012	0:00	3h 4'46.3" +18°57'30.4"	403329 km	93°	+23°	+ 57%	-10.7	11:29	19:33	+60°	02:42	17:55	+55°	ARI
Do 2. 2.2012	0:00	3h55'19.9" +20°51'33.7"	401116 km	85°	+31°	+ 67%	-11.3	12:08	20:22	+61°	03:42	17:57	+50°	TAU
Fr 3. 2.2012	0:00	4h47'45.1" +21°48' 3.7"	397791 km	76°	+40°	+ 75%	-11.7	12:57	21:13	+61°	04:37	17:58	+43°	TAU
Sa 4. 2.2012	0:00	5h41'40.5" +21°40' 0.3"	393601 km	63°	+47°	+ 83%	-12.1	13:54	22:04	+60°	05:26	18:00	+35°	ORI
So 5. 2.2012	0:00	6h36'29.7" +20°23' 9.2"	388870 km	47°	+53°	+ 90%	-12.4	15:00	22:56	+58°	06:07	18:02	+26°	GEM
Mo 6. 2.2012	0:00	7h31'31.5" +17°57'28.2"	383966 km	26°	+55°	+ 95%	-12.6	16:11	23:47	+54°	06:43	18:03	+15°	GEM
Di 7. 2.2012	0:00	8h26'12.1" +14°27'59.1"	379269 km	5°	+54°	+ 99%	-12.8	17:28	--:--	---°	07:13	18:05	+ 5°	CNC
Mi 8. 2.2012	0:00	9h20'14.5" +10° 4'48.4"	375126 km	345°	+49°	-100%	-12.8	18:45	00:38	+49°	07:39	07:20	+ 2°	LEO
Do 9. 2.2012	0:00	10h13'42.2" + 5° 2'21.9"	371811 km	330°	+41°	- 98%	-12.7	20:04	01:28	+44°	08:03	07:18	+ 6°	SEX

Mondephemeride für den Zeitraum 1. 1.2012 - 31.12.2012

Alle Zeiten gelten für den Standort Boden (50.5° N, 7.9° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

Datum	RA (2000.0)	D (2000.0)	Entferng.	Azim	Höhe	Phase	Hell.	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH.	Stb.
Fr 10. 2.2012	0:00	11h 6'56.6" - 0°21'47.2"	369492 km	319°	+31°	- 94%	-12.6	21:24	02:18	+39°	08:25	07:16	+10°	LEO
Sa 11. 2.2012	0:00	12h 0'30.8" - 5°48'17.6"	368218 km	309°	+21°	- 88%	-12.3	22:43	03:08	+33°	08:49	07:15	+13°	VIR
So 12. 2.2012	0:00	12h55' 0.9" -10°57'14.8"	367927 km	301°	+10°	- 80%	-11.9	--:--	04:01	+28°	09:15	07:13	+15°	VIR
Mo 13. 2.2012	0:00	13h50'56.9" -15°29'18.5"	368481 km	293°	- 1°	- 70%	-11.4	00:04	04:55	+23°	09:45	07:12	+17°	VIR
Di 14. 2.2012	0:00	14h48'31.6" -19° 6'54.4"	369708 km	285°	-12°	- 59%	-10.8	01:22	05:52	+19°	10:21	07:10	+18°	LIB
Mi 15. 2.2012	0:00	15h47'31.3" -21°35'42.2"	371444 km	277°	-23°	- 47%	-10.0	02:35	06:51	+17°	11:06	07:08	+17°	SCO
Do 16. 2.2012	0:00	16h47'12.9" -22°46'20.6"	373560 km	267°	-32°	- 36%	-9.0	03:41	07:51	+16°	12:00	07:50	+16°	OPH
Fr 17. 2.2012	0:00	17h46'32.5" -22°35'58.4"	375976 km	256°	-41°	- 26%	-7.7	04:36	08:50	+17°	13:03	08:49	+17°	SGR
Sa 18. 2.2012	0:00	18h44'23.8" -21° 8'40.3"	378657 km	241°	-48°	- 17%	-6.1	05:21	09:47	+19°	14:13	09:46	+19°	SGR
So 19. 2.2012	0:00	19h39'57.5" -18°34'21.4"	381593 km	223°	-52°	- 10%	-4.1	05:57	10:41	+22°	15:25	10:40	+22°	SGR
Mo 20. 2.2012	0:00	20h32'51.8" -15° 6'37.8"	384773 km	203°	-53°	- 4%	-4.1	06:25	11:31	+26°	16:38	11:30	+26°	AQR
Di 21. 2.2012	0:00	21h23'11.4" -11° 0'29.7"	388158 km	184°	-50°	- 1%	-4.1	06:50	12:19	+31°	17:49	12:18	+31°	CAP
Mi 22. 2.2012	0:00	22h11'20.3" - 6°30'40.3"	391663 km	168°	-45°	+ 0%	-4.1	07:11	13:04	+35°	18:59	13:03	+35°	AQR
Do 23. 2.2012	0:00	22h57'53.2" - 1°50'39.4"	395145 km	155°	-39°	+ 1%	-4.1	07:31	13:47	+40°	20:07	13:46	+40°	PSC
Fr 24. 2.2012	0:00	23h43'29.3" + 2°47'35.2"	398414 km	145°	-31°	+ 4%	-4.1	07:51	14:30	+45°	21:14	14:29	+45°	PSC
Sa 25. 2.2012	0:00	0h28'48.1" + 7°13'32.4"	401241 km	136°	-23°	+ 9%	-4.1	08:11	15:12	+50°	22:19	15:11	+50°	PSC
So 26. 2.2012	0:00	1h14'26.3" +11°17'50.7"	403387 km	129°	-14°	+ 15%	-5.7	08:33	15:55	+53°	23:25	15:54	+53°	PSC
Mo 27. 2.2012	0:00	2h 0'56.4" +14°51'56.4"	404625 km	122°	- 6°	+ 22%	-7.2	08:59	16:40	+57°	--:--	16:39	+57°	ARI
Di 28. 2.2012	0:00	2h48'43.3" +17°47'44.4"	404768 km	115°	+ 3°	+ 31%	-8.3	09:29	17:26	+59°	00:28	17:25	+59°	ARI
Mi 29. 2.2012	0:00	3h38' 2.3" +19°57'29.5"	403692 km	108°	+11°	+ 40%	-9.3	10:05	18:13	+61°	01:29	18:12	+61°	TAU
Do 1. 3.2012	0:00	4h28'56.0" +21°13'54.2"	401356 km	100°	+19°	+ 49%	-10.1	10:49	19:03	+61°	02:25	18:43	+61°	TAU
Fr 2. 3.2012	0:00	5h21'13.7" +21°30'38.4"	397817 km	91°	+27°	+ 59%	-10.8	11:41	19:53	+61°	03:16	18:45	+58°	TAU
Sa 3. 3.2012	0:00	6h14'33.2" +20°43' 6.9"	393239 km	81°	+35°	+ 68%	-11.4	12:41	20:43	+59°	04:00	18:46	+51°	GEM
So 4. 3.2012	0:00	7h 8'26.9" +18°49'26.0"	387894 km	68°	+41°	+ 77%	-11.8	13:49	21:34	+56°	04:37	18:48	+43°	GEM
Mo 5. 3.2012	0:00	8h 2'30.0" +15°51'16.6"	382150 km	52°	+45°	+ 85%	-12.2	15:02	22:25	+52°	05:10	18:50	+33°	CNC
Di 6. 3.2012	0:00	8h56'28.3" +11°54'31.3"	376444 km	34°	+47°	+ 92%	-12.5	16:18	23:15	+47°	05:38	18:51	+22°	CNC
Mi 7. 3.2012	0:00	9h50'22.6" + 7° 9'34.2"	371243 km	15°	+46°	+ 97%	-12.7	17:38	--:--	---°	06:03	18:53	+11°	SEX
Do 8. 3.2012	0:00	10h44'29.1" + 1°51'19.2"	366985 km	357°	+41°	+100%	-12.8	18:58	00:06	+41°	06:27	06:25	---°	LEO
Fr 9. 3.2012	0:00	11h39'14.9" - 3°41'18.5"	364019 km	342°	+34°	- 99%	-12.8	20:20	00:57	+36°	06:51	06:23	+ 3°	VIR
Sa 10. 3.2012	0:00	12h35'11.0" - 9° 6'27.8"	362549 km	329°	+26°	- 96%	-12.7	21:44	01:51	+30°	07:17	06:21	+ 7°	VIR
So 11. 3.2012	0:00	13h32'42.0" -14° 1' 8.8"	362605 km	318°	+16°	- 91%	-12.4	23:05	02:46	+25°	07:47	06:19	+11°	VIR
Mo 12. 3.2012	0:00	14h31'54.7" -18° 3'37.6"	364053 km	308°	+ 6°	- 83%	-12.1	--:--	03:45	+21°	08:22	06:16	+14°	LIB
Di 13. 3.2012	0:00	15h32'27.6" -20°56'14.0"	366634 km	299°	- 4°	- 73%	-11.6	00:23	04:45	+18°	09:05	06:14	+15°	LIB
Mi 14. 3.2012	0:00	16h33'29.1" -22°27'56.2"	370024 km	289°	-13°	- 62%	-11.0	01:33	05:46	+17°	09:57	06:12	+16°	OPH
Do 15. 3.2012	0:00	17h33'48.7" -22°35'51.9"	373898 km	279°	-22°	- 51%	-10.3	02:32	06:45	+17°	10:58	06:44	+17°	SGR
Fr 16. 3.2012	0:00	18h32'17.8" -21°25' 0.4"	377976 km	268°	-30°	- 40%	-9.4	03:20	07:43	+18°	12:06	07:42	+18°	SGR
Sa 17. 3.2012	0:00	19h28' 9.6" -19° 6' 9.2"	382046 km	255°	-36°	- 30%	-8.2	03:58	08:37	+21°	13:16	08:36	+21°	SGR
So 18. 3.2012	0:00	20h21' 7.7" -15°53' 6.8"	385968 km	241°	-41°	- 21%	-6.9	04:28	09:28	+25°	14:27	09:27	+25°	CAP
Mo 19. 3.2012	0:00	21h11'22.6" -12° 0'20.8"	389668 km	225°	-44°	- 13%	-5.1	04:54	10:15	+29°	15:38	10:14	+29°	AQR
Di 20. 3.2012	0:00	21h59'22.7" - 7°41'36.9"	393111 km	209°	-44°	- 7%	-4.1	05:16	11:00	+34°	16:47	10:59	+34°	AQR

Mondephemeride für den Zeitraum 1. 1.2012 - 31.12.2012

Alle Zeiten gelten für den Standort Boden (50.5° N, 7.9° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

Datum	RA (2000.0)	D (2000.0)	Entferng.	Azim	Höhe	Phase	Hell.	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH.	Stb.
Mi 21. 3.2012	0:00	22h45'45.4" - 3° 9'28.2"	396273 km	194°	-42°	- 3%	-4.1	05:36	11:44	+39°	17:55	11:43	+39°	PSC
Do 22. 3.2012	0:00	23h31'10.8" + 1°24'42.7"	399123 km	180°	-38°	- 1%	-4.1	05:56	12:26	+43°	19:01	12:25	+43°	PSC
Fr 23. 3.2012	0:00	0h16'17.7" + 5°50'31.7"	401603 km	168°	-33°	+ 0%	-4.1	06:16	13:09	+48°	20:07	13:08	+48°	PSC
Sa 24. 3.2012	0:00	1h 1'41.2" + 9°58'19.2"	403617 km	157°	-27°	+ 2%	-4.1	06:38	13:52	+52°	21:12	13:51	+52°	PSC
So 25. 3.2012	0:00	1h45'24.8" +13°31'51.3"	404995 km	134°	-15°	+ 5%	-4.1	08:02	15:36	+55°	23:16	15:35	+55°	ARI
Mo 26. 3.2012	0:00	2h32'42.9" +16°39'11.1"	405716 km	126°	- 7°	+ 10%	-4.1	08:30	16:21	+58°	--:--	16:20	+58°	ARI
Di 27. 3.2012	0:00	3h21'20.8" +19° 3'11.8"	405555 km	119°	+ 1°	+ 16%	-5.9	09:05	17:08	+60°	00:17	17:07	+60°	TAU
Mi 28. 3.2012	0:00	4h11'19.1" +20°36'43.3"	404379 km	111°	+ 9°	+ 24%	-7.3	09:45	17:56	+61°	01:15	17:55	+61°	TAU
Do 29. 3.2012	0:00	5h 2'26.8" +21°13'53.6"	402096 km	103°	+17°	+ 32%	-8.5	10:33	18:45	+61°	02:07	18:44	+61°	TAU
Fr 30. 3.2012	0:00	5h54'24.5" +20°50'38.4"	398681 km	94°	+24°	+ 41%	-9.5	11:29	19:34	+59°	02:53	19:33	+59°	ORI
Sa 31. 3.2012	0:00	6h46'49.6" +19°25' 8.4"	394197 km	83°	+31°	+ 51%	-10.3	12:32	20:23	+57°	03:33	20:22	+57°	GEM
So 1. 4.2012	0:00	7h39'23.3" +16°58'10.5"	388811 km	71°	+36°	+ 61%	-10.9	13:41	21:13	+54°	04:06	20:34	+53°	GEM
Mo 2. 4.2012	0:00	8h31'57.3" +13°33'22.7"	382803 km	56°	+41°	+ 71%	-11.5	14:53	22:02	+49°	04:35	20:36	+46°	CNC
Di 3. 4.2012	0:00	9h24'37.1" + 9°17'31.9"	376557 km	40°	+43°	+ 80%	-12.0	16:09	22:51	+44°	05:02	20:38	+37°	LEO
Mi 4. 4.2012	0:00	10h17'42.5" + 4°21' 0.2"	370548 km	22°	+42°	+ 88%	-12.3	17:29	23:42	+39°	05:26	20:39	+26°	SEX
Do 5. 4.2012	0:00	11h11'44.6" - 1° 1'41.3"	365291 km	5°	+38°	+ 95%	-12.6	18:50	--:--	---°	05:50	20:41	+15°	LEO
Fr 6. 4.2012	0:00	12h 7'20.1" - 6°31'33.2"	361277 km	349°	+32°	+ 99%	-12.7	20:13	00:35	+33°	06:15	20:43	+ 3°	VIR
Sa 7. 4.2012	0:00	13h 5' 1.6" -11°45'38.1"	358892 km	335°	+25°	-100%	-12.8	21:38	01:30	+27°	06:44	06:18	+ 3°	VIR
So 8. 4.2012	0:00	14h 5' 4.6" -16°18'55.1"	358345 km	323°	+16°	- 98%	-12.7	23:00	02:29	+23°	07:18	06:16	+ 7°	VIR
Mo 9. 4.2012	0:00	15h 7'12.4" -19°47'53.4"	359634 km	312°	+ 6°	- 93%	-12.5	--:--	03:30	+19°	07:59	06:14	+11°	LIB
Di 10. 4.2012	0:00	16h10'28.0" -21°55' 5.6"	362549 km	302°	- 3°	- 86%	-12.2	00:16	04:33	+17°	08:49	06:11	+14°	OPH
Mi 11. 4.2012	0:00	17h13'22.9" -22°32'55.1"	366729 km	291°	-12°	- 77%	-11.8	01:22	05:36	+17°	09:49	06:09	+16°	OPH
Do 12. 4.2012	0:00	18h14'24.4" -21°44'35.2"	371733 km	280°	-20°	- 67%	-11.3	02:15	06:36	+18°	10:57	06:35	+18°	SGR
Fr 13. 4.2012	0:00	19h12'25.4" -19°41'44.2"	377117 km	269°	-27°	- 56%	-10.6	02:58	07:33	+20°	12:08	07:32	+20°	SGR
Sa 14. 4.2012	0:00	20h 6'58.9" -16°40'12.9"	382496 km	256°	-33°	- 45%	-9.8	03:31	08:25	+24°	13:20	08:24	+24°	CAP
So 15. 4.2012	0:00	20h58'14.7" -12°56'21.3"	387572 km	242°	-37°	- 35%	-8.8	03:58	09:14	+28°	14:30	09:13	+28°	AQR
Mo 16. 4.2012	0:00	21h46'46.0" - 8°44'54.8"	392147 km	228°	-39°	- 25%	-7.6	04:21	09:59	+32°	15:39	09:58	+32°	AQR
Di 17. 4.2012	0:00	22h33'17.0" - 4°18'32.8"	396109 km	213°	-39°	- 17%	-6.2	04:42	10:43	+37°	16:46	10:42	+37°	AQR
Mi 18. 4.2012	0:00	23h18'34.6" + 0°11'52.1"	399417 km	199°	-38°	- 10%	-4.3	05:02	11:25	+42°	17:52	11:24	+42°	PSC
Do 19. 4.2012	0:00	0h 3'23.3" + 4°36'36.9"	402073 km	185°	-35°	- 5%	-4.1	05:22	12:07	+46°	18:58	12:06	+46°	PSC
Fr 20. 4.2012	0:00	0h48'22.8" + 8°46'34.7"	404093 km	173°	-31°	- 2%	-4.1	05:43	12:50	+51°	20:03	12:49	+51°	PSC
Sa 21. 4.2012	0:00	1h34' 5.8" +12°32'53.7"	405491 km	162°	-25°	- 0%	-4.1	06:06	13:33	+54°	21:07	13:32	+54°	PSC
So 22. 4.2012	0:00	2h20'56.0" +15°46'50.8"	406261 km	152°	-20°	+ 0%	-4.1	06:33	14:18	+57°	22:09	14:17	+57°	ARI
Mo 23. 4.2012	0:00	3h 9' 5.7" +18°20' 3.4"	406368 km	143°	-13°	+ 2%	-4.1	07:06	15:04	+59°	23:08	15:03	+59°	ARI
Di 24. 4.2012	0:00	3h58'33.9" +20° 4'57.6"	405753 km	134°	- 7°	+ 6%	-4.1	07:44	15:52	+61°	--:--	15:51	+61°	TAU
Mi 25. 4.2012	0:00	4h49' 6.6" +20°55'27.3"	404340 km	125°	- 1°	+ 11%	-4.5	08:29	16:40	+61°	00:01	16:39	+61°	TAU
Do 26. 4.2012	0:00	5h40'20.4" +20°47'33.1"	402055 km	116°	+ 6°	+ 18%	-6.3	09:23	17:29	+60°	00:49	17:28	+60°	ORI
Fr 27. 4.2012	0:00	6h31'48.8" +19°39'47.7"	398848 km	107°	+12°	+ 26%	-7.7	10:22	18:17	+58°	01:31	18:16	+58°	GEM
Sa 28. 4.2012	0:00	7h23'10.6" +17°33'21.1"	394718 km	96°	+18°	+ 35%	-8.8	11:27	19:05	+55°	02:05	19:04	+55°	GEM
So 29. 4.2012	0:00	8h14'16.0" +14°31'48.8"	389741 km	85°	+23°	+ 45%	-9.8	12:36	19:53	+51°	02:35	19:52	+51°	CNC

Mondephemeride für den Zeitraum 1. 1.2012 - 31.12.2012

Alle Zeiten gelten für den Standort Boden (50.5° N, 7.9° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

Datum	RA (2000.0)	D (2000.0)	Entferng.	Azim	Höhe	Phase	Hell.	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH.	Stb.	
Mo 30. 4.2012	0:00	9h 5'11.0"	+10°40'58.9"	384086 km	73°	+27°	+ 55%	-10.6	13:48	20:41	+46°	03:02	20:40	+46°	CNC
Di 1. 5.2012	0:00	9h56'17.6"	+ 6° 8'52.8"	378028 km	59°	+30°	+ 66%	-11.2	15:03	21:29	+41°	03:26	21:26	+41°	SEX
Mi 2. 5.2012	0:00	10h48'11.1"	+ 1° 6'12.3"	371951 km	44°	+32°	+ 76%	-11.8	16:20	22:19	+36°	03:50	21:28	+35°	LEO
Do 3. 5.2012	0:00	11h41'36.2"	- 4°12'51.7"	366324 km	28°	+32°	+ 85%	-12.2	17:42	23:12	+30°	04:13	21:30	+26°	VIR
Fr 4. 5.2012	0:00	12h37'19.3"	- 9°29'50.6"	361657 km	12°	+29°	+ 92%	-12.5	19:05	--:--	---°	04:40	21:31	+17°	VIR
Sa 5. 5.2012	0:00	13h35'57.3"	-14°21'56.8"	358430 km	357°	+25°	+ 98%	-12.7	20:28	00:09	+25°	05:11	21:33	+ 7°	VIR
So 6. 5.2012	0:00	14h37'39.6"	-18°23'48.8"	356998 km	342°	+19°	+100%	-12.8	21:50	01:09	+21°	05:48	05:17	+ 3°	LIB
Mo 7. 5.2012	0:00	15h41'50.0"	-21°11'42.9"	357529 km	329°	+13°	- 99%	-12.8	23:03	02:13	+18°	06:34	05:15	+ 8°	SCO
Di 8. 5.2012	0:00	16h47' 1.6"	-22°29'25.7"	359961 km	317°	+ 6°	- 95%	-12.6	--:--	03:18	+17°	07:32	05:13	+13°	OPH
Mi 9. 5.2012	0:00	17h51'16.8"	-22°12'56.3"	364018 km	305°	- 1°	- 89%	-12.4	00:04	04:22	+17°	08:39	05:11	+17°	SGR
Do 10. 5.2012	0:00	18h52'48.9"	-20°30'47.1"	369269 km	293°	- 8°	- 81%	-12.0	00:53	05:22	+19°	09:52	05:21	+19°	SGR
Fr 11. 5.2012	0:00	19h50'36.1"	-17°39'50.8"	375210 km	281°	-14°	- 71%	-11.5	01:31	06:18	+23°	11:06	06:17	+23°	SGR
Sa 12. 5.2012	0:00	20h44'27.8"	-13°59'37.7"	381345 km	269°	-19°	- 61%	-10.9	02:00	07:09	+27°	12:19	07:08	+27°	AQR
So 13. 5.2012	0:00	21h34'51.6"	- 9°48' 9.6"	387242 km	257°	-23°	- 50%	-10.2	02:25	07:57	+31°	13:30	07:56	+31°	CAP
Mo 14. 5.2012	0:00	22h22'34.5"	- 5°20'22.2"	392575 km	244°	-26°	- 40%	- 9.3	02:47	08:41	+36°	14:38	08:40	+36°	AQR
Di 15. 5.2012	0:00	23h 8'29.9"	- 0°48'11.7"	397122 km	232°	-28°	- 30%	- 8.3	03:08	09:24	+41°	15:45	09:23	+41°	PSC
Mi 16. 5.2012	0:00	23h53'29.9"	+ 3°38'34.8"	400766 km	219°	-29°	- 22%	- 7.0	03:28	10:06	+45°	16:50	10:05	+45°	PSC
Do 17. 5.2012	0:00	0h38'21.5"	+ 7°51'21.7"	403473 km	206°	-28°	- 14%	- 5.5	03:48	10:48	+49°	17:55	10:47	+49°	PSC
Fr 18. 5.2012	0:00	1h23'44.5"	+11°41'59.9"	405272 km	194°	-27°	- 8%	- 4.1	04:11	11:31	+53°	18:59	11:30	+53°	PSC
Sa 19. 5.2012	0:00	2h10' 9.2"	+15° 2'21.1"	406229 km	182°	-24°	- 4%	- 4.1	04:36	12:16	+56°	20:01	12:15	+56°	ARI
So 20. 5.2012	0:00	2h57'53.7"	+17°44'15.7"	406418 km	171°	-21°	- 1%	- 4.1	05:07	13:02	+59°	21:01	13:01	+59°	ARI
Mo 21. 5.2012	0:00	3h47' 1.7"	+19°39'56.4"	405911 km	160°	-18°	- 0%	- 4.1	05:43	13:49	+60°	21:57	13:48	+60°	TAU
Di 22. 5.2012	0:00	4h37'21.1"	+20°42'43.1"	404754 km	150°	-14°	+ 1%	- 4.1	06:26	14:37	+61°	22:47	14:36	+61°	TAU
Mi 23. 5.2012	0:00	5h28'26.5"	+20°47'57.4"	402972 km	139°	- 9°	+ 3%	- 4.1	07:18	15:26	+60°	23:31	15:25	+60°	TAU
Do 24. 5.2012	0:00	6h19'46.4"	+19°53'48.0"	400562 km	129°	- 5°	+ 8%	- 4.1	08:15	16:15	+59°	--:--	16:14	+59°	GEM
Fr 25. 5.2012	0:00	7h10'51.6"	+18° 1'26.5"	397512 km	119°	+ 0°	+ 14%	- 5.3	09:19	17:03	+56°	00:07	17:02	+56°	GEM
Sa 26. 5.2012	0:00	8h 1'24.5"	+15°14'52.8"	393815 km	108°	+ 5°	+ 21%	- 7.0	10:25	17:50	+52°	00:38	17:49	+52°	CNC
So 27. 5.2012	0:00	8h51'23.9"	+11°40'20.8"	389493 km	97°	+ 9°	+ 30%	- 8.3	11:35	18:36	+48°	01:05	18:35	+48°	CNC
Mo 28. 5.2012	0:00	9h41' 6.4"	+ 7°25'48.2"	384629 km	86°	+13°	+ 40%	- 9.4	12:47	19:23	+43°	01:30	19:22	+43°	SEX
Di 29. 5.2012	0:00	10h31' 4.4"	+ 2°40'48.4"	379382 km	73°	+17°	+ 51%	-10.2	14:01	20:11	+38°	01:52	20:10	+38°	SEX
Mi 30. 5.2012	0:00	11h22' 2.4"	- 2°23' 6.2"	374003 km	60°	+19°	+ 62%	-11.0	15:18	21:00	+33°	02:15	20:59	+33°	LEO
Do 31. 5.2012	0:00	12h14'52.3"	- 7°31'35.8"	368837 km	46°	+21°	+ 73%	-11.6	16:37	21:53	+27°	02:39	21:52	+27°	VIR
Fr 1. 6.2012	0:00	13h10'24.8"	-12°26'43.0"	364300 km	32°	+22°	+ 82%	-12.1	17:59	22:50	+23°	03:07	22:15	+23°	VIR
Sa 2. 6.2012	0:00	14h 9'16.2"	-16°46'45.8"	360837 km	17°	+21°	+ 90%	-12.4	19:20	23:51	+19°	03:40	22:16	+17°	VIR
So 3. 6.2012	0:00	15h11'29.3"	-20° 7'58.6"	358844 km	2°	+19°	+ 96%	-12.7	20:37	--:--	---°	04:20	22:17	+10°	LIB
Mo 4. 6.2012	0:00	16h16'14.5"	-22° 8'50.6"	358598 km	347°	+16°	+100%	-12.8	21:46	00:55	+17°	05:12	04:36	+ 3°	OPH
Di 5. 6.2012	0:00	17h21'48.9"	-22°36'10.1"	360191 km	333°	+13°	-100%	-12.8	22:41	02:01	+17°	06:15	04:36	+10°	OPH
Mi 6. 6.2012	0:00	18h26' 5.5"	-21°29'38.3"	363505 km	319°	+ 8°	- 97%	-12.7	23:26	03:04	+18°	07:27	04:35	+16°	SGR
Do 7. 6.2012	0:00	19h27'19.3"	-19° 1'29.5"	368230 km	306°	+ 4°	- 92%	-12.5	24:00	04:04	+21°	08:43	04:34	+21°	SGR
Fr 8. 6.2012	0:00	20h24'37.7"	-15°31'29.4"	373920 km	294°	- 1°	- 84%	-12.1	--:--	04:59	+25°	09:59	04:58	+25°	CAP

Mondephemeride für den Zeitraum 1. 1.2012 - 31.12.2012

Alle Zeiten gelten für den Standort Boden (50.5° N, 7.9° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

Datum	RA (2000.0)	D (2000.0)	Entferng.	Azim	Höhe	Phase	Hell.	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH.	Stb.
Sa 9. 6.2012	0:00	21h18' 1.2"	-11°20'53.2"	380070 km	282° - 5°	- 75%	-11.7	00:27	05:50	+29°	11:13	05:49	+29°	CAP
So 10. 6.2012	0:00	22h 8' 5.3"	- 6°48'27.3"	386191 km	270° - 9°	- 66%	-11.2	00:51	06:37	+34°	12:24	06:36	+34°	AQR
Mo 11. 6.2012	0:00	22h55'41.7"	- 2° 9'10.6"	391860 km	259° -12°	- 55%	-10.6	01:13	07:21	+39°	13:33	07:20	+39°	PSC
Di 12. 6.2012	0:00	23h41'45.7"	+ 2°25'21.9"	396753 km	247° -15°	- 45%	-9.8	01:33	08:04	+44°	14:39	08:03	+44°	PSC
Mi 13. 6.2012	0:00	0h27' 9.8"	+ 6°45'56.4"	400653 km	236° -17°	- 36%	-8.9	01:53	08:46	+48°	15:45	08:45	+48°	PSC
Do 14. 6.2012	0:00	1h12'40.2"	+10°44'34.9"	403454 km	224° -19°	- 27%	-7.8	02:15	09:29	+52°	16:49	09:28	+52°	PSC
Fr 15. 6.2012	0:00	1h58'54.4"	+14°13'45.9"	405139 km	213° -20°	- 19%	-6.5	02:40	10:13	+55°	17:53	10:12	+55°	ARI
Sa 16. 6.2012	0:00	2h46'19.1"	+17° 5'59.1"	405767 km	201° -20°	- 12%	-4.8	03:09	10:58	+58°	18:54	10:57	+58°	ARI
So 17. 6.2012	0:00	3h35' 6.3"	+19°13'47.3"	405448 km	190° -20°	- 7%	-4.1	03:43	11:45	+60°	19:52	11:44	+60°	TAU
Mo 18. 6.2012	0:00	4h25'12.3"	+20°30'18.4"	404321 km	178° -19°	- 3%	-4.1	04:24	12:34	+61°	20:44	12:33	+61°	TAU
Di 19. 6.2012	0:00	5h16'17.1"	+20°50' 9.7"	402529 km	167° -18°	- 0%	-4.1	05:12	13:23	+61°	21:30	13:22	+61°	TAU
Mi 20. 6.2012	0:00	6h 7'49.4"	+20°10'27.9"	400202 km	155° -16°	+ 0%	-4.1	06:08	14:12	+59°	22:09	14:11	+59°	GEM
Do 21. 6.2012	0:00	6h59'15.5"	+18°31'31.1"	397446 km	144° -14°	+ 2%	-4.1	07:11	15:00	+57°	22:42	14:59	+57°	GEM
Fr 22. 6.2012	0:00	7h50' 9.1"	+15°56'55.9"	394333 km	132° -11°	+ 5%	-4.1	08:17	15:48	+54°	23:11	15:47	+54°	CNC
Sa 23. 6.2012	0:00	8h40'18.4"	+12°33' 9.3"	390913 km	121° - 8°	+ 11%	-4.3	09:26	16:35	+49°	23:36	16:34	+49°	CNC
So 24. 6.2012	0:00	9h29'49.9"	+ 8°28'45.9"	387217 km	109° - 5°	+ 18%	-6.3	10:37	17:21	+45°	23:58	17:20	+45°	LEO
Mo 25. 6.2012	0:00	10h19' 7.1"	+ 3°53'50.5"	383286 km	98° - 1°	+ 27%	-7.8	11:50	18:08	+40°	--:--	18:07	+40°	SEX
Di 26. 6.2012	0:00	11h 8'47.6"	- 1° 0'14.8"	379190 km	86° + 2°	+ 37%	-9.0	13:04	18:56	+35°	00:20	18:55	+35°	LEO
Mi 27. 6.2012	0:00	11h59'38.7"	- 6° 0'35.9"	375054 km	73° + 6°	+ 48%	-10.0	14:19	19:46	+29°	00:43	19:45	+29°	VIR
Do 28. 6.2012	0:00	12h52'31.6"	-10°52'11.3"	371071 km	61° + 9°	+ 59%	-10.8	15:38	20:39	+25°	01:09	20:38	+25°	VIR
Fr 29. 6.2012	0:00	13h48'12.3"	-15°17'21.5"	367501 km	47° +12°	+ 70%	-11.4	16:57	21:36	+21°	01:38	21:35	+21°	VIR
Sa 30. 6.2012	0:00	14h47' 7.4"	-18°56' 4.5"	364657 km	34° +14°	+ 80%	-12.0	18:14	22:37	+18°	02:13	22:28	+18°	LIB
So 1. 7.2012	0:00	15h49' 6.7"	-21°27'51.8"	362856 km	19° +16°	+ 89%	-12.3	19:26	23:40	+17°	02:59	22:28	+15°	SCO
Mo 2. 7.2012	0:00	16h53' 9.4"	-22°35'53.0"	362375 km	5° +17°	+ 95%	-12.6	20:27	--:--	---°	03:55	22:27	+12°	OPH
Di 3. 7.2012	0:00	17h57'31.9"	-22°12' 1.2"	363381 km	350° +17°	+ 99%	-12.8	21:17	00:44	+17°	05:02	22:27	+ 8°	SGR
Mi 4. 7.2012	0:00	19h 0'19.5"	-20°20' 1.8"	365889 km	336° +16°	-100%	-12.8	21:56	01:46	+19°	06:16	04:39	+10°	SGR
Do 5. 7.2012	0:00	20h 0' 6.7"	-17°14'19.3"	369746 km	322° +14°	- 98%	-12.7	22:27	02:45	+23°	07:34	04:40	+18°	CAP
Fr 6. 7.2012	0:00	20h56'17.0"	-13°15'12.1"	374647 km	308° +12°	- 94%	-12.6	22:53	03:38	+27°	08:50	04:41	+25°	AQR
Sa 7. 7.2012	0:00	21h48'59.0"	- 8°43'42.5"	380185 km	296° + 9°	- 88%	-12.3	23:16	04:28	+32°	10:04	04:42	+32°	AQR
So 8. 7.2012	0:00	22h38'49.2"	- 3°58'18.2"	385908 km	284° + 6°	- 80%	-11.9	23:38	05:15	+37°	11:16	05:14	+37°	AQR
Mo 9. 7.2012	0:00	23h26'36.8"	+ 0°46'12.9"	391375 km	272° + 3°	- 71%	-11.5	23:58	05:59	+41°	12:24	05:58	+41°	PSC
Di 10. 7.2012	0:00	0h13'13.0"	+ 5°18'22.0"	396204 km	261° - 0°	- 61%	-11.0	--:--	06:42	+46°	13:32	06:41	+46°	PSC
Mi 11. 7.2012	0:00	0h59'25.7"	+ 9°29' 3.2"	400097 km	250° - 4°	- 52%	-10.3	00:20	07:26	+50°	14:37	07:25	+50°	PSC
Do 12. 7.2012	0:00	1h45'56.2"	+13°10'32.7"	402861 km	240° - 7°	- 42%	-9.5	00:43	08:09	+54°	15:42	08:08	+54°	ARI
Fr 13. 7.2012	0:00	2h33'16.6"	+16°15'43.8"	404407 km	229° -10°	- 33%	-8.6	01:11	08:54	+57°	16:44	08:53	+57°	ARI
Sa 14. 7.2012	0:00	3h21'47.0"	+18°37'45.1"	404740 km	218° -13°	- 24%	-7.5	01:43	09:40	+59°	17:43	09:39	+59°	TAU
So 15. 7.2012	0:00	4h11'33.1"	+20°10' 6.4"	403953 km	207° -15°	- 17%	-6.0	02:21	10:28	+60°	18:37	10:27	+60°	TAU
Mo 16. 7.2012	0:00	5h 2'25.1"	+20°47'13.2"	402200 km	196° -17°	- 10%	-4.2	03:06	11:17	+61°	19:26	11:16	+61°	TAU
Di 17. 7.2012	0:00	5h53'59.6"	+20°25'19.6"	399684 km	184° -19°	- 5%	-4.1	04:00	12:06	+60°	20:08	12:05	+60°	ORI
Mi 18. 7.2012	0:00	6h45'46.0"	+19° 3'22.4"	396627 km	172° -20°	- 2%	-4.1	05:00	12:56	+58°	20:44	12:55	+58°	GEM

Mondephemeride für den Zeitraum 1. 1.2012 - 31.12.2012

Alle Zeiten gelten für den Standort Boden (50.5° N, 7.9° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

Datum	RA (2000.0)	D (2000.0)	Entferng.	Azim	Höhe	Phase	Hell.	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH.	Stb.	
Do 19. 7.2012	0:00	7h37'15.1" +16°43'35.0"	393246 km	160°	-21°	-	0%	-4.1	06:06	13:44	+55°	21:14	13:43	+55°	GEM
Fr 20. 7.2012	0:00	8h28' 8.0" +13°31'29.2"	389733 km	148°	-20°	+	1%	-4.1	07:15	14:32	+51°	21:41	14:31	+51°	CNC
Sa 21. 7.2012	0:00	9h18'21.2" + 9°35'28.1"	386241 km	135°	-19°	+	3%	-4.1	08:26	15:20	+46°	22:05	15:19	+46°	LEO
So 22. 7.2012	0:00	10h 8' 7.6" + 5° 6' 6.0"	382876 km	122°	-18°	+	8%	-4.1	09:40	16:07	+41°	22:27	16:06	+41°	SEX
Mo 23. 7.2012	0:00	10h57'54.8" + 0°15'34.1"	379699 km	109°	-15°	+	15%	-5.7	10:53	16:54	+36°	22:50	16:53	+36°	LEO
Di 24. 7.2012	0:00	11h48'21.1" - 4°42'38.5"	376747 km	97°	-12°	+	24%	-7.4	12:08	17:43	+31°	23:15	17:42	+31°	VIR
Mi 25. 7.2012	0:00	12h40'10.5" - 9°33'46.2"	374050 km	85°	- 8°	+	34%	-8.7	13:25	18:35	+26°	23:42	18:34	+26°	VIR
Do 26. 7.2012	0:00	13h34' 5.5" -14° 1'39.9"	371658 km	72°	- 4°	+	45%	-9.8	14:42	19:29	+22°	--:--	19:28	+22°	VIR
Fr 27. 7.2012	0:00	14h30'37.3" -17°48'55.4"	369659 km	60°	+ 1°	+	56%	-10.6	15:58	20:27	+19°	00:14	20:26	+19°	LIB
Sa 28. 7.2012	0:00	15h29'52.3" -20°37'51.9"	368182 km	47°	+ 6°	+	68%	-11.3	17:10	21:27	+17°	00:54	21:26	+17°	LIB
So 29. 7.2012	0:00	16h31'19.9" -22°12'48.9"	367390 km	34°	+10°	+	78%	-11.9	18:14	22:29	+17°	01:44	21:56	+17°	OPH
Mo 30. 7.2012	0:00	17h33'50.7" -22°23'33.3"	367455 km	21°	+15°	+	87%	-12.3	19:08	23:31	+18°	02:44	21:54	+15°	SGR
Di 31. 7.2012	0:00	18h35'52.6" -21° 8'29.6"	368516 km	8°	+18°	+	94%	-12.5	19:51	--:--	---°	03:54	21:53	+13°	SGR
Mi 1. 8.2012	0:00	19h36' 0.1" -18°35'36.2"	370640 km	354°	+21°	+	98%	-12.7	20:25	00:30	+21°	05:09	21:51	+11°	SGR
Do 2. 8.2012	0:00	20h33'19.7" -15° 0'21.2"	373790 km	340°	+22°	+100%	-12.8	20:54	01:25	+25°	06:26	05:20	+ 8°	AQR	
Fr 3. 8.2012	0:00	21h27'37.0" -10°41'53.8"	377810 km	325°	+23°	-	99%	-12.8	21:19	02:17	+29°	07:42	05:21	+18°	CAP
Sa 4. 8.2012	0:00	22h19' 9.2" - 5°59'28.1"	382441 km	312°	+22°	-	96%	-12.6	21:41	03:05	+34°	08:55	05:23	+27°	AQR
So 5. 8.2012	0:00	23h 8'31.8" - 1°10' 9.9"	387348 km	299°	+20°	-	91%	-12.4	22:02	03:52	+39°	10:06	05:25	+35°	PSC
Mo 6. 8.2012	0:00	23h56'27.8" + 3°31'51.9"	392161 km	286°	+18°	-	84%	-12.2	22:24	04:36	+44°	11:15	05:26	+43°	PSC
Di 7. 8.2012	0:00	0h43'40.4" + 7°55'16.0"	396514 km	275°	+14°	-	76%	-11.8	22:47	05:20	+48°	12:21	05:28	+48°	PSC
Mi 8. 8.2012	0:00	1h30'48.7" +11°50'51.2"	400080 km	264°	+10°	-	68%	-11.3	23:13	06:04	+52°	13:27	06:03	+52°	PSC
Do 9. 8.2012	0:00	2h18'25.0" +15°10'55.1"	402606 km	253°	+ 6°	-	58%	-10.8	23:43	06:49	+56°	14:30	06:48	+56°	ARI
Fr 10. 8.2012	0:00	3h 6'51.9" +17°48'40.7"	403927 km	243°	+ 2°	-	49%	-10.1	--:--	07:34	+58°	15:31	07:33	+58°	ARI
Sa 11. 8.2012	0:00	3h56'20.6" +19°38' 3.3"	403974 km	234°	- 3°	-	40%	-9.3	00:18	08:21	+60°	16:27	08:20	+60°	TAU
So 12. 8.2012	0:00	4h46'49.2" +20°33'49.1"	402778 km	224°	- 8°	-	30%	-8.3	01:01	09:10	+61°	17:19	09:09	+61°	TAU
Mo 13. 8.2012	0:00	5h38' 3.9" +20°32' 4.3"	400457 km	213°	-13°	-	22%	-7.1	01:51	09:59	+60°	18:03	09:58	+60°	ORI
Di 14. 8.2012	0:00	6h29'42.5" +19°30'54.6"	397217 km	203°	-17°	-	15%	-5.5	02:48	10:48	+59°	18:41	10:47	+59°	GEM
Mi 15. 8.2012	0:00	7h21'21.3" +17°31' 2.9"	393325 km	192°	-21°	-	8%	-4.1	03:52	11:37	+56°	19:15	11:36	+56°	GEM
Do 16. 8.2012	0:00	8h12'41.8" +14°36'12.9"	389087 km	179°	-25°	-	4%	-4.1	05:00	12:26	+53°	19:43	12:25	+53°	CNC
Fr 17. 8.2012	0:00	9h 3'36.8" +10°53'13.1"	384817 km	166°	-28°	-	1%	-4.1	06:11	13:14	+48°	20:08	13:13	+48°	CNC
Sa 18. 8.2012	0:00	9h54'12.4" + 6°31'43.9"	380801 km	152°	-29°	+	0%	-4.1	07:25	14:02	+43°	20:32	14:01	+43°	SEX
So 19. 8.2012	0:00	10h44'48.3" + 1°43'55.4"	377270 km	138°	-30°	+	2%	-4.1	08:39	14:50	+38°	20:56	14:49	+38°	LEO
Mo 20. 8.2012	0:00	11h35'54.1" - 3°15'58.2"	374381 km	123°	-28°	+	6%	-4.1	09:56	15:40	+33°	21:20	15:39	+33°	VIR
Di 21. 8.2012	0:00	12h28' 5.5" - 8°12' 4.5"	372205 km	109°	-25°	+	13%	-5.1	11:13	16:31	+28°	21:47	16:30	+28°	VIR
Mi 22. 8.2012	0:00	13h21'57.2" -12°47'21.6"	370741 km	96°	-21°	+	21%	-7.0	12:31	17:25	+24°	22:18	17:24	+24°	VIR
Do 23. 8.2012	0:00	14h17'54.9" -16°44'19.6"	369936 km	83°	-16°	+	31%	-8.4	13:48	18:22	+20°	22:56	18:21	+20°	LIB
Fr 24. 8.2012	0:00	15h16' 4.6" -19°46' 8.8"	369720 km	71°	-10°	+	43%	-9.6	15:00	19:21	+18°	23:42	19:20	+18°	LIB
Sa 25. 8.2012	0:00	16h16' 3.5" -21°38'29.4"	370032 km	59°	- 3°	+	54%	-10.5	16:06	20:22	+17°	--:--	20:21	+17°	OPH
So 26. 8.2012	0:00	17h16'58.5" -22°11'53.9"	370842 km	48°	+ 4°	+	65%	-11.2	17:01	21:22	+18°	00:37	21:00	+18°	OPH
Mo 27. 8.2012	0:00	18h17'37.1" -21°23'52.5"	372152 km	37°	+10°	+	76%	-11.7	17:47	22:20	+20°	01:42	20:57	+18°	SGR

Mondephemeride für den Zeitraum 1. 1.2012 - 31.12.2012

Alle Zeiten gelten für den Standort Boden (50.5° N, 7.9° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

Datum	RA (2000.0)	D (2000.0)	Entferng.	Azim	Höhe	Phase	Hell.	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH.	Stb.	
Di 28. 8.2012	0:00	19h16'48.7"	-19°19'36.5"	373989 km	25°	+17°	+ 84%	-12.2	18:24	23:16	+23°	02:53	20:55	+17°	SGR
Mi 29. 8.2012	0:00	20h13'44.9"	-16°10'46.9"	376379 km	12°	+23°	+ 92%	-12.5	18:55	--:--	---°	04:07	20:53	+15°	CAP
Do 30. 8.2012	0:00	21h 8' 7.5"	-12°13' 7.1"	379322 km	359°	+27°	+ 97%	-12.7	19:21	00:08	+27°	05:22	20:51	+12°	AQR
Fr 31. 8.2012	0:00	22h 0' 5.4"	- 7°43'46.3"	382763 km	345°	+31°	+ 99%	-12.8	19:44	00:57	+32°	06:35	20:48	+ 9°	AQR
Sa 1. 9.2012	0:00	22h50' 5.5"	- 2°59'23.3"	386578 km	331°	+33°	-100%	-12.8	20:06	01:44	+37°	07:47	06:10	+13°	PSC
So 2. 9.2012	0:00	23h38'43.4"	+ 1°45' 0.1"	390578 km	316°	+33°	- 98%	-12.7	20:27	02:29	+42°	08:57	06:11	+24°	PSC
Mo 3. 9.2012	0:00	0h26'36.2"	+ 6°16'24.1"	394518 km	303°	+31°	- 94%	-12.6	20:50	03:14	+46°	10:05	06:13	+33°	PSC
Di 4. 9.2012	0:00	1h14'18.1"	+10°23'49.6"	398120 km	290°	+29°	- 89%	-12.3	21:16	03:58	+51°	11:11	06:15	+42°	PSC
Mi 5. 9.2012	0:00	2h 2'17.4"	+13°58' 4.8"	401101 km	278°	+24°	- 82%	-12.0	21:44	04:43	+54°	12:16	06:16	+50°	ARI
Do 6. 9.2012	0:00	2h50'54.0"	+16°51'28.0"	403202 km	267°	+20°	- 74%	-11.7	22:17	05:28	+57°	13:18	06:18	+56°	ARI
Fr 7. 9.2012	0:00	3h40'18.1"	+18°57'36.7"	404213 km	257°	+14°	- 65%	-11.2	22:57	06:15	+59°	14:16	06:19	+59°	TAU
Sa 8. 9.2012	0:00	4h30'29.2"	+20°11'26.5"	404000 km	248°	+ 8°	- 56%	-10.6	23:43	07:02	+60°	15:09	07:01	+60°	TAU
So 9. 9.2012	0:00	5h21'17.2"	+20°29'20.3"	402515 km	239°	+ 2°	- 47%	-9.9	--:--	07:50	+60°	15:56	07:49	+60°	TAU
Mo 10. 9.2012	0:00	6h12'26.0"	+19°49'25.1"	399805 km	230°	- 5°	- 37%	-9.1	00:36	08:39	+59°	16:36	08:38	+59°	GEM
Di 11. 9.2012	0:00	7h 3'38.4"	+18°11'49.1"	396018 km	221°	-12°	- 28%	-8.0	01:37	09:28	+57°	17:12	09:27	+57°	GEM
Mi 12. 9.2012	0:00	7h54'41.6"	+15°38'56.7"	391402 km	211°	-19°	- 20%	-6.6	02:41	10:16	+54°	17:42	10:15	+54°	CNC
Do 13. 9.2012	0:00	8h45'31.7"	+12°15'39.6"	386289 km	200°	-25°	- 12%	-4.8	03:51	11:04	+50°	18:09	11:03	+50°	CNC
Fr 14. 9.2012	0:00	9h36'16.0"	+ 8° 9'27.3"	381068 km	188°	-31°	- 6%	-4.1	05:04	11:52	+46°	18:34	11:51	+46°	LEO
Sa 15. 9.2012	0:00	10h27'13.0"	+ 3°30'37.3"	376148 km	174°	-36°	- 2%	-4.1	06:18	12:41	+40°	18:58	12:40	+40°	SEX
So 16. 9.2012	0:00	11h18'49.9"	- 1°27'39.0"	371912 km	158°	-39°	- 0%	-4.1	07:36	13:31	+35°	19:23	13:30	+35°	LEO
Mo 17. 9.2012	0:00	12h11'39.2"	- 6°29'22.0"	368665 km	141°	-40°	+ 1%	-4.1	08:54	14:24	+30°	19:50	14:23	+30°	VIR
Di 18. 9.2012	0:00	13h 6'11.8"	-11°16'14.7"	366598 km	124°	-38°	+ 5%	-4.1	10:14	15:18	+25°	20:20	15:17	+25°	VIR
Mi 19. 9.2012	0:00	14h 2'48.9"	-15°28'49.2"	365766 km	108°	-34°	+ 11%	-4.3	11:34	16:16	+21°	20:57	16:15	+21°	VIR
Do 20. 9.2012	0:00	15h 1'31.4"	-18°48'17.6"	366091 km	94°	-28°	+ 19%	-6.5	12:49	17:15	+19°	21:41	17:14	+19°	LIB
Fr 21. 9.2012	0:00	16h 1'51.7"	-20°59' 0.9"	367400 km	82°	-21°	+ 29%	-8.1	13:58	18:16	+18°	22:34	18:15	+18°	SCO
Sa 22. 9.2012	0:00	17h 2'53.5"	-21°51' 6.6"	369469 km	71°	-13°	+ 40%	-9.3	14:57	19:17	+18°	23:37	19:16	+18°	OPH
So 23. 9.2012	0:00	18h 3'24.6"	-21°22'15.1"	372072 km	61°	- 4°	+ 51%	-10.3	15:46	20:15	+19°	--:--	19:56	+19°	SGR
Mo 24. 9.2012	0:00	19h 2'18.2"	-19°37'42.7"	375018 km	51°	+ 5°	+ 62%	-11.0	16:24	21:11	+22°	00:45	19:54	+20°	SGR
Di 25. 9.2012	0:00	19h58'50.7"	-16°48'36.3"	378168 km	41°	+13°	+ 73%	-11.6	16:57	22:03	+26°	01:57	19:51	+20°	CAP
Mi 26. 9.2012	0:00	20h52'49.1"	-13° 9'19.4"	381435 km	31°	+21°	+ 82%	-12.0	17:24	22:52	+30°	03:10	19:49	+19°	AQR
Do 27. 9.2012	0:00	21h44'25.9"	- 8°55'17.0"	384771 km	20°	+29°	+ 89%	-12.4	17:48	23:39	+35°	04:22	19:47	+17°	AQR
Fr 28. 9.2012	0:00	22h34'10.0"	- 4°21'31.2"	388144 km	8°	+35°	+ 95%	-12.6	18:10	--:--	---°	05:33	19:45	+14°	AQR
Sa 29. 9.2012	0:00	23h22'37.8"	+ 0°17'56.9"	391514 km	354°	+40°	+ 98%	-12.7	18:31	00:24	+40°	06:42	19:42	+10°	PSC
So 30. 9.2012	0:00	0h10'26.4"	+ 4°50'18.9"	394811 km	339°	+42°	+100%	-12.8	18:54	01:08	+45°	07:50	06:56	+ 7°	PSC
Mo 1.10.2012	0:00	0h58' 9.1"	+ 9° 4' 0.8"	397925 km	323°	+43°	- 99%	-12.8	19:19	01:53	+49°	08:57	06:57	+17°	PSC
Di 2.10.2012	0:00	1h46'12.8"	+12°48'44.7"	400703 km	307°	+41°	- 97%	-12.7	19:46	02:37	+53°	10:02	06:59	+27°	ARI
Mi 3.10.2012	0:00	2h34'55.0"	+15°55'32.7"	402964 km	293°	+38°	- 93%	-12.5	20:17	03:22	+56°	11:05	07:00	+36°	ARI
Do 4.10.2012	0:00	3h24'22.5"	+18°16'57.0"	404508 km	281°	+33°	- 87%	-12.3	20:54	04:09	+58°	12:05	07:02	+44°	TAU
Fr 5.10.2012	0:00	4h14'31.3"	+19°47'12.8"	405143 km	271°	+27°	- 80%	-12.0	21:38	04:56	+60°	13:00	07:03	+51°	TAU
Sa 6.10.2012	0:00	5h 5' 8.2"	+20°22'32.2"	404707 km	261°	+20°	- 72%	-11.6	22:27	05:43	+60°	13:49	07:05	+56°	TAU

Mondephemeride für den Zeitraum 1. 1.2012 - 31.12.2012

Alle Zeiten gelten für den Standort Boden (50.5° N, 7.9° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

Datum	RA (2000.0)	D (2000.0)	Entferng.	Azim	Höhe	Phase	Hell.	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH.	Stb.	
So 7.10.2012	0:00	5h55'55.2"	+20° 1'11.7"	403092 km	253°	+12°	- 63%	-11.1	23:24	06:31	+60°	14:31	07:07	+59°	ORI
Mo 8.10.2012	0:00	6h46'35.1"	+18°43'32.7"	400266 km	245°	+ 4°	- 54%	-10.5	--:--	07:19	+58°	15:08	07:18	+58°	GEM
Di 9.10.2012	0:00	7h36'56.8"	+16°31'52.6"	396290 km	238°	- 4°	- 44%	-9.7	00:26	08:07	+55°	15:40	08:06	+55°	GEM
Mi 10.10.2012	0:00	8h26'59.5"	+13°30'16.4"	391331 km	230°	-13°	- 34%	-8.8	01:32	08:54	+52°	16:07	08:53	+52°	CNC
Do 11.10.2012	0:00	9h16'54.3"	+ 9°44'35.5"	385669 km	221°	-21°	- 25%	-7.6	02:41	09:41	+48°	16:33	09:40	+48°	LEO
Fr 12.10.2012	0:00	10h 7' 3.7"	+ 5°22'43.1"	379680 km	211°	-29°	- 16%	-6.0	03:54	10:29	+43°	16:57	10:28	+43°	SEX
Sa 13.10.2012	0:00	10h57'59.3"	+ 0°35' 4.2"	373824 km	199°	-37°	- 9%	-4.1	05:09	11:18	+38°	17:22	11:17	+38°	LEO
So 14.10.2012	0:00	11h50'18.6"	- 4°24'48.1"	368589 km	184°	-44°	- 4%	-4.1	06:27	12:09	+32°	17:48	12:08	+32°	VIR
Mo 15.10.2012	0:00	12h44'38.7"	- 9°19'51.3"	364436 km	166°	-48°	- 1%	-4.1	07:48	13:04	+27°	18:17	13:03	+27°	VIR
Di 16.10.2012	0:00	13h41'27.5"	-13°49'58.6"	361731 km	145°	-49°	+ 0%	-4.1	09:09	14:02	+23°	18:52	14:01	+23°	VIR
Mi 17.10.2012	0:00	14h40'51.4"	-17°33'39.9"	360676 km	125°	-46°	+ 3%	-4.1	10:29	15:02	+20°	19:35	15:01	+20°	LIB
Do 18.10.2012	0:00	15h42'23.4"	-20°11'12.7"	361284 km	108°	-40°	+ 8%	-4.1	11:44	16:05	+18°	20:26	16:04	+18°	SCO
Fr 19.10.2012	0:00	16h44'59.3"	-21°28'43.6"	363384 km	94°	-32°	+ 16%	-5.9	12:48	17:08	+18°	21:28	17:07	+18°	OPH
Sa 20.10.2012	0:00	17h47'11.0"	-21°21'20.6"	366669 km	83°	-22°	+ 26%	-7.7	13:42	18:09	+19°	22:36	18:08	+19°	SGR
So 21.10.2012	0:00	18h47'34.0"	-19°53'49.7"	370760 km	74°	-13°	+ 36%	-9.0	14:25	19:07	+21°	23:49	18:57	+21°	SGR
Mo 22.10.2012	0:00	19h45'12.6"	-17°18'14.6"	375283 km	66°	- 3°	+ 48%	-10.0	14:59	20:00	+25°	--:--	18:55	+24°	SGR
Di 23.10.2012	0:00	20h39'49.3"	-13°50'15.1"	379914 km	58°	+ 7°	+ 59%	-10.8	15:28	20:50	+29°	01:02	18:53	+24°	AQR
Mi 24.10.2012	0:00	21h31'38.5"	- 9°45'59.0"	384409 km	50°	+17°	+ 69%	-11.4	15:52	21:37	+34°	02:13	18:51	+24°	CAP
Do 25.10.2012	0:00	22h21'14.9"	- 5°20'20.3"	388609 km	41°	+26°	+ 78%	-11.9	16:15	22:22	+38°	03:24	18:50	+22°	AQR
Fr 26.10.2012	0:00	23h 9'21.4"	- 0°46'33.6"	392426 km	31°	+34°	+ 86%	-12.2	16:36	23:06	+43°	04:32	18:48	+20°	PSC
Sa 27.10.2012	0:00	23h56'41.7"	+ 3°43'31.3"	395824 km	19°	+42°	+ 92%	-12.5	16:58	23:49	+47°	05:40	18:46	+16°	PSC
So 28.10.2012	0:00	0h45'17.1"	+ 8° 9' 0.4"	398908 km	26°	+45°	+ 97%	-12.7	16:22	23:34	+51°	05:46	17:44	+12°	PSC
Mo 29.10.2012	0:00	1h32'56.2"	+11°58'57.8"	401419 km	11°	+51°	+ 99%	-12.8	16:48	--:--	---°	06:51	17:43	+ 7°	PSC
Di 30.10.2012	0:00	2h21'23.6"	+15°14'44.3"	403459 km	354°	+55°	-100%	-12.8	17:18	00:18	+55°	07:55	06:43	+ 9°	ARI
Mi 31.10.2012	0:00	3h10'47.4"	+17°47'54.2"	404967 km	334°	+55°	- 99%	-12.8	17:53	01:04	+57°	08:56	06:44	+18°	ARI
Do 1.11.2012	0:00	4h 1' 2.4"	+19°31'32.2"	405852 km	316°	+53°	- 96%	-12.6	18:34	01:51	+59°	09:52	06:46	+26°	TAU
Fr 2.11.2012	0:00	4h51'51.0"	+20°20'48.8"	405999 km	301°	+47°	- 91%	-12.5	19:22	02:39	+60°	10:43	06:48	+34°	TAU
Sa 3.11.2012	0:00	5h42'48.6"	+20°13'27.1"	405283 km	289°	+40°	- 86%	-12.2	20:15	03:26	+60°	11:28	06:49	+41°	ORI
So 4.11.2012	0:00	6h33'30.4"	+19° 9'48.2"	403591 km	279°	+32°	- 78%	-11.9	21:15	04:14	+59°	12:06	06:51	+46°	GEM
Mo 5.11.2012	0:00	7h23'39.0"	+17°12'33.8"	400845 km	271°	+24°	- 70%	-11.4	22:18	05:01	+56°	12:39	06:52	+50°	GEM
Di 6.11.2012	0:00	8h13' 9.4"	+14°26'15.5"	397030 km	265°	+14°	- 61%	-10.9	23:24	05:47	+53°	13:08	06:54	+51°	CNC
Mi 7.11.2012	0:00	9h 2'11.3"	+10°56'46.7"	392218 km	258°	+ 5°	- 51%	-10.2	--:--	06:33	+50°	13:34	06:56	+49°	CNC
Do 8.11.2012	0:00	9h51' 8.0"	+ 6°51'12.9"	386585 km	252°	- 6°	- 41%	-9.4	00:33	07:19	+45°	13:58	07:18	+45°	SEX
Fr 9.11.2012	0:00	10h40'34.3"	+ 2°18' 7.9"	380418 km	246°	-16°	- 30%	-8.3	01:45	08:06	+40°	14:21	08:05	+40°	LEO
Sa 10.11.2012	0:00	11h31'13.5"	- 2°31'45.2"	374121 km	238°	-27°	- 21%	-6.9	02:59	08:55	+35°	14:45	08:54	+35°	VIR
So 11.11.2012	0:00	12h23'52.0"	- 7°24'40.7"	368182 km	229°	-37°	- 12%	-4.9	04:16	09:46	+30°	15:13	09:45	+30°	VIR
Mo 12.11.2012	0:00	13h19'12.2"	-12° 3'10.5"	363134 km	216°	-47°	- 6%	-4.1	05:37	10:42	+25°	15:45	10:41	+25°	VIR
Di 13.11.2012	0:00	14h17'39.8"	-16° 6'22.4"	359472 km	198°	-55°	- 1%	-4.1	06:59	11:42	+21°	16:23	11:41	+21°	LIB
Mi 14.11.2012	0:00	15h19' 7.7"	-19°12' 7.9"	357573 km	174°	-59°	+ 0%	-4.1	08:18	12:45	+19°	17:11	12:44	+19°	LIB
Do 15.11.2012	0:00	16h22'43.2"	-21° 1'17.6"	357623 km	147°	-57°	+ 2%	-4.1	09:30	13:50	+18°	18:09	13:49	+18°	OPH

Mondephemeride für den Zeitraum 1. 1.2012 - 31.12.2012

Alle Zeiten gelten für den Standort Boden (50.5° N, 7.9° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

Datum	RA (2000.0)	D (2000.0)	Entferng.	Azim	Höhe	Phase	Hell.	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH.	Stb.		
Fr 16.11.2012	0:00	17h26'51.5"	-21°22'51.3"	359574 km	126°	-51°	+	6%	-4.1	10:31	14:55	+18°	19:18 14:54	+18°	OPH	
Sa 17.11.2012	0:00	18h29'43.2"	-20°17'15.6"	363168 km	111°	-42°	+	13%	-5.2	11:20	15:56	+20°	20:32 15:55	+20°	SGR	
So 18.11.2012	0:00	19h29'51.2"	-17°55'31.0"	367984 km	100°	-31°	+	22%	-7.1	11:59	16:53	+24°	21:48 16:52	+24°	SGR	
Mo 19.11.2012	0:00	20h26'33.8"	-14°34'53.1"	373533 km	92°	-20°	+	33%	-8.6	12:30	17:46	+28°	23:02 17:14	+27°	AQR	
Di 20.11.2012	0:00	21h19'53.8"	-10°34' 2.7"	379336 km	85°	-10°	+	43%	-9.6	12:57	18:35	+32°	--:-- 17:13	+30°	CAP	
Mi 21.11.2012	0:00	22h10'23.9"	- 6°10' 0.0"	384986 km	79°	+ 1°	+	54%	-10.5	13:20	19:21	+37°	00:14 17:12	+31°	AQR	
Do 22.11.2012	0:00	22h58'51.2"	- 1°37' 1.6"	390179 km	73°	+12°	+	64%	-11.1	13:42	20:05	+42°	01:24 17:11	+30°	PSC	
Fr 23.11.2012	0:00	23h46' 6.0"	+ 2°53' 3.0"	394717 km	67°	+22°	+	73%	-11.6	14:04	20:48	+46°	02:31 17:10	+28°	PSC	
Sa 24.11.2012	0:00	0h32'55.6"	+ 7°10' 5.3"	398497 km	60°	+31°	+	82%	-12.0	14:26	21:32	+50°	03:38 17:09	+24°	PSC	
So 25.11.2012	0:00	1h20' 0.3"	+11° 4'52.6"	401494 km	51°	+40°	+	88%	-12.3	14:51	22:16	+54°	04:43 17:09	+20°	PSC	
Mo 26.11.2012	0:00	2h 7'50.4"	+14°28'40.4"	403732 km	40°	+48°	+	94%	-12.6	15:20	23:01	+57°	05:47 17:08	+15°	ARI	
Di 27.11.2012	0:00	2h56'42.8"	+17°13' 9.8"	405259 km	25°	+55°	+	98%	-12.7	15:53	23:48	+59°	06:48 17:07	+10°	ARI	
Mi 28.11.2012	0:00	3h46'39.4"	+19°10'50.6"	406121 km	6°	+59°	+100%	-12.8	16:32	--:--	---°	07:47	17:07	+ 4°	TAU	
Do 29.11.2012	0:00	4h37'26.4"	+20°15'45.3"	406347 km	345°	+59°	-100%	-12.8	17:18	00:35	+60°	08:39	07:28	+ 9°	TAU	
Fr 30.11.2012	0:00	5h28'37.6"	+20°24'17.9"	405937 km	325°	+56°	- 98%	-12.7	18:09	01:23	+60°	09:27	07:29	+16°	TAU	
Sa 1.12.2012	0:00	6h19'41.7"	+19°35'47.9"	404860 km	309°	+50°	- 95%	-12.6	19:07	02:11	+59°	10:07	07:30	+22°	GEM	
So 2.12.2012	0:00	7h10'11.2"	+17°52'32.8"	403064 km	297°	+43°	- 90%	-12.4	20:09	02:58	+57°	10:41	07:32	+28°	GEM	
Mo 3.12.2012	0:00	7h59'50.3"	+15°19'19.1"	400492 km	288°	+34°	- 84%	-12.1	21:14	03:44	+54°	11:11	07:33	+33°	CNC	
Di 4.12.2012	0:00	8h48'39.2"	+12° 2'38.3"	397097 km	281°	+24°	- 76%	-11.8	22:20	04:29	+51°	11:37	07:34	+36°	CNC	
Mi 5.12.2012	0:00	9h36'54.0"	+ 8°10' 7.0"	392879 km	275°	+14°	- 67%	-11.3	23:29	05:14	+47°	12:01	07:35	+38°	LEO	
Do 6.12.2012	0:00	10h25' 5.1"	+ 3°50'10.8"	387905 km	269°	+ 4°	- 57%	-10.7	--:--	05:59	+42°	12:24	07:36	+38°	SEX	
Fr 7.12.2012	0:00	11h13'54.1"	- 0°47'42.8"	382334 km	263°	- 7°	- 47%	-9.9	00:39	06:46	+37°	12:47	07:37	+36°	LEO	
Sa 8.12.2012	0:00	12h 4' 9.6"	- 5°32'25.6"	376434 km	257°	-18°	- 36%	-9.0	01:53	07:34	+32°	13:12	07:38	+32°	VIR	
So 9.12.2012	0:00	12h56'42.3"	-10°10'14.1"	370579 km	250°	-29°	- 26%	-7.7	03:09	08:25	+28°	13:40	08:24	+28°	VIR	
Mo 10.12.2012	0:00	13h52'16.3"	-14°24' 8.4"	365236 km	240°	-40°	- 16%	-6.0	04:27	09:21	+23°	14:13	09:20	+23°	VIR	
Di 11.12.2012	0:00	14h51'14.8"	-17°54' 9.0"	360909 km	227°	-50°	- 9%	-4.1	05:47	10:22	+20°	14:55	10:21	+20°	LIB	
Mi 12.12.2012	0:00	15h53'22.7"	-20°19'28.1"	358071 km	208°	-57°	- 3%	-4.1	07:03	11:26	+18°	15:48	11:25	+18°	SCO	
Do 13.12.2012	0:00	16h57'34.5"	-21°23' 0.3"	357066 km	181°	-61°	- 0%	-4.1	08:11	12:32	+18°	16:51	12:31	+18°	OPH	
Fr 14.12.2012	0:00	18h 2' 3.7"	-20°56'44.1"	358044 km	153°	-58°	+	1%	-4.1	09:08	13:36	+19°	18:05	13:35	+19°	SGR
Sa 15.12.2012	0:00	19h 4'56.1"	-19° 4'43.4"	360920 km	133°	-51°	+	4%	-4.1	09:53	14:38	+22°	19:23	14:37	+22°	SGR
So 16.12.2012	0:00	20h 4'49.0"	-16° 1'31.7"	365391 km	119°	-41°	+	10%	-4.1	10:29	15:35	+26°	20:41	15:34	+26°	CAP
Mo 17.12.2012	0:00	21h 1' 9.6"	-12° 7'11.5"	370996 km	109°	-30°	+	18%	-6.3	10:59	16:27	+30°	21:57	16:26	+30°	AQR
Di 18.12.2012	0:00	21h54' 9.3"	- 7°42' 6.9"	377203 km	102°	-19°	+	27%	-7.9	11:24	17:16	+35°	23:10	17:04	+35°	AQR
Mi 19.12.2012	0:00	22h44'26.4"	- 3° 4' 0.9"	383493 km	96°	- 9°	+	37%	-9.1	11:47	18:02	+40°	--:-- 17:05	+39°	PSC	
Do 20.12.2012	0:00	23h32'50.6"	+ 1°32'53.9"	389422 km	90°	+ 2°	+	47%	-10.0	12:09	18:46	+45°	00:20	17:05	+40°	PSC
Fr 21.12.2012	0:00	0h20'13.0"	+ 5°57'24.4"	394653 km	84°	+12°	+	57%	-10.7	12:32	19:30	+49°	01:28	17:05	+40°	PSC
Sa 22.12.2012	0:00	1h 7'20.0"	+10° 0'18.0"	398966 km	78°	+22°	+	67%	-11.3	12:56	20:14	+53°	02:34	17:06	+37°	PSC
So 23.12.2012	0:00	1h54'50.1"	+13°33'29.2"	402250 km	72°	+32°	+	76%	-11.7	13:23	20:59	+56°	03:39	17:07	+33°	ARI
Mo 24.12.2012	0:00	2h43'10.5"	+16°29'26.1"	404487 km	63°	+41°	+	83%	-12.1	13:54	21:45	+58°	04:40	17:07	+28°	ARI
Di 25.12.2012	0:00	3h32'34.4"	+18°41' 4.5"	405733 km	52°	+49°	+	90%	-12.4	14:31	22:32	+60°	05:40	17:08	+22°	TAU

Mondephemeride für den Zeitraum 1. 1.2012 - 31.12.2012

Alle Zeiten gelten für den Standort Boden (50.5° N, 7.9° O)

Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

Datum	RA (2000.0)	D (2000.0)	Entferng.	Azim	Höhe	Phase	Hell.	Aufg.	Kulm.	KHöh	Untg.	TOpt.	TOptH.	Stb.
Mi 26.12.2012	0:00	4h22'59.2" +20° 2'11.5"	406086 km	38°	+55°	+ 95%	-12.6	15:14	23:19	+60°	06:34	17:09	+16°	TAU
Do 27.12.2012	0:00	5h14' 7.1" +20°28'10.3"	405664 km	19°	+59°	+ 98%	-12.7	16:04	--:--	---°	07:24	17:09	+ 8°	TAU
Fr 28.12.2012	0:00	6h 5'29.3" +19°56'50.7"	404581 km	357°	+59°	+100%	-12.8	17:00	00:07	+59°	08:07	07:51	+ 1°	ORI
Sa 29.12.2012	0:00	6h56'34.6" +18°29' 3.5"	402929 km	337°	+56°	-100%	-12.8	18:01	00:55	+58°	08:44	07:51	+ 7°	GEM
So 30.12.2012	0:00	7h46'58.1" +16° 8'41.3"	400771 km	320°	+50°	- 98%	-12.7	19:05	01:42	+55°	09:16	07:51	+12°	CNC
Mo 31.12.2012	0:00	8h36'28.1" +13° 2' 9.5"	398136 km	308°	+42°	- 94%	-12.6	20:11	02:28	+52°	09:43	07:51	+16°	CNC

Legende:

Eine Zeile in dieser Farbe signalisiert eine optimale Beobachtbarkeit in über 10° Höhe

Eine Zeile in dieser Farbe signalisiert eine optimale Beobachtbarkeit in unter 10° Höhe

Eine Zeile in dieser Farbe signalisiert eine Unbeobachtbarkeit des Mondes

Datum	= Berechnungsdatum und -Uhrzeit
RA (2000.0)	= Rektaszension zum Berechnungszeitpunkt (Äquinoktium 2000.0)
Dek.(2000.0)	= Deklination zum Berechnungszeitpunkt (Äquinoktium 2000.0)
Entferng.	= Abstand Erde - Mond zum Berechnungszeitpunkt
Azim	= Azimut des Mondes zum Berechnungszeitpunkt
Höhe	= Höhe des Mondes zum Berechnungszeitpunkt
Phase	= Mondphase zum Berechnungszeitpunkt
Hell.	= Helligkeit des Mondes zum Berechnungszeitpunkt
Aufg.	= Mondaufgang
Kulm.	= Kulmination des Mondes
KHöh	= Höhe des Mondes zum Kulminationszeitpunkt
Untg.	= Monduntergang
TOpt.	= Optimalster Beobachtungszeitpunkt
TOptH.	= Höhe des Mondes zum optimalsten Beobachtungszeitpunkt
Stb.	= Sternbild zur berechneten Position