

Ephemeride für den Kleinplaneten (9) Metis

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)	r	Entferng.	Elong.	Azim	Höhe	Hell	Aufg.	Kulm.	KHöh	Untg.	TOpt	TOptH	Stb.
So 01.01.2012	00:00	21h59' 7.4"	-17° 4'33.1"	2.358 aE	2.927 aE	46.4°	105° -34°	11.4/	11:13	15:47	+23°	20:16	18:22	+14°	AQR
Mo 02.01.2012	00:00	22h 0'49.3"	-16°54'32.2"	2.357 aE	2.934 aE	45.8°	106° -34°	11.4/	11:10	15:45	+23°	20:14	18:23	+14°	AQR
Di 03.01.2012	00:00	22h 2'31.4"	-16°44'27.4"	2.355 aE	2.942 aE	45.2°	106° -34°	11.4/	11:07	15:43	+23°	20:13	18:24	+14°	AQR
Mi 04.01.2012	00:00	22h 4'13.8"	-16°34'18.8"	2.354 aE	2.950 aE	44.6°	107° -35°	11.4/	11:04	15:41	+23°	20:12	18:25	+14°	AQR
Do 05.01.2012	00:00	22h 5'56.4"	-16°24' 6.4"	2.352 aE	2.957 aE	44.1°	108° -35°	11.4/	11:00	15:38	+23°	20:11	18:26	+14°	AQR
Fr 06.01.2012	00:00	22h 7'39.2"	-16°13'50.3"	2.351 aE	2.965 aE	43.5°	108° -35°	11.4/	10:57	15:36	+23°	20:09	18:27	+13°	AQR
Sa 07.01.2012	00:00	22h 9'22.2"	-16° 3'30.5"	2.350 aE	2.972 aE	42.9°	109° -35°	11.4/	10:54	15:34	+24°	20:08	18:28	+13°	AQR
So 08.01.2012	00:00	22h11' 5.4"	-15°53' 7.1"	2.348 aE	2.979 aE	42.4°	110° -35°	11.4/	10:51	15:32	+24°	20:07	18:29	+13°	AQR
Mo 09.01.2012	00:00	22h12'48.8"	-15°42'39.9"	2.347 aE	2.987 aE	41.8°	110° -36°	11.4/	10:48	15:30	+24°	20:06	18:30	+13°	AQR
Di 10.01.2012	00:00	22h14'32.4"	-15°32' 9.2"	2.346 aE	2.994 aE	41.2°	111° -36°	11.4/	10:44	15:27	+24°	20:05	18:31	+13°	AQR
Mi 11.01.2012	00:00	22h16'16.1"	-15°21'34.9"	2.344 aE	3.001 aE	40.7°	111° -36°	11.4/	10:41	15:25	+24°	20:03	18:33	+12°	AQR
Do 12.01.2012	00:00	22h18' 0.1"	-15°10'57.1"	2.343 aE	3.008 aE	40.1°	112° -36°	11.4/	10:38	15:23	+24°	20:02	18:34	+12°	AQR
Fr 13.01.2012	00:00	22h19'44.2"	-15° 0'15.7"	2.341 aE	3.014 aE	39.5°	113° -36°	11.4/	10:35	15:21	+25°	20:01	18:35	+12°	AQR
Sa 14.01.2012	00:00	22h21'28.5"	-14°49'30.8"	2.340 aE	3.021 aE	39.0°	113° -37°	11.4/	10:31	15:19	+25°	20:00	18:36	+12°	AQR
So 15.01.2012	00:00	22h23'13.0"	-14°38'42.4"	2.339 aE	3.028 aE	38.4°	114° -37°	11.4/	10:28	15:16	+25°	19:59	18:37	+11°	AQR
Mo 16.01.2012	00:00	22h24'57.7"	-14°27'50.7"	2.337 aE	3.034 aE	37.9°	115° -37°	11.4/	10:25	15:14	+25°	19:57	18:39	+11°	AQR
Di 17.01.2012	00:00	22h26'42.5"	-14°16'55.5"	2.336 aE	3.041 aE	37.3°	115° -37°	11.4/	10:22	15:12	+25°	19:56	18:40	+11°	AQR
Mi 18.01.2012	00:00	22h28'27.5"	-14° 5'57.0"	2.335 aE	3.047 aE	36.8°	116° -37°	11.4/	10:19	15:10	+26°	19:55	18:41	+11°	AQR
Do 19.01.2012	00:00	22h30'12.7"	-13°54'55.2"	2.333 aE	3.053 aE	36.2°	117° -37°	11.4/	10:16	15:08	+26°	19:54	18:43	+10°	AQR
Fr 20.01.2012	00:00	22h31'58.0"	-13°43'50.0"	2.332 aE	3.059 aE	35.7°	117° -38°	11.4/	10:12	15:05	+26°	19:53	18:44	+10°	AQR
Sa 21.01.2012	00:00	22h33'43.5"	-13°32'41.7"	2.330 aE	3.065 aE	35.1°	118° -38°	11.4/	10:09	15:03	+26°	19:52	18:45	+10°	AQR
So 22.01.2012	00:00	22h35'29.1"	-13°21'30.2"	2.329 aE	3.071 aE	34.6°	119° -38°	11.4/	10:06	15:01	+26°	19:50	18:47	+ 9°	AQR
Mo 23.01.2012	00:00	22h37'14.9"	-13°10'15.6"	2.328 aE	3.077 aE	34.0°	120° -38°	11.4/	10:03	14:59	+26°	19:49	18:48	+ 9°	AQR
Di 24.01.2012	00:00	22h39' 0.8"	-12°58'58.0"	2.326 aE	3.083 aE	33.5°	120° -38°	11.4/	10:00	14:57	+27°	19:48	18:49	+ 9°	AQR
Mi 25.01.2012	00:00	22h40'46.8"	-12°47'37.3"	2.325 aE	3.089 aE	32.9°	121° -38°	11.4/	09:57	14:55	+27°	19:47	18:51	+ 8°	AQR
Do 26.01.2012	00:00	22h42'33.0"	-12°36'13.7"	2.324 aE	3.094 aE	32.4°	122° -38°	11.3/	09:54	14:52	+27°	19:46	18:52	+ 8°	AQR
Fr 27.01.2012	00:00	22h44'19.3"	-12°24'47.2"	2.322 aE	3.100 aE	31.9°	122° -39°	11.3/	09:51	14:50	+27°	19:45	18:54	+ 8°	AQR
Sa 28.01.2012	00:00	22h46' 5.8"	-12°13'17.8"	2.321 aE	3.105 aE	31.3°	123° -39°	11.3/	09:48	14:48	+27°	19:44	18:55	+ 7°	AQR
So 29.01.2012	00:00	22h47'52.3"	-12° 1'45.7"	2.319 aE	3.110 aE	30.8°	124° -39°	11.3/	09:44	14:46	+28°	19:42	18:57	+ 7°	AQR
Mo 30.01.2012	00:00	22h49'39.0"	-11°50'10.8"	2.318 aE	3.115 aE	30.2°	124° -39°	11.3/	09:41	14:44	+28°	19:41	18:58	+ 7°	AQR
Di 31.01.2012	00:00	22h51'25.8"	-11°38'33.2"	2.317 aE	3.120 aE	29.7°	125° -39°	11.3/	09:38	14:42	+28°	19:40	19:00	+ 6°	AQR
Mi 01.02.2012	00:00	22h53'12.7"	-11°26'53.0"	2.315 aE	3.125 aE	29.2°	126° -39°	11.3/	09:35	14:39	+28°	19:39	19:01	+ 6°	AQR
Do 02.02.2012	00:00	22h54'59.8"	-11°15'10.2"	2.314 aE	3.130 aE	28.7°	127° -39°	11.3/	09:32	14:37	+28°	19:38	19:02	+ 6°	AQR
Fr 03.02.2012	00:00	22h56'46.9"	-11° 3'24.9"	2.313 aE	3.135 aE	28.1°	127° -39°	11.3/	09:29	14:35	+29°	19:37	19:04	+ 5°	AQR
Sa 04.02.2012	00:00	22h58'34.1"	-10°51'37.1"	2.311 aE	3.139 aE	27.6°	128° -40°	11.3/	09:25	14:33	+29°	19:36	19:06	+ 5°	AQR
So 05.02.2012	00:00	23h 0'21.4"	-10°39'46.9"	2.310 aE	3.144 aE	27.1°	129° -40°	11.3/	09:22	14:31	+29°	19:34	19:07	+ 5°	AQR
Mo 06.02.2012	00:00	23h 2' 8.9"	-10°27'54.2"	2.308 aE	3.148 aE	26.5°	129° -40°	11.3/	09:19	14:29	+29°	19:33	19:09	+ 4°	AQR
Di 07.02.2012	00:00	23h 3'56.4"	-10°15'59.2"	2.307 aE	3.152 aE	26.0°	130° -40°	11.3/	09:16	14:26	+29°	19:32	19:10	+ 4°	AQR
Mi 08.02.2012	00:00	23h 5'44.0"	-10° 4' 1.9"	2.306 aE	3.157 aE	25.5°	131° -40°	11.3/	09:13	14:24	+30°	19:31	19:12	+ 3°	AQR
Do 09.02.2012	00:00	23h 7'31.8"	- 9°52' 2.3"	2.304 aE	3.161 aE	25.0°	132° -40°	11.3/	09:09	14:22	+30°	19:30	19:13	+ 3°	AQR

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Datum	RA (2000.0)	D (2000.0)	r	Entferng.	Elong.	Azim	Höhe	Hell	Aufg.	Kulm.	KHöh	Untg.	TOpt	TOptH	Stb.	
Fr 10.02.2012	00:00	23h 9'19.6"	- 9°40' 0.5"	2.303 aE	3.165 aE	24.5°	132°	-40°	11.3/	09:06	14:20	+30°	19:29	19:15	+ 3° AQR	
Sa 11.02.2012	00:00	23h11' 7.5"	- 9°27'56.5"	2.302 aE	3.169 aE	23.9°	133°	-40°	11.3/	09:03	14:18	+30°	19:28	19:16	+ 2° AQR	
So 12.02.2012	00:00	23h12'55.5"	- 9°15'50.4"	2.300 aE	3.172 aE	23.4°	134°	-40°	11.3/	09:00	14:16	+30°	19:27	19:18	+ 2° AQR	
Mo 13.02.2012	00:00	23h14'43.7"	- 9° 3'42.2"	2.299 aE	3.176 aE	22.9°	135°	-40°	11.2/	08:57	14:14	+31°	19:25	19:19	+ 1° AQR	
Di 14.02.2012	00:00	23h16'31.9"	- 8°51'31.9"	2.298 aE	3.180 aE	22.4°	135°	-40°	11.2/	08:53	14:12	+31°	19:24	19:21	+ 1° AQR	
Mi 15.02.2012	00:00	23h18'20.2"	- 8°39'19.6"	2.296 aE	3.183 aE	21.9°	136°	-40°	11.2/	08:50	14:09	+31°	19:23	19:23	+ 0° AQR	
Do 16.02.2012	00:00	23h20' 8.6"	- 8°27' 5.4"	2.295 aE	3.186 aE	21.4°	137°	-40°	11.2/	08:47	14:07	+31°	19:22	19:24	+ 0° AQR	
Fr 17.02.2012	00:00	23h21'57.1"	- 8°14'49.3"	2.294 aE	3.190 aE	20.8°	138°	-40°	11.2/	08:44	14:05	+31°	19:21	---	---	AQR
Sa 18.02.2012	00:00	23h23'45.7"	- 8° 2'31.4"	2.292 aE	3.193 aE	20.3°	138°	-40°	11.2/	08:41	14:03	+32°	19:20	---	---	AQR
So 19.02.2012	00:00	23h25'34.4"	- 7°50'11.7"	2.291 aE	3.196 aE	19.8°	139°	-41°	11.2/	08:38	14:01	+32°	19:19	---	---	AQR
Mo 20.02.2012	00:00	23h27'23.3"	- 7°37'50.3"	2.289 aE	3.199 aE	19.3°	140°	-41°	11.2/	08:34	13:59	+32°	19:18	---	---	AQR
Di 21.02.2012	00:00	23h29'12.1"	- 7°25'27.2"	2.288 aE	3.202 aE	18.8°	140°	-41°	11.2/	08:31	13:57	+32°	19:17	---	---	AQR
Mi 22.02.2012	00:00	23h31' 1.1"	- 7°13' 2.6"	2.287 aE	3.204 aE	18.3°	141°	-41°	11.2/	08:28	13:54	+32°	19:16	---	---	AQR
Do 23.02.2012	00:00	23h32'50.2"	- 7° 0'36.5"	2.285 aE	3.207 aE	17.8°	142°	-41°	11.2/	08:25	13:52	+33°	19:14	---	---	AQR
Fr 24.02.2012	00:00	23h34'39.4"	- 6°48' 8.9"	2.284 aE	3.210 aE	17.3°	143°	-41°	11.2/	08:22	13:50	+33°	19:13	---	---	AQR
Sa 25.02.2012	00:00	23h36'28.6"	- 6°35'39.9"	2.283 aE	3.212 aE	16.8°	143°	-41°	11.2/	08:19	13:48	+33°	19:12	---	---	AQR
So 26.02.2012	00:00	23h38'17.9"	- 6°23' 9.6"	2.281 aE	3.214 aE	16.3°	144°	-41°	11.1/	08:15	13:46	+33°	19:11	---	---	AQR
Mo 27.02.2012	00:00	23h40' 7.4"	- 6°10'38.0"	2.280 aE	3.217 aE	15.8°	145°	-41°	11.1/	08:12	13:44	+33°	19:10	---	---	AQR
Di 28.02.2012	00:00	23h41'56.9"	- 5°58' 5.2"	2.279 aE	3.219 aE	15.3°	146°	-41°	11.1/	08:09	13:42	+34°	19:09	---	---	AQR
Mi 29.02.2012	00:00	23h43'46.4"	- 5°45'31.3"	2.277 aE	3.221 aE	14.8°	146°	-41°	11.1/	08:06	13:40	+34°	19:08	---	---	AQR
Do 01.03.2012	00:00	23h45'36.1"	- 5°32'56.2"	2.276 aE	3.223 aE	14.4°	147°	-41°	11.1/	08:03	13:38	+34°	19:07	---	---	PSC
Fr 02.03.2012	00:00	23h47'25.8"	- 5°20'20.2"	2.275 aE	3.225 aE	13.9°	148°	-41°	11.1/	08:00	13:35	+34°	19:06	---	---	PSC
Sa 03.03.2012	00:00	23h49'15.6"	- 5° 7'43.1"	2.273 aE	3.226 aE	13.4°	149°	-41°	11.1/	07:57	13:33	+35°	19:05	---	---	PSC
So 04.03.2012	00:00	23h51' 5.5"	- 4°55' 5.1"	2.272 aE	3.228 aE	12.9°	149°	-41°	11.1/	07:54	13:31	+35°	19:04	---	---	PSC
Mo 05.03.2012	00:00	23h52'55.5"	- 4°42'26.3"	2.271 aE	3.229 aE	12.4°	150°	-41°	11.1/	07:51	13:29	+35°	19:02	---	---	PSC
Di 06.03.2012	00:00	23h54'45.6"	- 4°29'46.6"	2.269 aE	3.231 aE	11.9°	151°	-41°	11.1/	07:48	13:27	+35°	19:01	---	---	PSC
Mi 07.03.2012	00:00	23h56'35.7"	- 4°17' 6.2"	2.268 aE	3.232 aE	11.5°	152°	-40°	11.0/	07:45	13:25	+35°	19:00	---	---	PSC
Do 08.03.2012	00:00	23h58'25.9"	- 4° 4'25.1"	2.267 aE	3.233 aE	11.0°	152°	-40°	11.0/	07:41	13:23	+36°	18:59	---	---	PSC
Fr 09.03.2012	00:00	0h 0'16.2"	- 3°51'43.2"	2.266 aE	3.234 aE	10.5°	153°	-40°	11.0/	07:38	13:21	+36°	18:58	---	---	PSC
Sa 10.03.2012	00:00	0h 2' 6.6"	- 3°39' 0.8"	2.264 aE	3.235 aE	10.1°	154°	-40°	11.0/	07:35	13:19	+36°	18:57	---	---	PSC
So 11.03.2012	00:00	0h 3'57.1"	- 3°26'17.8"	2.263 aE	3.236 aE	9.6°	155°	-40°	11.0/	07:32	13:17	+36°	18:56	---	---	PSC
Mo 12.03.2012	00:00	0h 5'47.7"	- 3°13'34.2"	2.262 aE	3.237 aE	9.1°	155°	-40°	11.0/	07:29	13:14	+36°	18:55	---	---	PSC
Di 13.03.2012	00:00	0h 7'38.3"	- 3° 0'50.2"	2.260 aE	3.238 aE	8.7°	156°	-40°	11.0/	07:26	13:12	+37°	18:54	---	---	PSC
Mi 14.03.2012	00:00	0h 9'29.1"	- 2°48' 5.8"	2.259 aE	3.238 aE	8.2°	157°	-40°	11.0/	07:23	13:10	+37°	18:53	---	---	PSC
Do 15.03.2012	00:00	0h11'19.9"	- 2°35'21.0"	2.258 aE	3.239 aE	7.8°	158°	-40°	11.0/	07:19	13:08	+37°	18:52	---	---	PSC
Fr 16.03.2012	00:00	0h13'10.9"	- 2°22'35.8"	2.256 aE	3.239 aE	7.4°	158°	-40°	10.9/	07:16	13:06	+37°	18:51	---	---	PSC
Sa 17.03.2012	00:00	0h15' 1.9"	- 2° 9'50.5"	2.255 aE	3.240 aE	6.9°	159°	-40°	10.9/	07:13	13:04	+37°	18:50	---	---	CET
So 18.03.2012	00:00	0h16'53.0"	- 1°57' 5.0"	2.254 aE	3.240 aE	6.5°	160°	-40°	10.9/	07:10	13:02	+38°	18:48	---	---	CET
Mo 19.03.2012	00:00	0h18'44.3"	- 1°44'19.3"	2.253 aE	3.240 aE	6.1°	160°	-40°	10.9/	07:07	13:00	+38°	18:47	---	---	CET
Di 20.03.2012	00:00	0h20'35.6"	- 1°31'33.6"	2.251 aE	3.240 aE	5.7°	161°	-40°	10.9/	07:04	12:58	+38°	18:46	---	---	CET

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Die TOpt bezieht sich auf eine Sonnenhöhe von -16°

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Mi 21.03.2012 00:00	0h22'27.0"	- 1°18'48.0"	2.250 aE	3.240 aE	5.3°	162°	-39°	10.9/	07:01	12:56	+38°	18:45	---:--	---°	CET
Do 22.03.2012 00:00	0h24'18.5"	- 1° 6' 2.4"	2.249 aE	3.240 aE	4.9°	163°	-39°	10.9/	06:57	12:54	+39°	18:44	---:--	---°	CET
Fr 23.03.2012 00:00	0h26'10.1"	- 0°53'17.0"	2.247 aE	3.239 aE	4.6°	163°	-39°	10.9/	06:54	12:51	+39°	18:43	---:--	---°	CET
Sa 24.03.2012 00:00	0h28' 1.8"	- 0°40'31.8"	2.246 aE	3.239 aE	4.3°	164°	-39°	10.8/	06:51	12:49	+39°	18:42	---:--	---°	CET
So 25.03.2012 00:00	0h29'49.0"	- 0°28'18.7"	2.245 aE	3.239 aE	4.0°	147°	-35°	10.8/	07:48	13:47	+39°	19:41	---:--	---°	CET
Mo 26.03.2012 00:00	0h31'40.9"	- 0°15'34.2"	2.244 aE	3.238 aE	3.8°	147°	-35°	10.8/	07:45	13:45	+39°	19:40	---:--	---°	CET
Di 27.03.2012 00:00	0h33'32.8"	- 0° 2'50.0"	2.242 aE	3.237 aE	3.6°	148°	-35°	10.8/	07:42	13:43	+40°	19:39	---:--	---°	CET
Mi 28.03.2012 00:00	0h35'24.9"	+ 0° 9'53.7"	2.241 aE	3.237 aE	3.4°	149°	-35°	10.8/	07:39	13:41	+40°	19:38	---:--	---°	CET
Do 29.03.2012 00:00	0h37'17.1"	+ 0°22'36.9"	2.240 aE	3.236 aE	3.3°	149°	-35°	10.8/	07:36	13:39	+40°	19:37	---:--	---°	CET
Fr 30.03.2012 00:00	0h39' 9.4"	+ 0°35'19.5"	2.239 aE	3.235 aE	3.3°	150°	-35°	10.8/	07:33	13:37	+40°	19:36	---:--	---°	CET
Sa 31.03.2012 00:00	0h41' 1.7"	+ 0°48' 1.4"	2.237 aE	3.234 aE	3.4°	151°	-35°	10.8\	07:30	13:35	+40°	19:35	---:--	---°	CET
So 01.04.2012 00:00	0h42'54.2"	+ 1° 0'42.7"	2.236 aE	3.233 aE	3.5°	151°	-35°	10.8\	07:27	13:33	+41°	19:34	---:--	---°	CET
Mo 02.04.2012 00:00	0h44'46.8"	+ 1°13'23.1"	2.235 aE	3.231 aE	3.7°	152°	-35°	10.8\	07:24	13:31	+41°	19:33	---:--	---°	CET
Di 03.04.2012 00:00	0h46'39.4"	+ 1°26' 2.8"	2.234 aE	3.230 aE	3.9°	153°	-35°	10.8\	07:21	13:29	+41°	19:32	---:--	---°	CET
Mi 04.04.2012 00:00	0h48'32.2"	+ 1°38'41.6"	2.232 aE	3.229 aE	4.2°	153°	-35°	10.8\	07:17	13:27	+41°	19:31	---:--	---°	PSC
Do 05.04.2012 00:00	0h50'25.0"	+ 1°51'19.4"	2.231 aE	3.227 aE	4.5°	154°	-35°	10.8\	07:14	13:25	+42°	19:30	---:--	---°	PSC
Fr 06.04.2012 00:00	0h52'18.0"	+ 2° 3'56.3"	2.230 aE	3.225 aE	4.8°	155°	-35°	10.8\	07:11	13:23	+42°	19:29	---:--	---°	PSC
Sa 07.04.2012 00:00	0h54'11.0"	+ 2°16'32.2"	2.229 aE	3.224 aE	5.1°	155°	-35°	10.8\	07:08	13:21	+42°	19:28	---:--	---°	PSC
So 08.04.2012 00:00	0h56' 4.2"	+ 2°29' 7.0"	2.227 aE	3.222 aE	5.5°	156°	-34°	10.9\	07:05	13:18	+42°	19:27	---:--	---°	PSC
Mo 09.04.2012 00:00	0h57'57.5"	+ 2°41'40.7"	2.226 aE	3.220 aE	5.9°	157°	-34°	10.9\	07:02	13:16	+42°	19:26	---:--	---°	PSC
Di 10.04.2012 00:00	0h59'50.9"	+ 2°54'13.2"	2.225 aE	3.218 aE	6.3°	157°	-34°	10.9\	06:59	13:14	+43°	19:25	---:--	---°	PSC
Mi 11.04.2012 00:00	1h 1'44.4"	+ 3° 6'44.4"	2.224 aE	3.216 aE	6.6°	158°	-34°	10.9\	06:56	13:12	+43°	19:24	---:--	---°	PSC
Do 12.04.2012 00:00	1h 3'38.0"	+ 3°19'14.4"	2.222 aE	3.214 aE	7.1°	159°	-34°	10.9\	06:53	13:10	+43°	19:23	---:--	---°	PSC
Fr 13.04.2012 00:00	1h 5'31.8"	+ 3°31'43.0"	2.221 aE	3.212 aE	7.5°	159°	-34°	10.9\	06:50	13:08	+43°	19:22	---:--	---°	PSC
Sa 14.04.2012 00:00	1h 7'25.7"	+ 3°44'10.3"	2.220 aE	3.209 aE	7.9°	160°	-34°	10.9\	06:46	13:06	+43°	19:21	---:--	---°	PSC
So 15.04.2012 00:00	1h 9'19.6"	+ 3°56'36.0"	2.219 aE	3.207 aE	8.3°	161°	-34°	10.9\	06:43	13:04	+44°	19:20	---:--	---°	PSC
Mo 16.04.2012 00:00	1h11'13.8"	+ 4° 9' 0.3"	2.218 aE	3.204 aE	8.7°	161°	-34°	10.9\	06:40	13:02	+44°	19:19	---:--	---°	PSC
Di 17.04.2012 00:00	1h13' 8.0"	+ 4°21'22.9"	2.216 aE	3.202 aE	9.2°	162°	-34°	10.9\	06:37	13:00	+44°	19:17	---:--	---°	PSC
Mi 18.04.2012 00:00	1h15' 2.3"	+ 4°33'43.8"	2.215 aE	3.199 aE	9.6°	163°	-34°	10.9\	06:34	12:58	+44°	19:16	---:--	---°	PSC
Do 19.04.2012 00:00	1h16'56.8"	+ 4°46' 3.0"	2.214 aE	3.196 aE	10.0°	163°	-33°	10.9\	06:31	12:56	+44°	19:15	---:--	---°	PSC
Fr 20.04.2012 00:00	1h18'51.4"	+ 4°58'20.5"	2.213 aE	3.193 aE	10.4°	164°	-33°	11.0\	06:28	12:54	+45°	19:14	---:--	---°	PSC
Sa 21.04.2012 00:00	1h20'46.1"	+ 5°10'36.0"	2.212 aE	3.190 aE	10.9°	165°	-33°	11.0\	06:25	12:52	+45°	19:13	---:--	---°	PSC
So 22.04.2012 00:00	1h22'41.0"	+ 5°22'49.7"	2.210 aE	3.187 aE	11.3°	165°	-33°	11.0\	06:22	12:50	+45°	19:12	---:--	---°	PSC
Mo 23.04.2012 00:00	1h24'35.9"	+ 5°35' 1.3"	2.209 aE	3.184 aE	11.8°	166°	-33°	11.0\	06:19	12:48	+45°	19:11	---:--	---°	PSC
Di 24.04.2012 00:00	1h26'31.0"	+ 5°47'10.9"	2.208 aE	3.181 aE	12.2°	166°	-33°	11.0\	06:16	12:46	+45°	19:10	---:--	---°	PSC
Mi 25.04.2012 00:00	1h28'26.2"	+ 5°59'18.4"	2.207 aE	3.178 aE	12.6°	167°	-33°	11.0\	06:13	12:44	+46°	19:09	---:--	---°	PSC
Do 26.04.2012 00:00	1h30'21.5"	+ 6°11'23.7"	2.206 aE	3.174 aE	13.1°	168°	-33°	11.0\	06:10	12:42	+46°	19:08	---:--	---°	PSC
Fr 27.04.2012 00:00	1h32'16.9"	+ 6°23'26.8"	2.205 aE	3.171 aE	13.5°	168°	-32°	11.0\	06:07	12:40	+46°	19:07	---:--	---°	PSC
Sa 28.04.2012 00:00	1h34'12.5"	+ 6°35'27.6"	2.203 aE	3.167 aE	14.0°	169°	-32°	11.0\	06:04	12:38	+46°	19:06	---:--	---°	PSC
So 29.04.2012 00:00	1h36' 8.1"	+ 6°47'26.0"	2.202 aE	3.163 aE	14.4°	170°	-32°	11.0\	06:01	12:36	+46°	19:05	---:--	---°	PSC

Ephemeride für den Kleinplaneten (9) Metis

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)	r	Entferng.	Elong.	Azim	Höhe	Hell	Aufg.	Kulm.	KHöh	Untg.	TOpt	TOptH	Stb.
Mo 30.04.2012 00:00	1h38' 3.9"	+ 6°59'22.1"	2.201 aE	3.160 aE	14.8°	170°	-32°	11.0\	05:58	12:34	+47°	19:04	---:--	---°	PSC
Di 01.05.2012 00:00	1h39'59.8"	+ 7°11'15.7"	2.200 aE	3.156 aE	15.3°	171°	-32°	11.0\	05:55	12:32	+47°	19:03	---:--	---°	PSC
Mi 02.05.2012 00:00	1h41'55.9"	+ 7°23' 6.7"	2.199 aE	3.152 aE	15.7°	171°	-32°	11.0\	05:52	12:30	+47°	19:02	---:--	---°	PSC
Do 03.05.2012 00:00	1h43'52.0"	+ 7°34'55.3"	2.198 aE	3.148 aE	16.2°	172°	-32°	11.0\	05:50	12:28	+47°	19:01	---:--	---°	PSC
Fr 04.05.2012 00:00	1h45'48.3"	+ 7°46'41.2"	2.196 aE	3.144 aE	16.6°	173°	-31°	11.0\	05:47	12:26	+47°	19:00	---:--	---°	PSC
Sa 05.05.2012 00:00	1h47'44.7"	+ 7°58'24.4"	2.195 aE	3.140 aE	17.0°	173°	-31°	11.0\	05:44	12:24	+48°	18:59	---:--	---°	PSC
So 06.05.2012 00:00	1h49'41.3"	+ 8°10' 5.0"	2.194 aE	3.135 aE	17.5°	174°	-31°	11.0\	05:41	12:22	+48°	18:58	---:--	---°	PSC
Mo 07.05.2012 00:00	1h51'37.9"	+ 8°21'42.8"	2.193 aE	3.131 aE	17.9°	174°	-31°	11.1\	05:38	12:20	+48°	18:57	---:--	---°	PSC
Di 08.05.2012 00:00	1h53'34.7"	+ 8°33'17.8"	2.192 aE	3.127 aE	18.4°	175°	-31°	11.1\	05:35	12:18	+48°	18:56	---:--	---°	PSC
Mi 09.05.2012 00:00	1h55'31.6"	+ 8°44'49.9"	2.191 aE	3.122 aE	18.8°	176°	-31°	11.1\	05:32	12:16	+48°	18:55	---:--	---°	CET
Do 10.05.2012 00:00	1h57'28.7"	+ 8°56'19.1"	2.190 aE	3.118 aE	19.2°	176°	-31°	11.1\	05:29	12:14	+49°	18:54	---:--	---°	CET
Fr 11.05.2012 00:00	1h59'25.9"	+ 9° 7'45.4"	2.189 aE	3.113 aE	19.7°	177°	-30°	11.1\	05:26	12:12	+49°	18:53	---:--	---°	CET
Sa 12.05.2012 00:00	2h 1'23.3"	+ 9°19' 8.6"	2.188 aE	3.108 aE	20.1°	177°	-30°	11.1\	05:23	12:10	+49°	18:52	---:--	---°	CET
So 13.05.2012 00:00	2h 3'20.7"	+ 9°30'28.8"	2.186 aE	3.104 aE	20.6°	178°	-30°	11.1\	05:20	12:08	+49°	18:51	---:--	---°	ARI
Mo 14.05.2012 00:00	2h 5'18.3"	+ 9°41'45.8"	2.185 aE	3.099 aE	21.0°	178°	-30°	11.1\	05:17	12:06	+49°	18:49	---:--	---°	ARI
Di 15.05.2012 00:00	2h 7'16.1"	+ 9°52'59.6"	2.184 aE	3.094 aE	21.4°	179°	-30°	11.1\	05:14	12:04	+50°	18:48	---:--	---°	ARI
Mi 16.05.2012 00:00	2h 9'14.0"	+10° 4'10.1"	2.183 aE	3.089 aE	21.9°	180°	-29°	11.1\	05:11	12:02	+50°	18:47	---:--	---°	ARI
Do 17.05.2012 00:00	2h11'12.0"	+10°15'17.4"	2.182 aE	3.084 aE	22.3°	180°	-29°	11.1\	05:08	12:00	+50°	18:46	---:--	---°	ARI
Fr 18.05.2012 00:00	2h13'10.2"	+10°26'21.2"	2.181 aE	3.078 aE	22.8°	181°	-29°	11.1\	05:05	11:58	+50°	18:45	---:--	---°	ARI
Sa 19.05.2012 00:00	2h15' 8.4"	+10°37'21.6"	2.180 aE	3.073 aE	23.2°	181°	-29°	11.1\	05:02	11:56	+50°	18:44	---:--	---°	ARI
So 20.05.2012 00:00	2h17' 6.9"	+10°48'18.5"	2.179 aE	3.068 aE	23.6°	182°	-29°	11.1\	04:59	11:54	+50°	18:43	---:--	---°	ARI
Mo 21.05.2012 00:00	2h19' 5.4"	+10°59'11.8"	2.178 aE	3.062 aE	24.1°	182°	-29°	11.1\	04:56	11:52	+51°	18:42	---:--	---°	ARI
Di 22.05.2012 00:00	2h21' 4.1"	+11°10' 1.5"	2.177 aE	3.057 aE	24.5°	183°	-28°	11.1\	04:53	11:50	+51°	18:41	---:--	---°	ARI
Mi 23.05.2012 00:00	2h23' 2.9"	+11°20'47.5"	2.176 aE	3.051 aE	25.0°	183°	-28°	11.1\	04:51	11:48	+51°	18:40	---:--	---°	ARI
Do 24.05.2012 00:00	2h25' 1.8"	+11°31'29.9"	2.175 aE	3.046 aE	25.4°	184°	-28°	11.1\	04:48	11:46	+51°	18:39	---:--	---°	ARI
Fr 25.05.2012 00:00	2h27' 0.8"	+11°42' 8.4"	2.174 aE	3.040 aE	25.8°	184°	-28°	11.1\	04:45	11:44	+51°	18:38	---:--	---°	ARI
Sa 26.05.2012 00:00	2h28'60.0"	+11°52'43.1"	2.173 aE	3.034 aE	26.3°	185°	-28°	11.1\	04:42	11:42	+51°	18:37	---:--	---°	ARI
So 27.05.2012 00:00	2h30'59.3"	+12° 3'14.0"	2.172 aE	3.028 aE	26.7°	185°	-27°	11.1\	04:39	11:40	+52°	18:36	---:--	---°	ARI
Mo 28.05.2012 00:00	2h32'58.7"	+12°13'40.9"	2.171 aE	3.022 aE	27.2°	186°	-27°	11.1\	04:36	11:38	+52°	18:35	---:--	---°	ARI
Di 29.05.2012 00:00	2h34'58.2"	+12°24' 3.8"	2.170 aE	3.016 aE	27.6°	187°	-27°	11.1\	04:33	11:36	+52°	18:34	---:--	---°	ARI
Mi 30.05.2012 00:00	2h36'57.8"	+12°34'22.7"	2.169 aE	3.010 aE	28.0°	187°	-27°	11.1\	04:30	11:34	+52°	18:33	---:--	---°	ARI
Do 31.05.2012 00:00	2h38'57.5"	+12°44'37.5"	2.168 aE	3.004 aE	28.5°	188°	-26°	11.1\	04:27	11:33	+52°	18:32	---:--	---°	ARI
Fr 01.06.2012 00:00	2h40'57.4"	+12°54'48.2"	2.167 aE	2.998 aE	28.9°	188°	-26°	11.1\	04:25	11:31	+53°	18:31	---:--	---°	ARI
Sa 02.06.2012 00:00	2h42'57.4"	+13° 4'54.8"	2.166 aE	2.992 aE	29.3°	189°	-26°	11.1\	04:22	11:29	+53°	18:30	---:--	---°	ARI
So 03.06.2012 00:00	2h44'57.5"	+13°14'57.1"	2.165 aE	2.985 aE	29.8°	189°	-26°	11.1\	04:19	11:27	+53°	18:29	---:--	---°	ARI
Mo 04.06.2012 00:00	2h46'57.7"	+13°24'55.3"	2.164 aE	2.979 aE	30.2°	190°	-26°	11.1\	04:16	11:25	+53°	18:28	---:--	---°	ARI
Di 05.06.2012 00:00	2h48'58.0"	+13°34'49.1"	2.163 aE	2.972 aE	30.7°	190°	-25°	11.1\	04:13	11:23	+53°	18:26	---:--	---°	ARI
Mi 06.06.2012 00:00	2h50'58.5"	+13°44'38.6"	2.162 aE	2.966 aE	31.1°	191°	-25°	11.1\	04:11	11:21	+53°	18:25	---:--	---°	ARI
Do 07.06.2012 00:00	2h52'59.0"	+13°54'23.8"	2.161 aE	2.959 aE	31.5°	191°	-25°	11.1\	04:08	11:19	+54°	18:24	---:--	---°	ARI
Fr 08.06.2012 00:00	2h54'59.7"	+14° 4' 4.5"	2.160 aE	2.953 aE	32.0°	192°	-25°	11.1\	04:05	11:17	+54°	18:23	---:--	---°	ARI

Ephemeride für den Kleinplaneten (9) Metis

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)	r	Entferng.	Elong.	Azim	Höhe	Hell	Aufg.	Kulm.	KHöh	Untg.	TOpt	TOptH	Stb.
Sa 09.06.2012 00:00	2h57' 0.5"	+14°13'40.8"	2.159	aE 2.946	aE 32.4°	192°	-25°	11.1\	04:02	11:15	+54°	18:22	---:--	---°	ARI
So 10.06.2012 00:00	2h59' 1.4"	+14°23'12.5"	2.158	aE 2.939	aE 32.9°	193°	-24°	11.1\	04:00	11:13	+54°	18:21	---:--	---°	ARI
Mo 11.06.2012 00:00	3h 1' 2.4"	+14°32'39.8"	2.157	aE 2.932	aE 33.3°	193°	-24°	11.1\	03:57	11:11	+54°	18:20	---:--	---°	ARI
Di 12.06.2012 00:00	3h 3' 3.6"	+14°42' 2.4"	2.156	aE 2.925	aE 33.7°	193°	-24°	11.1\	03:54	11:09	+54°	18:19	---:--	---°	ARI
Mi 13.06.2012 00:00	3h 5' 4.8"	+14°51'20.3"	2.155	aE 2.918	aE 34.2°	194°	-24°	11.1\	03:52	11:07	+54°	18:18	---:--	---°	ARI
Do 14.06.2012 00:00	3h 7' 6.1"	+15° 0'33.6"	2.154	aE 2.911	aE 34.6°	194°	-23°	11.1\	03:49	11:06	+55°	18:17	---:--	---°	ARI
Fr 15.06.2012 00:00	3h 9' 7.6"	+15° 9'42.1"	2.153	aE 2.904	aE 35.1°	195°	-23°	11.1\	03:46	11:04	+55°	18:16	---:--	---°	ARI
Sa 16.06.2012 00:00	3h11' 9.1"	+15°18'45.8"	2.152	aE 2.897	aE 35.5°	195°	-23°	11.1/	03:43	11:02	+55°	18:15	---:--	---°	ARI
So 17.06.2012 00:00	3h13'10.7"	+15°27'44.7"	2.151	aE 2.889	aE 36.0°	196°	-23°	11.1/	03:41	11:00	+55°	18:14	---:--	---°	TAU
Mo 18.06.2012 00:00	3h15'12.4"	+15°36'38.7"	2.150	aE 2.882	aE 36.4°	196°	-23°	11.1/	03:38	10:58	+55°	18:13	---:--	---°	TAU
Di 19.06.2012 00:00	3h17'14.2"	+15°45'27.8"	2.149	aE 2.875	aE 36.8°	197°	-22°	11.1/	03:35	10:56	+55°	18:11	---:--	---°	TAU
Mi 20.06.2012 00:00	3h19'16.1"	+15°54'12.0"	2.149	aE 2.867	aE 37.3°	197°	-22°	11.1/	03:32	10:54	+56°	18:10	---:--	---°	TAU
Do 21.06.2012 00:00	3h21'18.0"	+16° 2'51.1"	2.148	aE 2.860	aE 37.7°	198°	-22°	11.1/	03:30	10:52	+56°	18:09	---:--	---°	TAU
Fr 22.06.2012 00:00	3h23'20.0"	+16°11'25.2"	2.147	aE 2.852	aE 38.2°	198°	-22°	11.1/	03:27	10:50	+56°	18:08	---:--	---°	TAU
Sa 23.06.2012 00:00	3h25'22.1"	+16°19'54.3"	2.146	aE 2.844	aE 38.6°	199°	-21°	11.1/	03:24	10:48	+56°	18:07	---:--	---°	TAU
So 24.06.2012 00:00	3h27'24.2"	+16°28'18.2"	2.145	aE 2.837	aE 39.1°	199°	-21°	11.1/	03:22	10:46	+56°	18:06	---:--	---°	TAU
Mo 25.06.2012 00:00	3h29'26.4"	+16°36'37.0"	2.144	aE 2.829	aE 39.5°	199°	-21°	11.1/	03:19	10:45	+56°	18:05	---:--	---°	TAU
Di 26.06.2012 00:00	3h31'28.7"	+16°44'50.7"	2.143	aE 2.821	aE 39.9°	200°	-21°	11.1/	03:16	10:43	+56°	18:04	---:--	---°	TAU
Mi 27.06.2012 00:00	3h33'31.0"	+16°52'59.1"	2.143	aE 2.813	aE 40.4°	200°	-20°	11.1/	03:14	10:41	+56°	18:03	---:--	---°	TAU
Do 28.06.2012 00:00	3h35'33.3"	+17° 1' 2.3"	2.142	aE 2.805	aE 40.8°	201°	-20°	11.1/	03:11	10:39	+57°	18:02	---:--	---°	TAU
Fr 29.06.2012 00:00	3h37'35.7"	+17° 9' 0.3"	2.141	aE 2.797	aE 41.3°	201°	-20°	11.1/	03:08	10:37	+57°	18:00	---:--	---°	TAU
Sa 30.06.2012 00:00	3h39'38.2"	+17°16'53.0"	2.140	aE 2.789	aE 41.7°	202°	-20°	11.1/	03:06	10:35	+57°	17:59	---:--	---°	TAU
So 01.07.2012 00:00	3h41'40.6"	+17°24'40.3"	2.139	aE 2.781	aE 42.2°	202°	-19°	11.1/	03:03	10:33	+57°	17:58	---:--	---°	TAU
Mo 02.07.2012 00:00	3h43'43.1"	+17°32'22.4"	2.138	aE 2.772	aE 42.6°	203°	-19°	11.1/	03:00	10:31	+57°	17:57	---:--	---°	TAU
Di 03.07.2012 00:00	3h45'45.7"	+17°39'59.1"	2.138	aE 2.764	aE 43.1°	203°	-19°	11.1/	02:58	10:29	+57°	17:56	---:--	---°	TAU
Mi 04.07.2012 00:00	3h47'48.2"	+17°47'30.4"	2.137	aE 2.756	aE 43.5°	203°	-19°	11.1/	02:55	10:27	+57°	17:55	---:--	---°	TAU
Do 05.07.2012 00:00	3h49'50.8"	+17°54'56.4"	2.136	aE 2.748	aE 44.0°	204°	-18°	11.1/	02:52	10:26	+58°	17:53	---:--	---°	TAU
Fr 06.07.2012 00:00	3h51'53.5"	+18° 2'16.9"	2.135	aE 2.739	aE 44.4°	204°	-18°	11.1/	02:50	10:24	+58°	17:52	---:--	---°	TAU
Sa 07.07.2012 00:00	3h53'56.1"	+18° 9'32.0"	2.134	aE 2.731	aE 44.9°	205°	-18°	11.1/	02:47	10:22	+58°	17:51	---:--	---°	TAU
So 08.07.2012 00:00	3h55'58.8"	+18°16'41.7"	2.134	aE 2.722	aE 45.3°	205°	-18°	11.1/	02:44	10:20	+58°	17:50	---:--	---°	TAU
Mo 09.07.2012 00:00	3h58' 1.5"	+18°23'45.8"	2.133	aE 2.713	aE 45.8°	205°	-18°	11.1/	02:42	10:18	+58°	17:49	---:--	---°	TAU
Di 10.07.2012 00:00	4h 0' 4.1"	+18°30'44.5"	2.132	aE 2.705	aE 46.2°	206°	-17°	11.1/	02:39	10:16	+58°	17:48	---:--	---°	TAU
Mi 11.07.2012 00:00	4h 2' 6.8"	+18°37'37.6"	2.131	aE 2.696	aE 46.7°	206°	-17°	11.1/	02:37	10:14	+58°	17:46	02:40	+ 0°	TAU
Do 12.07.2012 00:00	4h 4' 9.5"	+18°44'25.1"	2.131	aE 2.687	aE 47.1°	207°	-17°	11.1/	02:34	10:12	+58°	17:45	02:43	+ 1°	TAU
Fr 13.07.2012 00:00	4h 6'12.1"	+18°51' 7.2"	2.130	aE 2.678	aE 47.6°	207°	-17°	11.1/	02:31	10:10	+58°	17:44	02:46	+ 2°	TAU
Sa 14.07.2012 00:00	4h 8'14.8"	+18°57'43.6"	2.129	aE 2.670	aE 48.1°	208°	-16°	11.1/	02:29	10:08	+59°	17:43	02:49	+ 3°	TAU
So 15.07.2012 00:00	4h10'17.4"	+19° 4'14.4"	2.128	aE 2.661	aE 48.5°	208°	-16°	11.1/	02:26	10:07	+59°	17:41	02:52	+ 4°	TAU
Mo 16.07.2012 00:00	4h12'20.0"	+19°10'39.6"	2.128	aE 2.652	aE 49.0°	208°	-16°	11.1/	02:24	10:05	+59°	17:40	02:55	+ 4°	TAU
Di 17.07.2012 00:00	4h14'22.5"	+19°16'59.3"	2.127	aE 2.643	aE 49.4°	209°	-16°	11.1/	02:21	10:03	+59°	17:39	02:58	+ 5°	TAU
Mi 18.07.2012 00:00	4h16'25.0"	+19°23'13.2"	2.126	aE 2.634	aE 49.9°	209°	-15°	11.1/	02:19	10:01	+59°	17:38	03:02	+ 6°	TAU

Ephemeride für den Kleinplaneten (9) Metis

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)	r	Entferng.	Elong.	Azim	Höhe	Hell	Aufg.	Kulm.	KHöh	Untg.	TOpt	TOptH	Stb.
Do 19.07.2012 00:00	4h18'27.4"	+19°29'21.6"	2.125 aE	2.624 aE	50.4°	210°	-15°	11.1/	02:16	09:59	+59°	17:36	03:05	+ 7°	TAU
Fr 20.07.2012 00:00	4h20'29.7"	+19°35'24.3"	2.125 aE	2.615 aE	50.8°	210°	-15°	11.1/	02:14	09:57	+59°	17:35	03:08	+ 8°	TAU
Sa 21.07.2012 00:00	4h22'32.0"	+19°41'21.4"	2.124 aE	2.606 aE	51.3°	210°	-15°	11.1/	02:11	09:55	+59°	17:34	03:11	+ 8°	TAU
So 22.07.2012 00:00	4h24'34.2"	+19°47'12.8"	2.123 aE	2.597 aE	51.8°	211°	-14°	11.1/	02:09	09:53	+59°	17:32	03:14	+ 9°	TAU
Mo 23.07.2012 00:00	4h26'36.3"	+19°52'58.6"	2.123 aE	2.587 aE	52.2°	211°	-14°	11.1/	02:06	09:51	+59°	17:31	03:17	+10°	TAU
Di 24.07.2012 00:00	4h28'38.2"	+19°58'38.7"	2.122 aE	2.578 aE	52.7°	212°	-14°	11.1/	02:04	09:49	+60°	17:30	03:20	+11°	TAU
Mi 25.07.2012 00:00	4h30'40.1"	+20° 4'13.2"	2.121 aE	2.569 aE	53.2°	212°	-14°	11.1/	02:02	09:48	+60°	17:28	03:23	+12°	TAU
Do 26.07.2012 00:00	4h32'41.9"	+20° 9'42.1"	2.121 aE	2.559 aE	53.6°	212°	-13°	11.1/	01:59	09:46	+60°	17:27	03:25	+12°	TAU
Fr 27.07.2012 00:00	4h34'43.5"	+20°15' 5.4"	2.120 aE	2.549 aE	54.1°	213°	-13°	11.1/	01:57	09:44	+60°	17:26	03:28	+13°	TAU
Sa 28.07.2012 00:00	4h36'45.1"	+20°20'23.0"	2.119 aE	2.540 aE	54.6°	213°	-13°	11.0/	01:54	09:42	+60°	17:24	03:31	+14°	TAU
So 29.07.2012 00:00	4h38'46.5"	+20°25'35.0"	2.119 aE	2.530 aE	55.0°	214°	-13°	11.0/	01:52	09:40	+60°	17:23	03:34	+15°	TAU
Mo 30.07.2012 00:00	4h40'47.7"	+20°30'41.4"	2.118 aE	2.521 aE	55.5°	214°	-12°	11.0/	01:49	09:38	+60°	17:21	03:37	+16°	TAU
Di 31.07.2012 00:00	4h42'48.8"	+20°35'42.3"	2.117 aE	2.511 aE	56.0°	214°	-12°	11.0/	01:47	09:36	+60°	17:20	03:40	+16°	TAU
Mi 01.08.2012 00:00	4h44'49.8"	+20°40'37.5"	2.117 aE	2.501 aE	56.5°	215°	-12°	11.0/	01:45	09:34	+60°	17:19	03:43	+17°	TAU
Do 02.08.2012 00:00	4h46'50.6"	+20°45'27.3"	2.116 aE	2.491 aE	56.9°	215°	-12°	11.0/	01:42	09:32	+60°	17:17	03:45	+18°	TAU
Fr 03.08.2012 00:00	4h48'51.2"	+20°50'11.5"	2.116 aE	2.481 aE	57.4°	216°	-11°	11.0/	01:40	09:30	+60°	17:16	03:48	+19°	TAU
Sa 04.08.2012 00:00	4h50'51.7"	+20°54'50.1"	2.115 aE	2.472 aE	57.9°	216°	-11°	11.0/	01:37	09:28	+60°	17:14	03:51	+20°	TAU
So 05.08.2012 00:00	4h52'51.9"	+20°59'23.3"	2.114 aE	2.462 aE	58.4°	216°	-11°	11.0/	01:35	09:26	+61°	17:13	03:53	+20°	TAU
Mo 06.08.2012 00:00	4h54'52.0"	+21° 3'51.0"	2.114 aE	2.452 aE	58.9°	217°	-11°	11.0/	01:33	09:24	+61°	17:11	03:56	+21°	TAU
Di 07.08.2012 00:00	4h56'51.9"	+21° 8'13.3"	2.113 aE	2.442 aE	59.4°	217°	-10°	11.0/	01:30	09:22	+61°	17:10	03:59	+22°	TAU
Mi 08.08.2012 00:00	4h58'51.6"	+21°12'30.1"	2.113 aE	2.432 aE	59.8°	217°	-10°	11.0/	01:28	09:21	+61°	17:08	04:01	+23°	TAU
Do 09.08.2012 00:00	5h 0'51.1"	+21°16'41.5"	2.112 aE	2.422 aE	60.3°	218°	-10°	11.0/	01:25	09:19	+61°	17:07	04:04	+23°	TAU
Fr 10.08.2012 00:00	5h 2'50.3"	+21°20'47.6"	2.112 aE	2.411 aE	60.8°	218°	-10°	11.0/	01:23	09:17	+61°	17:05	04:07	+24°	TAU
Sa 11.08.2012 00:00	5h 4'49.3"	+21°24'48.3"	2.111 aE	2.401 aE	61.3°	219°	-9°	11.0/	01:21	09:15	+61°	17:03	04:09	+25°	TAU
So 12.08.2012 00:00	5h 6'48.1"	+21°28'43.7"	2.111 aE	2.391 aE	61.8°	219°	-9°	11.0/	01:18	09:13	+61°	17:02	04:12	+26°	TAU
Mo 13.08.2012 00:00	5h 8'46.5"	+21°32'33.8"	2.110 aE	2.381 aE	62.3°	219°	-9°	11.0/	01:16	09:11	+61°	17:00	04:14	+27°	TAU
Di 14.08.2012 00:00	5h10'44.7"	+21°36'18.7"	2.110 aE	2.370 aE	62.8°	220°	-9°	11.0/	01:13	09:09	+61°	16:59	04:17	+27°	TAU
Mi 15.08.2012 00:00	5h12'42.6"	+21°39'58.4"	2.109 aE	2.360 aE	63.3°	220°	-8°	11.0/	01:11	09:07	+61°	16:57	04:19	+28°	TAU
Do 16.08.2012 00:00	5h14'40.2"	+21°43'33.0"	2.109 aE	2.350 aE	63.8°	221°	-8°	10.9/	01:09	09:05	+61°	16:55	04:22	+29°	TAU
Fr 17.08.2012 00:00	5h16'37.5"	+21°47' 2.5"	2.108 aE	2.339 aE	64.3°	221°	-8°	10.9/	01:06	09:03	+61°	16:54	04:24	+30°	TAU
Sa 18.08.2012 00:00	5h18'34.5"	+21°50'26.9"	2.108 aE	2.329 aE	64.8°	221°	-8°	10.9/	01:04	09:01	+61°	16:52	04:26	+30°	TAU
So 19.08.2012 00:00	5h20'31.1"	+21°53'46.4"	2.107 aE	2.318 aE	65.3°	222°	-7°	10.9/	01:02	08:59	+61°	16:50	04:29	+31°	TAU
Mo 20.08.2012 00:00	5h22'27.4"	+21°57' 0.8"	2.107 aE	2.308 aE	65.8°	222°	-7°	10.9/	00:59	08:57	+62°	16:49	04:31	+32°	TAU
Di 21.08.2012 00:00	5h24'23.3"	+22° 0'10.4"	2.106 aE	2.297 aE	66.4°	223°	-7°	10.9/	00:57	08:55	+62°	16:47	04:33	+32°	TAU
Mi 22.08.2012 00:00	5h26'18.8"	+22° 3'15.2"	2.106 aE	2.287 aE	66.9°	223°	-7°	10.9/	00:54	08:53	+62°	16:45	04:36	+33°	TAU
Do 23.08.2012 00:00	5h28'14.0"	+22° 6'15.1"	2.105 aE	2.276 aE	67.4°	223°	-6°	10.9/	00:52	08:51	+62°	16:44	04:38	+34°	TAU
Fr 24.08.2012 00:00	5h30' 8.7"	+22° 9'10.4"	2.105 aE	2.265 aE	67.9°	224°	-6°	10.9/	00:50	08:49	+62°	16:42	04:40	+35°	TAU
Sa 25.08.2012 00:00	5h32' 3.0"	+22°12' 1.0"	2.104 aE	2.255 aE	68.4°	224°	-6°	10.9/	00:47	08:47	+62°	16:40	04:42	+35°	TAU
So 26.08.2012 00:00	5h33'57.0"	+22°14'47.0"	2.104 aE	2.244 aE	68.9°	225°	-5°	10.9/	00:45	08:45	+62°	16:38	04:45	+36°	TAU
Mo 27.08.2012 00:00	5h35'50.5"	+22°17'28.4"	2.104 aE	2.233 aE	69.5°	225°	-5°	10.9/	00:43	08:43	+62°	16:37	04:47	+37°	ORI

Ephemeride für den Kleinplaneten (9) Metis

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)	r	Entferng.	Elong.	Azim	Höhe	Hell	Aufg.	Kulm.	KHöh	Untg.	TOpt	TOptH	Stb.
Di 28.08.2012 00:00	5h37'43.5"	+22°20' 5.4"	2.103	aE 2.222	aE 70.0°	225°	-5°	10.9/	00:40	08:41	+62°	16:35	04:49	+37°	ORI
Mi 29.08.2012 00:00	5h39'36.1"	+22°22'38.0"	2.103	aE 2.211	aE 70.5°	226°	-5°	10.8/	00:38	08:38	+62°	16:33	04:51	+38°	ORI
Do 30.08.2012 00:00	5h41'28.3"	+22°25' 6.3"	2.102	aE 2.201	aE 71.1°	226°	-4°	10.8/	00:36	08:36	+62°	16:31	04:53	+39°	ORI
Fr 31.08.2012 00:00	5h43'19.9"	+22°27'30.3"	2.102	aE 2.190	aE 71.6°	226°	-4°	10.8/	00:33	08:34	+62°	16:29	04:55	+39°	ORI
Sa 01.09.2012 00:00	5h45'11.1"	+22°29'50.2"	2.102	aE 2.179	aE 72.1°	227°	-4°	10.8/	00:31	08:32	+62°	16:28	04:57	+40°	ORI
So 02.09.2012 00:00	5h47' 1.8"	+22°32' 6.0"	2.101	aE 2.168	aE 72.7°	227°	-4°	10.8/	00:29	08:30	+62°	16:26	04:59	+41°	GEM
Mo 03.09.2012 00:00	5h48'52.0"	+22°34'17.7"	2.101	aE 2.157	aE 73.2°	228°	-3°	10.8/	00:26	08:28	+62°	16:24	05:01	+41°	GEM
Di 04.09.2012 00:00	5h50'41.7"	+22°36'25.6"	2.100	aE 2.146	aE 73.8°	228°	-3°	10.8/	00:24	08:26	+62°	16:22	05:03	+42°	GEM
Mi 05.09.2012 00:00	5h52'30.8"	+22°38'29.6"	2.100	aE 2.135	aE 74.3°	228°	-3°	10.8/	00:21	08:24	+62°	16:20	05:05	+43°	GEM
Do 06.09.2012 00:00	5h54'19.4"	+22°40'29.8"	2.100	aE 2.124	aE 74.9°	229°	-2°	10.8/	00:19	08:22	+62°	16:18	05:07	+43°	GEM
Fr 07.09.2012 00:00	5h56' 7.4"	+22°42'26.5"	2.099	aE 2.113	aE 75.4°	229°	-2°	10.8/	00:17	08:20	+62°	16:16	05:09	+44°	GEM
Sa 08.09.2012 00:00	5h57'54.8"	+22°44'19.5"	2.099	aE 2.102	aE 76.0°	230°	-2°	10.8/	00:14	08:17	+62°	16:14	05:11	+45°	GEM
So 09.09.2012 00:00	5h59'41.6"	+22°46' 9.1"	2.099	aE 2.091	aE 76.5°	230°	-2°	10.7/	00:12	08:15	+62°	16:12	05:13	+45°	GEM
Mo 10.09.2012 00:00	6h 1'27.8"	+22°47'55.4"	2.098	aE 2.080	aE 77.1°	231°	-1°	10.7/	00:10	08:13	+62°	16:10	05:15	+46°	GEM
Di 11.09.2012 00:00	6h 3'13.4"	+22°49'38.4"	2.098	aE 2.068	aE 77.7°	231°	-1°	10.7/	00:07	08:11	+62°	16:08	05:17	+47°	GEM
Mi 12.09.2012 00:00	6h 4'58.3"	+22°51'18.3"	2.098	aE 2.057	aE 78.2°	231°	-1°	10.7/	00:05	08:09	+62°	16:06	05:19	+47°	GEM
Do 13.09.2012 00:00	6h 6'42.5"	+22°52'55.2"	2.098	aE 2.046	aE 78.8°	232°	0°	10.7/	00:03	08:06	+62°	16:04	05:21	+48°	GEM
Fr 14.09.2012 00:00	6h 8'26.0"	+22°54'29.1"	2.097	aE 2.035	aE 79.4°	232°	0°	10.7/	00:00	08:04	+62°	16:02	05:23	+48°	GEM
Sa 15.09.2012 00:00	6h10' 8.8"	+22°56' 0.3"	2.097	aE 2.024	aE 80.0°	233°	0°	10.7/	23:55	08:02	+62°	16:00	05:25	+49°	GEM
So 16.09.2012 00:00	6h11'50.9"	+22°57'28.8"	2.097	aE 2.013	aE 80.6°	233°	1°	10.7/	23:52	08:00	+62°	15:58	05:26	+50°	GEM
Mo 17.09.2012 00:00	6h13'32.3"	+22°58'54.7"	2.097	aE 2.001	aE 81.1°	233°	1°	10.7/	23:50	07:58	+63°	15:56	05:28	+50°	GEM
Di 18.09.2012 00:00	6h15'12.9"	+23° 0'18.2"	2.096	aE 1.990	aE 81.7°	234°	1°	10.7/	23:47	07:55	+63°	15:54	05:30	+51°	GEM
Mi 19.09.2012 00:00	6h16'52.7"	+23° 1'39.4"	2.096	aE 1.979	aE 82.3°	234°	1°	10.6/	23:45	07:53	+63°	15:52	05:32	+51°	GEM
Do 20.09.2012 00:00	6h18'31.7"	+23° 2'58.3"	2.096	aE 1.967	aE 82.9°	235°	2°	10.6/	23:43	07:51	+63°	15:50	05:34	+52°	GEM
Fr 21.09.2012 00:00	6h20' 9.9"	+23° 4'15.3"	2.096	aE 1.956	aE 83.5°	235°	2°	10.6/	23:40	07:48	+63°	15:48	05:35	+52°	GEM
Sa 22.09.2012 00:00	6h21'47.2"	+23° 5'30.3"	2.095	aE 1.945	aE 84.1°	236°	2°	10.6/	23:38	07:46	+63°	15:46	05:37	+53°	GEM
So 23.09.2012 00:00	6h23'23.7"	+23° 6'43.4"	2.095	aE 1.934	aE 84.7°	236°	3°	10.6/	23:35	07:44	+63°	15:43	05:39	+54°	GEM
Mo 24.09.2012 00:00	6h24'59.4"	+23° 7'54.9"	2.095	aE 1.922	aE 85.4°	236°	3°	10.6/	23:33	07:41	+63°	15:41	05:41	+54°	GEM
Di 25.09.2012 00:00	6h26'34.2"	+23° 9' 4.9"	2.095	aE 1.911	aE 86.0°	237°	3°	10.6/	23:30	07:39	+63°	15:39	05:42	+55°	GEM
Mi 26.09.2012 00:00	6h28' 8.0"	+23°10'13.4"	2.095	aE 1.900	aE 86.6°	237°	4°	10.6/	23:28	07:37	+63°	15:37	05:44	+55°	GEM
Do 27.09.2012 00:00	6h29'41.0"	+23°11'20.7"	2.095	aE 1.888	aE 87.2°	238°	4°	10.5/	23:25	07:34	+63°	15:34	05:46	+56°	GEM
Fr 28.09.2012 00:00	6h31'13.0"	+23°12'26.8"	2.094	aE 1.877	aE 87.8°	238°	4°	10.5/	23:22	07:32	+63°	15:32	05:47	+56°	GEM
Sa 29.09.2012 00:00	6h32'44.1"	+23°13'31.9"	2.094	aE 1.866	aE 88.5°	239°	5°	10.5/	23:20	07:29	+63°	15:30	05:49	+57°	GEM
So 30.09.2012 00:00	6h34'14.2"	+23°14'36.2"	2.094	aE 1.855	aE 89.1°	239°	5°	10.5/	23:17	07:27	+63°	15:28	05:51	+57°	GEM
Mo 01.10.2012 00:00	6h35'43.4"	+23°15'39.8"	2.094	aE 1.843	aE 89.8°	239°	5°	10.5/	23:15	07:25	+63°	15:25	05:52	+57°	GEM
Di 02.10.2012 00:00	6h37'11.5"	+23°16'42.8"	2.094	aE 1.832	aE 90.4°	240°	6°	10.5/	23:12	07:22	+63°	15:23	05:54	+58°	GEM
Mi 03.10.2012 00:00	6h38'38.6"	+23°17'45.5"	2.094	aE 1.821	aE 91.1°	240°	6°	10.5/	23:09	07:20	+63°	15:20	05:56	+58°	GEM
Do 04.10.2012 00:00	6h40' 4.6"	+23°18'48.0"	2.094	aE 1.809	aE 91.7°	241°	7°	10.4/	23:07	07:17	+63°	15:18	05:57	+59°	GEM
Fr 05.10.2012 00:00	6h41'29.6"	+23°19'50.4"	2.093	aE 1.798	aE 92.4°	241°	7°	10.4/	23:04	07:15	+63°	15:16	05:59	+59°	GEM
Sa 06.10.2012 00:00	6h42'53.4"	+23°20'52.9"	2.093	aE 1.787	aE 93.0°	242°	7°	10.4/	23:01	07:12	+63°	15:13	06:01	+60°	GEM

Ephemeride für den Kleinplaneten (9) Metis

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)	r	Entferng.	Elong.	Azim	Höhe	Hell	Aufg.	Kulm.	KHöh	Untg.	TOpt	TOptH	Stb.
So 07.10.2012 00:00	6h44'16.1"	+23°21'55.7"	2.093	aE 1.776	aE 93.7°	242°	8°	10.4/	22:59	07:09	+63°	15:11	06:02	+60°	GEM
Mo 08.10.2012 00:00	6h45'37.7"	+23°22'58.9"	2.093	aE 1.764	aE 94.4°	243°	8°	10.4/	22:56	07:07	+63°	15:08	06:04	+60°	GEM
Di 09.10.2012 00:00	6h46'58.1"	+23°24' 2.8"	2.093	aE 1.753	aE 95.1°	243°	8°	10.4/	22:53	07:04	+63°	15:06	06:06	+61°	GEM
Mi 10.10.2012 00:00	6h48'17.3"	+23°25' 7.5"	2.093	aE 1.742	aE 95.8°	244°	9°	10.4/	22:50	07:02	+63°	15:03	06:07	+61°	GEM
Do 11.10.2012 00:00	6h49'35.3"	+23°26'13.1"	2.093	aE 1.731	aE 96.5°	244°	9°	10.3/	22:47	06:59	+63°	15:00	06:09	+61°	GEM
Fr 12.10.2012 00:00	6h50'52.0"	+23°27'19.9"	2.093	aE 1.720	aE 97.2°	245°	10°	10.3/	22:45	06:56	+63°	14:58	06:10	+62°	GEM
Sa 13.10.2012 00:00	6h52' 7.4"	+23°28'28.0"	2.093	aE 1.708	aE 97.9°	245°	10°	10.3/	22:42	06:54	+63°	14:55	06:12	+62°	GEM
So 14.10.2012 00:00	6h53'21.6"	+23°29'37.6"	2.093	aE 1.697	aE 98.6°	245°	10°	10.3/	22:39	06:51	+63°	14:53	06:13	+62°	GEM
Mo 15.10.2012 00:00	6h54'34.3"	+23°30'48.9"	2.093	aE 1.686	aE 99.3°	246°	11°	10.3/	22:36	06:48	+63°	14:50	06:15	+62°	GEM
Di 16.10.2012 00:00	6h55'45.8"	+23°32' 2.1"	2.093	aE 1.675	aE 100.0°	246°	11°	10.3/	22:33	06:45	+63°	14:47	06:17	+63°	GEM
Mi 17.10.2012 00:00	6h56'55.8"	+23°33'17.3"	2.093	aE 1.664	aE 100.7°	247°	12°	10.2/	22:30	06:43	+63°	14:45	06:18	+63°	GEM
Do 18.10.2012 00:00	6h58' 4.4"	+23°34'34.6"	2.093	aE 1.653	aE 101.5°	247°	12°	10.2/	22:27	06:40	+63°	14:42	06:20	+63°	GEM
Fr 19.10.2012 00:00	6h59'11.6"	+23°35'54.4"	2.093	aE 1.642	aE 102.2°	248°	12°	10.2/	22:24	06:37	+63°	14:39	06:21	+63°	GEM
Sa 20.10.2012 00:00	7h 0'17.3"	+23°37'16.7"	2.093	aE 1.631	aE 103.0°	248°	13°	10.2/	22:21	06:34	+63°	14:37	06:23	+63°	GEM
So 21.10.2012 00:00	7h 1'21.5"	+23°38'41.6"	2.093	aE 1.620	aE 103.7°	249°	13°	10.2/	22:18	06:31	+63°	14:34	06:24	+63°	GEM
Mo 22.10.2012 00:00	7h 2'24.2"	+23°40' 9.5"	2.093	aE 1.609	aE 104.5°	249°	14°	10.2/	22:15	06:28	+63°	14:31	06:26	+63°	GEM
Di 23.10.2012 00:00	7h 3'25.4"	+23°41'40.4"	2.093	aE 1.598	aE 105.2°	250°	14°	10.1/	22:12	06:25	+63°	14:28	06:24	+63°	GEM
Mi 24.10.2012 00:00	7h 4'25.0"	+23°43'14.5"	2.093	aE 1.588	aE 106.0°	250°	15°	10.1/	22:09	06:23	+63°	14:26	06:22	+63°	GEM
Do 25.10.2012 00:00	7h 5'23.0"	+23°44'51.9"	2.093	aE 1.577	aE 106.8°	251°	15°	10.1/	22:05	06:20	+63°	14:23	06:19	+63°	GEM
Fr 26.10.2012 00:00	7h 6'19.4"	+23°46'32.9"	2.093	aE 1.566	aE 107.6°	251°	16°	10.1/	22:02	06:17	+63°	14:20	06:16	+63°	GEM
Sa 27.10.2012 00:00	7h 7'14.2"	+23°48'17.6"	2.093	aE 1.556	aE 108.4°	252°	16°	10.1/	21:59	06:14	+63°	14:17	06:13	+63°	GEM
So 28.10.2012 00:00	7h 8' 9.5"	+23°50'11.1"	2.093	aE 1.545	aE 109.2°	263°	26°	10.1/	20:56	05:10	+63°	13:15	05:09	+63°	GEM
Mo 29.10.2012 00:00	7h 9' 0.8"	+23°52' 3.9"	2.093	aE 1.534	aE 110.0°	264°	26°	10.0/	20:52	05:07	+63°	13:12	05:06	+63°	GEM
Di 30.10.2012 00:00	7h 9'50.5"	+23°54' 0.8"	2.094	aE 1.524	aE 110.8°	264°	27°	10.0/	20:49	05:04	+63°	13:09	05:03	+63°	GEM
Mi 31.10.2012 00:00	7h10'38.3"	+23°56' 2.2"	2.094	aE 1.513	aE 111.6°	265°	28°	10.0/	20:46	05:01	+63°	13:06	05:00	+63°	GEM
Do 01.11.2012 00:00	7h11'24.4"	+23°58' 8.0"	2.094	aE 1.503	aE 112.5°	266°	28°	10.0/	20:42	04:58	+64°	13:03	04:57	+64°	GEM
Fr 02.11.2012 00:00	7h12' 8.7"	+24° 0'18.6"	2.094	aE 1.493	aE 113.3°	266°	29°	10.0/	20:38	04:55	+64°	13:00	04:54	+64°	GEM
Sa 03.11.2012 00:00	7h12'51.1"	+24° 2'34.0"	2.094	aE 1.483	aE 114.2°	267°	29°	9.9/	20:35	04:51	+64°	12:57	04:50	+64°	GEM
So 04.11.2012 00:00	7h13'31.7"	+24° 4'54.4"	2.094	aE 1.472	aE 115.0°	267°	30°	9.9/	20:31	04:48	+64°	12:54	04:47	+64°	GEM
Mo 05.11.2012 00:00	7h14'10.3"	+24° 7'20.0"	2.094	aE 1.462	aE 115.9°	268°	30°	9.9/	20:28	04:45	+64°	12:51	04:44	+64°	GEM
Di 06.11.2012 00:00	7h14'47.0"	+24° 9'50.9"	2.095	aE 1.452	aE 116.7°	268°	31°	9.9/	20:24	04:42	+64°	12:48	04:41	+64°	GEM
Mi 07.11.2012 00:00	7h15'21.7"	+24°12'27.1"	2.095	aE 1.443	aE 117.6°	269°	31°	9.8/	20:20	04:38	+64°	12:45	04:37	+64°	GEM
Do 08.11.2012 00:00	7h15'54.5"	+24°15' 9.0"	2.095	aE 1.433	aE 118.5°	270°	32°	9.8/	20:17	04:35	+64°	12:42	04:34	+64°	GEM
Fr 09.11.2012 00:00	7h16'25.2"	+24°17'56.4"	2.095	aE 1.423	aE 119.4°	270°	32°	9.8/	20:13	04:31	+64°	12:38	04:30	+64°	GEM
Sa 10.11.2012 00:00	7h16'53.8"	+24°20'49.7"	2.095	aE 1.413	aE 120.3°	271°	33°	9.8/	20:09	04:28	+64°	12:35	04:27	+64°	GEM
So 11.11.2012 00:00	7h17'20.3"	+24°23'48.8"	2.096	aE 1.404	aE 121.2°	272°	34°	9.8/	20:05	04:24	+64°	12:32	04:23	+64°	GEM
Mo 12.11.2012 00:00	7h17'44.7"	+24°26'53.9"	2.096	aE 1.395	aE 122.1°	272°	34°	9.7/	20:01	04:21	+64°	12:29	04:20	+64°	GEM
Di 13.11.2012 00:00	7h18' 7.0"	+24°30' 5.0"	2.096	aE 1.385	aE 123.0°	273°	35°	9.7/	19:57	04:17	+64°	12:26	04:16	+64°	GEM
Mi 14.11.2012 00:00	7h18'27.1"	+24°33'22.2"	2.096	aE 1.376	aE 124.0°	274°	35°	9.7/	19:53	04:14	+64°	12:23	04:13	+64°	GEM
Do 15.11.2012 00:00	7h18'44.9"	+24°36'45.5"	2.096	aE 1.367	aE 124.9°	274°	36°	9.7/	19:49	04:10	+64°	12:19	04:09	+64°	GEM

Ephemeride für den Kleinplaneten (9) Metis

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)	r	Entferng.	Elong.	Azim	Höhe	Hell	Aufg.	Kulm.	KHöh	Untg.	TOpt	TOptH	Stb.
Fr 16.11.2012 00:00	7h19' 0.6"	+24°40'14.9"	2.097	aE 1.358	aE 125.9°	275°	37°	9.6/	19:45	04:06	+64°	12:16	04:05	+64°	GEM
Sa 17.11.2012 00:00	7h19'14.0"	+24°43'50.6"	2.097	aE 1.349	aE 126.8°	276°	37°	9.6/	19:41	04:03	+64°	12:13	04:02	+64°	GEM
So 18.11.2012 00:00	7h19'25.2"	+24°47'32.3"	2.097	aE 1.340	aE 127.8°	276°	38°	9.6/	19:37	03:59	+64°	12:09	03:58	+64°	GEM
Mo 19.11.2012 00:00	7h19'34.1"	+24°51'20.2"	2.097	aE 1.332	aE 128.8°	277°	39°	9.6/	19:33	03:55	+64°	12:06	03:54	+64°	GEM
Di 20.11.2012 00:00	7h19'40.7"	+24°55'14.3"	2.098	aE 1.323	aE 129.8°	278°	39°	9.6/	19:28	03:51	+64°	12:03	03:50	+64°	GEM
Mi 21.11.2012 00:00	7h19'45.1"	+24°59'14.4"	2.098	aE 1.315	aE 130.8°	279°	40°	9.5/	19:24	03:47	+65°	11:59	03:46	+65°	GEM
Do 22.11.2012 00:00	7h19'47.1"	+25° 3'20.5"	2.098	aE 1.307	aE 131.8°	279°	41°	9.5/	19:20	03:44	+65°	11:56	03:43	+65°	GEM
Fr 23.11.2012 00:00	7h19'46.8"	+25° 7'32.6"	2.099	aE 1.299	aE 132.8°	280°	41°	9.5/	19:15	03:40	+65°	11:53	03:39	+65°	GEM
Sa 24.11.2012 00:00	7h19'44.2"	+25°11'50.6"	2.099	aE 1.291	aE 133.8°	281°	42°	9.5/	19:10	03:36	+65°	11:49	03:35	+65°	GEM
So 25.11.2012 00:00	7h19'39.2"	+25°16'14.4"	2.099	aE 1.283	aE 134.9°	282°	43°	9.4/	19:06	03:32	+65°	11:46	03:31	+65°	GEM
Mo 26.11.2012 00:00	7h19'31.9"	+25°20'43.9"	2.100	aE 1.275	aE 135.9°	283°	43°	9.4/	19:01	03:28	+65°	11:42	03:27	+65°	GEM
Di 27.11.2012 00:00	7h19'22.3"	+25°25'19.0"	2.100	aE 1.268	aE 136.9°	283°	44°	9.4/	18:56	03:23	+65°	11:39	03:22	+65°	GEM
Mi 28.11.2012 00:00	7h19'10.3"	+25°29'59.6"	2.100	aE 1.261	aE 138.0°	284°	45°	9.4/	18:52	03:19	+65°	11:35	03:18	+65°	GEM
Do 29.11.2012 00:00	7h18'55.9"	+25°34'45.4"	2.101	aE 1.253	aE 139.1°	285°	45°	9.3/	18:47	03:15	+65°	11:32	03:14	+65°	GEM
Fr 30.11.2012 00:00	7h18'39.2"	+25°39'36.3"	2.101	aE 1.246	aE 140.2°	286°	46°	9.3/	18:42	03:11	+65°	11:28	03:10	+65°	GEM
Sa 01.12.2012 00:00	7h18'20.2"	+25°44'32.1"	2.101	aE 1.240	aE 141.2°	287°	47°	9.3/	18:37	03:07	+65°	11:24	03:06	+65°	GEM
So 02.12.2012 00:00	7h17'58.8"	+25°49'32.7"	2.102	aE 1.233	aE 142.3°	288°	48°	9.3/	18:32	03:02	+65°	11:21	03:01	+65°	GEM
Mo 03.12.2012 00:00	7h17'35.1"	+25°54'37.8"	2.102	aE 1.227	aE 143.4°	289°	48°	9.2/	18:27	02:58	+65°	11:17	02:57	+65°	GEM
Di 04.12.2012 00:00	7h17' 9.0"	+25°59'47.1"	2.102	aE 1.220	aE 144.5°	290°	49°	9.2/	18:22	02:54	+66°	11:13	02:53	+66°	GEM
Mi 05.12.2012 00:00	7h16'40.7"	+26° 5' 0.3"	2.103	aE 1.214	aE 145.7°	291°	50°	9.2/	18:17	02:49	+66°	11:09	02:48	+66°	GEM
Do 06.12.2012 00:00	7h16'10.0"	+26°10'17.3"	2.103	aE 1.208	aE 146.8°	292°	50°	9.2/	18:12	02:45	+66°	11:05	02:44	+66°	GEM
Fr 07.12.2012 00:00	7h15'37.1"	+26°15'37.6"	2.104	aE 1.203	aE 147.9°	293°	51°	9.1/	18:07	02:40	+66°	11:01	02:39	+66°	GEM
Sa 08.12.2012 00:00	7h15' 2.0"	+26°21' 0.9"	2.104	aE 1.197	aE 149.1°	295°	52°	9.1/	18:01	02:36	+66°	10:58	02:35	+66°	GEM
So 09.12.2012 00:00	7h14'24.6"	+26°26'26.9"	2.104	aE 1.192	aE 150.2°	296°	53°	9.1/	17:56	02:31	+66°	10:54	02:30	+66°	GEM
Mo 10.12.2012 00:00	7h13'45.1"	+26°31'55.2"	2.105	aE 1.187	aE 151.4°	297°	53°	9.0/	17:51	02:27	+66°	10:50	02:26	+66°	GEM
Di 11.12.2012 00:00	7h13' 3.4"	+26°37'25.5"	2.105	aE 1.182	aE 152.5°	298°	54°	9.0/	17:46	02:22	+66°	10:46	02:21	+66°	GEM
Mi 12.12.2012 00:00	7h12'19.7"	+26°42'57.2"	2.106	aE 1.178	aE 153.7°	299°	55°	9.0/	17:40	02:17	+66°	10:42	02:16	+66°	GEM
Do 13.12.2012 00:00	7h11'34.0"	+26°48'30.1"	2.106	aE 1.173	aE 154.8°	301°	56°	9.0/	17:35	02:13	+66°	10:38	02:12	+66°	GEM
Fr 14.12.2012 00:00	7h10'46.3"	+26°54' 3.5"	2.107	aE 1.169	aE 156.0°	302°	56°	8.9/	17:30	02:08	+66°	10:34	02:07	+66°	GEM
Sa 15.12.2012 00:00	7h 9'56.7"	+26°59'37.2"	2.107	aE 1.165	aE 157.2°	304°	57°	8.9/	17:24	02:03	+67°	10:29	02:02	+67°	GEM
So 16.12.2012 00:00	7h 9' 5.3"	+27° 5'10.6"	2.108	aE 1.161	aE 158.4°	305°	58°	8.9/	17:19	01:58	+67°	10:25	01:57	+67°	GEM
Mo 17.12.2012 00:00	7h 8'12.1"	+27°10'43.3"	2.108	aE 1.158	aE 159.6°	307°	58°	8.9/	17:13	01:54	+67°	10:21	01:53	+67°	GEM
Di 18.12.2012 00:00	7h 7'17.3"	+27°16'14.8"	2.109	aE 1.155	aE 160.7°	308°	59°	8.8/	17:07	01:49	+67°	10:17	01:48	+67°	GEM
Mi 19.12.2012 00:00	7h 6'20.9"	+27°21'44.7"	2.109	aE 1.152	aE 161.9°	310°	60°	8.8/	17:02	01:44	+67°	10:13	01:43	+67°	GEM
Do 20.12.2012 00:00	7h 5'23.0"	+27°27'12.5"	2.110	aE 1.149	aE 163.1°	312°	60°	8.8/	16:56	01:39	+67°	10:09	01:38	+67°	GEM
Fr 21.12.2012 00:00	7h 4'23.7"	+27°32'37.8"	2.110	aE 1.146	aE 164.3°	314°	61°	8.7/	16:50	01:34	+67°	10:05	01:33	+67°	GEM
Sa 22.12.2012 00:00	7h 3'23.1"	+27°38' 0.1"	2.111	aE 1.144	aE 165.4°	315°	62°	8.7/	16:45	01:29	+67°	10:01	01:28	+67°	GEM
So 23.12.2012 00:00	7h 2'21.2"	+27°43'19.0"	2.111	aE 1.142	aE 166.6°	317°	62°	8.7/	16:39	01:24	+67°	09:56	01:23	+67°	GEM
Mo 24.12.2012 00:00	7h 1'18.2"	+27°48'34.2"	2.112	aE 1.140	aE 167.7°	319°	63°	8.7/	16:33	01:19	+67°	09:52	01:18	+67°	GEM
Di 25.12.2012 00:00	7h 0'14.3"	+27°53'45.0"	2.112	aE 1.139	aE 168.8°	321°	63°	8.6/	16:28	01:14	+67°	09:48	01:13	+67°	GEM

Ephemeride für den Kleinplaneten (9) Metis

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)	r	Entferng.	Elong.	Azim	Höhe	Hell	Aufg.	Kulm.	KHöh	Untg.	TOpt	TOptH	Stb.
Mi 26.12.2012 00:00	6h59' 9.3"	+27°58'51.3"	2.113 aE	1.138 aE	169.9°	324°	64°	8.6/	16:22	01:09	+68°	09:44	01:08	+68°	GEM
Do 27.12.2012 00:00	6h58' 3.6"	+28° 3'52.5"	2.114 aE	1.137 aE	170.9°	326°	65°	8.6/	16:16	01:04	+68°	09:39	01:03	+68°	GEM
Fr 28.12.2012 00:00	6h56'57.2"	+28° 8'48.4"	2.114 aE	1.136 aE	171.9°	328°	65°	8.6/	16:11	00:59	+68°	09:35	00:58	+68°	GEM
Sa 29.12.2012 00:00	6h55'50.1"	+28°13'38.5"	2.115 aE	1.136 aE	172.7°	331°	66°	8.5/	16:05	00:54	+68°	09:31	00:53	+68°	GEM
So 30.12.2012 00:00	6h54'42.6"	+28°18'22.5"	2.115 aE	1.135 aE	173.5°	333°	66°	8.5/	15:59	00:49	+68°	09:26	00:48	+68°	GEM
Mo 31.12.2012 00:00	6h53'34.7"	+28°23' 0.1"	2.116 aE	1.135 aE	174.0°	336°	66°	8.5/	15:54	00:44	+68°	09:22	00:43	+68°	GEM

Legende:

Datum	= Berechnungsdatum
RA, D	= Rektaszension, Deklination (2000.0)
r	= Abstand zur Sonne in aE
Entferng.	= Abstand zur Erde in aE
Elong.	= Elongation
Azim, Höhe	= Azimut und Höhe zum Berechnungszeitpunkt
Hell	= Helligkeit in Mag. und Tendenz
Aufg	= Aufgangszeit
Kulm, KHöh	= Kulminationszeit und -höhe
Untg	= Untergangszeit
TOpt, Höhe	= Optimale Beobachtungszeit und -höhe
Stb	= Sternbild zu RA und D