

Planetary Phenomena of Pluto from -400 through 100 (UT), AstroDienst AG 14-Nov-2015 16:13, page 1

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

conjunction	-400 Feb 27 j 16:19	3° 31 '28	-16°-22'-47	minimum elong	-392 Mar 07 j 07:33	12° 04 '25	16°48'32
minimum elong	-400 Feb 27 j 16:18	3° 31 '28	16°22'49	max. Earth dist.	-392 Mar 09 j 13:37	12° 07 '41	48.17429 AU
max. Earth dist.	-400 Mar 01 j 07:18	3° 35 '22	47.06731 AU	retrograde	-392 Jun 18 j 15:34	13° 39 '11	
retrograde	-400 Jun 09 j 23:00	5° 08 '41		min. Earth dist.	-392 Sep 08 j 08:30	12° 39 '35	46.32496 AU
min. Earth dist.	-400 Aug 30 j 11:49	4° 08 '31	45.23055 AU	opposition	-392 Sep 10 j 12:23	12° 37 '03	-17°-32'-23
opposition	-400 Sep 01 j 23:27	4° 05 '34	-17°-8'-1	direct	-392 Nov 30 j 10:43	11° 36 '21	
direct	-400 Nov 22 j 00:03	3° 03 '57					
				conjunction	-391 Mar 08 j 14:47	13° 06 '50	-16°-50'-15
conjunction	-399 Feb 28 j 00:34	4° 36 '43	-16°-27'-9	minimum elong	-391 Mar 08 j 14:49	13° 06 '51	16°50'15
minimum elong	-399 Feb 28 j 00:32	4° 36 '43	16°27'10	max. Earth dist.	-391 Mar 10 j 20:15	13° 10 '03	48.29531 AU
max. Earth dist.	-399 Mar 02 j 13:32	4° 40 '29	47.22166 AU	retrograde	-391 Jun 19 j 21:15	14° 41 '19	
retrograde	-399 Jun 11 j 10:58	6° 13 '38		min. Earth dist.	-391 Sep 09 j 17:10	13° 41 '45	46.44493 AU
min. Earth dist.	-399 Aug 31 j 20:39	5° 13 '36	45.38362 AU	opposition	-391 Sep 11 j 19:25	13° 39 '18	-17°-33'-54
opposition	-399 Sep 03 j 07:41	5° 10 '41	-17°-12'-14	direct	-391 Dec 01 j 18:19	12° 38 '42	
direct	-399 Nov 23 j 04:51	4° 09 '14					
				conjunction	-390 Mar 09 j 21:57	14° 08 '56	-16°-51'-39
conjunction	-398 Mar 01 j 08:47	5° 41 '44	-16°-31'-10	minimum elong	-390 Mar 09 j 21:58	14° 08 '56	16°51'39
minimum elong	-398 Mar 01 j 08:47	5° 41 '44	16°31'11	max. Earth dist.	-390 Mar 12 j 03:15	14° 12 '08	48.41365 AU
max. Earth dist.	-398 Mar 03 j 21:44	5° 45 '28	47.37169 AU	retrograde	-390 Jun 21 j 01:18	15° 43 '09	
retrograde	-398 Jun 12 j 20:30	7° 18 '21		min. Earth dist.	-390 Sep 11 j 00:08	14° 43 '41	46.56192 AU
min. Earth dist.	-398 Sep 02 j 06:52	6° 18 '21	45.53193 AU	opposition	-390 Sep 13 j 02:11	14° 41 '15	-17°-35'-4
opposition	-398 Sep 04 j 15:47	6° 15 '33	-17°-16'-6	direct	-390 Dec 03 j 04:15	13° 40 '46	
direct	-398 Nov 24 j 11:42	5° 14 '15					
				conjunction	-389 Mar 11 j 05:01	15° 10 '45	-16°-52'-43
conjunction	-397 Mar 02 j 17:02	6° 46 '27	-16°-34'-52	minimum elong	-389 Mar 11 j 05:04	15° 10 '45	16°52'44
minimum elong	-397 Mar 02 j 17:02	6° 46 '27	16°34'52	max. Earth dist.	-389 Mar 13 j 08:29	15° 13 '50	48.52897 AU
max. Earth dist.	-397 Mar 05 j 04:09	6° 50 '04	47.51691 AU	retrograde	-389 Jun 22 j 10:07	16° 44 '44	
retrograde	-397 Jun 14 j 02:29	8° 22 '46		min. Earth dist.	-389 Sep 12 j 07:39	15° 45 '20	46.67584 AU
min. Earth dist.	-397 Sep 03 j 14:48	7° 22 '54	45.67516 AU	opposition	-389 Sep 14 j 08:48	15° 42 '57	-17°-35'-54
opposition	-397 Sep 05 j 23:32	7° 20 '07	-17°-19'-39	direct	-389 Dec 04 j 10:17	14° 42 '35	
direct	-397 Nov 25 j 20:21	6° 18 '56					
				conjunction	-388 Mar 11 j 12:07	16° 12 '21	-16°-53'-28
conjunction	-396 Mar 03 j 01:04	7° 50 '51	-16°-38'-14	minimum elong	-388 Mar 11 j 12:09	16° 12 '21	16°53'29
minimum elong	-396 Mar 03 j 01:03	7° 50 '51	16°38'16	max. Earth dist.	-388 Mar 13 j 15:42	16° 15 '25	48.64096 AU
max. Earth dist.	-396 Mar 05 j 10:49	7° 54 '22	47.65694 AU	retrograde	-388 Jun 22 j 18:24	17° 46 '06	
retrograde	-396 Jun 14 j 08:03	9° 26 '51		min. Earth dist.	-388 Sep 12 j 15:55	16° 46 '45	46.78603 AU
min. Earth dist.	-396 Sep 04 j 00:39	8° 27 '00	45.81333 AU	opposition	-388 Sep 14 j 15:25	16° 44 '27	-17°-36'-26
opposition	-396 Sep 06 j 07:21	8° 24 '19	-17°-22'-52	direct	-388 Dec 04 j 16:08	15° 44 '11	
direct	-396 Nov 26 j 06:33	7° 23 '15					
				conjunction	-387 Mar 12 j 18:56	17° 13 '45	-16°-53'-55
conjunction	-395 Mar 04 j 08:51	8° 54 '52	-16°-41'-18	minimum elong	-387 Mar 12 j 19:00	17° 13 '45	16°53'56
minimum elong	-395 Mar 04 j 08:52	8° 54 '52	16°41'19	max. Earth dist.	-387 Mar 14 j 20:50	17° 16 '43	48.74912 AU
max. Earth dist.	-395 Mar 06 j 18:12	8° 58 '21	47.79220 AU	retrograde	-387 Jun 24 j 02:06	18° 47 '16	
retrograde	-395 Jun 15 j 14:06	10° 30 '33		min. Earth dist.	-387 Sep 13 j 22:36	17° 48 '02	46.89204 AU
min. Earth dist.	-395 Sep 05 j 08:50	9° 30 '46	45.94675 AU	opposition	-387 Sep 15 j 21:54	17° 45 '45	-17°-36'-39
opposition	-395 Sep 07 j 14:52	9° 28 '07	-17°-25'-45	direct	-387 Dec 05 j 20:53	16° 45 '36	
direct	-395 Nov 27 j 16:38	8° 27 '09					
				conjunction	-386 Mar 14 j 01:53	18° 14 '58	-16°-54'-5
conjunction	-394 Mar 05 j 16:30	9° 58 '27	-16°-44'-2	minimum elong	-386 Mar 14 j 01:56	18° 14 '58	16°54'05
minimum elong	-394 Mar 05 j 16:30	9° 58 '27	16°44'04	max. Earth dist.	-386 Mar 16 j 02:34	18° 17 '51	48.85266 AU
max. Earth dist.	-394 Mar 07 j 23:56	10° 01 '49	47.92311 AU	retrograde	-386 Jun 25 j 07:32	19° 48 '15	
retrograde	-394 Jun 16 j 23:32	11° 33 '50		min. Earth dist.	-386 Sep 15 j 07:18	18° 49 '01	46.99316 AU
min. Earth dist.	-394 Sep 06 j 17:01	10° 34 '06	46.07626 AU	opposition	-386 Sep 17 j 04:20	18° 46 '51	-17°-36'-35
opposition	-394 Sep 08 j 22:14	10° 31 '30	-17°-28'-19	direct	-386 Dec 07 j 04:25	17° 46 '48	
direct	-394 Nov 28 j 22:49	9° 30 '37					
				conjunction	-385 Mar 15 j 08:56	19° 15 '58	-16°-53'-58
conjunction	-393 Mar 07 j 00:08	11° 01 '38	-16°-46'-26	minimum elong	-385 Mar 15 j 09:00	19° 15 '58	16°54'00
minimum elong	-393 Mar 07 j 00:10	11° 01 '38	16°46'27	max. Earth dist.	-385 Mar 17 j 08:43	19° 18 '48	48.95119 AU
max. Earth dist.	-393 Mar 09 j 07:42	11° 04 '59	48.05030 AU	retrograde	-385 Jun 26 j 11:42	20° 49 '02	
retrograde	-393 Jun 18 j 07:48	12° 36 '42		min. Earth dist.	-385 Sep 16 j 14:21	19° 49 '52	47.08884 AU
min. Earth dist.	-393 Sep 08 j 01:44	11° 37 '00	46.20214 AU	opposition	-385 Sep 18 j 10:37	19° 47 '44	-17°-36'-14
opposition	-393 Sep 10 j 05:27	11° 34 '28	-17°-30'-31	direct	-385 Dec 08 j 13:18	18° 47 '46	
direct	-393 Nov 30 j 05:13	10° 33 '41					
				conjunction	-384 Mar 15 j 15:39	20° 16 '44	-16°-53'-36
conjunction	-392 Mar 07 j 07:32	12° 04 '25	-16°-48'-31	minimum elong	-384 Mar 15 j 15:43	20° 16 '44	16°53'36

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Attention, astronomical year style is used: The year -384 in astronomical counting style is the year 385 BCE in historical counting style.

max. Earth dist.	-384 Mar 17 j 13:04	20° ♁ 19'25	49.04423 AU	opposition	-376 Sep 26 j 13:52	28° ♁ 44'22	-17°-20'-20
retrograde	-384 Jun 26 j 19:21	21° ♁ 49'35		direct	-376 Dec 16 j 15:21	27° ♁ 45'02	
min. Earth dist.	-384 Sep 16 j 21:58	20° ♁ 50'26	47.17922 AU				
opposition	-384 Sep 18 j 16:49	20° ♁ 48'22	-17°-35'-38	conjunction	-375 Mar 25 j 00:06	29° ♁ 12'30	-16°-37'-38
direct	-384 Dec 08 j 19:14	19° ♁ 48'29		minimum elong	-375 Mar 25 j 00:12	29° ♁ 12'31	16°37'39
				max. Earth dist.	-375 Mar 26 j 13:27	29° ♁ 14'40	49.70528 AU
conjunction	-383 Mar 16 j 22:23	21° ♁ 17'14	-16°-52'-57		-375 Apr 29 j 23:26	0° ♁	
minimum elong	-383 Mar 16 j 22:27	21° ♁ 17'14	16°52'59	retrograde	-375 Jul 05 j 23:46	0° ♁ 43'39	
max. Earth dist.	-383 Mar 18 j 19:30	21° ♁ 19'53	49.13216 AU		-375 Sep 12 j 21:04	30° ♁	
retrograde	-383 Jun 28 j 02:17	22° ♁ 49'51		min. Earth dist.	-375 Sep 26 j 08:54	29° ♁ 44'49	47.82111 AU
min. Earth dist.	-383 Sep 18 j 05:40	21° ♁ 50'41	47.26456 AU	opposition	-375 Sep 27 j 19:04	29° ♁ 43'11	-17°-17'-7
opposition	-383 Sep 19 j 22:52	21° ♁ 48'42	-17°-34'-45	direct	-375 Dec 17 j 22:48	28° ♁ 43'56	
direct	-383 Dec 10 j 01:29	20° ♁ 48'53			-374 Mar 18 j 01:53	0° ♁	
				conjunction	-374 Mar 26 j 06:03	0° ♁ 11'18	-16°-34'-28
conjunction	-382 Mar 18 j 04:50	22° ♁ 17'26	-16°-52'-3	minimum elong	-374 Mar 26 j 06:11	0° ♁ 11'18	16°34'29
minimum elong	-382 Mar 18 j 04:55	22° ♁ 17'26	16°52'03	max. Earth dist.	-374 Mar 27 j 17:13	0° ♁ 13'20	49.76141 AU
max. Earth dist.	-382 Mar 20 j 00:04	22° ♁ 19'58	49.21553 AU	retrograde	-374 Jul 07 j 05:57	1° ♁ 42'19	
retrograde	-382 Jun 29 j 10:12	23° ♁ 49'49		min. Earth dist.	-374 Sep 27 j 15:54	0° ♁ 43'29	47.87431 AU
min. Earth dist.	-382 Sep 19 j 11:47	22° ♁ 50'42	47.34562 AU	opposition	-374 Sep 29 j 00:22	0° ♁ 41'56	-17°-13'-38
opposition	-382 Sep 21 j 04:45	22° ♁ 48'45	-17°-33'-35		-374 Nov 08 j 18:21	30° ♁	
direct	-382 Dec 11 j 05:13	21° ♁ 48'59		direct	-374 Dec 19 j 04:47	29° ♁ 42'45	
					-373 Jan 28 j 00:31	0° ♁	
conjunction	-381 Mar 19 j 11:17	23° ♁ 17'20	-16°-50'-51	conjunction	-373 Mar 27 j 12:15	1° ♁ 09'59	-16°-31'-3
minimum elong	-381 Mar 19 j 11:22	23° ♁ 17'20	16°50'53	minimum elong	-373 Mar 27 j 12:23	1° ♁ 09'59	16°31'03
max. Earth dist.	-381 Mar 21 j 05:42	23° ♁ 19'49	49.29476 AU	max. Earth dist.	-373 Mar 28 j 22:53	1° ♁ 11'59	49.81257 AU
retrograde	-381 Jun 30 j 15:37	24° ♁ 49'30		retrograde	-373 Jul 08 j 11:23	2° ♁ 40'51	
min. Earth dist.	-381 Sep 20 j 19:33	23° ♁ 50'22	47.42290 AU	min. Earth dist.	-373 Sep 28 j 22:36	1° ♁ 42'01	47.92218 AU
opposition	-381 Sep 22 j 10:27	23° ♁ 48'30	-17°-32'-7	opposition	-373 Sep 30 j 05:27	1° ♁ 40'33	-17°-9'-56
direct	-381 Dec 12 j 10:45	22° ♁ 48'48		direct	-373 Dec 20 j 11:27	0° ♁ 41'24	
				conjunction	-372 Mar 27 j 18:14	2° ♁ 08'31	-16°-27'-24
conjunction	-380 Mar 19 j 17:40	24° ♁ 16'58	-16°-49'-23	minimum elong	-372 Mar 27 j 18:22	2° ♁ 08'31	16°27'25
minimum elong	-380 Mar 19 j 17:46	24° ♁ 16'59	16°49'23	max. Earth dist.	-372 Mar 29 j 02:36	2° ♁ 10'22	49.85852 AU
max. Earth dist.	-380 Mar 21 j 11:37	24° ♁ 19'25	49.37067 AU	retrograde	-372 Jul 08 j 19:50	3° ♁ 39'13	
retrograde	-380 Jun 30 j 18:09	25° ♁ 48'56		min. Earth dist.	-372 Sep 29 j 04:22	2° ♁ 40'24	47.96484 AU
min. Earth dist.	-380 Sep 21 j 01:09	24° ♁ 49'52	47.49689 AU	opposition	-372 Sep 30 j 10:34	2° ♁ 38'58	-17°-5'-58
opposition	-380 Sep 22 j 16:02	24° ♁ 48'01	-17°-30'-22	direct	-372 Dec 20 j 14:00	1° ♁ 39'51	
direct	-380 Dec 12 j 19:44	23° ♁ 48'22		conjunction	-371 Mar 29 j 00:00	3° ♁ 06'50	-16°-23'-31
				minimum elong	-371 Mar 29 j 00:08	3° ♁ 06'50	16°23'32
conjunction	-379 Mar 20 j 23:40	25° ♁ 16'22	-16°-47'-36	max. Earth dist.	-371 Mar 30 j 07:15	3° ♁ 08'37	49.89923 AU
minimum elong	-379 Mar 20 j 23:45	25° ♁ 16'23	16°47'37	retrograde	-371 Jul 10 j 02:38	4° ♁ 37'23	
max. Earth dist.	-379 Mar 22 j 15:51	25° ♁ 18'43	49.44350 AU	min. Earth dist.	-371 Sep 30 j 11:44	3° ♁ 38'29	48.00246 AU
retrograde	-379 Jul 02 j 00:34	26° ♁ 48'10		opposition	-371 Oct 01 j 15:43	3° ♁ 37'09	-17°-1'-47
min. Earth dist.	-379 Sep 22 j 07:51	25° ♁ 49'07	47.56803 AU	direct	-371 Dec 21 j 17:39	2° ♁ 38'04	
opposition	-379 Sep 23 j 21:42	25° ♁ 47'19	-17°-28'-18	conjunction	-370 Mar 30 j 05:55	4° ♁ 04'54	-16°-19'-24
direct	-379 Dec 14 j 02:12	24° ♁ 47'45		minimum elong	-370 Mar 30 j 06:03	4° ♁ 04'55	16°19'25
				max. Earth dist.	-370 Mar 31 j 12:18	4° ♁ 06'39	49.93536 AU
conjunction	-378 Mar 22 j 05:55	26° ♁ 15'35	-16°-45'-33	retrograde	-370 Jul 11 j 04:52	5° ♁ 35'17	
minimum elong	-378 Mar 22 j 06:02	26° ♁ 15'36	16°45'33	opposition	-370 Oct 02 j 20:28	4° ♁ 35'06	-16°-57'-20
max. Earth dist.	-378 Mar 23 j 22:24	26° ♁ 17'57	49.51354 AU	min. Earth dist.	-370 Oct 01 j 16:50	4° ♁ 36'24	48.03564 AU
retrograde	-378 Jul 03 j 07:52	27° ♁ 47'12		direct	-370 Dec 23 j 01:03	3° ♁ 36'01	
min. Earth dist.	-378 Sep 23 j 14:29	26° ♁ 48'12	47.63623 AU	conjunction	-369 Mar 31 j 11:38	5° ♁ 02'44	-16°-15'-1
opposition	-378 Sep 25 j 03:07	26° ♁ 46'27	-17°-25'-56	minimum elong	-369 Mar 31 j 11:47	5° ♁ 02'45	16°15'02
direct	-378 Dec 15 j 07:14	25° ♁ 46'57		max. Earth dist.	-369 Apr 01 j 15:57	5° ♁ 04'22	49.96728 AU
				retrograde	-369 Jul 12 j 08:53	6° ♁ 32'58	
conjunction	-377 Mar 23 j 12:02	27° ♁ 14'40	-16°-43'-11	min. Earth dist.	-369 Oct 02 j 23:13	5° ♁ 34'03	48.06501 AU
minimum elong	-377 Mar 23 j 12:07	27° ♁ 14'40	16°43'12	opposition	-369 Oct 04 j 01:23	5° ♁ 32'48	-16°-52'-38
max. Earth dist.	-377 Mar 25 j 02:47	27° ♁ 16'55	49.58080 AU	direct	-369 Dec 24 j 07:43	4° ♁ 33'44	
retrograde	-377 Jul 04 j 16:13	28° ♁ 46'07		conjunction	-368 Mar 31 j 17:18	6° ♁ 00'21	-16°-10'-24
min. Earth dist.	-377 Sep 24 j 19:56	27° ♁ 47'12	47.70149 AU	minimum elong	-368 Mar 31 j 17:26	6° ♁ 00'21	16°10'25
opposition	-377 Sep 26 j 08:30	27° ♁ 45'27	-17°-23'-16	max. Earth dist.	-368 Apr 01 j 21:43	6° ♁ 01'58	49.99562 AU
direct	-377 Dec 16 j 09:53	26° ♁ 46'03					
conjunction	-376 Mar 23 j 18:00	28° ♁ 13'38	-16°-40'-33				
minimum elong	-376 Mar 23 j 18:08	28° ♁ 13'38	16°40'34				
max. Earth dist.	-376 Mar 25 j 08:01	28° ♁ 15'50	49.64479 AU				
retrograde	-376 Jul 04 j 21:06	29° ♁ 44'55					
min. Earth dist.	-376 Sep 25 j 03:17	28° ♁ 46'01	47.76329 AU				

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Attention, astronomical year style is used: The year -368 in astronomical counting style is the year 369 BCE in historical counting style.

retrograde	-368 Jul 12 j 13:45	7°V30'27		direct	-359 Jan 01 j 00:04	13°V10'14	
min. Earth dist.	-368 Oct 03 j 05:05	6°V31'30	48.09088 AU				
opposition	-368 Oct 04 j 06:07	6°V30'19	-16°-47'-39	conjunction	-359 Apr 09 j 19:36	14°V36'28	-15°-17'-16
direct	-368 Dec 24 j 13:56	5°V31'17		minimum elong	-359 Apr 09 j 19:46	14°V36'29	15°17'17
				max. Earth dist.	-359 Apr 10 j 11:46	14°V37'23	50.09364 AU
conjunction	-367 Apr 01 j 22:51	6°V57'47	-16°-5'-30	retrograde	-359 Jul 21 j 14:12	16°V05'56	
minimum elong	-367 Apr 01 j 23:01	6°V57'48	16°05'31	opposition	-359 Oct 12 j 23:27	15°V06'17	-15°-51'-12
max. Earth dist.	-367 Apr 03 j 01:31	6°V59'19	50.02089 AU	min. Earth dist.	-359 Oct 12 j 08:58	15°V06'58	48.16122 AU
retrograde	-367 Jul 13 j 21:30	8°V27'46		direct	-358 Jan 02 j 06:53	14°V07'32	
min. Earth dist.	-367 Oct 04 j 09:50	7°V28'52	48.11386 AU				
opposition	-367 Oct 05 j 10:48	7°V27'41	-16°-42'-24	conjunction	-358 Apr 11 j 01:15	15°V33'44	-15°-10'-12
direct	-367 Dec 25 j 16:24	6°V28'40		minimum elong	-358 Apr 11 j 01:26	15°V33'44	15°10'13
				max. Earth dist.	-358 Apr 11 j 17:05	15°V34'38	50.08114 AU
conjunction	-366 Apr 03 j 04:23	7°V55'06	-16°00'-20	retrograde	-358 Jul 22 j 17:56	17°V03'07	
minimum elong	-366 Apr 03 j 04:31	7°V55'07	16°00'21	opposition	-358 Oct 14 j 03:54	16°V03'28	-15°-43'-45
max. Earth dist.	-366 Apr 04 j 06:19	7°V56'35	50.04321 AU	min. Earth dist.	-358 Oct 13 j 14:42	16°V04'06	48.14518 AU
retrograde	-366 Jul 15 j 02:48	9°V24'59		direct	-357 Jan 03 j 14:04	15°V04'43	
opposition	-366 Oct 06 j 15:33	8°V24'57	-16°-36'-53				
min. Earth dist.	-366 Oct 05 j 16:27	8°V26'03	48.13386 AU	conjunction	-357 Apr 12 j 06:46	16°V30'52	-15°-2'-55
direct	-366 Dec 26 j 20:32	7°V25'59		minimum elong	-357 Apr 12 j 06:56	16°V30'53	15°02'56
				max. Earth dist.	-357 Apr 12 j 20:26	16°V31'39	50.06418 AU
conjunction	-365 Apr 04 j 10:02	8°V52'22	-15°-54'-55	retrograde	-357 Jul 24 j 01:41	18°V00'12	
minimum elong	-365 Apr 04 j 10:13	8°V52'23	15°54'55	opposition	-357 Oct 15 j 08:08	17°V00'33	-15°-36'-4
max. Earth dist.	-365 Apr 05 j 11:28	8°V53'49	50.06270 AU	min. Earth dist.	-357 Oct 14 j 19:32	17°V01'09	48.12505 AU
retrograde	-365 Jul 16 j 05:44	10°V22'09		direct	-356 Jan 04 j 16:29	16°V01'46	
opposition	-365 Oct 07 j 20:01	9°V22'12	-16°-31'-5				
min. Earth dist.	-365 Oct 06 j 21:02	9°V23'17	48.15080 AU	conjunction	-356 Apr 12 j 12:15	17°V27'54	-14°-55'-24
direct	-365 Dec 28 j 02:38	8°V23'16		minimum elong	-356 Apr 12 j 12:27	17°V27'55	14°55'24
				max. Earth dist.	-356 Apr 13 j 01:02	17°V28'37	50.04326 AU
conjunction	-364 Apr 04 j 15:30	9°V49'37	-15°-49'-13	retrograde	-356 Jul 24 j 07:37	18°V57'10	
minimum elong	-364 Apr 04 j 15:39	9°V49'38	15°49'14	opposition	-356 Oct 15 j 12:35	17°V57'31	-15°-28'-8
max. Earth dist.	-364 Apr 05 j 14:57	9°V50'58	50.07898 AU	min. Earth dist.	-356 Oct 15 j 01:53	17°V58'02	48.10122 AU
retrograde	-364 Jul 16 j 11:01	11°V19'21		direct	-355 Jan 04 j 19:35	16°V58'42	
min. Earth dist.	-364 Oct 07 j 03:12	10°V20'29	48.16444 AU				
opposition	-364 Oct 08 j 00:41	10°V19'28	-16°-25'-1	conjunction	-355 Apr 13 j 17:37	18°V24'50	-14°-47'-38
direct	-364 Dec 28 j 07:53	9°V20'36		minimum elong	-355 Apr 13 j 17:48	18°V24'50	14°47'38
				max. Earth dist.	-355 Apr 14 j 05:51	18°V25'31	50.01907 AU
conjunction	-363 Apr 05 j 21:00	10°V46'55	-15°-43'-17	retrograde	-355 Jul 25 j 11:07	19°V54'03	
minimum elong	-363 Apr 05 j 21:11	10°V46'56	15°43'18	opposition	-355 Oct 16 j 16:54	18°V54'23	-15°-19'-57
max. Earth dist.	-363 Apr 06 j 20:22	10°V48'15	50.09167 AU	min. Earth dist.	-355 Oct 16 j 06:15	18°V54'54	48.07415 AU
retrograde	-363 Jul 17 j 15:46	12°V16'37		direct	-354 Jan 06 j 00:58	17°V55'33	
min. Earth dist.	-363 Oct 08 j 09:07	11°V17'45	48.17397 AU				
opposition	-363 Oct 09 j 05:17	11°V16'48	-16°-18'-43	conjunction	-354 Apr 14 j 23:03	19°V21'41	-14°-39'-37
direct	-363 Dec 29 j 13:53	10°V17'59		minimum elong	-354 Apr 14 j 23:15	19°V21'42	14°39'37
				max. Earth dist.	-354 Apr 15 j 09:18	19°V22'16	49.99170 AU
conjunction	-362 Apr 07 j 02:39	11°V44'17	-15°-37'-6	retrograde	-354 Jul 26 j 14:53	20°V50'52	
minimum elong	-362 Apr 07 j 02:49	11°V44'17	15°37'07	opposition	-354 Oct 17 j 21:13	19°V51'13	-15°-11'-29
max. Earth dist.	-362 Apr 07 j 23:50	11°V45'29	50.10004 AU	min. Earth dist.	-354 Oct 17 j 12:03	19°V51'39	48.04410 AU
retrograde	-362 Jul 19 j 00:15	13°V13'56		direct	-353 Jan 07 j 06:33	18°V52'22	
opposition	-362 Oct 10 j 09:44	12°V14'11	-16°-12'-10				
min. Earth dist.	-362 Oct 09 j 14:24	12°V15'06	48.17888 AU	conjunction	-353 Apr 16 j 04:39	20°V18'31	-14°-31'-20
direct	-362 Dec 30 j 15:40	11°V15'25		minimum elong	-353 Apr 16 j 04:49	20°V18'31	14°31'21
				max. Earth dist.	-353 Apr 16 j 14:51	20°V19'05	49.96137 AU
conjunction	-361 Apr 08 j 08:25	12°V41'42	-15°-30'-42	retrograde	-353 Jul 27 j 18:06	21°V47'41	
minimum elong	-361 Apr 08 j 08:35	12°V41'43	15°30'44	opposition	-353 Oct 19 j 01:34	20°V48'03	-15°-2'-47
max. Earth dist.	-361 Apr 09 j 04:13	12°V42'49	50.10328 AU	min. Earth dist.	-353 Oct 18 j 17:21	20°V48'26	48.01088 AU
retrograde	-361 Jul 20 j 07:52	14°V11'17		direct	-352 Jan 08 j 13:10	19°V49'11	
opposition	-361 Oct 11 j 14:26	13°V11'35	-16°-5'-24				
min. Earth dist.	-361 Oct 10 j 21:31	13°V12'23	48.17840 AU	conjunction	-352 Apr 16 j 09:58	21°V15'21	-14°-22'-49
direct	-361 Dec 31 j 18:09	12°V12'51		minimum elong	-352 Apr 16 j 10:10	21°V15'22	14°22'50
				max. Earth dist.	-352 Apr 16 j 18:24	21°V15'50	49.92793 AU
conjunction	-360 Apr 08 j 14:03	13°V39'07	-15°-24'-6	retrograde	-352 Jul 28 j 01:14	22°V44'32	
minimum elong	-360 Apr 08 j 14:13	13°V39'07	15°24'06	opposition	-352 Oct 19 j 05:53	21°V44'55	-14°-53'-48
max. Earth dist.	-360 Apr 09 j 08:38	13°V40'10	50.10118 AU	min. Earth dist.	-352 Oct 18 j 22:11	21°V45'17	47.97441 AU
retrograde	-360 Jul 20 j 10:58	15°V08'38		direct	-351 Jan 08 j 16:17	20°V46'03	
opposition	-360 Oct 11 j 18:55	14°V08'58	-15°-58'-24				
min. Earth dist.	-360 Oct 11 j 02:26	14°V09'45	48.17238 AU	conjunction	-351 Apr 17 j 15:29	22°V12'16	-14°-14'-3

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Attention, astronomical year style is used: The year -351 in astronomical counting style is the year 352 BCE in historical counting style.

minimum elong	-351 Apr 17 j 15:40	22°♃12'16	14°14'04	max. Earth dist.	-343 Apr 25 j 09:49	29°♃49'06	49.42498 AU
max. Earth dist.	-351 Apr 17 j 22:53	22°♃12'41	49.89086 AU		-343 May 03 j 10:12	0°♄	
retrograde	-351 Jul 29 j 08:55	23°♃41'27		retrograde	-343 Aug 05 j 21:57	1°♄18'42	
opposition	-351 Oct 20 j 10:15	22°♃41'51	-14°-44'-36	opposition	-343 Oct 27 j 21:12	0°♄18'56	-13°-22'-36
min. Earth dist.	-351 Oct 20 j 04:40	22°♃42'07	47.93404 AU	min. Earth dist.	-343 Oct 28 j 01:13	0°♄18'45	47.43919 AU
direct	-350 Jan 09 j 18:33	21°♃42'59			-343 Nov 13 j 18:24	30°♃	
				direct	-342 Jan 17 j 11:53	29°♃19'43	
conjunction	-350 Apr 18 j 21:09	23°♃09'15	-14°-5'-3		-342 Mar 21 j 18:16	0°♄	
minimum elong	-350 Apr 18 j 21:21	23°♃09'16	14°05'04				
max. Earth dist.	-350 Apr 19 j 03:34	23°♃09'37	49.84970 AU	conjunction	-342 Apr 26 j 18:42	0°♄46'33	-12°-45'00
retrograde	-350 Jul 30 j 14:00	24°♃38'27		minimum elong	-342 Apr 26 j 18:53	0°♄46'34	12°45'01
opposition	-350 Oct 21 j 14:34	23°♃38'53	-14°-35'-9	max. Earth dist.	-342 Apr 26 j 13:41	0°♄46'16	49.34914 AU
min. Earth dist.	-350 Oct 21 j 09:26	23°♃39'07	47.88906 AU	retrograde	-342 Aug 07 j 04:55	2°♄16'03	
direct	-349 Jan 10 j 22:40	22°♃40'00		opposition	-342 Oct 29 j 01:37	1°♄16'16	-13°-11'-14
				min. Earth dist.	-342 Oct 29 j 06:08	1°♄16'03	47.36049 AU
conjunction	-349 Apr 20 j 02:48	24°♃06'20	-13°-55'-50	direct	-341 Jan 18 j 15:24	0°♄17'00	
minimum elong	-349 Apr 20 j 02:59	24°♃06'21	13°55'49				
max. Earth dist.	-349 Apr 20 j 06:42	24°♃06'33	49.80351 AU	conjunction	-341 Apr 28 j 00:31	1°♄43'57	-12°-33'-55
retrograde	-349 Jul 31 j 18:09	25°♃35'33		minimum elong	-341 Apr 28 j 00:44	1°♄43'58	12°33'55
opposition	-349 Oct 22 j 18:56	24°♃35'58	-14°-25'-28	max. Earth dist.	-341 Apr 27 j 18:38	1°♄43'37	49.27043 AU
min. Earth dist.	-349 Oct 22 j 15:56	24°♃36'07	47.83894 AU	retrograde	-341 Aug 08 j 12:49	3°♄13'32	
direct	-348 Jan 12 j 04:22	23°♃37'04		opposition	-341 Oct 30 j 06:07	2°♄13'44	-12°-59'-36
				min. Earth dist.	-341 Oct 30 j 12:20	2°♄13'27	47.27894 AU
conjunction	-348 Apr 20 j 08:35	25°♃03'28	-13°-46'-23	direct	-340 Jan 19 j 17:38	1°♄14'26	
minimum elong	-348 Apr 20 j 08:47	25°♃03'28	13°46'25				
max. Earth dist.	-348 Apr 20 j 11:55	25°♃03'39	49.75207 AU	conjunction	-340 Apr 28 j 06:22	2°♄41'32	-12°-22'-34
retrograde	-348 Jul 31 j 20:59	26°♃32'42		minimum elong	-340 Apr 28 j 06:33	2°♄41'33	12°22'34
opposition	-348 Oct 22 j 23:23	25°♃33'07	-14°-15'-35	max. Earth dist.	-340 Apr 27 j 23:53	2°♄41'10	49.18905 AU
min. Earth dist.	-348 Oct 22 j 21:41	25°♃33'12	47.78339 AU	retrograde	-340 Aug 08 j 19:46	4°♄11'12	
direct	-347 Jan 12 j 11:46	24°♃34'10		opposition	-340 Oct 30 j 10:34	3°♄11'24	-12°-47'-43
				min. Earth dist.	-340 Oct 30 j 16:48	3°♄11'06	47.19445 AU
conjunction	-347 Apr 21 j 14:08	26°♃00'37	-13°-36'-44	direct	-339 Jan 19 j 20:22	2°♄12'03	
minimum elong	-347 Apr 21 j 14:20	26°♃00'37	13°36'44				
max. Earth dist.	-347 Apr 21 j 15:06	26°♃00'40	49.69543 AU	conjunction	-339 Apr 29 j 12:07	3°♄39'19	-12°-10'-58
retrograde	-347 Aug 02 j 04:18	27°♃29'53		minimum elong	-339 Apr 29 j 12:20	3°♄39'20	12°10'59
opposition	-347 Oct 24 j 03:46	26°♃30'16	-14°-5'-28	max. Earth dist.	-339 Apr 29 j 03:38	3°♄38'50	49.10439 AU
min. Earth dist.	-347 Oct 24 j 02:55	26°♃30'18	47.72279 AU	retrograde	-339 Aug 10 j 00:43	5°♄09'06	
direct	-346 Jan 13 j 14:44	25°♃31'16		opposition	-339 Oct 31 j 15:13	4°♄09'17	-12°-35'-34
				min. Earth dist.	-339 Oct 31 j 23:25	4°♄08'54	47.10645 AU
conjunction	-346 Apr 22 j 19:55	26°♃57'46	-13°-26'-52	direct	-338 Jan 21 j 01:45	3°♄09'54	
minimum elong	-346 Apr 22 j 20:07	26°♃57'47	13°26'53				
max. Earth dist.	-346 Apr 22 j 19:39	26°♃57'45	49.63376 AU	conjunction	-338 Apr 30 j 18:20	4°♄37'20	-11°-59'-8
retrograde	-346 Aug 03 j 10:49	28°♃27'03		minimum elong	-338 Apr 30 j 18:32	4°♄37'20	11°59'08
opposition	-346 Oct 25 j 08:07	27°♃27'25	-13°-55'-7	max. Earth dist.	-338 Apr 30 j 09:27	4°♄36'49	49.01582 AU
min. Earth dist.	-346 Oct 25 j 09:32	27°♃27'21	47.65745 AU	retrograde	-338 Aug 11 j 02:37	6°♄07'14	
direct	-345 Jan 14 j 17:51	26°♃28'22		opposition	-338 Nov 01 j 19:46	5°♄07'24	-12°-23'-10
				min. Earth dist.	-338 Nov 02 j 05:07	5°♄06'57	47.01409 AU
conjunction	-345 Apr 24 j 01:44	27°♃54'55	-13°-16'-46	direct	-337 Jan 22 j 10:10	4°♄07'58	
minimum elong	-345 Apr 24 j 01:56	27°♃54'56	13°16'46				
max. Earth dist.	-345 Apr 24 j 00:36	27°♃54'52	49.56783 AU	conjunction	-337 May 02 j 00:32	5°♄35'33	-11°-47'-4
retrograde	-345 Aug 04 j 15:02	29°♃24'14		minimum elong	-337 May 02 j 00:44	5°♄35'34	11°47'05
opposition	-345 Oct 26 j 12:26	28°♃24'33	-13°-44'-32	max. Earth dist.	-337 May 01 j 13:14	5°♄34'55	48.92266 AU
min. Earth dist.	-345 Oct 26 j 14:02	28°♃24'28	47.58805 AU	retrograde	-337 Aug 12 j 09:40	7°♄05'35	
direct	-344 Jan 15 j 23:13	27°♃25'26		opposition	-337 Nov 03 j 00:30	6°♄05'43	-12°-10'-33
				min. Earth dist.	-337 Nov 03 j 10:53	6°♄05'14	46.91690 AU
conjunction	-344 Apr 24 j 07:13	28°♃52'05	-13°-6'-26	direct	-336 Jan 23 j 14:24	5°♄06'13	
minimum elong	-344 Apr 24 j 07:24	28°♃52'06	13°06'27				
max. Earth dist.	-344 Apr 24 j 03:58	28°♃51'54	49.49801 AU	conjunction	-336 May 02 j 06:42	6°♄33'58	-11°-34'-46
	-344 Jun 19 j 19:30	0°♄		minimum elong	-336 May 02 j 06:54	6°♄33'58	11°34'46
retrograde	-344 Aug 04 j 18:54	0°♄21'26		max. Earth dist.	-336 May 01 j 18:05	6°♄33'14	48.82429 AU
	-344 Sep 20 j 03:42	30°♃		retrograde	-336 Aug 12 j 17:15	8°♄04'07	
opposition	-344 Oct 26 j 16:52	29°♃21'43	-13°-33'-41	opposition	-336 Nov 03 j 05:26	7°♄04'12	-11°-57'-41
min. Earth dist.	-344 Oct 26 j 20:06	29°♃21'34	47.51518 AU	min. Earth dist.	-336 Nov 03 j 18:02	7°♄03'36	46.81442 AU
direct	-343 Jan 16 j 04:57	28°♃22'32		direct	-335 Jan 23 j 17:45	6°♄04'36	
conjunction	-343 Apr 25 j 13:00	29°♃49'17	-12°-55'-50	conjunction	-335 May 03 j 13:04	7°♄32'30	-11°-22'-15
minimum elong	-343 Apr 25 j 13:13	29°♃49'18	12°55'51	minimum elong	-335 May 03 j 13:16	7°♄32'31	11°22'16

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Attention, astronomical year style is used: The year -335 in astronomical counting style is the year 336 BCE in historical counting style.

max. Earth dist.	-335 May 02 j 23:16	7°♃31'43	48.72087 AU	max. Earth dist.	-327 May 10 j 17:35	15°♃23'50	47.75420 AU
retrograde	-335 Aug 13 j 23:31	9°♃02'46		retrograde	-327 Aug 21 j 22:34	16°♃56'48	
opposition	-335 Nov 04 j 10:09	8°♃02'46	-11°-44'-36	opposition	-327 Nov 12 j 02:55	15°♃56'13	-9°-50'-31
min. Earth dist.	-335 Nov 04 j 23:14	8°♃02'09	46.70690 AU	min. Earth dist.	-327 Nov 13 j 00:41	15°♃55'09	45.71456 AU
direct	-334 Jan 24 j 22:22	7°♃03'04		direct	-326 Jan 12 j 21:46	15°♃R♃	
conjunction	-334 May 04 j 19:24	8°♃31'08	-11°-9'-30	direct	-326 Feb 01 j 19:06	14°♃55'39	
minimum elong	-334 May 04 j 19:37	8°♃31'09	11°09'31	max. Earth dist.	-326 Feb 21 j 12:52	15°♃	
max. Earth dist.	-334 May 04 j 03:06	8°♃30'12	48.61248 AU	max. Earth dist.	-326 May 11 j 23:46	16°♃24'03	47.61877 AU
retrograde	-334 Aug 15 j 05:23	10°♃01'29		conjunction	-326 May 13 j 01:00	16°♃25'32	-9°-18'-31
opposition	-334 Nov 05 j 15:05	9°♃01'25	-11°-31'-15	minimum elong	-326 May 13 j 01:11	16°♃25'32	9°18'32
min. Earth dist.	-334 Nov 06 j 06:10	9°♃00'41	46.59471 AU	retrograde	-326 Aug 23 j 06:49	17°♃57'21	
direct	-333 Jan 26 j 03:43	8°♃01'36		opposition	-326 Nov 13 j 08:34	16°♃56'42	-9°-35'-3
max. Earth dist.	-333 May 05 j 09:20	9°♃28'53	48.49962 AU	min. Earth dist.	-326 Nov 14 j 08:28	16°♃55'32	45.57548 AU
conjunction	-333 May 06 j 01:54	9°♃29'50	-10°-56'-31	direct	-325 Feb 02 j 23:08	15°♃56'03	
minimum elong	-333 May 06 j 02:05	9°♃29'51	10°56'32	max. Earth dist.	-325 May 13 j 05:49	17°♃24'40	47.47888 AU
retrograde	-333 Aug 16 j 08:18	11°♃00'18		conjunction	-325 May 14 j 08:19	17°♃26'13	-9°-3'-29
opposition	-333 Nov 06 j 19:55	10°♃00'08	-11°-17'-40	minimum elong	-325 May 14 j 08:30	17°♃26'14	9°03'29
min. Earth dist.	-333 Nov 07 j 11:58	9°♃59'22	46.47827 AU	retrograde	-325 Aug 24 j 15:06	18°♃58'18	
direct	-332 Jan 27 j 11:48	9°♃00'12		opposition	-325 Nov 14 j 14:09	17°♃57'34	-9°-19'-20
conjunction	-332 May 06 j 08:16	10°♃28'36	-10°-43'-17	min. Earth dist.	-325 Nov 15 j 14:31	17°♃56'23	45.43161 AU
minimum elong	-332 May 06 j 08:28	10°♃28'37	10°43'18	direct	-324 Feb 04 j 03:37	16°♃56'49	
max. Earth dist.	-332 May 05 j 13:41	10°♃27'32	48.38295 AU	max. Earth dist.	-324 May 13 j 10:39	18°♃25'35	47.33388 AU
retrograde	-332 Aug 16 j 14:12	11°♃59'13		conjunction	-324 May 14 j 15:44	18°♃27'17	-8°-48'-13
opposition	-332 Nov 07 j 00:50	10°♃58'58	-11°-3'-49	minimum elong	-324 May 14 j 15:55	18°♃27'18	8°48'15
min. Earth dist.	-332 Nov 07 j 17:37	10°♃58'09	46.35840 AU	retrograde	-324 Aug 24 j 23:27	19°♃59'37	
direct	-331 Jan 27 j 16:51	9°♃58'54		opposition	-324 Nov 14 j 20:04	18°♃58'48	-9°-3'-21
conjunction	-331 May 07 j 14:42	11°♃27'29	-10°-29'-48	min. Earth dist.	-324 Nov 15 j 22:40	18°♃57'30	45.28264 AU
minimum elong	-331 May 07 j 14:53	11°♃27'30	10°29'49	direct	-323 Feb 04 j 09:08	17°♃57'54	
max. Earth dist.	-331 May 06 j 19:13	11°♃26'22	48.26288 AU	conjunction	-323 May 15 j 23:20	19°♃28'41	-8°-32'-43
retrograde	-331 Aug 17 j 21:14	12°♃58'15		minimum elong	-323 May 15 j 23:31	19°♃28'42	8°32'43
opposition	-331 Nov 08 j 05:58	11°♃57'55	-10°-49'-43	max. Earth dist.	-323 May 14 j 17:45	19°♃26'57	47.18379 AU
min. Earth dist.	-331 Nov 09 j 00:27	11°♃57'01	46.23532 AU	retrograde	-323 Aug 26 j 03:59	21°♃01'15	
direct	-330 Jan 28 j 21:19	10°♃57'44		opposition	-323 Nov 16 j 02:01	20°♃00'19	-8°-47'-7
conjunction	-330 May 08 j 21:24	12°♃26'32	-10°-16'-4	min. Earth dist.	-323 Nov 17 j 05:35	19°♃58'58	45.12849 AU
minimum elong	-330 May 08 j 21:36	12°♃26'33	10°16'04	direct	-322 Feb 05 j 18:22	18°♃59'16	
max. Earth dist.	-330 May 08 j 01:16	12°♃25'22	48.13995 AU	max. Earth dist.	-322 May 15 j 22:55	20°♃28'28	47.02874 AU
retrograde	-330 Aug 19 j 05:16	13°♃57'28		conjunction	-322 May 17 j 07:01	20°♃30'22	-8°-16'-58
opposition	-330 Nov 09 j 10:56	12°♃57'02	-10°-35'-20	minimum elong	-322 May 17 j 07:11	20°♃30'22	8°16'59
min. Earth dist.	-330 Nov 10 j 05:24	12°♃56'09	46.10945 AU	retrograde	-322 Aug 27 j 10:42	22°♃03'11	
direct	-329 Jan 30 j 00:47	11°♃56'45		opposition	-322 Nov 17 j 07:55	21°♃02'07	-8°-30'-38
max. Earth dist.	-329 May 09 j 05:58	13°♃24'31	48.01421 AU	min. Earth dist.	-322 Nov 18 j 12:49	21°♃00'42	44.96974 AU
conjunction	-329 May 10 j 04:05	13°♃25'48	-10°-2'-4	direct	-321 Feb 07 j 00:49	21°♃00'55	
minimum elong	-329 May 10 j 04:16	13°♃25'48	10°02'05	max. Earth dist.	-321 May 17 j 05:43	21°♃30'20	46.86915 AU
retrograde	-329 Aug 20 j 12:10	14°♃56'55		conjunction	-321 May 18 j 14:54	21°♃32'18	-8°00'-58
opposition	-329 Nov 10 j 16:16	13°♃56'25	-10°-20'-40	minimum elong	-321 May 18 j 15:04	21°♃32'19	8°00'58
min. Earth dist.	-329 Nov 11 j 12:29	13°♃55'27	45.98090 AU	retrograde	-321 Aug 28 j 17:22	23°♃05'23	
direct	-328 Jan 31 j 05:32	12°♃56'03		opposition	-321 Nov 18 j 14:08	22°♃04'11	-8°-13'-52
conjunction	-328 May 10 j 10:51	14°♃25'20	-9°-47'-48	min. Earth dist.	-321 Nov 19 j 20:46	22°♃02'40	44.80676 AU
minimum elong	-328 May 10 j 11:02	14°♃25'21	9°47'50	direct	-320 Feb 08 j 07:28	21°♃02'48	
max. Earth dist.	-328 May 09 j 12:44	14°♃24'03	47.88574 AU	conjunction	-320 May 18 j 22:37	22°♃34'29	-7°-44'-42
retrograde	-328 Jun 04 j 23:01	15°♃		minimum elong	-320 May 18 j 22:47	22°♃34'30	7°44'43
opposition	-328 Aug 20 j 15:31	15°♃56'40		max. Earth dist.	-320 May 17 j 12:34	22°♃32'28	46.70580 AU
min. Earth dist.	-328 Nov 07 j 13:54	15°♃R♃		retrograde	-320 Aug 29 j 03:22	24°♃07'50	
opposition	-328 Nov 10 j 21:37	14°♃56'08	-10°-5'-44	opposition	-320 Nov 18 j 20:18	23°♃06'29	-7°-56'-50
min. Earth dist.	-328 Nov 11 j 18:24	14°♃55'07	45.84937 AU	min. Earth dist.	-320 Nov 20 j 03:06	23°♃04'58	44.64032 AU
direct	-327 Jan 31 j 13:53	13°♃55'40		direct	-319 Feb 08 j 11:25	22°♃04'55	
conjunction	-327 May 11 j 17:45	15°♃25'14	-9°-33'-17	max. Earth dist.	-319 May 18 j 18:34	23°♃34'48	46.53909 AU
minimum elong	-327 May 11 j 17:55	15°♃25'15	9°33'18	conjunction	-319 May 20 j 06:35	23°♃36'56	-7°-28'-10
				minimum elong	-319 May 20 j 06:45	23°♃36'57	7°28'11

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Attention, astronomical year style is used: The year -319 in astronomical counting style is the year 320 BCE in historical counting style.

retrograde	-319 Aug 30 j 12:51	25°♄10'34		conjunction	-311 May 29 j 05:09	2°♄10'57	-5°-6'-9
opposition	-319 Nov 20 j 02:38	24°♄09'04	-7°-39'-30	minimum elong	-311 May 29 j 05:17	2°♄10'58	5°06'10
min. Earth dist.	-319 Nov 21 j 11:21	24°♄07'27	44.47093 AU	retrograde	-311 Sep 08 j 05:03	3°♄47'27	
direct	-318 Feb 09 j 15:44	23°♄07'18		opposition	-311 Nov 28 j 11:31	2°♄44'48	-5°-10'-29
max. Earth dist.	-318 May 20 j 02:44	24°♄37'32	46.36966 AU	min. Earth dist.	-311 Nov 30 j 05:03	2°♄42'41	43.01083 AU
				direct	-310 Feb 18 j 05:44	1°♄41'33	
conjunction	-318 May 21 j 14:50	24°♄39'41	-7°-11'-23	max. Earth dist.	-310 May 28 j 16:01	3°♄14'30	44.90497 AU
minimum elong	-318 May 21 j 14:59	24°♄39'42	7°11'24				
retrograde	-318 Aug 31 j 18:09	26°♄13'35		conjunction	-310 May 30 j 14:59	3°♄17'23	-4°-47'-11
opposition	-318 Nov 21 j 09:08	25°♄11'57	-7°-21'-53	minimum elong	-310 May 30 j 15:06	3°♄17'24	4°47'12
min. Earth dist.	-318 Nov 22 j 18:06	25°♄10'18	44.29890 AU	retrograde	-310 Sep 09 j 15:23	4°♄54'17	
direct	-317 Feb 11 j 01:21	24°♄10'00		opposition	-310 Nov 29 j 19:25	3°♄51'27	-4°-50'-34
max. Earth dist.	-317 May 21 j 08:58	25°♄40'29	46.19779 AU	min. Earth dist.	-310 Dec 01 j 13:27	3°♄49'19	42.81060 AU
				direct	-309 Feb 19 j 12:30	2°♄47'58	
conjunction	-317 May 22 j 22:59	25°♄42'46	-6°-54'-18	max. Earth dist.	-309 May 29 j 23:58	4°♄21'17	44.70371 AU
minimum elong	-317 May 22 j 23:08	25°♄42'46	6°54'19				
retrograde	-317 Sep 02 j 00:33	27°♄16'58		conjunction	-309 Jun 01 j 00:54	4°♄24'18	-4°-27'-58
opposition	-317 Nov 22 j 15:44	26°♄15'12	-7°-3'-59	minimum elong	-309 Jun 01 j 01:01	4°♄24'18	4°27'59
min. Earth dist.	-317 Nov 24 j 01:34	26°♄13'30	44.12465 AU	retrograde	-309 Sep 11 j 03:05	6°♄01'38	
direct	-316 Feb 12 j 09:33	25°♄13'05		opposition	-309 Dec 01 j 03:37	4°♄58'36	-4°-30'-22
max. Earth dist.	-316 May 21 j 16:57	26°♄43'55	46.02356 AU	min. Earth dist.	-309 Dec 02 j 23:48	4°♄56'20	42.60667 AU
				direct	-308 Feb 20 j 17:50	3°♄54'52	
conjunction	-316 May 23 j 07:28	26°♄46'13	-6°-36'-57	max. Earth dist.	-308 May 30 j 09:56	5°♄28'39	44.49913 AU
minimum elong	-316 May 23 j 07:36	26°♄46'14	6°36'58				
retrograde	-316 Sep 02 j 07:35	28°♄20'47		conjunction	-308 Jun 01 j 11:06	5°♄31'42	-4°-8'-28
opposition	-316 Nov 22 j 22:36	27°♄18'52	-6°-45'-47	minimum elong	-308 Jun 01 j 11:12	5°♄31'42	4°08'28
min. Earth dist.	-316 Nov 24 j 09:53	27°♄17'06	43.94796 AU	retrograde	-308 Sep 11 j 12:20	7°♄09'28	
direct	-315 Feb 12 j 16:54	26°♄16'36		opposition	-308 Dec 01 j 11:52	6°♄06'13	-4°-9'-52
max. Earth dist.	-315 May 23 j 00:34	27°♄47'46	45.84689 AU	min. Earth dist.	-308 Dec 03 j 08:11	6°♄03'57	42.39972 AU
				direct	-307 Feb 21 j 03:51	5°♄02'15	
conjunction	-315 May 24 j 16:03	27°♄50'08	-6°-19'-20	max. Earth dist.	-307 May 31 j 18:01	6°♄36'25	44.29174 AU
minimum elong	-315 May 24 j 16:13	27°♄50'09	6°19'21				
retrograde	-315 Sep 03 j 17:21	29°♄25'04		conjunction	-307 Jun 02 j 21:20	6°♄39'37	-3°-48'-41
opposition	-315 Nov 24 j 05:30	28°♄23'02	-6°-27'-17	minimum elong	-307 Jun 02 j 21:25	6°♄39'37	3°48'42
min. Earth dist.	-315 Nov 25 j 16:58	28°♄21'15	43.76853 AU	retrograde	-307 Sep 12 j 22:26	8°♄17'50	
direct	-314 Feb 13 j 22:19	27°♄20'35		opposition	-307 Dec 02 j 20:26	7°♄14'23	-3°-49'-4
max. Earth dist.	-314 May 24 j 07:26	28°♄52'03	45.66692 AU	min. Earth dist.	-307 Dec 04 j 18:05	7°♄12'02	42.19034 AU
				direct	-306 Feb 22 j 13:26	6°♄10'09	
conjunction	-314 May 26 j 01:00	28°♄54'34	-6°-1'-26	max. Earth dist.	-306 Jun 02 j 04:33	7°♄44'51	44.08196 AU
minimum elong	-314 May 26 j 01:08	28°♄54'34	6°01'26				
retrograde	-314 Jul 14 j 12:03	0°♄		conjunction	-306 Jun 04 j 08:02	7°♄48'05	-3°-28'-38
opposition	-314 Sep 05 j 04:25	0°♄29'53		minimum elong	-306 Jun 04 j 08:08	7°♄48'05	3°28'37
min. Earth dist.	-314 Oct 28 j 08:19	30°♄♄		retrograde	-306 Sep 14 j 06:27	9°♄26'47	
direct	-314 Nov 25 j 12:40	29°♄27'42	-6°-8'-31	opposition	-306 Dec 04 j 05:14	8°♄23'08	-3°-27'-58
max. Earth dist.	-314 Nov 27 j 02:20	29°♄25'49	43.58559 AU	min. Earth dist.	-306 Dec 06 j 03:52	8°♄20'43	41.97884 AU
				direct	-305 Feb 24 j 00:18	7°♄18'40	
conjunction	-313 May 25 j 16:22	29°♄56'59	45.48312 AU	max. Earth dist.	-305 Jun 03 j 14:07	8°♄53'50	43.87042 AU
conjunction	-313 May 27 j 10:17	29°♄59'31	-5°-43'-16	conjunction	-305 Jun 05 j 18:49	8°♄57'09	-3°-8'-17
minimum elong	-313 May 27 j 10:25	29°♄59'32	5°43'17	minimum elong	-305 Jun 05 j 18:54	8°♄57'09	3°08'18
retrograde	-313 May 27 j 18:09	0°♄		retrograde	-305 Sep 15 j 17:04	10°♄36'22	
opposition	-313 Sep 06 j 13:09	1°♄35'13		opposition	-305 Dec 05 j 14:16	9°♄32'32	-3°-6'-34
min. Earth dist.	-313 Nov 26 j 20:06	0°♄32'54	-5°-49'-27	min. Earth dist.	-305 Dec 07 j 12:58	9°♄30'06	41.76578 AU
direct	-313 Nov 28 j 10:24	0°♄30'58	43.39848 AU	direct	-304 Feb 25 j 08:28	8°♄27'49	
max. Earth dist.	-313 Dec 25 j 10:20	30°♄♄		max. Earth dist.	-304 Jun 03 j 23:48	10°♄03'29	43.65712 AU
conjunction	-312 Feb 16 j 12:21	29°♄30'05		conjunction	-304 Jun 06 j 05:45	10°♄06'54	-2°-47'-40
minimum elong	-312 Apr 08 j 23:10	0°♄		minimum elong	-304 Jun 06 j 05:50	10°♄06'54	2°47'41
retrograde	-312 May 25 j 22:59	1°♄02'17	45.29494 AU	retrograde	-304 Sep 16 j 05:21	11°♄46'41	
				opposition	-304 Dec 05 j 23:43	10°♄42'39	-2°-44'-51
conjunction	-312 May 27 j 19:27	1°♄04'59	-5°-24'-51	min. Earth dist.	-304 Dec 08 j 00:05	10°♄40'07	41.55102 AU
minimum elong	-312 May 27 j 19:34	1°♄05'00	5°24'51	direct	-303 Feb 25 j 15:24	9°♄37'42	
retrograde	-312 Sep 06 j 22:36	2°♄41'05		max. Earth dist.	-303 Jun 05 j 11:13	11°♄13'59	43.44207 AU
opposition	-312 Nov 27 j 03:44	1°♄38'36	-5°-30'-6				
min. Earth dist.	-312 Nov 28 j 19:36	1°♄36'35	43.20696 AU	conjunction	-303 Jun 07 j 17:13	11°♄17'25	-2°-26'-47
direct	-311 Feb 16 j 19:59	0°♄35'35		minimum elong	-303 Jun 07 j 17:17	11°♄17'25	2°26'48
max. Earth dist.	-311 May 27 j 07:41	2°♄08'10	45.10211 AU	retrograde	-303 Sep 17 j 19:07	12°♄57'45	

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Attention, astronomical year style is used: The year -303 in astronomical counting style is the year 304 BCE in historical counting style.

opposition	-303 Dec 07 j 09:09	11°II53'32	-2°-22'-51	opposition	-295 Dec 17 j 01:10	21°II49'18	0°43'43
min. Earth dist.	-303 Dec 09 j 09:37	11°II51'00	41.33425 AU	min. Earth dist.	-295 Dec 19 j 10:57	21°II46'10	39.48345 AU
direct	-302 Feb 26 j 23:31	10°II48'22		direct	-294 Mar 08 j 16:14	20°II41'39	
max. Earth dist.	-302 Jun 06 j 20:39	12°II25'09	43.22459 AU	max. Earth dist.	-294 Jun 16 j 21:08	22°II23'22	41.36290 AU
conjunction	-302 Jun 09 j 04:57	12°II28'45	-2°-5'-36	conjunction	-294 Jun 19 j 14:59	22°II27'48	0°53'22
minimum elong	-302 Jun 09 j 05:00	12°II28'45	2°05'37	minimum elong	-294 Jun 19 j 14:57	22°II27'48	0°53'22
retrograde	-302 Sep 19 j 08:33	14°II09'40		retrograde	-294 Sep 29 j 13:37	24°II13'49	
opposition	-302 Dec 08 j 19:04	13°II05'16	-2°00'-33	opposition	-294 Dec 18 j 13:48	23°II07'17	1°08'19
min. Earth dist.	-302 Dec 10 j 21:20	13°II02'38	41.11488 AU	min. Earth dist.	-294 Dec 21 j 00:48	23°II04'04	39.24062 AU
direct	-301 Feb 28 j 08:09	11°II59'51		direct	-293 Mar 10 j 05:48	21°II59'18	
max. Earth dist.	-301 Jun 08 j 08:22	13°II37'16	43.00396 AU	max. Earth dist.	-293 Jun 18 j 11:21	23°II41'46	41.11938 AU
conjunction	-301 Jun 10 j 17:02	13°II40'55	-1°-44'-10	conjunction	-293 Jun 21 j 05:36	23°II46'15	1°16'53
minimum elong	-301 Jun 10 j 17:05	13°II40'55	1°44'10	minimum elong	-293 Jun 21 j 05:33	23°II46'15	1°16'54
retrograde	-301 Sep 20 j 18:06	15°II22'25		retrograde	-293 Oct 01 j 04:16	25°II33'00	
opposition	-301 Dec 10 j 05:20	14°II17'49	-1°-37'-57	opposition	-293 Dec 20 j 02:38	24°II26'12	1°33'11
min. Earth dist.	-301 Dec 12 j 08:37	14°II15'06	40.89207 AU	min. Earth dist.	-293 Dec 22 j 13:21	24°II22'58	38.99698 AU
direct	-300 Feb 29 j 21:07	13°II12'08		direct	-292 Mar 10 j 17:22	23°II17'52	
max. Earth dist.	-300 Jun 08 j 18:49	14°II50'05	42.77980 AU	max. Earth dist.	-292 Jun 19 j 00:56	25°II01'03	40.87496 AU
conjunction	-300 Jun 11 j 05:24	14°II53'54	-1°-22'-27	conjunction	-292 Jun 21 j 20:44	25°II05'41	1°40'39
minimum elong	-300 Jun 11 j 05:27	14°II53'54	1°22'28	minimum elong	-292 Jun 21 j 20:41	25°II05'40	1°40'39
retrograde	-300 Sep 21 j 05:24	16°II36'00		retrograde	-292 Oct 01 j 20:46	26°II53'13	
opposition	-300 Dec 10 j 15:47	15°II31'11	-1°-15'-3	opposition	-292 Dec 20 j 15:56	25°II46'08	1°58'20
min. Earth dist.	-300 Dec 12 j 19:56	15°II28'24	40.66567 AU	min. Earth dist.	-292 Dec 23 j 04:20	25°II42'48	38.75269 AU
direct	-299 Mar 02 j 08:22	14°II25'13		direct	-291 Mar 12 j 03:26	24°II37'28	
max. Earth dist.	-299 Jun 10 j 06:03	16°II03'44	42.55164 AU	max. Earth dist.	-291 Jun 20 j 16:49	26°II21'33	40.62980 AU
conjunction	-299 Jun 12 j 18:14	16°II07'39	-1°00'-28	conjunction	-291 Jun 23 j 12:24	26°II26'11	2°04'39
minimum elong	-299 Jun 12 j 18:16	16°II07'40	1°00'29	minimum elong	-291 Jun 23 j 12:20	26°II26'11	2°04'40
retrograde	-299 Sep 22 j 17:16	17°II50'24		retrograde	-291 Oct 03 j 13:12	28°II14'33	
opposition	-299 Dec 12 j 02:45	16°II45'19	0°-51'-52	opposition	-291 Dec 22 j 05:38	27°II07'11	2°23'43
min. Earth dist.	-299 Dec 14 j 09:02	16°II42'25	40.43531 AU	min. Earth dist.	-291 Dec 24 j 18:02	27°II03'50	38.50744 AU
direct	-298 Mar 03 j 17:54	15°II39'03		direct	-290 Mar 13 j 18:00	25°II58'11	
max. Earth dist.	-298 Jun 11 j 18:24	17°II18'11	42.31972 AU	max. Earth dist.	-290 Jun 22 j 06:51	27°II43'03	40.38337 AU
conjunction	-298 Jun 14 j 07:25	17°II22'11	0°-38'-14	conjunction	-290 Jun 25 j 04:25	27°II47'52	2°28'53
minimum elong	-298 Jun 14 j 07:26	17°II22'11	0°38'15	minimum elong	-290 Jun 25 j 04:21	27°II47'51	2°28'53
retrograde	-298 Sep 24 j 06:44	19°II05'32		retrograde	-290 Oct 05 j 07:37	29°II37'04	
opposition	-298 Dec 13 j 13:48	18°II00'11	0°-28'-24	opposition	-290 Dec 23 j 19:44	28°II29'26	2°49'22
min. Earth dist.	-298 Dec 15 j 20:19	17°II57'16	40.20138 AU	min. Earth dist.	-290 Dec 26 j 09:23	28°II26'00	38.26088 AU
direct	-297 Mar 05 j 04:36	16°II53'36		direct	-289 Mar 15 j 07:57	27°II20'07	
max. Earth dist.	-297 Jun 13 j 05:27	18°II33'16	42.08429 AU	max. Earth dist.	-289 Jun 23 j 23:16	29°II05'54	40.13509 AU
conjunction	-297 Jun 15 j 20:48	18°II37'27	0°-15'-44	conjunction	-289 Jun 26 j 21:05	29°II10'46	2°53'19
minimum elong	-297 Jun 15 j 20:48	18°II37'27	0°15'44	minimum elong	-289 Jun 26 j 21:00	29°II10'46	2°53'20
retrograde	-297 Sep 25 j 22:34	20°II21'26		retrograde	-289 Jul 27 j 06:43	0°☾	
opposition	-297 Dec 15 j 01:21	19°II15'48	0°-4'-39	retrograde	-289 Oct 06 j 23:40	1°☾00'51	
min. Earth dist.	-297 Dec 17 j 09:45	19°II12'46	39.96441 AU	retrograde	-289 Dec 20 j 04:34	30°RII	
asc. node	-296 Feb 24 j 09:58	18°II10'10		opposition	-289 Dec 25 j 10:30	29°II52'57	3°15'15
direct	-296 Mar 05 j 14:26	18°II08'52		min. Earth dist.	-289 Dec 28 j 01:19	29°II49'25	38.01230 AU
max. Earth dist.	-296 Jun 13 j 19:09	19°II49'15	41.84597 AU	direct	-288 Mar 15 j 23:30	28°II43'17	
conjunction	-296 Jun 16 j 10:28	19°II53'27	0°07'06	max. Earth dist.	-288 Jun 06 j 12:48	0°☾	
minimum elong	-296 Jun 16 j 10:27	19°II53'27	0°07'06	max. Earth dist.	-288 Jun 24 j 14:47	0°☾29'55	39.88464 AU
behind sun begin	-296 Jun 16 j 04:27	19°II53'05		conjunction	-288 Jun 27 j 13:58	0°☾34'55	3°17'58
behind sun end	-296 Jun 16 j 16:28	19°II53'49		minimum elong	-288 Jun 27 j 13:52	0°☾34'55	3°17'58
retrograde	-296 Sep 26 j 11:56	21°II38'05		retrograde	-288 Oct 07 j 15:56	2°☾25'54	
opposition	-296 Dec 15 j 13:11	20°II32'09	0°19'23	opposition	-288 Dec 26 j 01:36	1°☾17'42	3°41'22
min. Earth dist.	-296 Dec 17 j 22:06	20°II29'05	39.72483 AU	min. Earth dist.	-288 Dec 28 j 16:51	1°☾14'07	37.76145 AU
direct	-295 Mar 07 j 04:07	19°II24'52		direct	-287 Mar 17 j 14:16	0°☾07'39	
max. Earth dist.	-295 Jun 15 j 07:17	21°II05'52	41.60535 AU	max. Earth dist.	-287 Jun 26 j 06:46	1°☾55'09	39.63151 AU
conjunction	-295 Jun 18 j 00:27	21°II10'13	0°30'05	conjunction	-287 Jun 29 j 07:37	2°☾00'19	3°42'50
minimum elong	-295 Jun 18 j 00:27	21°II10'13	0°30'06	minimum elong	-287 Jun 29 j 07:30	2°☾00'18	3°42'50
retrograde	-295 Sep 28 j 02:00	22°II55'32		retrograde	-287 Oct 09 j 08:42	3°☾52'12	

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Attention, astronomical year style is used: The year -287 in astronomical counting style is the year 288 BCE in historical counting style.

opposition	-287 Dec 27 j 17:13	2° \mathfrak{E} 43'40	4°07'43	max. Earth dist.	-278 Jul 10 j 13:39	15° \mathfrak{E} 39'32	37.30818 AU
min. Earth dist.	-287 Dec 30 j 10:27	2° \mathfrak{E} 39'58	37.50809 AU				
direct	-286 Mar 19 j 03:43	1° \mathfrak{E} 33'15		conjunction	-278 Jul 13 j 20:13	15° \mathfrak{E} 45'33	7°32'55
max. Earth dist.	-286 Jun 28 j 00:35	3° \mathfrak{E} 21'42	39.37601 AU	minimum elong	-278 Jul 13 j 19:58	15° \mathfrak{E} 45'32	7°32'55
				retrograde	-278 Oct 24 j 02:33	17° \mathfrak{E} 46'39	
conjunction	-286 Jul 01 j 01:44	3° \mathfrak{E} 26'55	4°07'53	opposition	-277 Jan 10 j 13:15	16° \mathfrak{E} 34'46	8°12'01
minimum elong	-286 Jul 01 j 01:37	3° \mathfrak{E} 26'55	4°07'52	min. Earth dist.	-277 Jan 13 j 11:00	16° \mathfrak{E} 30'35	35.19932 AU
retrograde	-286 Oct 11 j 03:23	5° \mathfrak{E} 19'44		direct	-277 Apr 01 j 16:46	15° \mathfrak{E} 20'25	
opposition	-286 Dec 29 j 09:20	4° \mathfrak{E} 10'52	4°34'17	max. Earth dist.	-277 Jul 12 j 13:15	17° \mathfrak{E} 18'31	37.05295 AU
min. Earth dist.	-285 Jan 01 j 02:31	4° \mathfrak{E} 07'08	37.25255 AU				
direct	-285 Mar 20 j 18:01	3° \mathfrak{E} 00'01		conjunction	-277 Jul 15 j 19:13	17° \mathfrak{E} 24'33	7°58'46
max. Earth dist.	-285 Jun 29 j 16:54	4° \mathfrak{E} 49'19	39.11836 AU	minimum elong	-277 Jul 15 j 18:57	17° \mathfrak{E} 24'31	7°58'46
				retrograde	-277 Oct 26 j 02:42	19° \mathfrak{E} 26'50	
conjunction	-285 Jul 02 j 20:05	4° \mathfrak{E} 54'44	4°33'06	opposition	-276 Jan 12 j 10:39	18° \mathfrak{E} 14'35	8°39'31
minimum elong	-285 Jul 02 j 19:56	4° \mathfrak{E} 54'43	4°33'06	min. Earth dist.	-276 Jan 15 j 08:48	18° \mathfrak{E} 10'20	34.94652 AU
retrograde	-285 Oct 12 j 23:29	6° \mathfrak{E} 48'30		direct	-276 Apr 02 j 15:07	16° \mathfrak{E} 59'48	
opposition	-285 Dec 31 j 01:56	5° \mathfrak{E} 39'15	5°01'03	max. Earth dist.	-276 Jul 13 j 11:44	18° \mathfrak{E} 59'05	36.79809 AU
min. Earth dist.	-284 Jan 02 j 20:48	5° \mathfrak{E} 35'25	36.99537 AU				
direct	-284 Mar 21 j 08:55	4° \mathfrak{E} 27'59		conjunction	-276 Jul 16 j 18:54	19° \mathfrak{E} 05'15	8°24'36
max. Earth dist.	-284 Jun 30 j 12:07	6° \mathfrak{E} 18'19	38.85921 AU	minimum elong	-276 Jul 16 j 18:37	19° \mathfrak{E} 05'14	8°24'37
				retrograde	-276 Oct 27 j 04:32	21° \mathfrak{E} 08'45	
conjunction	-284 Jul 03 j 15:08	6° \mathfrak{E} 23'46	4°58'29	opposition	-275 Jan 13 j 08:30	19° \mathfrak{E} 56'07	9°07'00
minimum elong	-284 Jul 03 j 14:58	6° \mathfrak{E} 23'45	4°58'29	min. Earth dist.	-275 Jan 16 j 06:52	19° \mathfrak{E} 51'51	34.69411 AU
retrograde	-284 Oct 13 j 19:07	8° \mathfrak{E} 18'28		direct	-275 Apr 04 j 12:37	18° \mathfrak{E} 40'53	
opposition	-284 Dec 31 j 18:55	7° \mathfrak{E} 08'51	5°27'59	max. Earth dist.	-275 Jul 15 j 11:47	20° \mathfrak{E} 41'26	36.54320 AU
min. Earth dist.	-283 Jan 03 j 14:10	7° \mathfrak{E} 04'58	36.73707 AU				
direct	-283 Mar 23 j 04:08	5° \mathfrak{E} 57'09		conjunction	-275 Jul 18 j 19:30	20° \mathfrak{E} 47'43	8°50'23
max. Earth dist.	-283 Jul 02 j 06:00	7° \mathfrak{E} 48'24	38.59929 AU	minimum elong	-275 Jul 18 j 19:11	20° \mathfrak{E} 47'41	8°50'23
				retrograde	-275 Oct 29 j 03:51	22° \mathfrak{E} 52'25	
conjunction	-283 Jul 05 j 10:33	7° \mathfrak{E} 54'01	5°24'01	opposition	-274 Jan 15 j 07:23	21° \mathfrak{E} 39'24	9°34'25
minimum elong	-283 Jul 05 j 10:22	7° \mathfrak{E} 54'00	5°24'01	min. Earth dist.	-274 Jan 18 j 07:00	21° \mathfrak{E} 35'01	34.44174 AU
retrograde	-283 Oct 15 j 16:38	9° \mathfrak{E} 49'41		direct	-274 Apr 06 j 10:43	20° \mathfrak{E} 23'43	
opposition	-282 Jan 02 j 12:28	8° \mathfrak{E} 39'41	5°55'05	max. Earth dist.	-274 Jul 17 j 12:50	22° \mathfrak{E} 25'33	36.28850 AU
min. Earth dist.	-282 Jan 05 j 08:08	8° \mathfrak{E} 35'45	36.47851 AU				
direct	-282 Mar 24 j 22:25	7° \mathfrak{E} 27'31		conjunction	-274 Jul 20 j 20:37	22° \mathfrak{E} 31'54	9°16'04
max. Earth dist.	-282 Jul 04 j 01:52	9° \mathfrak{E} 19'51	38.33909 AU	minimum elong	-274 Jul 20 j 20:18	22° \mathfrak{E} 31'53	9°16'05
				retrograde	-274 Oct 31 j 05:06	24° \mathfrak{E} 37'51	
conjunction	-282 Jul 07 j 06:37	9° \mathfrak{E} 25'31	5°49'39	opposition	-273 Jan 17 j 06:48	23° \mathfrak{E} 24'26	10°01'46
minimum elong	-282 Jul 07 j 06:25	9° \mathfrak{E} 25'30	5°49'40	min. Earth dist.	-273 Jan 20 j 05:57	23° \mathfrak{E} 20'02	34.18974 AU
retrograde	-282 Oct 17 j 10:40	11° \mathfrak{E} 22'12		direct	-273 Apr 08 j 09:29	22° \mathfrak{E} 08'15	
opposition	-281 Jan 04 j 06:40	10° \mathfrak{E} 11'48	6°22'19	max. Earth dist.	-273 Jul 19 j 13:28	24° \mathfrak{E} 11'19	36.03417 AU
min. Earth dist.	-281 Jan 07 j 03:21	10° \mathfrak{E} 07'47	36.22019 AU				
direct	-281 Mar 26 j 16:51	8° \mathfrak{E} 59'11		conjunction	-273 Jul 22 j 22:28	24° \mathfrak{E} 17'50	9°41'38
max. Earth dist.	-281 Jul 05 j 22:15	10° \mathfrak{E} 52'35	38.07960 AU	minimum elong	-273 Jul 22 j 22:09	24° \mathfrak{E} 17'48	9°41'38
				retrograde	-273 Nov 02 j 07:11	26° \mathfrak{E} 25'03	
conjunction	-281 Jul 09 j 03:05	10° \mathfrak{E} 58'19	6°15'24	opposition	-272 Jan 19 j 07:02	25° \mathfrak{E} 11'12	10°28'58
minimum elong	-281 Jul 09 j 02:52	10° \mathfrak{E} 58'18	6°15'24	min. Earth dist.	-272 Jan 22 j 07:32	25° \mathfrak{E} 06'42	33.93861 AU
retrograde	-281 Oct 19 j 06:01	12° \mathfrak{E} 56'02		direct	-272 Apr 09 j 06:09	23° \mathfrak{E} 54'32	
opposition	-280 Jan 06 j 01:22	11° \mathfrak{E} 45'16	6°49'39	max. Earth dist.	-272 Jul 20 j 16:44	25° \mathfrak{E} 59'00	35.78094 AU
min. Earth dist.	-280 Jan 08 j 21:25	11° \mathfrak{E} 41'15	35.96299 AU				
direct	-280 Mar 27 j 11:00	10° \mathfrak{E} 32'13		conjunction	-272 Jul 24 j 00:57	26° \mathfrak{E} 05'30	10°07'01
max. Earth dist.	-280 Jul 06 j 18:11	12° \mathfrak{E} 26'40	37.82116 AU	minimum elong	-272 Jul 24 j 00:37	26° \mathfrak{E} 05'29	10°07'02
				retrograde	-272 Nov 03 j 09:47	28° \mathfrak{E} 14'00	
conjunction	-280 Jul 10 j 00:04	12° \mathfrak{E} 32'32	6°41'12	opposition	-271 Jan 20 j 07:56	26° \mathfrak{E} 59'43	10°55'59
minimum elong	-280 Jul 09 j 23:51	12° \mathfrak{E} 32'31	6°41'12	min. Earth dist.	-271 Jan 23 j 07:50	26° \mathfrak{E} 55'14	33.68882 AU
retrograde	-280 Oct 20 j 03:13	14° \mathfrak{E} 31'20		direct	-271 Apr 11 j 07:20	25° \mathfrak{E} 42'33	
opposition	-279 Jan 06 j 20:47	13° \mathfrak{E} 20'11	7°17'04	max. Earth dist.	-271 Jul 22 j 18:43	27° \mathfrak{E} 48'17	35.52932 AU
min. Earth dist.	-279 Jan 09 j 18:04	13° \mathfrak{E} 16'05	35.70714 AU				
direct	-279 Mar 29 j 02:47	12° \mathfrak{E} 06'41		conjunction	-271 Jul 26 j 04:07	27° \mathfrak{E} 54'58	10°32'12
max. Earth dist.	-279 Jul 08 j 16:42	14° \mathfrak{E} 02'23	37.56411 AU	minimum elong	-271 Jul 26 j 03:46	27° \mathfrak{E} 54'56	10°32'11
					-271 Oct 19 j 00:31	0° \mathfrak{Q}	
conjunction	-279 Jul 11 j 21:52	14° \mathfrak{E} 08'14	7°07'03	retrograde	-271 Nov 05 j 15:37	0° \mathfrak{Q} 04'46	
minimum elong	-279 Jul 11 j 21:38	14° \mathfrak{E} 08'13	7°07'02		-271 Nov 23 j 08:08	30° \mathfrak{R} \mathfrak{E}	
retrograde	-279 Oct 22 j 01:20	16° \mathfrak{E} 08'10		opposition	-270 Jan 22 j 09:31	28° \mathfrak{E} 50'02	11°22'45
opposition	-278 Jan 08 j 16:37	14° \mathfrak{E} 56'39	7°44'32	min. Earth dist.	-270 Jan 25 j 09:56	28° \mathfrak{E} 45'29	33.44125 AU
min. Earth dist.	-278 Jan 11 j 13:21	14° \mathfrak{E} 52'33	35.45264 AU	direct	-270 Apr 13 j 07:33	27° \mathfrak{E} 32'21	
direct	-278 Mar 30 j 21:48	13° \mathfrak{E} 42'44		max. Earth dist.	-270 Jul 24 j 23:56	29° \mathfrak{E} 39'36	35.28011 AU

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Attention, astronomical year style is used: The year -270 in astronomical counting style is the year 271 BCE in historical counting style.

conjunction	-270 Jul 28 j 08:06	29° 5 46'14	10°57'05			-262 Jul 21 j 06:08	15° Ω		
minimum elong	-270 Jul 28 j 07:45	29° 5 46'12	10°57'06	max. Earth dist.		-262 Aug 10 j 14:41	15° Ω 42'46	33.43207 AU	
	-270 Aug 04 j 06:33	0° Ω							
retrograde	-270 Nov 07 j 19:40	1° Ω 57'21		conjunction		-262 Aug 13 j 19:14	15° Ω 49'38	13°58'58	
opposition	-269 Jan 24 j 12:05	0° Ω 42'11	11°49'14	minimum elong		-262 Aug 13 j 18:51	15° Ω 49'36	13°58'59	
min. Earth dist.	-269 Jan 27 j 12:17	0° Ω 37'37	33.19654 AU	retrograde		-262 Nov 24 j 16:14	18° Ω 12'02		
	-269 Feb 22 j 19:23	30° R Ω		opposition		-261 Feb 09 j 14:44	16° Ω 53'42	15°02'14	
direct	-269 Apr 15 j 10:11	29° 5 24'01		min. Earth dist.		-261 Feb 12 j 11:22	16° Ω 49'09	31.38993 AU	
	-269 Jun 04 j 20:30	0° Ω		direct		-261 May 01 j 01:55	15° Ω 32'00		
max. Earth dist.	-269 Jul 27 j 04:04	1° Ω 32'38	35.03428 AU	max. Earth dist.		-261 Aug 13 j 03:23	17° Ω 52'53	33.21941 AU	
conjunction	-269 Jul 30 j 12:26	1° Ω 39'21	11°21'38	conjunction		-261 Aug 16 j 06:20	17° Ω 59'40	14°18'40	
minimum elong	-269 Jul 30 j 12:04	1° Ω 39'19	11°21'37	minimum elong		-261 Aug 16 j 05:56	17° Ω 59'38	14°18'39	
retrograde	-269 Nov 10 j 02:34	3° Ω 51'50		retrograde		-261 Nov 27 j 03:26	20° Ω 23'28		
opposition	-268 Jan 26 j 15:19	2° Ω 36'14	12°15'20	opposition		-260 Feb 12 j 01:15	19° Ω 04'43	15°23'03	
min. Earth dist.	-268 Jan 29 j 14:45	2° Ω 31'41	32.95570 AU	min. Earth dist.		-260 Feb 14 j 21:42	19° Ω 00'09	31.18249 AU	
direct	-268 Apr 16 j 12:54	1° Ω 17'35		direct		-260 May 02 j 12:02	17° Ω 42'34		
max. Earth dist.	-268 Jul 28 j 10:14	3° Ω 27'42	34.79238 AU	max. Earth dist.		-260 Aug 14 j 15:38	20° Ω 04'54	33.01143 AU	
conjunction	-268 Jul 31 j 17:52	3° Ω 34'26	11°45'47	conjunction		-260 Aug 17 j 18:11	20° Ω 11'43	14°37'28	
minimum elong	-268 Jul 31 j 17:29	3° Ω 34'24	11°45'47	minimum elong		-260 Aug 17 j 17:48	20° Ω 11'41	14°37'28	
retrograde	-268 Nov 11 j 08:16	5° Ω 48'16		retrograde		-260 Nov 28 j 17:42	22° Ω 36'51		
opposition	-267 Jan 27 j 19:23	4° Ω 32'16	12°40'59	opposition		-259 Feb 13 j 12:19	21° Ω 17'42	15°42'52	
min. Earth dist.	-267 Jan 30 j 19:07	4° Ω 27'40	32.71912 AU	min. Earth dist.		-259 Feb 16 j 07:22	21° Ω 13'12	30.97995 AU	
direct	-267 Apr 18 j 16:29	3° Ω 13'10		direct		-259 May 04 j 23:10	19° Ω 55'06		
max. Earth dist.	-267 Jul 30 j 17:08	5° Ω 24'48	34.55509 AU	max. Earth dist.		-259 Aug 17 j 05:33	22° Ω 18'56	32.80860 AU	
conjunction	-267 Aug 03 j 00:00	5° Ω 31'32	12°09'28	conjunction		-259 Aug 20 j 06:56	22° Ω 25'42	14°55'16	
minimum elong	-267 Aug 02 j 23:37	5° Ω 31'30	12°09'27	minimum elong		-259 Aug 20 j 06:34	22° Ω 25'40	14°55'16	
retrograde	-267 Nov 13 j 16:32	7° Ω 46'47		retrograde		-259 Dec 01 j 07:06	24° Ω 52'11		
opposition	-266 Jan 30 j 00:17	6° Ω 30'23	13°06'08	opposition		-258 Feb 16 j 00:34	23° Ω 32'36	16°01'37	
min. Earth dist.	-266 Feb 01 j 22:32	6° Ω 25'51	32.48718 AU	min. Earth dist.		-258 Feb 18 j 19:32	23° Ω 28'05	30.78288 AU	
direct	-266 Apr 20 j 20:30	5° Ω 10'50		direct		-258 May 07 j 10:33	22° Ω 09'34		
max. Earth dist.	-266 Aug 02 j 00:11	7° Ω 23'59	34.32224 AU	max. Earth dist.		-258 Aug 19 j 20:28	24° Ω 34'54	32.61193 AU	
conjunction	-266 Aug 05 j 06:57	7° Ω 30'46	12°32'38	conjunction		-258 Aug 22 j 20:09	24° Ω 41'34	15°12'01	
minimum elong	-266 Aug 05 j 06:33	7° Ω 30'44	12°32'39	minimum elong		-258 Aug 22 j 19:48	24° Ω 41'32	15°12'01	
retrograde	-266 Nov 15 j 22:44	9° Ω 47'27		retrograde		-258 Dec 03 j 22:07	27° Ω 09'21		
opposition	-265 Feb 01 j 06:12	8° Ω 30'41	13°30'43	opposition		-257 Feb 18 j 13:33	25° Ω 49'23	16°19'10	
min. Earth dist.	-265 Feb 04 j 05:04	8° Ω 26'05	32.25973 AU	min. Earth dist.		-257 Feb 21 j 06:14	25° Ω 44'59	30.59223 AU	
direct	-265 Apr 22 j 23:25	7° Ω 10'43		direct		-257 May 09 j 23:41	24° Ω 25'54		
max. Earth dist.	-265 Aug 04 j 09:34	9° Ω 25'28	34.09384 AU	max. Earth dist.		-257 Aug 22 j 11:36	26° Ω 52'41	32.42216 AU	
conjunction	-265 Aug 07 j 14:45	9° Ω 32'12	12°55'13	conjunction		-257 Aug 25 j 10:09	26° Ω 59'18	15°27'35	
minimum elong	-265 Aug 07 j 14:21	9° Ω 32'10	12°55'13	minimum elong		-257 Aug 25 j 09:48	26° Ω 59'16	15°27'34	
retrograde	-265 Nov 18 j 06:39	11° Ω 50'19		retrograde		-257 Dec 06 j 11:42	29° Ω 28'22		
opposition	-264 Feb 03 j 12:53	10° Ω 33'11	13°54'41	opposition		-256 Feb 21 j 03:24	28° Ω 08'00	16°35'26	
min. Earth dist.	-264 Feb 06 j 10:28	10° Ω 28'38	32.03650 AU	min. Earth dist.		-256 Feb 23 j 19:36	28° Ω 03'36	30.40896 AU	
direct	-264 Apr 24 j 04:49	9° Ω 12'47		direct		-256 May 11 j 11:09	26° Ω 44'07		
max. Earth dist.	-264 Aug 05 j 17:33	11° Ω 29'00	33.86944 AU	max. Earth dist.		-256 Aug 24 j 05:05	29° Ω 12'27	32.24042 AU	
conjunction	-264 Aug 08 j 23:19	11° Ω 35'51	13°17'11	conjunction		-256 Aug 27 j 00:50	29° Ω 18'52	15°41'53	
minimum elong	-264 Aug 08 j 22:56	11° Ω 35'49	13°17'12	minimum elong		-256 Aug 27 j 00:32	29° Ω 18'50	15°41'53	
retrograde	-264 Nov 19 j 17:03	13° Ω 55'24				-256 Sep 14 j 08:29	0° \mathbb{M}		
opposition	-263 Feb 04 j 20:35	12° Ω 37'52	14°17'58	retrograde		-256 Dec 08 j 02:45	1° \mathbb{M} 49'11		
min. Earth dist.	-263 Feb 07 j 18:31	12° Ω 33'17	31.81720 AU	opposition		-255 Feb 22 j 18:06	0° \mathbb{M} 28'28	16°50'19	
direct	-263 Apr 26 j 08:50	11° Ω 17'03		min. Earth dist.		-255 Feb 25 j 07:48	0° \mathbb{M} 24'13	30.23372 AU	
max. Earth dist.	-263 Aug 08 j 04:47	13° Ω 34'54	33.64881 AU			-255 Mar 12 j 08:28	30° R Ω		
conjunction	-263 Aug 11 j 08:57	13° Ω 41'40	13°38'27	direct		-255 May 14 j 01:20	29° Ω 04'13		
minimum elong	-263 Aug 11 j 08:33	13° Ω 41'38	13°38'27			-255 Jul 13 j 00:23	0° \mathbb{M}		
	-263 Sep 19 j 04:10	15° Ω		max. Earth dist.		-255 Aug 26 j 21:27	1° \mathbb{M} 33'55	32.06721 AU	
retrograde	-263 Nov 22 j 02:54	16° Ω 02'39		conjunction		-255 Aug 29 j 16:11	1° \mathbb{M} 40'17	15°54'50	
	-262 Jan 28 j 12:41	15° R Ω		minimum elong		-255 Aug 29 j 15:53	1° \mathbb{M} 40'15	15°54'49	
opposition	-262 Feb 07 j 05:11	14° Ω 44'44	14°40'31	retrograde		-255 Dec 10 j 19:24	4° \mathbb{M} 11'52		
min. Earth dist.	-262 Feb 10 j 02:22	14° Ω 40'10	31.60154 AU	opposition		-254 Feb 25 j 09:38	2° \mathbb{M} 50'48	17°03'41	
direct	-262 Apr 28 j 16:49	13° Ω 23'29		min. Earth dist.		-254 Feb 27 j 22:03	2° \mathbb{M} 46'38	30.06720 AU	

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Attention, astronomical year style is used: The year -254 in astronomical counting style is the year 255 BCE in historical counting style.

direct	-254 May 16 j 13:35	1° \mathring{M} 26'15		conjunction	-246 Sep 21 j 12:52	24° \mathring{M} 08'53	16°39'51
max. Earth dist.	-254 Aug 29 j 16:52	3° \mathring{M} 57'30	31.90308 AU	minimum elong	-246 Sep 21 j 12:53	24° \mathring{M} 08'53	16°39'51
				retrograde	-245 Jan 03 j 02:13	26° \mathring{M} 48'47	
conjunction	-254 Sep 01 j 08:19	4° \mathring{M} 03'36	16°06'20	opposition	-245 Mar 20 j 14:43	25° \mathring{M} 25'40	17°46'09
minimum elong	-254 Sep 01 j 08:04	4° \mathring{M} 03'34	16°06'21	min. Earth dist.	-245 Mar 22 j 08:30	25° \mathring{M} 22'43	28.95481 AU
retrograde	-254 Dec 13 j 11:26	6° \mathring{M} 36'23		direct	-245 Jun 08 j 13:03	23° \mathring{M} 59'23	
opposition	-253 Feb 28 j 02:06	5° \mathring{M} 15'03	17°15'30	max. Earth dist.	-245 Sep 22 j 15:41	26° \mathring{M} 40'16	30.82522 AU
min. Earth dist.	-253 Mar 02 j 12:18	5° \mathring{M} 11'01	29.90944 AU				
direct	-253 May 19 j 05:15	3° \mathring{M} 50'14		conjunction	-245 Sep 24 j 08:53	26° \mathring{M} 44'26	16°35'58
max. Earth dist.	-253 Sep 01 j 10:32	6° \mathring{M} 22'46	31.74800 AU	minimum elong	-245 Sep 24 j 08:55	26° \mathring{M} 44'26	16°35'58
				retrograde	-244 Jan 05 j 22:17	29° \mathring{M} 24'46	
conjunction	-253 Sep 04 j 00:49	6° \mathring{M} 28'48	16°16'21	opposition	-244 Mar 22 j 12:33	28° \mathring{M} 01'29	17°41'11
minimum elong	-253 Sep 04 j 00:34	6° \mathring{M} 28'46	16°16'20	min. Earth dist.	-244 Mar 24 j 02:44	27° \mathring{M} 58'47	28.87729 AU
retrograde	-253 Dec 16 j 06:17	9° \mathring{M} 02'46		direct	-244 Jun 10 j 11:54	26° \mathring{M} 35'06	
opposition	-252 Mar 01 j 19:13	7° \mathring{M} 41'10	17°25'40	max. Earth dist.	-244 Sep 24 j 14:15	29° \mathring{M} 16'31	30.75430 AU
min. Earth dist.	-252 Mar 04 j 03:29	7° \mathring{M} 37'15	29.76048 AU				
direct	-252 May 20 j 20:51	6° \mathring{M} 16'06		conjunction	-244 Sep 26 j 05:03	29° \mathring{M} 20'27	16°30'09
max. Earth dist.	-252 Sep 03 j 07:13	8° \mathring{M} 50'05	31.60168 AU	minimum elong	-244 Sep 26 j 05:09	29° \mathring{M} 20'28	16°30'08
					-244 Oct 12 j 15:26	0° \mathring{M}	
conjunction	-252 Sep 05 j 18:17	8° \mathring{M} 55'51	16°24'48	retrograde	-243 Jan 07 j 19:34	2° \mathring{M} 01'08	
minimum elong	-252 Sep 05 j 18:05	8° \mathring{M} 55'49	16°24'48	opposition	-243 Mar 25 j 10:36	0° \mathring{M} 37'43	17°34'07
retrograde	-252 Dec 17 j 23:43	11° \mathring{M} 30'55		min. Earth dist.	-243 Mar 26 j 22:07	0° \mathring{M} 35'13	28.81118 AU
opposition	-251 Mar 04 j 13:09	10° \mathring{M} 09'05	17°34'09		-243 Apr 17 j 10:32	30° \mathring{M}	
min. Earth dist.	-251 Mar 06 j 20:04	10° \mathring{M} 05'15	29.61982 AU	direct	-243 Jun 13 j 08:05	29° \mathring{M} 11'16	
direct	-251 May 23 j 13:31	8° \mathring{M} 43'48			-243 Aug 06 j 15:14	0° \mathring{M}	
max. Earth dist.	-251 Sep 06 j 02:34	11° \mathring{M} 18'58	31.46402 AU	max. Earth dist.	-243 Sep 27 j 15:03	1° \mathring{M} 53'19	30.69546 AU
conjunction	-251 Sep 08 j 12:13	11° \mathring{M} 24'37	16°31'38	conjunction	-243 Sep 29 j 01:26	1° \mathring{M} 56'49	16°22'22
minimum elong	-251 Sep 08 j 12:01	11° \mathring{M} 24'36	16°31'37	minimum elong	-243 Sep 29 j 01:33	1° \mathring{M} 56'49	16°22'22
retrograde	-251 Dec 20 j 20:30	14° \mathring{M} 00'44		retrograde	-242 Jan 10 j 14:50	4° \mathring{M} 37'45	
opposition	-250 Mar 07 j 07:53	12° \mathring{M} 38'40	17°40'52	opposition	-242 Mar 28 j 09:04	3° \mathring{M} 14'15	17°24'55
min. Earth dist.	-250 Mar 09 j 12:13	12° \mathring{M} 35'01	29.48753 AU	min. Earth dist.	-242 Mar 29 j 17:08	3° \mathring{M} 11'59	28.75690 AU
direct	-250 May 26 j 07:40	11° \mathring{M} 13'11		direct	-242 Jun 16 j 06:49	1° \mathring{M} 47'49	
max. Earth dist.	-250 Sep 09 j 00:00	13° \mathring{M} 49'36	31.33479 AU				
				conjunction	-242 Oct 01 j 21:33	4° \mathring{M} 33'25	16°12'38
conjunction	-250 Sep 11 j 06:43	13° \mathring{M} 55'01	16°36'48	minimum elong	-242 Oct 01 j 21:44	4° \mathring{M} 33'26	16°12'37
minimum elong	-250 Sep 11 j 06:36	13° \mathring{M} 55'00	16°36'48	max. Earth dist.	-242 Sep 30 j 13:44	4° \mathring{M} 30'11	30.64904 AU
retrograde	-250 Dec 23 j 15:49	16° \mathring{M} 32'05		retrograde	-241 Jan 13 j 11:39	7° \mathring{M} 14'32	
opposition	-249 Mar 10 j 03:29	15° \mathring{M} 09'47	17°45'46	opposition	-241 Mar 31 j 07:38	5° \mathring{M} 50'59	17°13'36
min. Earth dist.	-249 Mar 12 j 06:40	15° \mathring{M} 06'12	29.36341 AU	min. Earth dist.	-241 Apr 01 j 12:12	5° \mathring{M} 48'58	28.71489 AU
direct	-249 May 29 j 02:57	13° \mathring{M} 44'08		direct	-241 Jun 19 j 04:09	4° \mathring{M} 24'35	
max. Earth dist.	-249 Sep 11 j 20:55	16° \mathring{M} 21'35	31.21429 AU				
				conjunction	-241 Oct 04 j 17:57	7° \mathring{M} 10'11	16°00'56
conjunction	-249 Sep 14 j 01:41	16° \mathring{M} 26'49	16°40'16	minimum elong	-241 Oct 04 j 18:09	7° \mathring{M} 10'12	16°00'56
minimum elong	-249 Sep 14 j 01:34	16° \mathring{M} 26'49	16°40'15	max. Earth dist.	-241 Oct 03 j 14:46	7° \mathring{M} 07'25	30.61508 AU
retrograde	-249 Dec 26 j 12:43	19° \mathring{M} 04'45		retrograde	-240 Jan 16 j 07:17	9° \mathring{M} 51'23	
opposition	-248 Mar 11 j 23:22	17° \mathring{M} 42'15	17°48'48	opposition	-240 Apr 02 j 06:13	8° \mathring{M} 27'50	17°00'11
min. Earth dist.	-248 Mar 13 j 23:26	17° \mathring{M} 38'52	29.24776 AU	min. Earth dist.	-240 Apr 03 j 08:02	8° \mathring{M} 26'00	28.68478 AU
direct	-248 May 30 j 23:31	16° \mathring{M} 16'24		direct	-240 Jun 21 j 02:02	7° \mathring{M} 01'32	
max. Earth dist.	-248 Sep 13 j 18:52	18° \mathring{M} 54'52	31.10254 AU				
				conjunction	-240 Oct 06 j 14:07	9° \mathring{M} 46'59	15°47'20
conjunction	-248 Sep 15 j 21:11	18° \mathring{M} 59'53	16°41'57	minimum elong	-240 Oct 06 j 14:22	9° \mathring{M} 47'00	15°47'20
minimum elong	-248 Sep 15 j 21:08	18° \mathring{M} 59'52	16°41'57	max. Earth dist.	-240 Oct 05 j 13:24	9° \mathring{M} 44'28	30.59326 AU
retrograde	-248 Dec 28 j 08:40	21° \mathring{M} 38'34		retrograde	-239 Jan 18 j 04:56	12° \mathring{M} 28'10	
opposition	-247 Mar 14 j 20:05	20° \mathring{M} 15'51	17°49'55	opposition	-239 Apr 05 j 04:54	11° \mathring{M} 04'39	16°44'43
min. Earth dist.	-247 Mar 16 j 19:00	20° \mathring{M} 12'33	29.14073 AU	min. Earth dist.	-239 Apr 06 j 02:47	11° \mathring{M} 03'07	28.66635 AU
direct	-247 Jun 02 j 18:47	18° \mathring{M} 49'51		direct	-239 Jun 23 j 23:54	9° \mathring{M} 38'28	
max. Earth dist.	-247 Sep 16 j 17:26	21° \mathring{M} 29'13	31.00008 AU				
				conjunction	-239 Oct 09 j 10:16	12° \mathring{M} 23'41	15°31'52
conjunction	-247 Sep 18 j 16:53	21° \mathring{M} 33'58	16°41'50	minimum elong	-239 Oct 09 j 10:31	12° \mathring{M} 23'43	15°31'52
minimum elong	-247 Sep 18 j 16:50	21° \mathring{M} 33'58	16°41'50	max. Earth dist.	-239 Oct 08 j 13:52	12° \mathring{M} 21'37	30.58304 AU
retrograde	-247 Dec 31 j 06:33	24° \mathring{M} 13'18		retrograde	-238 Jan 21 j 00:16	15° \mathring{M} 04'46	
opposition	-246 Mar 17 j 17:09	22° \mathring{M} 50'23	17°49'03	opposition	-238 Apr 08 j 03:48	13° \mathring{M} 41'18	16°27'16
min. Earth dist.	-246 Mar 19 j 12:39	22° \mathring{M} 47'19	29.04281 AU	min. Earth dist.	-238 Apr 08 j 23:22	13° \mathring{M} 39'56	28.65902 AU
direct	-246 Jun 05 j 17:04	21° \mathring{M} 24'14		direct	-238 Jun 26 j 23:00	12° \mathring{M} 15'18	
max. Earth dist.	-246 Sep 19 j 15:50	24° \mathring{M} 04'21	30.90733 AU				
				conjunction	-238 Oct 12 j 06:08	15° \mathring{M} 00'09	15°14'35

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Attention, astronomical year style is used: The year -238 in astronomical counting style is the year 239 BCE in historical counting style.

minimum elong	-238 Oct 12 j 06:26	15° $\underline{\text{A}}$ 00'10	15°14'35	minimum elong	-230 Nov 01 j 07:42	5° M 21'28	11°59'39
max. Earth dist.	-238 Oct 11 j 12:20	14° $\underline{\text{A}}$ 58'20	30.58413 AU	max. Earth dist.	-230 Nov 01 j 17:05	5° M 22'24	30.97572 AU
retrograde	-237 Jan 23 j 21:45	17° $\underline{\text{A}}$ 41'01		retrograde	-229 Feb 12 j 22:13	7° M 57'16	
opposition	-237 Apr 11 j 02:24	16° $\underline{\text{A}}$ 17'37	16°07'53	opposition	-229 May 02 j 04:42	6° M 34'57	12°32'57
min. Earth dist.	-237 Apr 11 j 17:48	16° $\underline{\text{A}}$ 16'32	28.66256 AU	min. Earth dist.	-229 May 01 j 18:42	6° M 35'38	29.06813 AU
direct	-237 Jun 29 j 21:59	14° $\underline{\text{A}}$ 51'47		direct	-229 Jul 21 j 05:50	5° M 11'08	
max. Earth dist.	-237 Oct 14 j 11:47	17° $\underline{\text{A}}$ 34'44	30.59598 AU				
conjunction	-237 Oct 15 j 01:51	17° $\underline{\text{A}}$ 36'10	14°55'34	conjunction	-229 Nov 03 j 22:47	7° M 48'18	11°29'22
minimum elong	-237 Oct 15 j 02:09	17° $\underline{\text{A}}$ 36'12	14°55'34	minimum elong	-229 Nov 03 j 23:11	7° M 48'20	11°29'22
retrograde	-236 Jan 26 j 17:12	20° $\underline{\text{A}}$ 16'43		max. Earth dist.	-229 Nov 04 j 10:56	7° M 49'29	31.07476 AU
opposition	-236 Apr 13 j 01:04	18° $\underline{\text{A}}$ 53'24	15°46'40	retrograde	-228 Feb 15 j 15:00	10° M 23'13	
min. Earth dist.	-236 Apr 13 j 14:28	18° $\underline{\text{A}}$ 52'28	28.67650 AU	opposition	-228 May 03 j 23:38	9° M 01'09	11°59'54
direct	-236 Jul 01 j 19:57	17° $\underline{\text{A}}$ 27'46		min. Earth dist.	-228 May 03 j 09:23	9° M 02'08	29.16886 AU
conjunction	-236 Oct 16 j 21:14	20° $\underline{\text{A}}$ 11'34	14°34'52	direct	-228 Jul 23 j 00:08	7° M 37'42	
minimum elong	-236 Oct 16 j 21:35	20° $\underline{\text{A}}$ 11'36	14°34'51	conjunction	-228 Nov 05 j 13:47	10° M 13'41	10°58'04
max. Earth dist.	-236 Oct 16 j 10:06	20° $\underline{\text{A}}$ 10'26	30.61842 AU	minimum elong	-228 Nov 05 j 14:11	10° M 13'44	10°58'03
retrograde	-235 Jan 28 j 14:03	22° $\underline{\text{A}}$ 51'42		max. Earth dist.	-228 Nov 06 j 06:14	10° M 15'18	31.18476 AU
opposition	-235 Apr 15 j 23:16	21° $\underline{\text{A}}$ 28'29	15°23'40	retrograde	-227 Feb 17 j 03:41	12° M 47'40	
min. Earth dist.	-235 Apr 16 j 08:36	21° $\underline{\text{A}}$ 27'50	28.70060 AU	opposition	-227 May 06 j 18:05	11° M 25'53	11°25'49
direct	-235 Jul 04 j 20:24	20° $\underline{\text{A}}$ 03'03		min. Earth dist.	-227 May 06 j 01:32	11° M 27'00	29.28027 AU
conjunction	-235 Oct 19 j 16:19	22° $\underline{\text{A}}$ 46'10	14°12'35	direct	-227 Jul 25 j 18:59	10° M 02'49	
minimum elong	-235 Oct 19 j 16:40	22° $\underline{\text{A}}$ 46'12	14°12'35	conjunction	-227 Nov 08 j 04:03	12° M 37'35	10°25'52
max. Earth dist.	-235 Oct 19 j 08:23	22° $\underline{\text{A}}$ 45'22	30.65108 AU	minimum elong	-227 Nov 08 j 04:26	12° M 37'38	10°25'52
retrograde	-234 Jan 31 j 09:13	25° $\underline{\text{A}}$ 25'47		max. Earth dist.	-227 Nov 08 j 22:46	12° M 39'24	31.30517 AU
opposition	-234 Apr 18 j 21:27	24° $\underline{\text{A}}$ 02'40	14°58'58	retrograde	-226 Jan 25 j 21:21	15° M	
min. Earth dist.	-234 Apr 19 j 04:30	24° $\underline{\text{A}}$ 02'11	28.73493 AU		-226 Feb 19 j 18:47	15° M 10'34	
direct	-234 Jul 07 j 18:25	22° $\underline{\text{A}}$ 37'28			-226 Mar 17 j 08:37	15° R M	
conjunction	-234 Oct 22 j 10:49	25° $\underline{\text{A}}$ 19'46	13°48'45	opposition	-226 May 09 j 11:51	13° M 49'04	10°50'51
minimum elong	-234 Oct 22 j 11:12	25° $\underline{\text{A}}$ 19'49	13°48'44	min. Earth dist.	-226 May 08 j 15:10	13° M 50'28	29.40181 AU
max. Earth dist.	-234 Oct 22 j 06:26	25° $\underline{\text{A}}$ 19'20	30.69423 AU	direct	-226 Jul 28 j 12:33	12° M 26'25	
retrograde	-233 Feb 03 j 03:43	27° $\underline{\text{A}}$ 58'47		conjunction	-226 Nov 10 j 17:42	14° M 59'56	9°52'53
opposition	-233 Apr 21 j 19:05	26° $\underline{\text{A}}$ 35'47	14°32'39	minimum elong	-226 Nov 10 j 18:04	14° M 59'58	9°52'52
min. Earth dist.	-233 Apr 21 j 22:13	26° $\underline{\text{A}}$ 35'34	28.77947 AU		-226 Nov 10 j 18:26	15° M	
direct	-233 Jul 10 j 17:53	25° $\underline{\text{A}}$ 10'48		max. Earth dist.	-226 Nov 11 j 16:06	15° M 02'05	31.43508 AU
conjunction	-233 Oct 25 j 04:49	27° $\underline{\text{A}}$ 52'13	13°23'28	retrograde	-225 Feb 22 j 07:49	17° M 31'53	
minimum elong	-233 Oct 25 j 05:12	27° $\underline{\text{A}}$ 52'15	13°23'28	min. Earth dist.	-225 May 11 j 06:33	16° M 12'12	29.53264 AU
max. Earth dist.	-233 Oct 25 j 03:10	27° $\underline{\text{A}}$ 52'03	30.74779 AU	opposition	-225 May 12 j 05:05	16° M 10'41	10°15'05
retrograde	-233 Dec 25 j 23:48	0° M		direct	-225 Jul 04 j 02:45	15° R M	
opposition	-232 Feb 05 j 22:38	0° M 30'31			-225 Jul 31 j 04:23	14° M 48'26	
min. Earth dist.	-232 Apr 23 j 16:09	29° $\underline{\text{A}}$ 07'39	14°04'49		-225 Aug 26 j 20:09	15° M	
direct	-232 Apr 23 j 16:28	29° $\underline{\text{A}}$ 07'38	28.83472 AU	conjunction	-225 Nov 13 j 06:46	17° M 20'39	9°19'13
retrograde	-232 Jul 12 j 15:08	27° $\underline{\text{A}}$ 42'55		minimum elong	-225 Nov 13 j 07:07	17° M 20'41	9°19'13
conjunction	-232 Oct 17 j 03:12	0° M		max. Earth dist.	-225 Nov 14 j 07:33	17° M 23'02	31.57384 AU
minimum elong	-232 Oct 26 j 22:20	0° M 23'22	12°56'48	retrograde	-224 Feb 24 j 21:38	19° M 51'32	
max. Earth dist.	-232 Oct 26 j 22:44	0° M 23'24	12°56'47	opposition	-224 May 13 j 21:20	18° M 30'38	9°38'41
retrograde	-231 Feb 07 j 15:06	3° M 00'54		min. Earth dist.	-224 May 12 j 19:13	18° M 32'22	29.67194 AU
opposition	-231 Apr 26 j 12:53	1° M 38'11	13°35'31	direct	-224 Aug 01 j 23:09	17° M 08'47	
min. Earth dist.	-231 Apr 26 j 09:41	1° M 38'24	28.90094 AU	conjunction	-224 Nov 14 j 19:11	19° M 39'41	8°45'00
direct	-231 Jul 15 j 13:46	0° M 13'43		minimum elong	-224 Nov 14 j 19:32	19° M 39'43	8°44'59
conjunction	-231 Oct 29 j 14:59	2° M 53'07	12°28'50	max. Earth dist.	-224 Nov 15 j 22:36	19° M 42'18	31.72050 AU
minimum elong	-231 Oct 29 j 15:23	2° M 53'09	12°28'50	retrograde	-223 Feb 26 j 11:08	22° M 09'28	
max. Earth dist.	-231 Oct 29 j 20:10	2° M 53'38	30.88820 AU	min. Earth dist.	-223 May 15 j 09:05	20° M 50'43	29.81918 AU
retrograde	-230 Feb 10 j 07:46	5° M 29'50		opposition	-223 May 16 j 13:15	20° M 48'51	9°01'43
opposition	-230 Apr 29 j 09:07	4° M 07'17	13°04'52	direct	-223 Aug 04 j 14:55	19° M 27'25	
min. Earth dist.	-230 Apr 29 j 02:08	4° M 07'46	28.97877 AU	conjunction	-223 Nov 17 j 06:50	21° M 56'57	8°10'18
direct	-230 Jul 18 j 09:35	2° M 43'07		minimum elong	-223 Nov 17 j 07:10	21° M 56'59	8°10'18
conjunction	-230 Nov 01 j 07:18	5° M 21'26	11°59'39	max. Earth dist.	-223 Nov 18 j 13:01	21° M 59'48	31.87467 AU
				retrograde	-222 Feb 28 j 22:08	24° M 25'35	
				min. Earth dist.	-222 May 17 j 21:18	23° M 07'18	29.97365 AU
				opposition	-222 May 19 j 04:20	23° M 05'16	8°24'20
				direct	-222 Aug 07 j 08:04	21° M 44'12	

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Attention, astronomical year style is used: The year -222 in astronomical counting style is the year 223 BCE in historical counting style.

conjunction	-222 Nov 19 j 17:47	24°♌12'21	7°35'13	conjunction	-214 Dec 06 j 06:16	11°♏07'14	2°50'07
minimum elong	-222 Nov 19 j 18:05	24°♌12'23	7°35'12	minimum elong	-214 Dec 06 j 06:23	11°♏07'14	2°50'06
max. Earth dist.	-222 Nov 21 j 01:43	24°♌15'21	32.03572 AU	max. Earth dist.	-214 Dec 08 j 09:52	11°♏11'46	33.57753 AU
retrograde	-221 Mar 03 j 09:46	26°♌39'48		retrograde	-213 Mar 19 j 19:21	13°♏25'18	
min. Earth dist.	-221 May 20 j 09:06	25°♌21'57	30.13528 AU	min. Earth dist.	-213 Jun 06 j 04:15	12°♏11'07	31.68855 AU
opposition	-221 May 21 j 18:35	25°♌19'46	7°46'35	opposition	-213 Jun 08 j 08:55	12°♏07'50	2°42'04
direct	-221 Aug 09 j 22:54	23°♌59'05		direct	-213 Aug 27 j 18:08	10°♏50'27	
conjunction	-221 Nov 22 j 04:04	26°♌25'50	6°59'50	conjunction	-213 Dec 08 j 10:42	13°♏06'22	2°14'58
minimum elong	-221 Nov 22 j 04:21	26°♌25'52	6°59'50	minimum elong	-213 Dec 08 j 10:48	13°♏06'23	2°14'58
max. Earth dist.	-221 Nov 23 j 15:14	26°♌29'06	32.20364 AU	max. Earth dist.	-213 Dec 10 j 15:21	13°♏10'57	33.79874 AU
retrograde	-220 Mar 04 j 18:40	28°♌52'04		retrograde	-212 Mar 21 j 01:11	15°♏23'20	
min. Earth dist.	-220 May 21 j 20:33	27°♌34'37	30.30375 AU	min. Earth dist.	-212 Jun 07 j 09:42	14°♏09'37	31.91115 AU
opposition	-220 May 23 j 08:04	27°♌32'18	7°08'35	opposition	-212 Jun 09 j 16:27	14°♏06'13	2°04'47
direct	-220 Aug 11 j 15:22	26°♌12'00		direct	-212 Aug 29 j 01:55	12°♏49'17	
conjunction	-220 Nov 23 j 13:18	28°♌37'20	6°24'14	conjunction	-212 Dec 09 j 14:37	15°♏03'57	1°40'07
minimum elong	-220 Nov 23 j 13:34	28°♌37'21	6°24'13	minimum elong	-212 Dec 09 j 14:41	15°♏03'57	1°40'06
max. Earth dist.	-220 Nov 25 j 01:57	28°♌40'43	32.37833 AU	max. Earth dist.	-212 Dec 11 j 21:54	15°♏08'44	34.02408 AU
retrograde	-219 Jan 02 j 06:47	0°♏		retrograde	-211 Mar 23 j 03:53	17°♏19'48	
retrograde	-219 Mar 07 j 04:13	1°♏02'22		min. Earth dist.	-211 Jun 09 j 15:40	16°♏06'29	32.13759 AU
min. Earth dist.	-219 May 14 j 18:09	30°♌		opposition	-211 Jun 11 j 23:21	16°♏03'03	1°27'53
min. Earth dist.	-219 May 24 j 05:54	29°♌45'23	30.47956 AU	direct	-211 Aug 31 j 11:31	14°♏46'32	
opposition	-219 May 25 j 20:46	29°♌42'52	6°30'25				
direct	-219 Aug 14 j 04:26	28°♌22'55		conjunction	-211 Dec 11 j 17:53	16°♏59'56	1°05'37
	-219 Nov 04 j 04:41	0°♏		minimum elong	-211 Dec 11 j 17:55	16°♏59'57	1°05'38
conjunction	-219 Nov 25 j 21:59	0°♏46'51	5°48'30	max. Earth dist.	-211 Dec 14 j 01:35	17°♏04'43	34.25278 AU
minimum elong	-219 Nov 25 j 22:14	0°♏46'52	5°48'30	retrograde	-210 Mar 25 j 07:57	19°♏14'42	
max. Earth dist.	-219 Nov 27 j 14:15	0°♏50'32	32.56027 AU	min. Earth dist.	-210 Jun 11 j 19:18	18°♏01'52	32.36741 AU
retrograde	-218 Mar 09 j 10:01	3°♏10'41		opposition	-210 Jun 14 j 05:28	17°♏58'17	0°51'25
min. Earth dist.	-218 May 26 j 16:14	1°♏54'05	30.66295 AU	direct	-210 Sep 02 j 17:47	16°♏42'10	
opposition	-218 May 28 j 08:48	1°♏51'28	5°52'09	conjunction	-210 Dec 13 j 20:37	18°♏54'20	0°31'32
direct	-218 Aug 16 j 17:49	0°♏31'55		minimum elong	-210 Dec 13 j 20:38	18°♏54'20	0°31'31
conjunction	-218 Nov 28 j 05:44	2°♏54'26	5°12'41	max. Earth dist.	-210 Dec 16 j 06:35	18°♏59'16	34.48426 AU
minimum elong	-218 Nov 28 j 05:57	2°♏54'27	5°12'40	retrograde	-209 Mar 27 j 07:42	21°♏07'59	
max. Earth dist.	-218 Nov 29 j 23:32	2°♏58'14	32.74973 AU	min. Earth dist.	-209 Jun 14 j 00:33	19°♏55'28	32.59994 AU
retrograde	-217 Mar 11 j 17:52	5°♏17'05		opposition	-209 Jun 16 j 11:00	19°♏51'54	0°15'25
min. Earth dist.	-217 May 28 j 23:39	4°♏01'01	30.85410 AU	direct	-209 Sep 05 j 00:37	18°♏36'10	
opposition	-217 May 30 j 19:52	3°♏58'11	5°13'52	desc. node	-209 Nov 22 j 06:42	20°♏00'08	
direct	-217 Aug 19 j 04:51	2°♏39'02		conjunction	-209 Dec 15 j 22:40	20°♏47'04	0°-2'-12
conjunction	-217 Nov 30 j 12:57	5°♏00'11	4°36'53	minimum elong	-209 Dec 15 j 22:41	20°♏47'04	0°02'13
minimum elong	-217 Nov 30 j 13:08	5°♏00'12	4°36'53	behind sun begin	-209 Dec 15 j 16:20	20°♏46'34	
max. Earth dist.	-217 Dec 02 j 09:55	5°♏04'14	32.94657 AU	behind sun end	-209 Dec 16 j 05:02	20°♏47'35	
retrograde	-216 Mar 12 j 23:57	7°♏21'40		max. Earth dist.	-209 Dec 18 j 09:08	20°♏52'01	34.71820 AU
min. Earth dist.	-216 May 30 j 08:32	6°♏06'00	31.05279 AU	retrograde	-208 Mar 28 j 09:06	22°♏59'37	
opposition	-216 Jun 01 j 06:12	6°♏03'06	4°35'39	min. Earth dist.	-208 Jun 15 j 02:51	21°♏47'31	32.83503 AU
direct	-216 Aug 20 j 14:29	4°♏44'22		opposition	-208 Jun 17 j 15:33	21°♏43'50	0°-20'-4
conjunction	-216 Dec 01 j 19:26	7°♏04'11	4°01'08	direct	-208 Sep 06 j 05:29	20°♏28'28	
minimum elong	-216 Dec 01 j 19:35	7°♏04'12	4°01'07	conjunction	-208 Dec 17 j 00:03	22°♏38'08	0°-35'-22
max. Earth dist.	-216 Dec 03 j 18:20	7°♏08'23	33.15065 AU	minimum elong	-208 Dec 17 j 00:02	22°♏38'08	0°35'24
retrograde	-215 Mar 15 j 07:01	9°♏24'31		max. Earth dist.	-208 Dec 19 j 12:15	22°♏43'11	34.95455 AU
min. Earth dist.	-215 Jun 01 j 14:53	8°♏09'24	31.25854 AU	retrograde	-207 Mar 30 j 10:33	24°♏49'36	
opposition	-215 Jun 03 j 15:49	8°♏06'18	3°57'33	min. Earth dist.	-207 Jun 17 j 06:18	23°♏37'48	33.07307 AU
direct	-215 Aug 23 j 01:06	6°♏48'01		opposition	-207 Jun 19 j 19:43	23°♏34'05	0°-55'-2
conjunction	-215 Dec 04 j 01:03	9°♏06'31	3°25'31	direct	-207 Sep 08 j 08:19	22°♏19'04	
minimum elong	-215 Dec 04 j 01:12	9°♏06'31	3°25'32	conjunction	-207 Dec 19 j 00:45	24°♏27'30	-1°-8'-5
max. Earth dist.	-215 Dec 06 j 02:17	9°♏10'52	33.36115 AU	minimum elong	-207 Dec 19 j 00:43	24°♏27'30	1°08'06
retrograde	-214 Mar 17 j 14:43	11°♏25'43		max. Earth dist.	-207 Dec 21 j 14:35	24°♏32'39	35.19386 AU
min. Earth dist.	-214 Jun 03 j 22:12	10°♏11'03	31.47079 AU	retrograde	-206 Apr 01 j 11:12	26°♏37'53	
opposition	-214 Jun 06 j 00:52	10°♏07'52	3°19'41	min. Earth dist.	-206 Jun 19 j 07:45	25°♏26'28	33.31428 AU
direct	-214 Aug 25 j 08:46	8°♏50'02		opposition	-206 Jun 21 j 23:01	25°♏22'40	-1°-29'-26
				direct	-206 Sep 10 j 13:16	24°♏07'59	

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Attention, astronomical year style is used: The year -206 in astronomical counting style is the year 207 BCE in historical counting style.

conjunction	-206 Dec 21 j 00:49	26° $\overline{\text{A}}$ 15'14	-1°-40'-17	direct	-198 Sep 24 j 18:08	7° $\overline{\text{B}}$ 48'33	
minimum elong	-206 Dec 21 j 00:45	26° $\overline{\text{A}}$ 15'14	1°40'19				
max. Earth dist.	-206 Dec 23 j 15:34	26° $\overline{\text{A}}$ 20'25	35.43631 AU	conjunction	-197 Jan 03 j 07:11	9° $\overline{\text{B}}$ 47'28	-5°-36'-59
retrograde	-205 Apr 03 j 13:34	28° $\overline{\text{A}}$ 24'33		minimum elong	-197 Jan 03 j 07:01	9° $\overline{\text{B}}$ 47'27	5°37'00
min. Earth dist.	-205 Jun 21 j 08:40	27° $\overline{\text{A}}$ 13'30	33.55917 AU	max. Earth dist.	-197 Jan 06 j 07:01	9° $\overline{\text{B}}$ 53'02	37.46707 AU
opposition	-205 Jun 24 j 01:35	27° $\overline{\text{A}}$ 09'37	-2°-3'-14	retrograde	-197 Apr 16 j 19:14	11° $\overline{\text{B}}$ 49'17	
direct	-205 Sep 12 j 14:44	25° $\overline{\text{A}}$ 55'18		min. Earth dist.	-197 Jul 05 j 02:06	10° $\overline{\text{B}}$ 41'04	35.60546 AU
				opposition	-197 Jul 08 j 02:04	10° $\overline{\text{B}}$ 36'57	-6°-10'-19
conjunction	-205 Dec 23 j 00:27	28° $\overline{\text{A}}$ 01'24	-2°-11'-56	direct	-197 Sep 26 j 17:57	9° $\overline{\text{B}}$ 25'35	
minimum elong	-205 Dec 23 j 00:23	28° $\overline{\text{A}}$ 01'24	2°11'57				
max. Earth dist.	-205 Dec 25 j 17:30	28° $\overline{\text{A}}$ 06'43	35.68231 AU	conjunction	-196 Jan 05 j 02:57	11° $\overline{\text{B}}$ 23'33	-6°-3'-49
	-204 Mar 09 j 09:01	0° $\overline{\text{B}}$		minimum elong	-196 Jan 05 j 02:47	11° $\overline{\text{B}}$ 23'32	6°03'49
retrograde	-204 Apr 04 j 12:07	0° $\overline{\text{B}}$ 09'41		max. Earth dist.	-196 Jan 08 j 02:04	11° $\overline{\text{B}}$ 29'03	37.72316 AU
	-204 May 01 j 01:46	30° $\overline{\text{R}}$ $\overline{\text{A}}$		retrograde	-196 Apr 17 j 14:41	13° $\overline{\text{B}}$ 24'30	
min. Earth dist.	-204 Jun 22 j 09:50	28° $\overline{\text{A}}$ 58'58	33.80755 AU	min. Earth dist.	-196 Jul 05 j 22:27	12° $\overline{\text{B}}$ 16'38	35.86283 AU
opposition	-204 Jun 25 j 03:37	28° $\overline{\text{A}}$ 55'04	-2°-36'-26	opposition	-196 Jul 08 j 23:45	12° $\overline{\text{B}}$ 12'27	-6°-38'-9
direct	-204 Sep 13 j 18:10	27° $\overline{\text{A}}$ 41'06		direct	-196 Sep 27 j 16:47	11° $\overline{\text{B}}$ 01'24	
conjunction	-204 Dec 23 j 23:15	29° $\overline{\text{A}}$ 46'06	-2°-43'-2	conjunction	-195 Jan 05 j 22:09	12° $\overline{\text{B}}$ 58'26	-6°-30'-1
minimum elong	-204 Dec 23 j 23:09	29° $\overline{\text{A}}$ 46'05	2°43'04	minimum elong	-195 Jan 05 j 21:58	12° $\overline{\text{B}}$ 58'26	6°30'02
max. Earth dist.	-204 Dec 26 j 16:44	29° $\overline{\text{A}}$ 51'25	35.93163 AU	max. Earth dist.	-195 Jan 08 j 22:44	13° $\overline{\text{B}}$ 04'00	37.97828 AU
	-204 Dec 31 j 02:48	0° $\overline{\text{B}}$		retrograde	-195 Apr 19 j 08:12	14° $\overline{\text{B}}$ 58'33	
retrograde	-203 Apr 06 j 11:03	1° $\overline{\text{B}}$ 53'23		min. Earth dist.	-195 Jul 07 j 20:19	13° $\overline{\text{B}}$ 50'53	36.11945 AU
min. Earth dist.	-203 Jun 24 j 08:53	0° $\overline{\text{B}}$ 43'06	34.05938 AU	opposition	-195 Jul 10 j 21:02	13° $\overline{\text{B}}$ 46'45	-7°-5'-19
opposition	-203 Jun 27 j 05:04	0° $\overline{\text{B}}$ 39'04	-3°-8'-59	direct	-195 Sep 29 j 15:46	12° $\overline{\text{B}}$ 36'00	
	-203 Jul 26 j 03:58	30° $\overline{\text{R}}$ $\overline{\text{A}}$					
direct	-203 Sep 15 j 20:09	29° $\overline{\text{A}}$ 25'30		conjunction	-194 Jan 07 j 16:59	14° $\overline{\text{B}}$ 32'07	-6°-55'-35
	-203 Nov 04 j 07:04	0° $\overline{\text{B}}$		minimum elong	-194 Jan 07 j 16:48	14° $\overline{\text{B}}$ 32'06	6°55'36
				max. Earth dist.	-194 Jan 10 j 17:32	14° $\overline{\text{B}}$ 37'38	38.23291 AU
conjunction	-203 Dec 25 j 21:45	1° $\overline{\text{B}}$ 29'24	-3°-13'-33	retrograde	-194 Apr 21 j 02:05	16° $\overline{\text{B}}$ 31'22	
minimum elong	-203 Dec 25 j 21:39	1° $\overline{\text{B}}$ 29'24	3°13'33	min. Earth dist.	-194 Jul 09 j 15:22	15° $\overline{\text{B}}$ 24'02	36.37583 AU
max. Earth dist.	-203 Dec 28 j 17:37	1° $\overline{\text{B}}$ 34'52	36.18397 AU	opposition	-194 Jul 12 j 17:31	15° $\overline{\text{B}}$ 19'50	-7°-31'-48
retrograde	-202 Apr 08 j 07:32	3° $\overline{\text{B}}$ 35'43		direct	-194 Oct 01 j 13:11	14° $\overline{\text{B}}$ 09'23	
min. Earth dist.	-202 Jun 26 j 09:32	2° $\overline{\text{B}}$ 25'47	34.31409 AU				
opposition	-202 Jun 29 j 05:58	2° $\overline{\text{B}}$ 21'45	-3°-40'-53	conjunction	-193 Jan 09 j 11:16	16° $\overline{\text{B}}$ 04'35	-7°-20'-31
direct	-202 Sep 17 j 22:55	1° $\overline{\text{B}}$ 08'33		minimum elong	-193 Jan 09 j 11:04	16° $\overline{\text{B}}$ 04'35	7°20'33
				max. Earth dist.	-193 Jan 12 j 12:29	16° $\overline{\text{B}}$ 10'08	38.48736 AU
conjunction	-202 Dec 27 j 19:41	3° $\overline{\text{B}}$ 11'24	-3°-43'-27	retrograde	-193 Apr 22 j 21:21	18° $\overline{\text{B}}$ 03'03	
minimum elong	-202 Dec 27 j 19:33	3° $\overline{\text{B}}$ 11'24	3°43'29	min. Earth dist.	-193 Jul 11 j 11:31	16° $\overline{\text{B}}$ 55'56	36.63246 AU
max. Earth dist.	-202 Dec 30 j 15:54	3° $\overline{\text{B}}$ 16'52	36.43879 AU	opposition	-193 Jul 14 j 13:42	16° $\overline{\text{B}}$ 51'46	-7°-57'-35
retrograde	-201 Apr 10 j 05:21	5° $\overline{\text{B}}$ 16'47		direct	-193 Oct 03 j 08:18	15° $\overline{\text{B}}$ 41'37	
min. Earth dist.	-201 Jun 28 j 07:43	4° $\overline{\text{B}}$ 07'17	34.57096 AU				
opposition	-201 Jul 01 j 06:10	4° $\overline{\text{B}}$ 03'09	-4°-12'-7	conjunction	-192 Jan 11 j 05:13	17° $\overline{\text{B}}$ 35'57	-7°-44'-49
direct	-201 Sep 19 j 23:31	2° $\overline{\text{B}}$ 50'21		minimum elong	-192 Jan 11 j 05:01	17° $\overline{\text{B}}$ 35'56	7°44'50
				max. Earth dist.	-192 Jan 14 j 07:31	17° $\overline{\text{B}}$ 41'32	38.74218 AU
conjunction	-201 Dec 29 j 17:08	4° $\overline{\text{B}}$ 52'10	-4°-12'-46	retrograde	-192 Apr 23 j 16:14	19° $\overline{\text{B}}$ 33'36	
minimum elong	-201 Dec 29 j 17:00	4° $\overline{\text{B}}$ 52'10	4°12'47	min. Earth dist.	-192 Jul 12 j 06:24	18° $\overline{\text{B}}$ 26'47	36.88941 AU
max. Earth dist.	-200 Jan 01 j 14:39	4° $\overline{\text{B}}$ 57'42	36.69514 AU	opposition	-192 Jul 15 j 09:13	18° $\overline{\text{B}}$ 22'35	-8°-22'-40
retrograde	-200 Apr 11 j 03:12	6° $\overline{\text{B}}$ 56'39		direct	-192 Oct 04 j 02:52	17° $\overline{\text{B}}$ 12'44	
min. Earth dist.	-200 Jun 29 j 07:24	5° $\overline{\text{B}}$ 47'28	34.82931 AU				
opposition	-200 Jul 02 j 05:56	5° $\overline{\text{B}}$ 43'21	-4°-42'-41	conjunction	-191 Jan 11 j 22:39	19° $\overline{\text{B}}$ 06'15	-8°-8'-27
direct	-200 Sep 20 j 22:25	4° $\overline{\text{B}}$ 30'56		minimum elong	-191 Jan 11 j 22:27	19° $\overline{\text{B}}$ 06'14	8°08'28
				max. Earth dist.	-191 Jan 15 j 00:48	19° $\overline{\text{B}}$ 11'46	38.99741 AU
conjunction	-200 Dec 30 j 14:17	6° $\overline{\text{B}}$ 31'46	-4°-41'-27	retrograde	-191 Apr 25 j 11:37	21° $\overline{\text{B}}$ 03'07	
minimum elong	-200 Dec 30 j 14:08	6° $\overline{\text{B}}$ 31'45	4°41'29	min. Earth dist.	-191 Jul 14 j 00:29	19° $\overline{\text{B}}$ 56'37	37.14698 AU
max. Earth dist.	-199 Jan 02 j 12:46	6° $\overline{\text{B}}$ 37'19	36.95255 AU	opposition	-191 Jul 17 j 04:28	19° $\overline{\text{B}}$ 52'24	-8°-47'-3
retrograde	-199 Apr 13 j 01:05	8° $\overline{\text{B}}$ 35'21		direct	-191 Oct 05 j 20:15	18° $\overline{\text{B}}$ 42'51	
min. Earth dist.	-199 Jul 01 j 05:38	7° $\overline{\text{B}}$ 26'31	35.08826 AU				
opposition	-199 Jul 04 j 05:10	7° $\overline{\text{B}}$ 22'23	-5°-12'-34	conjunction	-190 Jan 13 j 15:47	20° $\overline{\text{B}}$ 35'33	-8°-31'-27
direct	-199 Sep 22 j 21:24	6° $\overline{\text{B}}$ 10'20		minimum elong	-190 Jan 13 j 15:35	20° $\overline{\text{B}}$ 35'32	8°31'29
				max. Earth dist.	-190 Jan 16 j 19:34	20° $\overline{\text{B}}$ 41'09	39.25302 AU
conjunction	-198 Jan 01 j 10:48	8° $\overline{\text{B}}$ 10'11	-5°-9'-32	retrograde	-190 Apr 27 j 03:21	22° $\overline{\text{B}}$ 31'41	
minimum elong	-198 Jan 01 j 10:38	8° $\overline{\text{B}}$ 10'11	5°09'33	min. Earth dist.	-190 Jul 15 j 19:40	21° $\overline{\text{B}}$ 25'26	37.40464 AU
max. Earth dist.	-198 Jan 04 j 09:20	8° $\overline{\text{B}}$ 15'43	37.21003 AU	opposition	-190 Jul 18 j 23:14	21° $\overline{\text{B}}$ 21'14	-9°-10'-45
retrograde	-198 Apr 15 j 00:14	10° $\overline{\text{B}}$ 12'54		direct	-190 Oct 07 j 16:50	20° $\overline{\text{B}}$ 12'00	
min. Earth dist.	-198 Jul 03 j 03:40	9° $\overline{\text{B}}$ 04'24	35.34725 AU				
opposition	-198 Jul 06 j 03:59	9° $\overline{\text{B}}$ 00'15	-5°-41'-47	conjunction	-189 Jan 15 j 08:35	22° $\overline{\text{B}}$ 03'55	-8°-53'-49

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Attention, astronomical year style is used: The year -189 in astronomical counting style is the year 190 BCE in historical counting style.

minimum elong	-189 Jan 15 j 08:22	22°☾03'54	8°53'50	minimum elong	-181 Jan 26 j 11:15	3°☾19'20	11°31'06
max. Earth dist.	-189 Jan 18 j 11:44	22°☾09'27	39.50856 AU	max. Earth dist.	-181 Jan 29 j 14:34	3°☾24'37	41.48485 AU
retrograde	-189 Apr 28 j 19:41	23°☾59'19		retrograde	-181 May 09 j 20:45	5°☾09'20	
min. Earth dist.	-189 Jul 17 j 12:31	22°☾53'25	37.66203 AU	min. Earth dist.	-181 Jul 29 j 03:31	4°☾05'05	39.64653 AU
opposition	-189 Jul 20 j 17:22	22°☾49'10	-9°-33'-45	opposition	-181 Aug 01 j 06:21	4°☾01'04	-12°-14'-55
direct	-189 Oct 09 j 12:01	21°☾40'15		direct	-181 Oct 21 j 03:40	2°☾54'12	
conjunction	-188 Jan 17 j 01:01	23°☾31'25	-9°-15'-33	conjunction	-180 Jan 28 j 01:23	4°☾39'41	-11°-48'-9
minimum elong	-188 Jan 17 j 00:49	23°☾31'24	9°15'35	minimum elong	-180 Jan 28 j 01:11	4°☾39'40	11°48'11
max. Earth dist.	-188 Jan 20 j 05:13	23°☾36'59	39.76341 AU	max. Earth dist.	-180 Jan 31 j 05:05	4°☾44'58	41.72130 AU
retrograde	-188 Apr 29 j 11:06	25°☾26'07		retrograde	-180 May 10 j 10:27	6°☾29'02	
min. Earth dist.	-188 Jul 18 j 07:24	24°☾20'25	37.91854 AU	min. Earth dist.	-180 Jul 29 j 18:08	5°☾25'00	39.88435 AU
opposition	-188 Jul 21 j 11:24	24°☾16'14	-9°-56'-6	opposition	-180 Aug 01 j 21:12	5°☾20'59	-12°-32'-18
direct	-188 Oct 10 j 06:49	23°☾07'38		direct	-180 Oct 21 j 18:53	4°☾14'21	
conjunction	-187 Jan 17 j 17:05	24°☾58'03	-9°-36'-41	conjunction	-179 Jan 28 j 14:45	5°☾59'11	-12°-4'-38
minimum elong	-187 Jan 17 j 16:52	24°☾58'02	9°36'41	minimum elong	-179 Jan 28 j 14:33	5°☾59'11	12°04'39
max. Earth dist.	-187 Jan 20 j 21:19	25°☾03'36	40.01710 AU	max. Earth dist.	-179 Jan 31 j 17:41	6°☾04'23	41.95642 AU
retrograde	-187 May 01 j 02:31	26°☾52'04		retrograde	-179 May 12 j 02:52	7°☾47'57	
min. Earth dist.	-187 Jul 20 j 00:14	25°☾46'41	38.17341 AU	min. Earth dist.	-179 Jul 31 j 08:16	6°☾44'08	40.12106 AU
opposition	-187 Jul 23 j 04:57	25°☾42'28	-10°-17'-48	opposition	-179 Aug 03 j 11:51	6°☾40'07	-12°-49'-4
direct	-187 Oct 12 j 01:15	24°☾34'10		direct	-179 Oct 23 j 06:35	5°☾33'43	
conjunction	-186 Jan 19 j 08:55	26°☾23'50	-9°-57'-12	conjunction	-178 Jan 30 j 04:06	7°☾17'58	-12°-20'-33
minimum elong	-186 Jan 19 j 08:42	26°☾23'49	9°57'13	minimum elong	-178 Jan 30 j 03:54	7°☾17'57	12°20'34
max. Earth dist.	-186 Jan 22 j 12:43	26°☾29'19	40.26873 AU	max. Earth dist.	-178 Feb 02 j 08:09	7°☾23'12	42.19041 AU
retrograde	-186 May 02 j 20:58	28°☾17'11		retrograde	-178 May 13 j 15:48	9°☾06'09	
min. Earth dist.	-186 Jul 21 j 17:50	27°☾12'01	38.42612 AU	min. Earth dist.	-178 Aug 01 j 23:23	8°☾02'30	40.35642 AU
opposition	-186 Jul 24 j 22:09	27°☾07'51	-10°-38'-51	opposition	-178 Aug 05 j 01:59	7°☾58'33	-13°-5'-15
direct	-186 Oct 13 j 16:16	25°☾59'50		direct	-178 Oct 24 j 20:59	6°☾52'24	
conjunction	-185 Jan 21 j 00:37	27°☾48'47	-10°-17'-7	conjunction	-177 Jan 31 j 17:07	8°☾36'04	-12°-35'-55
minimum elong	-185 Jan 21 j 00:24	27°☾48'46	10°17'08	minimum elong	-177 Jan 31 j 16:56	8°☾36'03	12°35'56
max. Earth dist.	-185 Jan 24 j 04:57	27°☾54'16	40.51783 AU	max. Earth dist.	-177 Feb 03 j 20:14	8°☾41'13	42.42307 AU
retrograde	-185 May 04 j 12:49	29°☾41'27		retrograde	-177 May 15 j 03:35	10°☾23'42	
min. Earth dist.	-185 Jul 23 j 11:23	28°☾36'28	38.67581 AU	min. Earth dist.	-177 Aug 03 j 12:19	9°☾20'20	40.59026 AU
opposition	-185 Jul 26 j 14:57	28°☾32'22	-10°-59'-17	opposition	-177 Aug 06 j 15:51	9°☾16'20	-13°-20'-50
direct	-185 Oct 15 j 08:52	27°☾24'36		direct	-177 Oct 26 j 11:38	8°☾10'26	
conjunction	-184 Jan 22 j 15:47	29°☾12'50	-10°-36'-28	conjunction	-176 Feb 02 j 05:45	9°☾53'33	-12°-50'-43
minimum elong	-184 Jan 22 j 15:34	29°☾12'50	10°36'30	minimum elong	-176 Feb 02 j 05:33	9°☾53'32	12°50'45
max. Earth dist.	-184 Jan 25 j 18:51	29°☾18'12	40.76379 AU	max. Earth dist.	-176 Feb 05 j 09:21	9°☾58'43	42.65389 AU
retrograde	-184 Feb 20 j 01:49	0°☾		retrograde	-176 May 15 j 15:00	11°☾40'40	
min. Earth dist.	-184 May 05 j 05:03	1°☾04'49		min. Earth dist.	-176 Aug 04 j 03:10	10°☾37'28	40.82209 AU
opposition	-184 Jul 24 j 03:18	0°☾00'04	38.92241 AU	opposition	-176 Aug 07 j 05:33	10°☾33'33	-13°-35'-52
direct	-184 Jul 24 j 04:37	30°☾☾		direct	-176 Oct 27 j 02:49	9°☾27'54	
opposition	-184 Jul 27 j 07:25	29°☾55'57	-11°-19'-6				
direct	-184 Oct 16 j 00:39	28°☾48'26		conjunction	-175 Feb 02 j 18:21	11°☾10'29	-13°-5'00
	-183 Jan 01 j 18:36	0°☾		minimum elong	-175 Feb 02 j 18:11	11°☾10'28	13°05'01
conjunction	-183 Jan 23 j 06:45	0°☾35'58	-10°-55'-15	max. Earth dist.	-175 Feb 05 j 21:43	11°☾15'36	42.88263 AU
minimum elong	-183 Jan 23 j 06:32	0°☾35'57	10°55'16	retrograde	-175 May 17 j 03:02	12°☾57'05	
max. Earth dist.	-183 Jan 26 j 10:34	0°☾41'20	41.00667 AU	min. Earth dist.	-175 Aug 05 j 16:18	11°☾54'07	41.05135 AU
retrograde	-183 May 06 j 17:51	2°☾27'15		opposition	-175 Aug 08 j 18:49	11°☾50'12	-13°-50'-20
min. Earth dist.	-183 Jul 25 j 20:42	1°☾22'38	39.16604 AU	direct	-175 Oct 28 j 17:03	10°☾44'49	
opposition	-183 Jul 28 j 23:34	1°☾18'36	-11°-38'-19	conjunction	-174 Feb 04 j 06:39	12°☾26'51	-13°-18'-46
direct	-183 Oct 17 j 18:57	0°☾11'18		minimum elong	-174 Feb 04 j 06:28	12°☾26'51	13°18'47
conjunction	-182 Jan 24 j 21:15	1°☾58'08	-11°-13'-28	max. Earth dist.	-174 Feb 07 j 09:00	12°☾31'53	43.10842 AU
minimum elong	-182 Jan 24 j 21:03	1°☾58'07	11°13'30	retrograde	-174 May 18 j 17:45	14°☾12'58	
max. Earth dist.	-182 Jan 28 j 00:17	2°☾03'25	41.24691 AU	min. Earth dist.	-174 Aug 07 j 06:10	13°☾10'10	41.27749 AU
retrograde	-182 May 08 j 06:48	3°☾48'45		opposition	-174 Aug 10 j 07:58	13°☾06'19	-14°-4'-16
min. Earth dist.	-182 Jul 27 j 11:33	2°☾44'22	39.40720 AU	direct	-174 Oct 30 j 04:26	12°☾01'10	
opposition	-182 Jul 30 j 15:09	2°☾40'17	-11°-56'-55	conjunction	-173 Feb 05 j 18:59	13°☾42'41	-13°-32'-2
direct	-182 Oct 19 j 12:00	1°☾33'12		minimum elong	-173 Feb 05 j 18:49	13°☾42'41	13°32'03
conjunction	-181 Jan 26 j 11:27	3°☾19'21	-11°-31'-6	max. Earth dist.	-173 Feb 08 j 21:42	13°☾47'42	43.33073 AU
					-173 Mar 31 j 15:33	15°☾	

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Attention, astronomical year style is used: The year -173 in astronomical counting style is the year 174 BCE in historical counting style.

retrograde	-173 May 20 j 07:00	15°28'17		max. Earth dist.	-165 Feb 18 j 10:04	23°30'29	44.98769 AU
	-173 Jul 10 j 07:40	15°R		retrograde	-165 May 29 j 20:46	25°07'35	
min. Earth dist.	-173 Aug 08 j 20:03	14°25'38	41.49967 AU	min. Earth dist.	-165 Aug 18 j 19:34	24°06'05	43.15856 AU
opposition	-173 Aug 11 j 20:38	14°21'51	-14°-17'-41	opposition	-165 Aug 21 j 17:02	24°02'33	-15°-47'-14
direct	-173 Oct 31 j 16:07	13°16'55		direct	-165 Nov 10 j 14:02	22°59'02	
conjunction	-172 Feb 07 j 06:56	14°57'56	-13°-44'-49	conjunction	-164 Feb 16 j 21:37	24°36'09	-15°-10'-7
minimum elong	-172 Feb 07 j 06:45	14°57'55	13°44'50	minimum elong	-164 Feb 16 j 21:30	24°36'09	15°10'07
	-172 Feb 08 j 13:55	15°		max. Earth dist.	-164 Feb 19 j 19:40	24°40'40	45.18382 AU
max. Earth dist.	-172 Feb 10 j 07:50	15°02'48	43.54908 AU	retrograde	-164 May 30 j 06:03	26°17'25	
retrograde	-172 May 20 j 21:10	16°43'00		min. Earth dist.	-164 Aug 19 j 07:24	25°16'02	43.35485 AU
min. Earth dist.	-172 Aug 09 j 08:24	15°40'33	41.71782 AU	opposition	-164 Aug 22 j 03:37	25°12'34	-15°-56'-14
opposition	-172 Aug 12 j 09:13	15°36'46	-14°-30'-37	direct	-164 Nov 11 j 01:54	24°09'16	
	-172 Sep 12 j 16:21	15°R		conjunction	-163 Feb 17 j 07:33	25°45'58	-15°-18'-42
direct	-172 Nov 01 j 02:37	14°32'02		minimum elong	-163 Feb 17 j 07:26	25°45'57	15°18'43
	-172 Dec 19 j 04:48	15°		max. Earth dist.	-163 Feb 20 j 05:47	25°50'28	45.37725 AU
conjunction	-171 Feb 07 j 18:33	16°12'31	-13°-57'-8	retrograde	-163 May 31 j 15:39	27°26'50	
minimum elong	-171 Feb 07 j 18:24	16°12'30	13°57'10	min. Earth dist.	-163 Aug 20 j 18:12	26°25'36	43.54790 AU
max. Earth dist.	-171 Feb 10 j 19:38	16°17'23	43.76333 AU	opposition	-163 Aug 23 j 13:52	26°22'11	-16°-4'-47
retrograde	-171 May 22 j 06:10	17°57'04		direct	-163 Nov 12 j 13:12	25°19'04	
min. Earth dist.	-171 Aug 10 j 22:34	16°54'42	41.93195 AU	conjunction	-162 Feb 18 j 17:23	26°55'23	-15°-26'-51
opposition	-171 Aug 13 j 21:35	16°51'01	-14°-43'-3	minimum elong	-162 Feb 18 j 17:18	26°55'22	15°26'52
direct	-171 Nov 02 j 16:46	15°46'27		max. Earth dist.	-162 Feb 21 j 13:53	26°59'45	45.56718 AU
conjunction	-170 Feb 09 j 06:04	17°26'25	-14°-8'-59	retrograde	-162 Jun 02 j 04:35	28°35'51	
minimum elong	-170 Feb 09 j 05:55	17°26'24	14°08'59	min. Earth dist.	-162 Aug 22 j 04:42	27°34'47	43.73724 AU
max. Earth dist.	-170 Feb 12 j 06:20	17°31'12	43.97393 AU	opposition	-162 Aug 24 j 23:51	27°31'24	-16°-12'-54
retrograde	-170 May 23 j 14:25	19°10'27		direct	-162 Nov 13 j 20:24	26°28'28	
min. Earth dist.	-170 Aug 12 j 10:06	18°08'14	42.14253 AU	conjunction	-161 Feb 20 j 03:14	28°04'24	-15°-34'-37
opposition	-170 Aug 15 j 09:21	18°04'33	-14°-54'-59	minimum elong	-161 Feb 20 j 03:08	28°04'24	15°34'38
direct	-170 Nov 04 j 07:40	17°00'09		max. Earth dist.	-161 Feb 22 j 23:45	28°08'46	45.75300 AU
conjunction	-169 Feb 10 j 17:12	18°39'36	-14°-20'-21	retrograde	-161 Jun 03 j 14:16	29°44'30	
minimum elong	-169 Feb 10 j 17:03	18°39'35	14°20'23	min. Earth dist.	-161 Aug 23 j 16:31	28°43'31	43.92201 AU
max. Earth dist.	-169 Feb 13 j 16:44	18°44'19	44.18122 AU	opposition	-161 Aug 26 j 09:46	28°40'14	-16°-20'-38
retrograde	-169 May 25 j 02:12	20°23'08		direct	-161 Nov 15 j 06:18	27°37'29	
min. Earth dist.	-169 Aug 13 j 22:43	19°21'02	42.35025 AU	conjunction	-160 Feb 21 j 12:44	29°13'02	-15°-42'00
opposition	-169 Aug 16 j 21:05	19°17'24	-15°-6'-26	minimum elong	-160 Feb 21 j 12:40	29°13'02	15°42'01
direct	-169 Nov 05 j 19:42	18°13'10		max. Earth dist.	-160 Feb 24 j 07:34	29°17'16	45.93421 AU
conjunction	-168 Feb 12 j 04:05	19°52'06	-14°-31'-15		-160 Mar 24 j 16:16	0°	
minimum elong	-168 Feb 12 j 03:56	19°52'05	14°31'16	retrograde	-160 Jun 03 j 22:35	0°52'44	
max. Earth dist.	-168 Feb 15 j 04:05	19°56'49	44.38597 AU		-160 Aug 17 j 07:59	30°R	
retrograde	-168 May 25 j 12:29	21°35'09		min. Earth dist.	-160 Aug 24 j 02:14	29°51'54	44.10196 AU
min. Earth dist.	-168 Aug 14 j 10:31	20°33'10	42.55544 AU	opposition	-160 Aug 26 j 19:28	29°48'38	-16°-27'-57
opposition	-168 Aug 17 j 08:26	20°29'34	-15°-17'-22	direct	-160 Nov 15 j 16:28	28°46'03	
direct	-168 Nov 06 j 07:48	19°25'30			-159 Feb 07 j 19:44	0°	
conjunction	-167 Feb 12 j 14:43	21°03'57	-14°-41'-40	conjunction	-159 Feb 21 j 22:10	0°21'13	-15°-49'00
minimum elong	-167 Feb 12 j 14:35	21°03'56	14°41'42	minimum elong	-159 Feb 21 j 22:05	0°21'13	15°49'01
max. Earth dist.	-167 Feb 15 j 13:28	21°08'34	44.58855 AU	max. Earth dist.	-159 Feb 24 j 16:08	0°25'23	46.11053 AU
retrograde	-167 May 27 j 01:35	22°46'31		retrograde	-159 Jun 05 j 06:28	2°00'32	
min. Earth dist.	-167 Aug 15 j 21:23	21°44'42	42.75867 AU	min. Earth dist.	-159 Aug 25 j 13:41	0°59'45	44.27715 AU
opposition	-167 Aug 18 j 19:35	21°41'07	-15°-27'-49	opposition	-159 Aug 28 j 05:02	0°56'34	-16°-34'-53
direct	-167 Nov 07 j 16:23	20°37'13			-159 Oct 25 j 19:00	30°R	
conjunction	-166 Feb 14 j 01:14	22°15'12	-14°-51'-37	direct	-159 Nov 17 j 03:28	29°54'08	
minimum elong	-166 Feb 14 j 01:06	22°15'12	14°51'37		-159 Dec 09 j 05:03	0°	
max. Earth dist.	-166 Feb 17 j 00:42	22°19'51	44.78914 AU	conjunction	-158 Feb 23 j 07:29	1°28'55	-15°-55'-37
retrograde	-166 May 28 j 11:50	23°57'19		minimum elong	-158 Feb 23 j 07:25	1°28'55	15°55'39
min. Earth dist.	-166 Aug 17 j 09:36	22°55'36	42.95975 AU	max. Earth dist.	-158 Feb 26 j 00:55	1°33'02	46.28239 AU
opposition	-166 Aug 20 j 06:32	22°52'05	-15°-37'-46	retrograde	-158 Jun 06 j 14:04	3°07'51	
direct	-166 Nov 09 j 03:14	21°48'23		min. Earth dist.	-158 Aug 26 j 23:21	2°07'11	44.44784 AU
conjunction	-165 Feb 15 j 11:34	23°25'55	-15°-1'-5	opposition	-158 Aug 29 j 14:13	2°04'02	-16°-41'-26
minimum elong	-165 Feb 15 j 11:26	23°25'55	15°01'07	direct	-158 Nov 18 j 14:45	1°01'43	

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Attention, astronomical year style is used: The year -157 in astronomical counting style is the year 158 BCE in historical counting style.

conjunction	-157 Feb 24 j 16:27	2°♃36'08	-16°-1'-52	retrograde	-149 Jun 16 j 20:03	12°♃55'16	
minimum elong	-157 Feb 24 j 16:22	2°♃36'07	16°01'53	min. Earth dist.	-149 Sep 06 j 10:13	11°♃55'27	45.83891 AU
max. Earth dist.	-157 Feb 27 j 08:10	2°♃40'07	46.45006 AU	opposition	-149 Sep 08 j 17:05	11°♃52'46	-17°-22'-42
retrograde	-157 Jun 08 j 01:05	4°♃14'40		direct	-149 Nov 28 j 14:34	10°♃51'43	
min. Earth dist.	-157 Aug 28 j 09:06	3°♃14'05	44.61481 AU				
opposition	-157 Aug 30 j 23:11	3°♃11'00	-16°-47'-35	conjunction	-148 Mar 05 j 19:01	12°♃23'18	-16°-41'-7
direct	-157 Nov 19 j 22:30	2°♃08'49		minimum elong	-148 Mar 05 j 19:01	12°♃23'18	16°41'08
				max. Earth dist.	-148 Mar 08 j 04:20	12°♃26'47	47.81861 AU
conjunction	-156 Feb 26 j 01:19	3°♃42'51	-16°-7'-43	retrograde	-148 Jun 17 j 01:05	13°♃58'55	
minimum elong	-156 Feb 26 j 01:16	3°♃42'51	16°07'45	min. Earth dist.	-148 Sep 06 j 18:11	12°♃59'12	45.97371 AU
max. Earth dist.	-156 Feb 28 j 17:32	3°♃46'52	46.61432 AU	opposition	-148 Sep 09 j 00:38	12°♃56'32	-17°-25'-30
retrograde	-156 Jun 08 j 10:56	5°♃21'02		direct	-148 Nov 29 j 00:12	11°♃55'36	
min. Earth dist.	-156 Aug 28 j 19:14	4°♃20'30	44.77849 AU				
opposition	-156 Aug 31 j 08:02	4°♃17'29	-16°-53'-20	conjunction	-147 Mar 07 j 02:39	13°♃26'53	-16°-43'-47
direct	-156 Nov 20 j 06:03	3°♃15'27		minimum elong	-147 Mar 07 j 02:40	13°♃26'53	16°43'48
				max. Earth dist.	-147 Mar 09 j 10:03	13°♃30'14	47.95034 AU
conjunction	-155 Feb 26 j 09:51	4°♃49'08	-16°-13'-12	retrograde	-147 Jun 18 j 08:27	15°♃02'12	
minimum elong	-155 Feb 26 j 09:48	4°♃49'08	16°13'12	min. Earth dist.	-147 Sep 08 j 03:20	14°♃02'30	46.10340 AU
max. Earth dist.	-155 Mar 01 j 00:36	4°♃53'02	46.77570 AU	opposition	-147 Sep 10 j 08:12	13°♃59'55	-17°-28'00
retrograde	-155 Jun 09 j 20:57	6°♃26'56		direct	-147 Nov 30 j 08:55	12°♃59'05	
min. Earth dist.	-155 Aug 30 j 03:27	5°♃26'34	44.93938 AU				
opposition	-155 Sep 01 j 16:39	5°♃23'32	-16°-58'-41	conjunction	-146 Mar 08 j 10:23	14°♃30'03	-16°-46'-8
direct	-155 Nov 21 j 12:30	4°♃21'38		minimum elong	-146 Mar 08 j 10:23	14°♃30'03	16°46'09
				max. Earth dist.	-146 Mar 10 j 17:39	14°♃33'24	48.07714 AU
conjunction	-154 Feb 27 j 18:23	5°♃54'59	-16°-18'-17	retrograde	-146 Jun 19 j 15:54	16°♃05'04	
minimum elong	-154 Feb 27 j 18:21	5°♃54'59	16°18'18	min. Earth dist.	-146 Sep 09 j 11:51	15°♃05'23	46.22820 AU
max. Earth dist.	-154 Mar 02 j 08:53	5°♃58'51	46.93429 AU	opposition	-146 Sep 11 j 15:18	15°♃02'53	-17°-30'-10
retrograde	-154 Jun 11 j 02:33	7°♃32'27		direct	-146 Dec 01 j 17:05	14°♃02'07	
min. Earth dist.	-154 Aug 31 j 13:35	6°♃32'08	45.09756 AU				
opposition	-154 Sep 03 j 01:05	6°♃29'12	-17°-3'-37	conjunction	-145 Mar 09 j 17:47	15°♃32'48	-16°-48'-11
direct	-154 Nov 22 j 23:01	5°♃27'26		minimum elong	-145 Mar 09 j 17:49	15°♃32'48	16°48'12
				max. Earth dist.	-145 Mar 11 j 23:02	15°♃36'00	48.19951 AU
conjunction	-153 Mar 01 j 02:50	7°♃00'28	-16°-22'-59	retrograde	-145 Jun 21 j 01:37	17°♃07'30	
minimum elong	-153 Mar 01 j 02:48	7°♃00'28	16°22'59	min. Earth dist.	-145 Sep 10 j 19:05	16°♃07'53	46.34894 AU
max. Earth dist.	-153 Mar 03 j 17:00	7°♃04'19	47.09035 AU	opposition	-145 Sep 12 j 22:21	16°♃05'24	-17°-32'-1
retrograde	-153 Jun 12 j 07:56	8°♃37'36		direct	-145 Dec 02 j 21:46	15°♃04'43	
min. Earth dist.	-153 Sep 01 j 21:47	7°♃37'27	45.25291 AU				
opposition	-153 Sep 04 j 09:18	7°♃34'30	-17°-8'-10	conjunction	-144 Mar 10 j 00:55	16°♃35'07	-16°-49'-55
direct	-153 Nov 24 j 10:11	6°♃32'54		minimum elong	-144 Mar 10 j 00:56	16°♃35'07	16°49'56
				max. Earth dist.	-144 Mar 12 j 05:54	16°♃38'17	48.31804 AU
conjunction	-152 Mar 01 j 10:49	8°♃05'37	-16°-27'-18	retrograde	-144 Jun 21 j 07:32	18°♃09'31	
minimum elong	-152 Mar 01 j 10:48	8°♃05'37	16°27'20	min. Earth dist.	-144 Sep 11 j 03:56	17°♃09'54	46.46613 AU
max. Earth dist.	-152 Mar 03 j 23:35	8°♃09'22	47.24351 AU	opposition	-144 Sep 13 j 05:22	17°♃07'30	-17°-33'-32
retrograde	-152 Jun 12 j 18:05	9°♃42'27		direct	-144 Dec 03 j 05:01	16°♃06'54	
min. Earth dist.	-152 Sep 02 j 06:52	8°♃42'24	45.40532 AU				
opposition	-152 Sep 04 j 17:34	8°♃39'30	-17°-12'-20	conjunction	-143 Mar 11 j 08:07	17°♃37'02	-16°-51'-19
direct	-152 Nov 24 j 17:38	7°♃38'03		minimum elong	-143 Mar 11 j 08:09	17°♃37'03	16°51'20
				max. Earth dist.	-143 Mar 13 j 12:29	17°♃40'11	48.43349 AU
conjunction	-151 Mar 02 j 19:02	9°♃10'28	-16°-31'-15	retrograde	-143 Jun 22 j 11:32	19°♃11'10	
minimum elong	-151 Mar 02 j 19:01	9°♃10'28	16°31'16	min. Earth dist.	-143 Sep 12 j 10:28	18°♃11'39	46.58029 AU
max. Earth dist.	-151 Mar 05 j 08:03	9°♃14'13	47.39354 AU	opposition	-143 Sep 14 j 11:58	18°♃09'15	-17°-34'-43
retrograde	-151 Jun 14 j 02:41	10°♃47'01		direct	-143 Dec 04 j 13:54	17°♃08'44	
min. Earth dist.	-151 Sep 03 j 16:12	9°♃47'02	45.55417 AU				
opposition	-151 Sep 06 j 01:31	9°♃44'13	-17°-16'-8	conjunction	-142 Mar 12 j 15:07	18°♃38'38	-16°-52'-23
direct	-151 Nov 26 j 01:45	8°♃42'55		minimum elong	-142 Mar 12 j 15:09	18°♃38'38	16°52'24
				max. Earth dist.	-142 Mar 14 j 18:01	18°♃41'40	48.54602 AU
conjunction	-150 Mar 04 j 03:05	10°♃15'03	-16°-34'-52	retrograde	-142 Jun 23 j 18:27	20°♃12'30	
minimum elong	-150 Mar 04 j 03:03	10°♃15'03	16°34'54	min. Earth dist.	-142 Sep 13 j 18:19	19°♃13'02	46.69170 AU
max. Earth dist.	-150 Mar 06 j 14:13	10°♃18'39	47.53986 AU	opposition	-142 Sep 15 j 18:41	19°♃10'41	-17°-35'-33
retrograde	-150 Jun 15 j 12:38	11°♃51'17		direct	-142 Dec 05 j 21:24	18°♃10'17	
min. Earth dist.	-150 Sep 05 j 00:19	10°♃51'26	45.69895 AU				
opposition	-150 Sep 07 j 09:21	10°♃48'38	-17°-19'-35	conjunction	-141 Mar 13 j 22:05	19°♃39'57	-16°-53'-8
direct	-150 Nov 27 j 06:54	9°♃47'28		minimum elong	-141 Mar 13 j 22:08	19°♃39'57	16°53'09
				max. Earth dist.	-141 Mar 16 j 01:15	19°♃43'00	48.65588 AU
conjunction	-149 Mar 05 j 11:04	11°♃19'20	-16°-38'-9	retrograde	-141 Jun 25 j 00:44	21°♃13'36	
minimum elong	-149 Mar 05 j 11:04	11°♃19'20	16°38'10	min. Earth dist.	-141 Sep 15 j 01:36	20°♃14'12	46.80022 AU
max. Earth dist.	-149 Mar 07 j 21:34	11°♃22'54	47.68164 AU	opposition	-141 Sep 17 j 01:06	20°♃11'54	-17°-36'-3

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Attention, astronomical year style is used: The year -141 in astronomical counting style is the year 142 BCE in historical counting style.

direct	-141 Dec 07 j 04:54	19° Υ 11'37		minimum elong	-132 Mar 22 j 09:25	28° Υ 44'00	16°46'39
				max. Earth dist.	-132 Mar 24 j 01:23	28° Υ 46'19	49.47081 AU
conjunction	-140 Mar 14 j 04:51	20° Υ 41'04	-16°-53'-33		-132 May 25 j 10:58	0° Υ	
minimum elong	-140 Mar 14 j 04:54	20° Υ 41'04	16°53'33	retrograde	-132 Jul 03 j 10:07	0° Υ 15'44	
max. Earth dist.	-140 Mar 16 j 06:17	20° Υ 44'00	48.76303 AU		-132 Aug 11 j 21:27	30° \Re Υ	
retrograde	-140 Jun 25 j 10:14	22° Υ 14'29		min. Earth dist.	-132 Sep 23 j 17:54	29° Υ 16'43	47.59463 AU
min. Earth dist.	-140 Sep 15 j 08:10	21° Υ 15'12	46.90595 AU	opposition	-132 Sep 25 j 07:14	29° Υ 14'56	-17°-27'-14
opposition	-140 Sep 17 j 07:31	21° Υ 12'55	-17°-36'-13	direct	-132 Dec 15 j 10:43	28° Υ 15'25	
direct	-140 Dec 07 j 08:25	20° Υ 12'45					
				conjunction	-131 Mar 23 j 15:29	29° Υ 43'13	-16°-44'-32
conjunction	-139 Mar 15 j 11:33	21° Υ 42'01	-16°-53'-39	minimum elong	-131 Mar 23 j 15:34	29° Υ 43'14	16°44'32
minimum elong	-139 Mar 15 j 11:36	21° Υ 42'02	16°53'40	max. Earth dist.	-131 Mar 25 j 07:36	29° Υ 45'33	49.53970 AU
max. Earth dist.	-139 Mar 17 j 12:49	21° Υ 44'56	48.86708 AU		-131 Apr 04 j 17:42	0° Υ	
retrograde	-139 Jun 26 j 17:36	23° Υ 15'14		retrograde	-131 Jul 04 j 14:08	1° Υ 14'46	
min. Earth dist.	-139 Sep 16 j 16:29	22° Υ 15'59	47.00826 AU	min. Earth dist.	-131 Sep 25 j 00:05	0° Υ 15'47	47.66145 AU
opposition	-139 Sep 18 j 13:54	22° Υ 13'48	-17°-36'-4	opposition	-131 Sep 26 j 12:41	0° Υ 14'02	-17°-24'-52
direct	-139 Dec 08 j 13:36	21° Υ 13'46			-131 Oct 08 j 21:20	30° \Re Υ	
				direct	-131 Dec 16 j 18:46	29° Υ 14'34	
conjunction	-138 Mar 16 j 18:23	22° Υ 42'51	-16°-53'-27		-130 Feb 21 j 07:30	0° Υ	
minimum elong	-138 Mar 16 j 18:27	22° Υ 42'51	16°53'27	conjunction	-130 Mar 24 j 21:32	0° Υ 42'11	-16°-42'-10
max. Earth dist.	-138 Mar 18 j 18:30	22° Υ 45'42	48.96760 AU	minimum elong	-130 Mar 24 j 21:39	0° Υ 42'12	16°42'11
retrograde	-138 Jun 27 j 22:24	24° Υ 15'51		max. Earth dist.	-130 Mar 26 j 11:47	0° Υ 44'25	49.60546 AU
min. Earth dist.	-138 Sep 17 j 22:42	23° Υ 16'44	47.10658 AU	retrograde	-130 Jul 05 j 22:05	2° Υ 13'33	
opposition	-138 Sep 19 j 19:54	23° Υ 14'34	-17°-35'-38	min. Earth dist.	-130 Sep 26 j 05:51	1° Υ 14'37	47.72534 AU
direct	-138 Dec 09 j 20:09	22° Υ 14'38		opposition	-130 Sep 27 j 17:57	1° Υ 12'54	-17°-22'-11
				direct	-130 Dec 17 j 22:57	0° Υ 13'29	
conjunction	-137 Mar 18 j 01:02	23° Υ 43'33	-16°-52'-58	conjunction	-129 Mar 26 j 03:33	1° Υ 40'57	-16°-39'-30
minimum elong	-137 Mar 18 j 01:06	23° Υ 43'34	16°52'59	minimum elong	-129 Mar 26 j 03:39	1° Υ 40'57	16°39'31
max. Earth dist.	-137 Mar 19 j 23:21	23° Υ 46'17	49.06373 AU	max. Earth dist.	-129 Mar 27 j 17:35	1° Υ 43'09	49.66826 AU
retrograde	-137 Jun 29 j 04:09	25° Υ 16'22		retrograde	-129 Jul 07 j 05:26	3° Υ 12'08	
min. Earth dist.	-137 Sep 19 j 06:52	24° Υ 17'17	47.20033 AU	opposition	-129 Sep 28 j 23:20	2° Υ 11'33	-17°-19'-13
opposition	-137 Sep 21 j 02:08	24° Υ 15'12	-17°-34'-54	min. Earth dist.	-129 Sep 27 j 12:50	2° Υ 13'12	47.78623 AU
direct	-137 Dec 11 j 03:59	23° Υ 15'23		direct	-129 Dec 19 j 02:44	1° Υ 12'12	
				conjunction	-128 Mar 26 j 09:21	2° Υ 39'32	-16°-36'-34
conjunction	-136 Mar 18 j 07:40	24° Υ 44'07	-16°-52'-13	minimum elong	-128 Mar 26 j 09:28	2° Υ 39'32	16°36'35
minimum elong	-136 Mar 18 j 07:45	24° Υ 44'08	16°52'14	max. Earth dist.	-128 Mar 27 j 22:26	2° Υ 41'40	49.72828 AU
max. Earth dist.	-136 Mar 20 j 05:42	24° Υ 46'50	49.15504 AU	retrograde	-128 Jul 07 j 11:17	4° Υ 10'33	
retrograde	-136 Jun 29 j 09:54	26° Υ 16'45		min. Earth dist.	-128 Sep 27 j 17:58	3° Υ 11'42	47.84407 AU
min. Earth dist.	-136 Sep 19 j 14:09	25° Υ 17'42	47.28882 AU	opposition	-128 Sep 29 j 04:34	3° Υ 10'03	-17°-15'-58
opposition	-136 Sep 21 j 08:13	25° Υ 15'41	-17°-33'-54	direct	-128 Dec 19 j 06:41	2° Υ 10'47	
direct	-136 Dec 11 j 12:10	24° Υ 15'57					
				conjunction	-127 Mar 27 j 15:14	3° Υ 37'59	-16°-33'-21
conjunction	-135 Mar 19 j 14:15	25° Υ 44'30	-16°-51'-13	minimum elong	-127 Mar 27 j 15:22	3° Υ 38'00	16°33'21
minimum elong	-135 Mar 19 j 14:18	25° Υ 44'30	16°51'14	max. Earth dist.	-127 Mar 29 j 02:51	3° Υ 40'03	49.78502 AU
max. Earth dist.	-135 Mar 21 j 09:46	25° Υ 47'03	49.24117 AU	retrograde	-127 Jul 08 j 15:54	5° Υ 08'52	
retrograde	-135 Jun 30 j 19:43	27° Υ 16'54		min. Earth dist.	-127 Sep 29 j 01:00	4° Υ 10'01	47.89853 AU
min. Earth dist.	-135 Sep 20 j 20:51	26° Υ 17'54	47.37217 AU	opposition	-127 Sep 30 j 09:45	4° Υ 08'27	-17°-12'-26
opposition	-135 Sep 22 j 14:07	26° Υ 15'56	-17°-32'-39	direct	-127 Dec 20 j 13:00	3° Υ 09'16	
direct	-135 Dec 12 j 15:21	25° Υ 16'16					
				conjunction	-126 Mar 28 j 21:17	4° Υ 36'22	-16°-29'-52
conjunction	-134 Mar 20 j 20:48	26° Υ 44'37	-16°-49'-57	minimum elong	-126 Mar 28 j 21:24	4° Υ 36'22	16°29'54
minimum elong	-134 Mar 20 j 20:55	26° Υ 44'38	16°49'58	max. Earth dist.	-126 Mar 30 j 08:41	4° Υ 38'24	49.83813 AU
max. Earth dist.	-134 Mar 22 j 15:42	26° Υ 47'08	49.32215 AU	retrograde	-126 Jul 09 j 19:14	6° Υ 07'07	
retrograde	-134 Jul 02 j 02:37	28° Υ 16'49		min. Earth dist.	-126 Sep 30 j 07:04	5° Υ 08'18	47.94881 AU
min. Earth dist.	-134 Sep 22 j 04:56	27° Υ 17'46	47.45047 AU	opposition	-126 Oct 01 j 14:49	5° Υ 06'48	-17°-8'-38
opposition	-134 Sep 23 j 20:01	27° Υ 15'54	-17°-31'-7	direct	-126 Dec 21 j 20:58	4° Υ 07'40	
direct	-134 Dec 13 j 20:21	26° Υ 16'18					
				conjunction	-125 Mar 30 j 03:07	5° Υ 34'41	-16°-26'-8
conjunction	-133 Mar 22 j 03:09	27° Υ 44'27	-16°-48'-25	minimum elong	-125 Mar 30 j 03:15	5° Υ 34'41	16°26'09
minimum elong	-133 Mar 22 j 03:13	27° Υ 44'28	16°48'26	max. Earth dist.	-125 Mar 31 j 12:06	5° Υ 36'35	49.88679 AU
max. Earth dist.	-133 Mar 23 j 20:48	27° Υ 46'53	49.39853 AU	retrograde	-125 Jul 11 j 03:25	7° Υ 05'19	
retrograde	-133 Jul 03 j 06:07	29° Υ 16'25		opposition	-125 Oct 02 j 19:53	6° Υ 05'05	-17°-4'-35
min. Earth dist.	-133 Sep 23 j 10:39	28° Υ 17'26	47.52439 AU	min. Earth dist.	-125 Oct 01 j 13:05	6° Υ 06'33	47.99441 AU
opposition	-133 Sep 25 j 01:35	28° Υ 15'34	-17°-29'-19	direct	-125 Dec 23 j 00:26	5° Υ 06'02	
direct	-133 Dec 15 j 03:23	27° Υ 16'00					
				conjunction	-132 Mar 22 j 09:18	28° Υ 43'59	-16°-46'-37

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Attention, astronomical year style is used: The year -124 in astronomical counting style is the year 125 BCE in historical counting style.

conjunction	-124 Mar 30 j 09:06	6°V32'56	-16°-22'-10	retrograde	-116 Jul 18 j 23:57	15°V43'42	
minimum elong	-124 Mar 30 j 09:13	6°V32'56	16°22'11	opposition	-116 Oct 10 j 14:48	14°V43'53	-16°-17'-13
max. Earth dist.	-124 Mar 31 j 17:19	6°V34'47	49.93039 AU	min. Earth dist.	-116 Oct 09 j 18:31	14°V44'50	48.19332 AU
retrograde	-124 Jul 11 j 10:38	8°V03'27		direct	-116 Dec 30 j 23:17	13°V45'05	
min. Earth dist.	-124 Oct 01 j 20:31	7°V04'38	48.03463 AU				
opposition	-124 Oct 03 j 01:01	7°V03'17	-17°00'-18	conjunction	-115 Apr 08 j 11:44	15°V11'17	-15°-35'-41
direct	-124 Dec 23 j 04:26	6°V04'17		minimum elong	-115 Apr 08 j 11:54	15°V11'17	15°35'42
				max. Earth dist.	-115 Apr 09 j 08:37	15°V12'28	50.11918 AU
conjunction	-123 Mar 31 j 15:01	7°V31'06	-16°-17'-58	retrograde	-115 Jul 20 j 06:53	16°V40'50	
minimum elong	-123 Mar 31 j 15:11	7°V31'06	16°17'59	opposition	-115 Oct 11 j 19:20	15°V41'05	-16°-10'-39
max. Earth dist.	-123 Apr 01 j 21:37	7°V32'51	49.96869 AU	min. Earth dist.	-115 Oct 10 j 23:55	15°V42'00	48.19774 AU
retrograde	-123 Jul 12 j 15:20	9°V01'28		direct	-114 Jan 01 j 03:31	14°V42'19	
min. Earth dist.	-123 Oct 03 j 01:54	8°V02'42	48.06935 AU				
opposition	-123 Oct 04 j 05:59	8°V01'22	-16°-55'-47	conjunction	-114 Apr 09 j 17:19	16°V08'29	-15°-29'-15
direct	-123 Dec 24 j 09:30	7°V02'24		minimum elong	-114 Apr 09 j 17:29	16°V08'30	15°29'15
				max. Earth dist.	-114 Apr 10 j 13:46	16°V09'39	50.12269 AU
conjunction	-122 Apr 01 j 20:52	8°V29'07	-16°-13'-33	retrograde	-114 Jul 21 j 14:19	17°V38'00	
minimum elong	-122 Apr 01 j 20:59	8°V29'07	16°13'33	opposition	-114 Oct 12 j 23:46	16°V38'17	-16°-3'-50
max. Earth dist.	-122 Apr 03 j 01:18	8°V30'45	50.00143 AU	min. Earth dist.	-114 Oct 12 j 06:20	16°V39'07	48.19814 AU
retrograde	-122 Jul 13 j 19:12	9°V59'21		direct	-113 Jan 02 j 06:44	15°V39'33	
min. Earth dist.	-122 Oct 04 j 08:58	9°V00'32	48.09880 AU				
opposition	-122 Oct 05 j 10:52	8°V59'18	-16°-51'-3	conjunction	-113 Apr 10 j 22:52	17°V05'43	-15°-22'-35
direct	-122 Dec 25 j 15:53	8°V00'22		minimum elong	-113 Apr 10 j 23:01	17°V05'43	15°22'36
				max. Earth dist.	-113 Apr 11 j 17:49	17°V06'47	50.12208 AU
conjunction	-121 Apr 03 j 02:42	9°V26'58	-16°-8'-53	retrograde	-113 Jul 22 j 20:11	18°V35'10	
minimum elong	-121 Apr 03 j 02:52	9°V26'59	16°08'54	min. Earth dist.	-113 Oct 13 j 11:08	17°V36'19	48.19405 AU
max. Earth dist.	-121 Apr 04 j 06:50	9°V28'35	50.02927 AU	opposition	-113 Oct 14 j 04:12	17°V35'30	-15°-56'-47
retrograde	-121 Jul 14 j 22:15	10°V57'05		direct	-112 Jan 03 j 09:37	16°V36'47	
opposition	-121 Oct 06 j 15:39	9°V57'04	-16°-46'-4				
min. Earth dist.	-121 Oct 05 j 14:39	9°V58'15	48.12346 AU	conjunction	-112 Apr 11 j 04:15	18°V02'56	-15°-15'-41
direct	-121 Dec 26 j 23:39	8°V58'09		minimum elong	-112 Apr 11 j 04:26	18°V02'57	15°15'41
				max. Earth dist.	-112 Apr 11 j 21:11	18°V03'54	50.11652 AU
conjunction	-120 Apr 03 j 08:09	10°V24'39	-16°-4'00	retrograde	-112 Jul 23 j 00:41	19°V32'20	
minimum elong	-120 Apr 03 j 08:17	10°V24'40	16°04'00	opposition	-112 Oct 14 j 08:49	18°V32'42	-15°-49'-30
max. Earth dist.	-120 Apr 04 j 10:08	10°V26'08	50.05271 AU	min. Earth dist.	-112 Oct 13 j 17:58	18°V33'24	48.18481 AU
retrograde	-120 Jul 15 j 05:12	11°V54'39		direct	-111 Jan 03 j 14:43	17°V33'59	
opposition	-120 Oct 06 j 20:27	10°V54'40	-16°-40'-49				
min. Earth dist.	-120 Oct 05 j 20:17	10°V55'49	48.14412 AU	conjunction	-111 Apr 12 j 09:58	19°V00'07	-15°-8'-35
direct	-120 Dec 27 j 03:44	9°V55'46		minimum elong	-111 Apr 12 j 10:08	19°V00'07	15°08'35
				max. Earth dist.	-111 Apr 13 j 02:18	19°V01'02	50.10576 AU
conjunction	-119 Apr 04 j 13:49	11°V22'11	-15°-58'-51	retrograde	-111 Jul 24 j 02:28	20°V29'26	
minimum elong	-119 Apr 04 j 13:59	11°V22'11	15°58'52	opposition	-111 Oct 15 j 13:09	19°V29'49	-15°-42'-1
max. Earth dist.	-119 Apr 05 j 15:26	11°V23'38	50.07229 AU	min. Earth dist.	-111 Oct 14 j 23:23	19°V30'28	48.17013 AU
retrograde	-119 Jul 16 j 12:01	12°V52'04		direct	-110 Jan 04 j 22:34	18°V31'06	
min. Earth dist.	-119 Oct 07 j 02:39	11°V53'10	48.16110 AU				
opposition	-119 Oct 08 j 01:05	11°V52'07	-16°-35'-19	conjunction	-110 Apr 13 j 15:32	19°V57'11	-15°-1'-15
direct	-119 Dec 28 j 07:10	10°V53'14		minimum elong	-110 Apr 13 j 15:44	19°V57'12	15°01'16
				max. Earth dist.	-110 Apr 14 j 05:17	19°V57'58	50.08970 AU
conjunction	-118 Apr 05 j 19:27	12°V19'34	-15°-53'-27	retrograde	-110 Jul 25 j 08:09	21°V26'27	
minimum elong	-118 Apr 05 j 19:36	12°V19'35	15°53'27	opposition	-110 Oct 16 j 17:36	20°V26'50	-15°-34'-18
max. Earth dist.	-118 Apr 06 j 19:52	12°V20'58	50.08861 AU	min. Earth dist.	-110 Oct 16 j 05:02	20°V27'25	48.15038 AU
retrograde	-118 Jul 17 j 18:23	13°V49'21		direct	-109 Jan 06 j 03:11	19°V28'05	
min. Earth dist.	-118 Oct 08 j 07:10	12°V50'30	48.17487 AU				
opposition	-118 Oct 09 j 05:39	12°V49'26	-16°-29'-33	conjunction	-109 Apr 14 j 20:59	20°V54'08	-14°-53'-43
direct	-118 Dec 29 j 09:49	11°V50'34		minimum elong	-109 Apr 14 j 21:09	20°V54'08	14°53'43
				max. Earth dist.	-109 Apr 15 j 10:00	20°V54'52	50.06865 AU
conjunction	-117 Apr 07 j 00:48	13°V16'52	-15°-47'-47	retrograde	-109 Jul 26 j 13:49	22°V23'21	
minimum elong	-117 Apr 07 j 00:58	13°V16'52	15°47'48	opposition	-109 Oct 17 j 22:00	21°V23'42	-15°-26'-21
max. Earth dist.	-117 Apr 07 j 23:49	13°V18'10	50.10173 AU	min. Earth dist.	-109 Oct 17 j 11:17	21°V24'13	48.12589 AU
retrograde	-117 Jul 18 j 22:27	14°V46'33		direct	-108 Jan 07 j 07:57	20°V24'55	
opposition	-117 Oct 10 j 10:19	13°V46'41	-16°-23'-31				
min. Earth dist.	-117 Oct 09 j 13:34	13°V47'40	48.18563 AU	conjunction	-108 Apr 15 j 02:27	21°V50'57	-14°-45'-56
direct	-117 Dec 30 j 15:04	12°V47'51		minimum elong	-108 Apr 15 j 02:39	21°V50'57	14°45'57
				max. Earth dist.	-108 Apr 15 j 14:13	21°V51'37	50.04341 AU
conjunction	-116 Apr 07 j 06:21	14°V14'05	-15°-41'-52	retrograde	-108 Jul 26 j 20:28	23°V20'06	
minimum elong	-116 Apr 07 j 06:31	14°V14'05	15°41'52	opposition	-108 Oct 18 j 02:12	22°V20'27	-15°-18'-10
max. Earth dist.	-116 Apr 08 j 05:20	14°V15'23	50.11201 AU	min. Earth dist.	-108 Oct 17 j 15:41	22°V20'56	48.09744 AU

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Attention, astronomical year style is used: The year -107 in astronomical counting style is the year 108 BCE in historical counting style.

direct	-107 Jan 07 j 10:28	21°♃21'37			-99 Apr 07 j 08:21	0°♄	
conjunction	-107 Apr 16 j 07:50	22°♃47'39	-14°-37'-55	conjunction	-99 Apr 24 j 04:03	0°♄22'36	-13°-24'-57
minimum elong	-107 Apr 16 j 08:01	22°♃47'39	14°37'56	minimum elong	-99 Apr 24 j 04:15	0°♄22'37	13°24'57
max. Earth dist.	-107 Apr 16 j 17:55	22°♃48'13	50.01434 AU	max. Earth dist.	-99 Apr 24 j 04:59	0°♄22'40	49.66414 AU
retrograde	-107 Jul 28 j 01:32	24°♃16'45		retrograde	-99 Aug 04 j 17:11	1°♄51'55	
opposition	-107 Oct 19 j 06:34	23°♃17'05	-15°-9'-43	opposition	-99 Oct 26 j 17:09	0°♄52'23	-13°-53'-4
min. Earth dist.	-107 Oct 18 j 21:59	23°♃17'29	48.06549 AU	min. Earth dist.	-99 Oct 26 j 17:39	0°♄52'21	47.68895 AU
direct	-106 Jan 08 j 14:25	22°♃18'14			-99 Dec 22 j 11:06	30°♃	
				direct	-98 Jan 16 j 05:11	29°♃53'27	
conjunction	-106 Apr 17 j 13:22	23°♃44'16	-14°-29'-40		-98 Feb 09 j 17:09	0°♄	
minimum elong	-106 Apr 17 j 13:34	23°♃44'16	14°29'41				
max. Earth dist.	-106 Apr 17 j 23:20	23°♃44'49	49.98203 AU	conjunction	-98 Apr 25 j 09:50	1°♄20'01	-13°-14'-48
retrograde	-106 Jul 29 j 03:04	25°♃13'20		minimum elong	-98 Apr 25 j 10:01	1°♄20'01	13°14'48
opposition	-106 Oct 20 j 10:42	24°♃13'40	-15°-1'-1	max. Earth dist.	-98 Apr 25 j 09:05	1°♄19'58	49.60064 AU
min. Earth dist.	-106 Oct 20 j 02:30	24°♃14'03	48.03034 AU	retrograde	-98 Aug 06 j 00:58	2°♄49'21	
direct	-105 Jan 09 j 21:57	23°♃14'48		opposition	-98 Oct 27 j 21:27	1°♄49'47	-13°-42'-26
				min. Earth dist.	-98 Oct 27 j 22:30	1°♄49'44	47.62138 AU
conjunction	-105 Apr 18 j 18:41	24°♃40'51	-14°-21'-9	direct	-97 Jan 17 j 07:13	0°♄50'49	
minimum elong	-105 Apr 18 j 18:52	24°♃40'51	14°21'09				
max. Earth dist.	-105 Apr 19 j 02:38	24°♃41'18	49.94682 AU	conjunction	-97 Apr 26 j 15:31	2°♄17'27	-13°-4'-25
retrograde	-105 Jul 30 j 08:34	26°♃09'55		minimum elong	-97 Apr 26 j 15:44	2°♄17'28	13°04'26
opposition	-105 Oct 21 j 15:01	25°♃10'16	-14°-52'-4	max. Earth dist.	-97 Apr 26 j 12:45	2°♄17'18	49.53203 AU
min. Earth dist.	-105 Oct 21 j 07:33	25°♃10'37	47.99249 AU	retrograde	-97 Aug 07 j 07:40	3°♄46'49	
direct	-104 Jan 11 j 02:31	24°♃11'23		opposition	-97 Oct 29 j 01:57	2°♄47'13	-13°-31'-34
				min. Earth dist.	-97 Oct 29 j 05:11	2°♄47'04	47.54906 AU
conjunction	-104 Apr 19 j 00:01	25°♃37'28	-14°-12'-23	direct	-96 Jan 18 j 10:04	1°♄48'10	
minimum elong	-104 Apr 19 j 00:12	25°♃37'29	14°12'24				
max. Earth dist.	-104 Apr 19 j 07:47	25°♃37'54	49.90880 AU	conjunction	-96 Apr 26 j 21:13	3°♄14'53	-12°-53'-49
retrograde	-104 Jul 30 j 15:23	27°♃06'33		minimum elong	-96 Apr 26 j 21:25	3°♄14'54	12°53'50
opposition	-104 Oct 21 j 19:24	26°♃06'55	-14°-42'-50	max. Earth dist.	-96 Apr 26 j 18:05	3°♄14'43	49.45902 AU
min. Earth dist.	-104 Oct 21 j 13:31	26°♃07'12	47.95168 AU	retrograde	-96 Aug 07 j 09:26	4°♄44'18	
direct	-103 Jan 11 j 05:53	25°♃08'03		opposition	-96 Oct 29 j 06:21	3°♄44'39	-13°-20'-28
				min. Earth dist.	-96 Oct 29 j 10:07	3°♄44'28	47.47244 AU
conjunction	-103 Apr 20 j 05:31	26°♃34'11	-14°-3'-22	direct	-95 Jan 18 j 17:55	2°♄45'31	
minimum elong	-103 Apr 20 j 05:43	26°♃34'12	14°03'22				
max. Earth dist.	-103 Apr 20 j 12:05	26°♃34'33	49.86796 AU	conjunction	-95 Apr 28 j 02:58	4°♄12'19	-12°-42'-59
retrograde	-103 Jul 31 j 22:00	28°♃03'18		minimum elong	-95 Apr 28 j 03:11	4°♄12'20	12°43'01
opposition	-103 Oct 22 j 23:32	27°♃03'42	-14°-33'-21	max. Earth dist.	-95 Apr 27 j 21:37	4°♄12'01	49.38201 AU
min. Earth dist.	-103 Oct 22 j 17:43	27°♃03'58	47.90781 AU	retrograde	-95 Aug 08 j 13:04	5°♄41'47	
direct	-102 Jan 12 j 07:56	26°♃04'49		opposition	-95 Oct 30 j 10:40	4°♄42'04	-13°-9'-7
				min. Earth dist.	-95 Oct 30 j 15:39	4°♄41'50	47.39222 AU
conjunction	-102 Apr 21 j 11:02	27°♃31'03	-13°-54'-6	direct	-94 Jan 20 j 00:16	3°♄42'52	
minimum elong	-102 Apr 21 j 11:13	27°♃31'03	13°54'08				
max. Earth dist.	-102 Apr 21 j 15:50	27°♃31'19	49.82365 AU	conjunction	-94 Apr 29 j 08:52	5°♄09'46	-12°-31'-55
retrograde	-102 Aug 02 j 03:04	29°♃00'12		minimum elong	-94 Apr 29 j 09:03	5°♄09'47	12°31'55
opposition	-102 Oct 24 j 03:57	28°♃00'38	-14°-23'-38	max. Earth dist.	-94 Apr 29 j 03:04	5°♄09'27	49.30147 AU
min. Earth dist.	-102 Oct 24 j 00:14	28°♃00'48	47.86026 AU	retrograde	-94 Aug 09 j 18:46	6°♄39'18	
direct	-101 Jan 13 j 12:31	27°♃01'46		opposition	-94 Oct 31 j 15:13	5°♄39'32	-12°-57'-31
				min. Earth dist.	-94 Oct 31 j 21:41	5°♄39'14	47.30862 AU
conjunction	-101 Apr 22 j 16:36	28°♃28'05	-13°-44'-36	direct	-93 Jan 21 j 05:22	4°♄40'16	
minimum elong	-101 Apr 22 j 16:48	28°♃28'06	13°44'37				
max. Earth dist.	-101 Apr 22 j 21:08	28°♃28'20	49.77537 AU	conjunction	-93 Apr 30 j 14:33	6°♄07'16	-12°-20'-35
retrograde	-101 Aug 03 j 05:07	29°♃57'17		minimum elong	-93 Apr 30 j 14:45	6°♄07'16	12°20'37
opposition	-101 Oct 25 j 08:16	28°♃57'44	-14°-13'-40	max. Earth dist.	-93 Apr 30 j 07:36	6°♄06'52	49.21794 AU
min. Earth dist.	-101 Oct 25 j 05:21	28°♃57'53	47.80825 AU	retrograde	-93 Aug 11 j 02:19	7°♄36'51	
direct	-100 Jan 14 j 19:58	27°♃58'52		opposition	-93 Nov 01 j 19:41	6°♄37'03	-12°-45'-39
				min. Earth dist.	-93 Nov 02 j 02:05	6°♄36'45	47.22212 AU
conjunction	-100 Apr 22 j 22:13	29°♃25'17	-13°-34'-53	direct	-92 Jan 22 j 07:36	5°♄37'43	
minimum elong	-100 Apr 22 j 22:24	29°♃25'18	13°34'54				
max. Earth dist.	-100 Apr 23 j 00:08	29°♃25'23	49.72238 AU	conjunction	-92 Apr 30 j 20:23	7°♄04'50	-12°-9'-1
	-100 May 19 j 03:09	0°♄		minimum elong	-92 Apr 30 j 20:35	7°♄04'51	12°09'01
retrograde	-100 Aug 03 j 11:07	0°♄54'33		max. Earth dist.	-92 Apr 30 j 11:51	7°♄04'21	49.13145 AU
	-100 Oct 21 j 03:01	30°♃		retrograde	-92 Aug 11 j 08:34	8°♄34'31	
opposition	-100 Oct 25 j 12:39	29°♃55'00	-14°-3'-29	opposition	-92 Nov 02 j 00:17	7°♄34'41	-12°-33'-31
min. Earth dist.	-100 Oct 25 j 11:09	29°♃55'05	47.75135 AU	min. Earth dist.	-92 Nov 02 j 08:33	7°♄34'17	47.13274 AU
direct	-99 Jan 15 j 00:21	28°♃56'07		direct	-91 Jan 22 j 11:24	6°♄35'17	

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Attention, astronomical year style is used: The year -91 in astronomical counting style is the year 92 BCE in historical counting style.

conjunction	-91 May 02 j 02:28	8°♃02'33	-11°-57'-11			-83 Mar 31 j 16:23	15°♃	
minimum elong	-91 May 02 j 02:40	8°♃02'34	11°57'12	max. Earth dist.		-83 May 09 j 08:42	15°♃50'13	48.16843 AU
max. Earth dist.	-91 May 01 j 17:50	8°♃02'04	49.04210 AU					
retrograde	-91 Aug 12 j 11:49	9°♃32'20			conjunction	-83 May 10 j 05:34	15°♃51'25	-10°-14'-3
opposition	-91 Nov 03 j 04:52	8°♃32'28	-12°-21'-7		minimum elong	-83 May 10 j 05:45	15°♃51'26	10°14'03
min. Earth dist.	-91 Nov 03 j 13:37	8°♃32'03	47.04016 AU		retrograde	-83 Aug 20 j 13:22	17°♃22'21	
direct	-90 Jan 23 j 18:17	7°♃33'01			opposition	-83 Nov 10 j 20:08	16°♃22'00	-10°-33'-13
					min. Earth dist.	-83 Nov 11 j 15:03	16°♃21'06	46.13610 AU
conjunction	-90 May 03 j 08:27	9°♃00'27	-11°-45'-6		direct	-82 Jan 31 j 10:04	15°♃21'48	
minimum elong	-90 May 03 j 08:39	9°♃00'28	11°45'06					
max. Earth dist.	-90 May 02 j 21:30	8°♃59'50	48.94934 AU		conjunction	-82 May 11 j 12:11	16°♃50'47	-10°00'-5
retrograde	-90 Aug 13 j 17:29	10°♃30'22			minimum elong	-82 May 11 j 12:23	16°♃50'48	10°00'06
opposition	-90 Nov 04 j 09:28	9°♃30'28	-12°-8'-29		max. Earth dist.	-82 May 10 j 13:43	16°♃49'30	48.03938 AU
min. Earth dist.	-90 Nov 04 j 19:29	9°♃30'00	46.94402 AU		retrograde	-82 Aug 21 j 20:35	18°♃21'54	
direct	-89 Jan 24 j 23:21	8°♃30'58			opposition	-82 Nov 12 j 01:20	17°♃21'27	-10°-18'-36
					min. Earth dist.	-82 Nov 12 j 22:12	17°♃20'27	46.00412 AU
conjunction	-89 May 04 j 14:41	9°♃58'35	-11°-32'-47		direct	-81 Feb 01 j 14:09	16°♃21'08	
minimum elong	-89 May 04 j 14:52	9°♃58'35	11°32'48					
max. Earth dist.	-89 May 04 j 03:03	9°♃57'55	48.85257 AU		conjunction	-81 May 12 j 18:59	17°♃50'22	-9°-45'-51
retrograde	-89 Aug 14 j 22:41	11°♃28'38			minimum elong	-81 May 12 j 19:10	17°♃50'22	9°45'52
opposition	-89 Nov 05 j 14:17	10°♃28'43	-11°-55'-35		max. Earth dist.	-81 May 11 j 20:26	17°♃49'03	47.90753 AU
min. Earth dist.	-89 Nov 06 j 02:05	10°♃28'09	46.84347 AU		retrograde	-81 Aug 23 j 01:20	19°♃21'39	
direct	-88 Jan 26 j 05:05	9°♃29'09			opposition	-81 Nov 13 j 06:34	18°♃21'07	-10°-3'-42
					min. Earth dist.	-81 Nov 14 j 03:32	18°♃20'06	45.86942 AU
conjunction	-88 May 04 j 20:54	10°♃56'56	-11°-20'-14		direct	-80 Feb 02 j 21:27	17°♃20'41	
minimum elong	-88 May 04 j 21:06	10°♃56'57	11°20'14		max. Earth dist.	-80 May 12 j 01:00	18°♃48'44	47.77308 AU
max. Earth dist.	-88 May 04 j 07:41	10°♃56'11	48.75123 AU					
retrograde	-88 Aug 15 j 06:43	12°♃27'08			conjunction	-80 May 13 j 01:39	18°♃50'10	-9°-31'-22
opposition	-88 Nov 05 j 19:06	11°♃27'10	-11°-42'-27		minimum elong	-80 May 13 j 01:51	18°♃50'11	9°31'23
min. Earth dist.	-88 Nov 06 j 07:32	11°♃26'35	46.73799 AU		retrograde	-80 Aug 23 j 07:09	20°♃21'40	
direct	-87 Jan 26 j 08:08	10°♃27'32			opposition	-80 Nov 13 j 11:58	19°♃21'04	-9°-48'-32
max. Earth dist.	-87 May 05 j 11:48	11°♃54'37	48.64454 AU		min. Earth dist.	-80 Nov 14 j 10:03	19°♃19'59	45.73223 AU
					direct	-79 Feb 03 j 03:56	18°♃20'31	
conjunction	-87 May 06 j 03:22	11°♃55'31	-11°-7'-27		max. Earth dist.	-79 May 13 j 07:49	19°♃48'49	47.63598 AU
minimum elong	-87 May 06 j 03:33	11°♃55'32	11°07'28					
retrograde	-87 Aug 16 j 14:58	13°♃25'51			conjunction	-79 May 14 j 08:45	19°♃50'16	-9°-16'-37
opposition	-87 Nov 07 j 00:02	12°♃25'50	-11°-29'-6		minimum elong	-79 May 14 j 08:57	19°♃50'17	9°16'37
min. Earth dist.	-87 Nov 07 j 14:56	12°♃25'07	46.62713 AU		retrograde	-79 Aug 24 j 12:01	21°♃22'01	
direct	-86 Jan 27 j 11:12	11°♃26'06			opposition	-79 Nov 14 j 17:24	20°♃21'20	-9°-33'-5
					min. Earth dist.	-79 Nov 15 j 16:46	20°♃20'11	45.59224 AU
conjunction	-86 May 07 j 09:59	12°♃54'16	-10°-54'-27		direct	-78 Feb 04 j 10:59	19°♃20'41	
minimum elong	-86 May 07 j 10:11	12°♃54'17	10°54'28					
max. Earth dist.	-86 May 06 j 17:44	12°♃53'21	48.53258 AU		conjunction	-78 May 15 j 15:54	20°♃50'43	-9°-1'-36
retrograde	-86 Aug 17 j 18:56	14°♃24'44			minimum elong	-78 May 15 j 16:05	20°♃50'44	9°01'38
opposition	-86 Nov 08 j 05:00	13°♃24'39	-11°-15'-30		max. Earth dist.	-78 May 14 j 13:40	20°♃49'11	47.49610 AU
min. Earth dist.	-86 Nov 08 j 20:34	13°♃23'54	46.51097 AU		retrograde	-78 Aug 25 j 20:38	22°♃22'43	
direct	-85 Jan 28 j 18:28	12°♃24'49			opposition	-78 Nov 15 j 22:57	21°♃21'58	-9°-17'-21
					min. Earth dist.	-78 Nov 16 j 22:42	21°♃20'48	45.44924 AU
conjunction	-85 May 08 j 16:17	13°♃53'11	-10°-41'-13		direct	-77 Feb 05 j 14:54	20°♃21'12	
minimum elong	-85 May 08 j 16:28	13°♃53'11	10°41'14					
max. Earth dist.	-85 May 07 j 21:33	13°♃52'06	48.41554 AU		conjunction	-77 May 16 j 23:02	21°♃51'33	-8°-46'-20
	-85 Jul 01 j 22:03	15°♃			minimum elong	-77 May 16 j 23:13	21°♃51'34	8°46'20
retrograde	-85 Aug 18 j 23:36	15°♃23'48			max. Earth dist.	-77 May 15 j 19:03	21°♃49'55	47.35265 AU
	-85 Oct 06 j 12:38	15°♃			retrograde	-77 Aug 27 j 07:12	23°♃23'49	
opposition	-85 Nov 09 j 10:03	14°♃23'37	-11°-1'-39		opposition	-77 Nov 17 j 04:46	22°♃22'58	-9°-1'-22
min. Earth dist.	-85 Nov 10 j 03:09	14°♃22'48	46.39009 AU		min. Earth dist.	-77 Nov 18 j 06:41	22°♃21'42	45.30241 AU
direct	-84 Jan 30 j 00:55	13°♃23'40			direct	-76 Feb 06 j 17:25	21°♃22'06	
					max. Earth dist.	-76 May 16 j 02:05	22°♃51'06	47.20512 AU
conjunction	-84 May 08 j 22:55	14°♃52'14	-10°-27'-45					
minimum elong	-84 May 08 j 23:08	14°♃52'14	10°27'47		conjunction	-76 May 17 j 06:38	22°♃52'46	-8°-30'-48
max. Earth dist.	-84 May 08 j 03:31	14°♃51'07	48.29391 AU		minimum elong	-76 May 17 j 06:48	22°♃52'47	8°30'50
	-84 May 14 j 13:50	15°♃			retrograde	-76 Aug 27 j 14:13	24°♃25'17	
retrograde	-84 Aug 19 j 04:51	16°♃23'00			opposition	-76 Nov 17 j 10:32	23°♃24'21	-8°-45'-6
opposition	-84 Nov 09 j 15:05	15°♃22'44	-10°-47'-34		min. Earth dist.	-76 Nov 18 j 13:01	23°♃23'03	45.15109 AU
min. Earth dist.	-84 Nov 10 j 09:47	15°♃21'50	46.26489 AU		direct	-75 Feb 06 j 23:47	22°♃23'20	
	-84 Nov 29 j 18:18	15°♃			max. Earth dist.	-75 May 17 j 07:04	23°♃52'30	47.05282 AU
direct	-83 Jan 30 j 07:18	14°♃22'40						

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Attention, astronomical year style is used: The year -75 in astronomical counting style is the year 76 BCE in historical counting style.

conjunction	-75 May 18 j 14:17	23°♃54'20	-8°-15'-2	max. Earth dist.	-67 May 25 j 15:13	2°♂14'57	45.68934 AU
minimum elong	-75 May 18 j 14:28	23°♃54'20	8°15'03				
retrograde	-75 Aug 28 j 20:38	25°♃27'06		conjunction	-67 May 27 j 08:14	2°♂17'25	-5°-59'-36
opposition	-75 Nov 18 j 16:36	24°♃26'03	-8°-28'-35	minimum elong	-67 May 27 j 08:23	2°♂17'26	5°59'38
min. Earth dist.	-75 Nov 19 j 20:55	24°♃24'40	44.99493 AU	retrograde	-67 Sep 06 j 10:45	3°♂52'38	
direct	-74 Feb 08 j 06:58	23°♃24'53		opposition	-67 Nov 26 j 21:15	2°♂50'26	-6°-6'-36
				min. Earth dist.	-67 Nov 28 j 10:25	2°♂48'34	43.60816 AU
conjunction	-74 May 19 j 22:09	24°♃56'12	-7°-59'-1	direct	-66 Feb 16 j 12:51	1°♂47'49	
minimum elong	-74 May 19 j 22:19	24°♃56'13	7°59'02	max. Earth dist.	-66 May 26 j 23:59	3°♂19'38	45.50645 AU
max. Earth dist.	-74 May 18 j 14:05	24°♃54'18	46.89549 AU				
retrograde	-74 Aug 30 j 00:43	26°♃29'14		conjunction	-66 May 28 j 17:13	3°♂22'08	-5°-41'-27
opposition	-74 Nov 19 j 22:45	25°♃28'03	-8°-11'-49	minimum elong	-66 May 28 j 17:21	3°♂22'08	5°41'28
min. Earth dist.	-74 Nov 21 j 04:37	25°♃26'35	44.83378 AU	retrograde	-66 Sep 07 j 21:06	4°♂57'45	
direct	-73 Feb 09 j 16:22	24°♃26'43		opposition	-66 Nov 28 j 04:30	3°♂55'26	-5°-47'-32
max. Earth dist.	-73 May 19 j 20:10	25°♃56'20	46.73355 AU	min. Earth dist.	-66 Nov 29 j 17:43	3°♂53'33	43.42267 AU
				direct	-65 Feb 17 j 18:52	2°♂52'39	
conjunction	-73 May 21 j 06:01	25°♃58'20	-7°-42'-45	max. Earth dist.	-65 May 28 j 06:53	4°♂24'48	45.32052 AU
minimum elong	-73 May 21 j 06:11	25°♃58'21	7°42'46				
retrograde	-73 Aug 31 j 08:51	27°♃31'38		conjunction	-65 May 30 j 02:23	4°♂27'27	-5°-23'-2
opposition	-73 Nov 21 j 04:54	26°♃30'19	-7°-54'-47	minimum elong	-65 May 30 j 02:30	4°♂27'27	5°23'03
min. Earth dist.	-73 Nov 22 j 11:18	26°♃28'49	44.66825 AU	retrograde	-65 Sep 09 j 06:56	6°♂03'29	
direct	-72 Feb 10 j 21:49	25°♃28'48		opposition	-65 Nov 29 j 12:00	5°♂01'03	-5°-28'-12
max. Earth dist.	-72 May 20 j 02:24	26°♃58'37	46.56723 AU	min. Earth dist.	-65 Dec 01 j 03:09	4°♂59'04	43.23397 AU
				direct	-64 Feb 19 j 02:00	3°♂58'06	
conjunction	-72 May 21 j 14:00	27°♃00'44	-7°-26'-14	max. Earth dist.	-64 May 28 j 15:57	5°♂30'43	45.13085 AU
minimum elong	-72 May 21 j 14:09	27°♃00'44	7°26'14				
retrograde	-72 Aug 31 j 17:49	28°♃34'18		conjunction	-64 May 30 j 11:57	5°♂33'24	-5°-4'-20
opposition	-72 Nov 21 j 11:20	27°♃32'50	-7°-37'-28	minimum elong	-64 May 30 j 12:05	5°♂33'25	5°04'20
min. Earth dist.	-72 Nov 22 j 19:56	27°♃31'13	44.49867 AU	retrograde	-64 Sep 09 j 13:22	7°♂09'53	
direct	-71 Feb 11 j 02:37	26°♃31'07		opposition	-64 Nov 29 j 19:50	6°♂07'19	-5°-8'-34
max. Earth dist.	-71 May 21 j 10:16	28°♃01'15	46.39721 AU	min. Earth dist.	-64 Dec 01 j 12:10	6°♂05'16	43.04109 AU
				direct	-63 Feb 19 j 13:02	5°♂04'10	
conjunction	-71 May 22 j 22:15	28°♃03'23	-7°-9'-27	max. Earth dist.	-63 May 29 j 23:34	6°♂37'09	44.93683 AU
minimum elong	-71 May 22 j 22:25	28°♃03'24	7°09'28				
retrograde	-71 Sep 02 j 01:48	29°♃37'13		conjunction	-63 May 31 j 21:46	6°♂39'59	-4°-45'-22
opposition	-71 Nov 22 j 17:39	28°♃35'36	-7°-19'-52	minimum elong	-63 May 31 j 21:53	6°♂40'00	4°45'23
min. Earth dist.	-71 Nov 24 j 02:30	28°♃33'58	44.32564 AU	retrograde	-63 Sep 10 j 22:45	8°♂16'54	
direct	-70 Feb 12 j 09:51	27°♃33'41		opposition	-63 Dec 01 j 03:43	7°♂14'11	-4°-48'-39
max. Earth dist.	-70 May 22 j 16:14	29°♃04'03	46.22396 AU	min. Earth dist.	-63 Dec 02 j 21:00	7°♂12'04	42.84379 AU
				direct	-62 Feb 20 j 20:55	6°♂10'50	
conjunction	-70 May 24 j 06:29	29°♃06'20	-6°-52'-24	max. Earth dist.	-62 May 31 j 08:02	7°♂44'12	44.73808 AU
minimum elong	-70 May 24 j 06:38	29°♃06'20	6°52'24				
retrograde	-70 Jul 02 j 23:00	0°♂		conjunction	-62 Jun 02 j 07:52	7°♂47'09	-4°-26'-9
				minimum elong	-62 Jun 02 j 07:59	7°♂47'10	4°26'09
retrograde	-70 Sep 03 j 10:04	0°♂40'28		retrograde	-62 Sep 12 j 08:46	9°♂24'32	
				opposition	-62 Dec 02 j 12:04	8°♂21'37	-4°-28'-27
opposition	-70 Nov 24 j 00:20	29°♃38'41	-7°-1'-59	min. Earth dist.	-62 Dec 04 j 07:32	8°♂19'24	42.64184 AU
min. Earth dist.	-70 Nov 25 j 10:33	29°♃36'59	44.14982 AU	direct	-61 Feb 22 j 03:41	7°♂18'03	
direct	-69 Feb 13 j 16:52	28°♃36'35		max. Earth dist.	-61 Jun 01 j 17:21	8°♂51'51	44.53494 AU
max. Earth dist.	-69 May 18 j 22:31	0°♂		conjunction	-61 Jun 03 j 18:00	8°♂54'52	-4°-6'-39
				minimum elong	-61 Jun 03 j 18:06	8°♂54'53	4°06'40
conjunction	-69 May 25 j 14:49	0°♂09'36	-6°-35'-5	retrograde	-61 Sep 13 j 20:10	10°♂32'41	
minimum elong	-69 May 25 j 14:58	0°♂09'37	6°35'06	opposition	-61 Dec 03 j 20:27	9°♂29'35	-4°-7'-58
retrograde	-69 Sep 04 j 15:53	1°♂44'04		min. Earth dist.	-61 Dec 05 j 16:16	9°♂27'20	42.43563 AU
opposition	-69 Nov 25 j 07:11	0°♂42'08	-6°-43'-49	direct	-60 Feb 23 j 11:27	8°♂25'46	
min. Earth dist.	-69 Nov 26 j 18:16	0°♂40'23	43.97144 AU	max. Earth dist.	-60 Jun 02 j 01:17	9°♂59'56	44.32760 AU
direct	-68 Jan 02 j 20:58	30°♂♃		conjunction	-60 Jun 04 j 04:26	10°♂03'07	-3°-46'-54
				minimum elong	-60 Jun 04 j 04:32	10°♂03'07	3°46'55
direct	-68 Feb 15 j 01:40	29°♃39'51		retrograde	-60 Sep 14 j 09:07	11°♂41'23	
				opposition	-60 Dec 04 j 04:59	10°♂38'04	-3°-47'-11
max. Earth dist.	-68 Mar 28 j 19:24	0°♂		min. Earth dist.	-60 Dec 06 j 02:49	10°♂35'42	42.22564 AU
				direct	-59 Feb 23 j 18:46	9°♂33'58	
conjunction	-68 May 25 j 23:23	1°♂13'16	-6°-17'-29	max. Earth dist.	-59 Jun 03 j 11:52	11°♂08'39	44.11664 AU
minimum elong	-68 May 25 j 23:31	1°♂13'17	6°17'29				
retrograde	-68 Sep 05 j 00:09	2°♂48'06		conjunction	-59 Jun 05 j 15:15	11°♂11'52	-3°-26'-52
opposition	-68 Nov 25 j 14:00	1°♂46'02	-6°-25'-21				
min. Earth dist.	-68 Nov 27 j 01:24	1°♂44'15	43.79097 AU				
direct	-67 Feb 15 j 08:07	0°♂43'34					

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Attention, astronomical year style is used: The year -59 in astronomical counting style is the year 60 BCE in historical counting style.

minimum elong	-59 Jun 05 j 15:20	11°II11'53	3°26'53	min. Earth dist.	-51 Dec 17 j 04:06	21°II19'37	40.22658 AU
retrograde	-59 Sep 15 j 18:05	12°II50'36		direct	-50 Mar 06 j 13:37	20°II15'57	
opposition	-59 Dec 05 j 13:51	11°II47'03	-3°-26'-7	max. Earth dist.	-50 Jun 14 j 12:55	21°II55'35	42.10997 AU
min. Earth dist.	-59 Dec 07 j 12:23	11°II44'39	42.01230 AU				
direct	-58 Feb 25 j 05:46	10°II42'42		conjunction	-50 Jun 17 j 03:32	21°II59'43	0°-14'-15
max. Earth dist.	-58 Jun 04 j 20:48	12°II17'47	43.90267 AU	minimum elong	-50 Jun 17 j 03:32	21°II59'43	0°14'17
				behind sun begin	-50 Jun 17 j 00:41	21°II59'32	
conjunction	-58 Jun 07 j 01:58	12°II21'08	-3°-6'-33	behind sun end	-50 Jun 17 j 06:22	21°II59'53	
minimum elong	-58 Jun 07 j 02:03	12°II21'08	3°06'34	retrograde	-50 Sep 27 j 05:13	23°II43'40	
retrograde	-58 Sep 17 j 02:51	14°II00'20		opposition	-50 Dec 16 j 09:44	22°II38'04	0°-3'-6
opposition	-58 Dec 06 j 22:51	12°II56'34	-3°-4'-45	min. Earth dist.	-50 Dec 18 j 17:48	22°II35'03	39.99046 AU
min. Earth dist.	-58 Dec 08 j 22:09	12°II54'07	41.79641 AU	asc. node	-49 Feb 02 j 04:44	21°II44'47	
direct	-57 Feb 26 j 16:03	11°II51'56		direct	-49 Mar 07 j 22:21	21°II31'12	
max. Earth dist.	-57 Jun 06 j 07:00	13°II27'31	43.68620 AU	max. Earth dist.	-49 Jun 16 j 02:25	23°II11'33	41.87218 AU
conjunction	-57 Jun 08 j 13:06	13°II30'57	-2°-45'-58	conjunction	-49 Jun 18 j 17:18	23°II15'43	0°08'33
minimum elong	-57 Jun 08 j 13:10	13°II30'57	2°45'59	minimum elong	-49 Jun 18 j 17:18	23°II15'43	0°08'33
retrograde	-57 Sep 18 j 11:54	15°II10'39		behind sun begin	-49 Jun 18 j 11:39	23°II15'22	
opposition	-57 Dec 08 j 08:12	14°II06'39	-2°-43'-5	behind sun end	-49 Jun 18 j 22:58	23°II16'04	
min. Earth dist.	-57 Dec 10 j 08:58	14°II04'06	41.57836 AU	retrograde	-49 Sep 28 j 19:08	25°II00'21	
direct	-56 Feb 28 j 01:43	13°II01'45		opposition	-49 Dec 17 j 21:29	23°II54'28	0°20'54
max. Earth dist.	-56 Jun 06 j 17:52	14°II37'52	43.46790 AU	min. Earth dist.	-49 Dec 20 j 05:51	23°II51'26	39.75097 AU
				direct	-48 Mar 08 j 10:19	22°II47'16	
conjunction	-56 Jun 09 j 00:26	14°II41'21	-2°-25'-7	max. Earth dist.	-48 Jun 16 j 14:07	24°II28'13	41.63116 AU
minimum elong	-56 Jun 09 j 00:30	14°II41'21	2°25'08				
retrograde	-56 Sep 19 j 00:03	16°II21'35		conjunction	-48 Jun 19 j 07:20	24°II32'34	0°31'31
opposition	-56 Dec 08 j 17:44	15°II17'22	-2°-21'-7	minimum elong	-48 Jun 19 j 07:19	24°II32'34	0°31'30
min. Earth dist.	-56 Dec 10 j 18:18	15°II14'49	41.35857 AU	retrograde	-48 Sep 29 j 10:18	26°II17'52	
direct	-55 Feb 28 j 09:17	14°II12'11		opposition	-48 Dec 18 j 09:37	25°II11'43	0°45'11
max. Earth dist.	-55 Jun 08 j 03:40	15°II48'48	43.24774 AU	min. Earth dist.	-48 Dec 20 j 19:32	25°II08'34	39.50865 AU
				direct	-47 Mar 09 j 22:24	24°II04'09	
conjunction	-55 Jun 10 j 12:07	15°II52'24	-2°-3'-59	max. Earth dist.	-47 Jun 18 j 04:15	25°II45'51	41.38732 AU
minimum elong	-55 Jun 10 j 12:10	15°II52'24	2°03'59				
retrograde	-55 Sep 20 j 13:19	17°II33'12		conjunction	-47 Jun 20 j 21:51	25°II50'15	0°54'45
opposition	-55 Dec 10 j 03:36	16°II28'46	-1°-58'-51	minimum elong	-47 Jun 20 j 21:50	25°II50'15	0°54'46
min. Earth dist.	-55 Dec 12 j 05:57	16°II26'07	41.13712 AU	retrograde	-47 Sep 30 j 22:24	27°II36'16	
direct	-54 Mar 01 j 17:16	15°II23'19		opposition	-47 Dec 19 j 22:05	26°II29'49	1°09'46
max. Earth dist.	-54 Jun 09 j 15:51	17°II00'35	43.02583 AU	min. Earth dist.	-47 Dec 22 j 09:05	26°II26'35	39.26391 AU
				direct	-46 Mar 11 j 13:32	25°II21'54	
conjunction	-54 Jun 12 j 00:11	17°II04'12	-1°-42'-34	max. Earth dist.	-46 Jun 19 j 17:44	27°II04'17	41.14151 AU
minimum elong	-54 Jun 12 j 00:14	17°II04'12	1°42'35				
retrograde	-54 Sep 22 j 01:33	18°II45'35		conjunction	-46 Jun 22 j 12:34	27°II08'49	1°18'15
opposition	-54 Dec 11 j 13:47	17°II40'56	-1°-36'-17	minimum elong	-46 Jun 22 j 12:31	27°II08'49	1°18'15
min. Earth dist.	-54 Dec 13 j 16:26	17°II38'15	40.91374 AU	retrograde	-46 Oct 02 j 12:55	28°II55'34	
direct	-53 Mar 03 j 04:49	16°II35'13		opposition	-46 Dec 21 j 10:54	27°II48'48	1°34'36
max. Earth dist.	-53 Jun 11 j 01:57	18°II13'02	42.80174 AU	min. Earth dist.	-46 Dec 23 j 22:00	27°II45'33	39.01768 AU
				direct	-45 Mar 13 j 02:11	26°II40'32	
conjunction	-53 Jun 13 j 12:16	18°II16'48	-1°-20'-53	max. Earth dist.	-45 Jun 21 j 07:39	28°II23'40	40.89421 AU
minimum elong	-53 Jun 13 j 12:18	18°II16'48	1°20'53				
retrograde	-53 Sep 23 j 14:51	19°II58'48		conjunction	-45 Jun 24 j 03:34	28°II28'17	1°41'59
opposition	-53 Dec 13 j 00:14	18°II53'55	-1°-13'-25	minimum elong	-45 Jun 24 j 03:30	28°II28'17	1°41'59
min. Earth dist.	-53 Dec 15 j 04:00	18°II51'11	40.68800 AU		-45 Aug 29 j 19:14	0°☿	
direct	-52 Mar 03 j 15:35	17°II47'57		retrograde	-45 Oct 04 j 03:06	0°☿15'49	
max. Earth dist.	-52 Jun 11 j 13:57	19°II26'24	42.57467 AU		-45 Nov 08 j 21:17	30°RII	
				opposition	-45 Dec 23 j 00:14	29°II08'45	1°59'42
conjunction	-52 Jun 14 j 01:05	19°II30'15	0°-58'-56	min. Earth dist.	-45 Dec 25 j 12:55	29°II05'24	38.77039 AU
minimum elong	-52 Jun 14 j 01:07	19°II30'15	0°58'57	direct	-44 Mar 13 j 13:40	28°II00'07	
retrograde	-52 Sep 24 j 01:33	21°II12'53		max. Earth dist.	-44 Jun 21 j 23:22	29°II44'05	40.64615 AU
opposition	-52 Dec 13 j 11:01	20°II07'47	0°-50'-16				
min. Earth dist.	-52 Dec 15 j 16:31	20°II04'56	40.45903 AU	conjunction	-44 Jun 24 j 19:09	29°II48'44	2°05'57
direct	-51 Mar 05 j 03:09	19°II01'32		minimum elong	-44 Jun 24 j 19:05	29°II48'44	2°05'56
max. Earth dist.	-51 Jun 13 j 01:48	20°II40'36	42.34424 AU		-44 Jul 01 j 15:07	0°☿	
				retrograde	-44 Oct 04 j 19:36	1°☿37'04	
conjunction	-51 Jun 15 j 14:12	20°II44'33	0°-36'-43	opposition	-44 Dec 23 j 13:45	0°☿29'42	2°25'04
minimum elong	-51 Jun 15 j 14:13	20°II44'33	0°36'43	min. Earth dist.	-44 Dec 26 j 02:07	0°☿26'20	38.52261 AU
retrograde	-51 Sep 25 j 14:12	22°II27'50			-43 Jan 15 j 14:12	30°RII	
opposition	-51 Dec 14 j 22:10	21°II22'30	0°-26'-50	direct	-43 Mar 15 j 02:13	29°II20'42	

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Attention, astronomical year style is used: The year -43 in astronomical counting style is the year 44 BCE in historical counting style.

	-43 May 11 j 12:40	0°☾		conjunction	-35 Jul 08 j 13:00	12°☾46'56	5°50'28
max. Earth dist.	-43 Jun 23 j 13:28	1°☾05'27	40.39761 AU	minimum elong	-35 Jul 08 j 12:49	12°☾46'55	5°50'27
				retrograde	-35 Oct 18 j 18:10	14°☾43'35	
conjunction	-43 Jun 26 j 11:06	1°☾10'15	2°30'08	opposition	-34 Jan 05 j 14:28	13°☾33'15	6°23'08
minimum elong	-43 Jun 26 j 11:01	1°☾10'15	2°30'08	min. Earth dist.	-34 Jan 08 j 10:42	13°☾29'16	36.24770 AU
retrograde	-43 Oct 06 j 14:51	2°☾59'24		direct	-34 Mar 27 j 22:24	12°☾20'43	
opposition	-43 Dec 25 j 03:54	1°☾51'44	2°50'40	max. Earth dist.	-34 Jul 07 j 04:21	14°☾14'01	38.10669 AU
min. Earth dist.	-43 Dec 27 j 17:34	1°☾48'18	38.27463 AU				
direct	-42 Mar 16 j 13:51	0°☾42'24		conjunction	-34 Jul 10 j 09:22	14°☾19'45	6°16'09
max. Earth dist.	-42 Jun 25 j 06:16	2°☾28'06	40.14870 AU	minimum elong	-34 Jul 10 j 09:10	14°☾19'44	6°16'10
				retrograde	-34 Oct 20 j 15:10	16°☾17'26	
conjunction	-42 Jun 28 j 03:28	2°☾32'55	2°54'32	opposition	-33 Jan 07 j 09:08	15°☾06'42	6°50'25
minimum elong	-42 Jun 28 j 03:23	2°☾32'54	2°54'32	min. Earth dist.	-33 Jan 10 j 05:18	15°☾02'41	35.98937 AU
retrograde	-42 Oct 08 j 06:43	4°☾22'56		direct	-33 Mar 29 j 17:47	13°☾53'41	
opposition	-42 Dec 26 j 18:28	3°☾14'58	3°16'30	max. Earth dist.	-33 Jul 09 j 00:49	15°☾48'04	37.84665 AU
min. Earth dist.	-42 Dec 29 j 08:23	3°☾11'30	38.02619 AU				
direct	-41 Mar 18 j 05:00	2°☾05'17		conjunction	-33 Jul 12 j 06:30	15°☾53'54	6°41'55
max. Earth dist.	-41 Jun 26 j 21:38	3°☾51'50	39.89923 AU	minimum elong	-33 Jul 12 j 06:17	15°☾53'53	6°41'55
				retrograde	-33 Oct 22 j 11:26	17°☾52'38	
conjunction	-41 Jun 29 j 20:16	3°☾56'48	3°19'08	opposition	-32 Jan 09 j 04:24	16°☾41'31	7°17'48
minimum elong	-41 Jun 29 j 20:10	3°☾56'47	3°19'08	min. Earth dist.	-32 Jan 12 j 01:54	16°☾37'23	35.73164 AU
retrograde	-41 Oct 10 j 00:17	5°☾47'42		direct	-32 Mar 30 j 11:23	15°☾28'03	
opposition	-41 Dec 28 j 09:20	4°☾39'27	3°42'34	max. Earth dist.	-32 Jul 09 j 22:50	17°☾23'35	37.58757 AU
min. Earth dist.	-41 Dec 30 j 23:54	4°☾35'56	37.77711 AU				
direct	-40 Mar 18 j 20:52	3°☾29'25		conjunction	-32 Jul 13 j 04:12	17°☾29'27	7°07'44
max. Earth dist.	-40 Jun 27 j 14:22	5°☾16'54	39.64843 AU	minimum elong	-32 Jul 13 j 03:58	17°☾29'26	7°07'45
				retrograde	-32 Oct 23 j 08:44	19°☾29'18	
conjunction	-40 Jun 30 j 13:48	5°☾21'58	3°43'56	opposition	-31 Jan 10 j 00:18	18°☾17'47	7°45'14
minimum elong	-40 Jun 30 j 13:41	5°☾21'57	3°43'56	min. Earth dist.	-31 Jan 12 j 21:02	18°☾13'41	35.47515 AU
retrograde	-40 Oct 10 j 16:33	7°☾13'47		direct	-31 Apr 01 j 06:51	17°☾03'52	
opposition	-40 Dec 29 j 00:57	6°☾05'14	4°08'51	max. Earth dist.	-31 Jul 11 j 19:50	19°☾00'31	37.32976 AU
min. Earth dist.	-40 Dec 31 j 17:08	6°☾01'36	37.52651 AU				
direct	-39 Mar 20 j 12:31	4°☾54'50		conjunction	-31 Jul 15 j 02:28	19°☾06'32	7°33'34
max. Earth dist.	-39 Jun 29 j 07:36	6°☾43'15	39.39593 AU	minimum elong	-31 Jul 15 j 02:13	19°☾06'31	7°33'34
				retrograde	-31 Oct 25 j 08:38	21°☾07'32	
conjunction	-39 Jul 02 j 07:46	6°☾48'25	4°08'55	opposition	-30 Jan 11 j 20:55	19°☾55'38	8°12'41
minimum elong	-39 Jul 02 j 07:38	6°☾48'24	4°08'55	min. Earth dist.	-30 Jan 14 j 18:39	19°☾51'27	35.22038 AU
retrograde	-39 Oct 12 j 10:11	8°☾41'10		direct	-30 Apr 03 j 00:30	18°☾41'16	
opposition	-39 Dec 30 j 16:55	7°☾32'19	4°35'21	max. Earth dist.	-30 Jul 13 j 19:51	20°☾39'15	37.07370 AU
min. Earth dist.	-38 Jan 02 j 09:06	7°☾28'39	37.27409 AU				
direct	-38 Mar 22 j 03:28	6°☾21'31		conjunction	-30 Jul 17 j 01:29	20°☾45'14	7°59'23
max. Earth dist.	-38 Jul 01 j 00:11	8°☾10'49	39.14128 AU	minimum elong	-30 Jul 17 j 01:13	20°☾45'13	7°59'24
				retrograde	-30 Oct 27 j 08:33	22°☾47'26	
conjunction	-38 Jul 04 j 02:18	8°☾16'09	4°34'05	opposition	-29 Jan 13 j 18:11	21°☾35'10	8°40'08
minimum elong	-38 Jul 04 j 02:09	8°☾16'08	4°34'05	min. Earth dist.	-29 Jan 16 j 15:35	21°☾30'58	34.96736 AU
retrograde	-38 Oct 14 j 05:15	10°☾09'52		direct	-29 Apr 04 j 21:25	20°☾20'23	
opposition	-37 Jan 01 j 09:36	9°☾00'40	5°02'02	max. Earth dist.	-29 Jul 15 j 18:10	22°☾19'34	36.81928 AU
min. Earth dist.	-37 Jan 04 j 03:41	8°☾56'52	37.01974 AU				
direct	-37 Mar 23 j 17:38	7°☾49'28		conjunction	-29 Jul 19 j 00:58	22°☾25'42	8°25'09
max. Earth dist.	-37 Jul 02 j 19:16	9°☾39'47	38.88470 AU	minimum elong	-29 Jul 19 j 00:41	22°☾25'41	8°25'09
				retrograde	-29 Oct 29 j 10:44	24°☾29'07	
conjunction	-37 Jul 05 j 21:16	9°☾45'09	4°59'24	opposition	-28 Jan 15 j 16:05	23°☾16'30	9°07'32
minimum elong	-37 Jul 05 j 21:06	9°☾45'08	4°59'24	min. Earth dist.	-28 Jan 18 j 13:57	23°☾12'15	34.71595 AU
retrograde	-37 Oct 16 j 01:24	11°☾39'50		direct	-28 Apr 05 j 17:38	22°☾01'18	
opposition	-36 Jan 03 j 02:43	10°☾30'16	5°28'55	max. Earth dist.	-28 Jul 16 j 18:53	24°☾01'49	36.56590 AU
min. Earth dist.	-36 Jan 05 j 20:57	10°☾26'26	36.76353 AU				
direct	-36 Mar 24 j 10:28	9°☾18'38		conjunction	-28 Jul 20 j 01:28	24°☾08'01	8°50'52
max. Earth dist.	-36 Jul 03 j 12:41	11°☾09'51	38.62637 AU	minimum elong	-28 Jul 20 j 01:11	24°☾07'59	8°50'52
				retrograde	-28 Oct 30 j 11:31	26°☾12'41	
conjunction	-36 Jul 06 j 16:48	11°☾15'25	5°24'52	opposition	-27 Jan 16 j 14:46	24°☾59'42	9°34'52
minimum elong	-36 Jul 06 j 16:38	11°☾15'24	5°24'52	min. Earth dist.	-27 Jan 19 j 13:28	24°☾55'22	34.46545 AU
retrograde	-36 Oct 16 j 22:49	13°☾11'04		direct	-27 Apr 07 j 17:11	23°☾44'05	
opposition	-35 Jan 03 j 20:13	12°☾01'07	5°55'57	max. Earth dist.	-27 Jul 18 j 19:24	25°☾45'54	36.31334 AU
min. Earth dist.	-35 Jan 06 j 15:42	11°☾57'12	36.50606 AU				
direct	-35 Mar 26 j 02:47	10°☾49'02		conjunction	-27 Jul 22 j 02:35	25°☾52'12	9°16'28
max. Earth dist.	-35 Jul 05 j 08:49	12°☾41'19	38.36677 AU	minimum elong	-27 Jul 22 j 02:16	25°☾52'10	9°16'27
				retrograde	-27 Nov 01 j 14:57	27°☾58'08	

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Attention, astronomical year style is used: The year -26 in astronomical counting style is the year 27 BCE in historical counting style.

opposition	-26 Jan 18 j 14:12	26° \mathcal{E} 44'47	10°02'07	opposition	-18 Feb 02 j 13:43	11° \mathcal{Q} 52'17	13°30'50
min. Earth dist.	-26 Jan 21 j 12:34	26° \mathcal{E} 40'27	34.21572 AU	min. Earth dist.	-18 Feb 05 j 12:54	11° \mathcal{Q} 47'39	32.27507 AU
direct	-26 Apr 09 j 16:18	25° \mathcal{E} 28'44		direct	-18 Apr 24 j 07:42	10° \mathcal{Q} 32'16	
max. Earth dist.	-26 Jul 20 j 20:26	27° \mathcal{E} 31'51	36.06113 AU	max. Earth dist.	-18 Aug 05 j 15:18	12° \mathcal{Q} 46'48	34.10783 AU
conjunction	-26 Jul 24 j 04:21	27° \mathcal{E} 38'16	9°41'56	conjunction	-18 Aug 08 j 21:04	12° \mathcal{Q} 53'34	12°55'20
minimum elong	-26 Jul 24 j 04:01	27° \mathcal{E} 38'14	9°41'57	minimum elong	-18 Aug 08 j 20:40	12° \mathcal{Q} 53'32	12°55'20
retrograde	-26 Nov 03 j 15:43	29° \mathcal{E} 45'30			-18 Oct 23 j 19:28	15° \mathcal{Q}	
opposition	-25 Jan 20 j 14:32	28° \mathcal{E} 31'46	10°29'13	retrograde	-18 Nov 19 j 15:36	15° \mathcal{Q} 11'33	
min. Earth dist.	-25 Jan 23 j 14:21	28° \mathcal{E} 27'19	33.96648 AU		-18 Dec 16 j 18:13	15° \mathcal{R} \mathcal{Q}	
direct	-25 Apr 11 j 14:11	27° \mathcal{E} 15'15		opposition	-17 Feb 04 j 20:17	13° \mathcal{Q} 54'19	13°54'47
max. Earth dist.	-25 Jul 22 j 23:23	29° \mathcal{E} 19'45	35.80953 AU	min. Earth dist.	-17 Feb 07 j 17:47	13° \mathcal{Q} 49'46	32.04945 AU
				direct	-17 Apr 26 j 13:36	12° \mathcal{Q} 33'51	
conjunction	-25 Jul 26 j 06:57	29° \mathcal{E} 26'13	10°07'15	max. Earth dist.	-17 Aug 07 j 23:54	14° \mathcal{Q} 49'53	33.88170 AU
minimum elong	-25 Jul 26 j 06:37	29° \mathcal{E} 26'11	10°07'14				
	-25 Aug 12 j 19:43	0° \mathcal{Q}		conjunction	-17 Aug 11 j 05:34	14° \mathcal{Q} 56'42	13°17'16
retrograde	-25 Nov 05 j 17:42	1° \mathcal{Q} 34'44		minimum elong	-17 Aug 11 j 05:11	14° \mathcal{Q} 56'40	13°17'16
opposition	-24 Jan 22 j 15:21	0° \mathcal{Q} 20'36	10°56'09		-17 Aug 12 j 19:07	15° \mathcal{Q}	
min. Earth dist.	-24 Jan 25 j 14:36	0° \mathcal{Q} 16'09	33.71794 AU	retrograde	-17 Nov 22 j 00:21	17° \mathcal{Q} 16'06	
	-24 Feb 05 j 13:25	30° \mathcal{R} \mathcal{E}		opposition	-16 Feb 07 j 03:43	15° \mathcal{Q} 58'29	14°18'02
direct	-24 Apr 12 j 14:30	29° \mathcal{E} 03'36		min. Earth dist.	-16 Feb 10 j 01:37	15° \mathcal{Q} 53'53	31.82912 AU
	-24 Jun 16 j 05:30	0° \mathcal{Q}			-16 Mar 19 j 13:42	15° \mathcal{R} \mathcal{Q}	
max. Earth dist.	-24 Jul 24 j 01:15	1° \mathcal{Q} 09'22	35.55865 AU	direct	-16 Apr 27 j 17:36	14° \mathcal{Q} 37'35	
					-16 Jun 05 j 05:54	15° \mathcal{Q}	
conjunction	-24 Jul 27 j 10:19	1° \mathcal{Q} 16'00	10°32'21	max. Earth dist.	-16 Aug 09 j 11:10	16° \mathcal{Q} 55'15	33.66080 AU
minimum elong	-24 Jul 27 j 09:58	1° \mathcal{Q} 15'58	10°32'22				
retrograde	-24 Nov 06 j 22:03	3° \mathcal{Q} 25'51		conjunction	-16 Aug 12 j 15:00	17° \mathcal{Q} 01'59	13°38'30
opposition	-23 Jan 23 j 17:07	2° \mathcal{Q} 11'16	11°22'52	minimum elong	-16 Aug 12 j 14:36	17° \mathcal{Q} 01'57	13°38'30
min. Earth dist.	-23 Jan 26 j 17:32	2° \mathcal{Q} 06'43	33.47055 AU	retrograde	-16 Nov 23 j 09:36	19° \mathcal{Q} 22'49	
direct	-23 Apr 14 j 12:43	0° \mathcal{Q} 53'46		opposition	-15 Feb 08 j 12:10	18° \mathcal{Q} 04'49	14°40'30
max. Earth dist.	-23 Jul 26 j 06:20	3° \mathcal{Q} 01'00	35.30907 AU	min. Earth dist.	-15 Feb 11 j 08:44	18° \mathcal{Q} 00'17	31.61375 AU
				direct	-15 Apr 30 j 01:37	16° \mathcal{Q} 43'31	
conjunction	-23 Jul 29 j 14:22	3° \mathcal{Q} 07'37	10°57'12	max. Earth dist.	-15 Aug 11 j 20:57	19° \mathcal{Q} 02'39	33.44476 AU
minimum elong	-23 Jul 29 j 14:01	3° \mathcal{Q} 07'36	10°57'11				
retrograde	-23 Nov 09 j 02:02	5° \mathcal{Q} 18'47		conjunction	-15 Aug 15 j 01:04	19° \mathcal{Q} 09'28	13°58'57
opposition	-22 Jan 25 j 19:38	4° \mathcal{Q} 03'46	11°49'18	minimum elong	-15 Aug 15 j 00:41	19° \mathcal{Q} 09'26	13°58'56
min. Earth dist.	-22 Jan 28 j 19:35	3° \mathcal{Q} 59'13	33.22477 AU	retrograde	-15 Nov 25 j 21:41	21° \mathcal{Q} 31'44	
direct	-22 Apr 16 j 14:42	2° \mathcal{Q} 45'46		opposition	-14 Feb 10 j 21:35	20° \mathcal{Q} 13'21	15°02'08
max. Earth dist.	-22 Jul 28 j 10:04	4° \mathcal{Q} 54'18	35.06155 AU	min. Earth dist.	-14 Feb 13 j 17:55	20° \mathcal{Q} 08'49	31.40322 AU
				direct	-14 May 02 j 08:14	18° \mathcal{Q} 51'37	
conjunction	-22 Jul 31 j 19:00	5° \mathcal{Q} 01'04	11°21'43	max. Earth dist.	-14 Aug 14 j 09:58	21° \mathcal{Q} 12'25	33.23346 AU
minimum elong	-22 Jul 31 j 18:38	5° \mathcal{Q} 01'02	11°21'44				
retrograde	-22 Nov 11 j 09:35	7° \mathcal{Q} 13'34		conjunction	-14 Aug 17 j 12:11	21° \mathcal{Q} 19'07	14°18'33
opposition	-21 Jan 27 j 22:50	5° \mathcal{Q} 58'05	12°15'23	minimum elong	-14 Aug 17 j 11:48	21° \mathcal{Q} 19'05	14°18'34
min. Earth dist.	-21 Jan 30 j 22:54	5° \mathcal{Q} 53'30	32.98165 AU	retrograde	-14 Nov 28 j 09:01	23° \mathcal{Q} 42'48	
direct	-21 Apr 18 j 17:29	4° \mathcal{Q} 39'34		opposition	-13 Feb 13 j 07:55	22° \mathcal{Q} 24'03	15°22'52
max. Earth dist.	-21 Jul 30 j 16:36	6° \mathcal{Q} 49'37	34.81682 AU	min. Earth dist.	-13 Feb 16 j 03:35	22° \mathcal{Q} 19'32	31.19727 AU
				direct	-13 May 04 j 17:19	21° \mathcal{Q} 01'54	
conjunction	-21 Aug 03 j 00:28	6° \mathcal{Q} 56'21	11°45'52	max. Earth dist.	-13 Aug 16 j 21:45	23° \mathcal{Q} 24'09	33.02697 AU
minimum elong	-21 Aug 03 j 00:05	6° \mathcal{Q} 56'19	11°45'52				
retrograde	-21 Nov 13 j 15:49	9° \mathcal{Q} 10'11		conjunction	-13 Aug 19 j 23:56	23° \mathcal{Q} 30'55	14°37'16
opposition	-20 Jan 30 j 03:00	7° \mathcal{Q} 54'14	12°41'03	minimum elong	-13 Aug 19 j 23:34	23° \mathcal{Q} 30'53	14°37'16
min. Earth dist.	-20 Feb 02 j 03:07	7° \mathcal{Q} 49'37	32.74170 AU	retrograde	-13 Nov 30 j 23:47	25° \mathcal{Q} 56'00	
direct	-20 Apr 19 j 22:28	6° \mathcal{Q} 35'13		opposition	-12 Feb 15 j 19:06	24° \mathcal{Q} 36'52	15°42'35
max. Earth dist.	-20 Jul 31 j 22:46	8° \mathcal{Q} 46'41	34.57581 AU	min. Earth dist.	-12 Feb 18 j 13:46	24° \mathcal{Q} 32'23	30.99613 AU
				direct	-12 May 06 j 04:04	23° \mathcal{Q} 14'18	
conjunction	-20 Aug 04 j 06:34	8° \mathcal{Q} 53'29	12°09'34	max. Earth dist.	-12 Aug 18 j 12:05	25° \mathcal{Q} 38'07	32.82534 AU
minimum elong	-20 Aug 04 j 06:10	8° \mathcal{Q} 53'27	12°09'34				
retrograde	-20 Nov 14 j 23:45	11° \mathcal{Q} 08'40		conjunction	-12 Aug 21 j 12:43	25° \mathcal{Q} 44'48	14°55'00
opposition	-19 Jan 31 j 07:47	9° \mathcal{Q} 52'17	13°06'13	minimum elong	-12 Aug 21 j 12:21	25° \mathcal{Q} 44'46	14°55'00
min. Earth dist.	-19 Feb 03 j 06:46	9° \mathcal{Q} 47'42	32.50598 AU	retrograde	-12 Dec 02 j 13:09	28° \mathcal{Q} 11'15	
direct	-19 Apr 22 j 03:18	8° \mathcal{Q} 32'45		opposition	-11 Feb 17 j 07:17	26° \mathcal{Q} 51'43	16°01'15
max. Earth dist.	-19 Aug 03 j 06:25	10° \mathcal{Q} 45'43	34.33920 AU	min. Earth dist.	-11 Feb 20 j 01:48	26° \mathcal{Q} 47'13	30.79995 AU
				direct	-11 May 08 j 16:05	25° \mathcal{Q} 28'45	
conjunction	-19 Aug 06 j 13:33	10° \mathcal{Q} 52'32	12°32'45	max. Earth dist.	-11 Aug 21 j 02:19	27° \mathcal{Q} 54'02	32.62925 AU
minimum elong	-19 Aug 06 j 13:10	10° \mathcal{Q} 52'30	12°32'44				
retrograde	-19 Nov 17 j 06:29	13° \mathcal{Q} 09'06		conjunction	-11 Aug 24 j 02:04	28° \mathcal{Q} 00'42	15°11'40

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Attention, astronomical year style is used: The year -11 in astronomical counting style is the year 12 BCE in historical counting style.

minimum elong	-11 Aug 24 j 01:43	28°Ω00'40	15°11'40	minimum elong	-3 Sep 12 j 12:08	17°♄13'10	16°36'25
	-11 Oct 24 j 21:17	0°♄		retrograde	-3 Dec 24 j 19:46	19°♄50'08	
retrograde	-11 Dec 05 j 04:39	0°♄28'29		opposition	-2 Mar 11 j 09:04	18°♄27'48	17°45'18
	-10 Jan 16 j 14:16	30°♄Ω		min. Earth dist.	-2 Mar 13 j 11:30	18°♄24'16	29.37273 AU
opposition	-10 Feb 19 j 20:15	29°Ω08'34	16°18'45	direct	-2 May 30 j 07:11	17°♄02'07	
min. Earth dist.	-10 Feb 22 j 12:46	29°Ω04'11	30.60946 AU	max. Earth dist.	-2 Sep 13 j 02:37	19°♄39'29	31.22488 AU
direct	-10 May 11 j 05:10	27°Ω45'11					
	-10 Aug 18 j 09:56	0°♄		conjunction	-2 Sep 15 j 06:58	19°♄44'41	16°39'48
max. Earth dist.	-10 Aug 23 j 17:38	0°♄11'56	32.43914 AU	minimum elong	-2 Sep 15 j 06:51	19°♄44'40	16°39'48
				retrograde	-2 Dec 27 j 17:01	22°♄22'31	
conjunction	-10 Aug 26 j 16:05	0°♄18'32	15°27'12	opposition	-1 Mar 14 j 04:55	21°♄00'00	17°48'14
minimum elong	-10 Aug 26 j 15:44	0°♄18'30	15°27'13	min. Earth dist.	-1 Mar 16 j 04:27	20°♄56'40	29.25952 AU
retrograde	-10 Dec 07 j 19:03	2°♄47'37		direct	-1 Jun 02 j 02:10	19°♄34'10	
opposition	-9 Feb 22 j 10:09	1°♄27'19	16°35'00	max. Earth dist.	-1 Sep 16 j 01:05	22°♄12'36	31.11573 AU
min. Earth dist.	-9 Feb 25 j 02:29	1°♄22'56	30.42521 AU				
direct	-9 May 13 j 17:24	0°♄03'33		conjunction	-1 Sep 18 j 02:24	22°♄17'31	16°41'24
max. Earth dist.	-9 Aug 26 j 10:30	2°♄31'47	32.25596 AU	minimum elong	-1 Sep 18 j 02:19	22°♄17'31	16°41'23
				retrograde	-1 Dec 30 j 12:54	24°♄56'08	
conjunction	-9 Aug 29 j 06:49	2°♄38'15	15°41'30	opposition	00 Mar 16 j 01:26	23°♄33'26	17°49'14
minimum elong	-9 Aug 29 j 06:30	2°♄38'13	15°41'29	min. Earth dist.	00 Mar 17 j 23:39	23°♄30'11	29.15516 AU
retrograde	-9 Dec 10 j 11:45	5°♄08'35		direct	00 Jun 03 j 22:36	22°♄07'28	
opposition	-8 Feb 25 j 00:36	3°♄47'55	16°49'53	max. Earth dist.	00 Sep 17 j 23:01	24°♄46'47	31.01595 AU
min. Earth dist.	-8 Feb 27 j 14:30	3°♄43'39	30.24806 AU				
direct	-8 May 15 j 07:55	2°♄23'45		conjunction	00 Sep 19 j 22:06	24°♄51'30	16°41'10
max. Earth dist.	-8 Aug 28 j 03:08	4°♄53'22	32.08040 AU	minimum elong	00 Sep 19 j 22:05	24°♄51'30	16°41'11
				retrograde	01 Jan 01 j 10:32	27°♄30'46	
conjunction	-8 Aug 30 j 22:15	4°♄59'46	15°54'28	opposition	01 Mar 18 j 22:30	26°♄07'54	17°48'16
minimum elong	-8 Aug 30 j 21:57	4°♄59'44	15°54'29	min. Earth dist.	01 Mar 20 j 17:23	26°♄04'53	29.05979 AU
retrograde	-8 Dec 12 j 02:57	7°♄31'19		direct	01 Jun 06 j 20:42	24°♄41'49	
opposition	-7 Feb 26 j 16:08	6°♄10'17	17°03'18	max. Earth dist.	01 Sep 20 j 21:44	27°♄21'57	30.92544 AU
min. Earth dist.	-7 Mar 01 j 05:19	6°♄06'04	30.07895 AU				
direct	-7 May 17 j 20:45	4°♄45'46		conjunction	01 Sep 22 j 18:06	27°♄26'24	16°39'07
max. Earth dist.	-7 Aug 30 j 22:16	7°♄16'53	31.91357 AU	minimum elong	01 Sep 22 j 18:05	27°♄26'24	16°39'06
					01 Dec 16 j 17:39	0°♄	
conjunction	-7 Sep 02 j 14:11	7°♄23'02	16°06'01	retrograde	02 Jan 04 j 06:47	0°♄06'15	
minimum elong	-7 Sep 02 j 13:55	7°♄23'00	16°06'01		02 Jan 23 j 03:14	30°♄♄	
retrograde	-7 Dec 14 j 18:41	9°♄55'45		opposition	02 Mar 21 j 20:09	28°♄43'13	17°45'18
opposition	-6 Mar 01 j 08:27	8°♄34'24	17°15'10	min. Earth dist.	02 Mar 23 j 13:36	28°♄40'18	28.97360 AU
min. Earth dist.	-6 Mar 03 j 18:50	8°♄30'21	29.91862 AU	direct	02 Jun 09 j 16:55	27°♄17'02	
direct	-6 May 20 j 13:04	7°♄09'35		max. Earth dist.	02 Sep 23 j 21:04	29°♄57'53	30.84471 AU
max. Earth dist.	-6 Sep 02 j 16:06	9°♄41'58	31.75615 AU		02 Sep 24 j 18:07	0°♄	
conjunction	-6 Sep 05 j 06:46	9°♄48'02	16°16'04	conjunction	02 Sep 25 j 14:21	0°♄02'03	16°35'11
minimum elong	-6 Sep 05 j 06:31	9°♄48'01	16°16'04	minimum elong	02 Sep 25 j 14:24	0°♄02'03	16°35'11
retrograde	-6 Dec 17 j 12:38	12°♄21'54		retrograde	03 Jan 07 j 04:41	2°♄42'20	
opposition	-5 Mar 04 j 01:23	11°♄00'15	17°25'21	opposition	03 Mar 24 j 17:51	1°♄19'10	17°40'18
min. Earth dist.	-5 Mar 06 j 10:07	10°♄56'18	29.76787 AU	min. Earth dist.	03 Mar 26 j 07:52	1°♄16'28	28.89690 AU
direct	-5 May 23 j 02:48	9°♄35'09			03 May 22 j 21:15	30°♄♄	
max. Earth dist.	-5 Sep 05 j 12:59	12°♄08'59	31.60868 AU	direct	03 Jun 12 j 16:07	29°♄52'53	
					03 Jul 03 j 00:50	0°♄	
conjunction	-5 Sep 08 j 00:05	12°♄14'45	16°24'31	max. Earth dist.	03 Sep 26 j 19:53	2°♄34'16	30.77397 AU
minimum elong	-5 Sep 07 j 23:52	12°♄14'44	16°24'30				
retrograde	-5 Dec 20 j 05:49	14°♄49'42		conjunction	03 Sep 28 j 10:46	2°♄38'12	16°29'21
opposition	-4 Mar 05 j 19:14	13°♄27'49	17°33'49	minimum elong	03 Sep 28 j 10:50	2°♄38'12	16°29'21
min. Earth dist.	-4 Mar 08 j 01:38	13°♄24'01	29.62665 AU	retrograde	04 Jan 10 j 01:25	5°♄18'51	
direct	-4 May 24 j 19:20	12°♄02'29		opposition	04 Mar 26 j 16:04	3°♄55'31	17°33'14
max. Earth dist.	-4 Sep 07 j 08:10	14°♄37'30	31.47110 AU	min. Earth dist.	04 Mar 28 j 04:08	3°♄52'58	28.83026 AU
				direct	04 Jun 14 j 13:11	2°♄29'11	
conjunction	-4 Sep 09 j 17:49	14°♄43'09	16°31'19	max. Earth dist.	04 Sep 28 j 20:12	5°♄11'07	30.71396 AU
minimum elong	-4 Sep 09 j 17:38	14°♄43'08	16°31'20				
retrograde	-4 Dec 22 j 01:19	17°♄19'09		conjunction	04 Sep 30 j 07:09	5°♄14'40	16°21'36
opposition	-3 Mar 08 j 13:42	15°♄57'02	17°40'29	minimum elong	04 Sep 30 j 07:18	5°♄14'41	16°21'37
min. Earth dist.	-3 Mar 10 j 17:49	15°♄53'23	29.49507 AU	retrograde	05 Jan 11 j 21:23	7°♄55'33	
direct	-3 May 27 j 12:51	14°♄31'30		opposition	05 Mar 29 j 14:29	6°♄32'07	17°24'06
max. Earth dist.	-3 Sep 10 j 06:11	17°♄07'50	31.34321 AU	min. Earth dist.	05 Mar 30 j 22:56	6°♄29'50	28.77423 AU
				direct	05 Jun 17 j 12:50	5°♄05'45	
conjunction	-3 Sep 12 j 12:17	17°♄13'11	16°36'26	max. Earth dist.	05 Oct 01 j 19:00	7°♄48'00	30.66531 AU

conjunction	05 Oct 03 j 03:29	7° <u>♁</u> 51'18	16°11'56	retrograde	14 Feb 04 j 09:17	1° <u>♁</u> 16'13	
minimum elong	05 Oct 03 j 03:38	7° <u>♁</u> 51'18	16°11'56		14 Apr 19 j 00:09	30° <u>R</u> ♁	
retrograde	06 Jan 14 j 18:36	10° <u>♁</u> 32'20		opposition	14 Apr 22 j 23:56	29° <u>♁</u> 53'22	14°32'03
opposition	06 Apr 01 j 13:03	9° <u>♁</u> 08'49	17°12'52	min. Earth dist.	14 Apr 23 j 02:59	29° <u>♁</u> 53'09	28.79380 AU
min. Earth dist.	06 Apr 02 j 18:33	9° <u>♁</u> 06'44	28.72980 AU	direct	14 Jul 11 j 20:43	28° <u>♁</u> 28'30	
direct	06 Jun 20 j 09:50	7° <u>♁</u> 42'27			14 Sep 26 j 06:42	0° <u>♁</u>	
conjunction	06 Oct 05 j 23:47	10° <u>♁</u> 27'57	16°00'19	conjunction	14 Oct 26 j 10:42	1° <u>♁</u> 10'00	13°22'55
minimum elong	06 Oct 05 j 23:59	10° <u>♁</u> 27'59	16°00'19	minimum elong	14 Oct 26 j 11:06	1° <u>♁</u> 10'02	13°22'55
max. Earth dist.	06 Oct 04 j 19:53	10° <u>♁</u> 25'07	30.62881 AU	max. Earth dist.	14 Oct 26 j 09:10	1° <u>♁</u> 09'51	30.76243 AU
retrograde	07 Jan 17 j 14:13	13° <u>♁</u> 09'03		retrograde	15 Feb 07 j 04:02	3° <u>♁</u> 48'21	
opposition	07 Apr 04 j 11:43	11° <u>♁</u> 45'31	16°59'32	opposition	15 Apr 25 j 21:13	2° <u>♁</u> 25'38	14°04'13
min. Earth dist.	07 Apr 05 j 13:51	11° <u>♁</u> 43'40	28.69723 AU	min. Earth dist.	15 Apr 25 j 22:01	2° <u>♁</u> 25'34	28.84932 AU
direct	07 Jun 23 j 08:34	10° <u>♁</u> 19'13		direct	15 Jul 14 j 18:25	1° <u>♁</u> 01'01	
conjunction	07 Oct 08 j 19:56	13° <u>♁</u> 04'34	15°46'47	conjunction	15 Oct 29 j 04:20	3° <u>♁</u> 41'33	12°56'16
minimum elong	07 Oct 08 j 20:09	13° <u>♁</u> 04'35	15°46'46	minimum elong	15 Oct 29 j 04:43	3° <u>♁</u> 41'35	12°56'16
max. Earth dist.	07 Oct 07 j 18:32	13° <u>♁</u> 01'59	30.60474 AU	max. Earth dist.	15 Oct 29 j 06:08	3° <u>♁</u> 41'44	30.82669 AU
retrograde	08 Jan 20 j 10:49	15° <u>♁</u> 45'38		retrograde	16 Feb 09 j 20:57	6° <u>♁</u> 19'07	
opposition	08 Apr 06 j 10:16	14° <u>♁</u> 22'07	16°44'09	opposition	16 Apr 27 j 17:54	4° <u>♁</u> 56'33	13°34'58
min. Earth dist.	08 Apr 07 j 08:45	14° <u>♁</u> 20'32	28.67697 AU	min. Earth dist.	16 Apr 27 j 15:01	4° <u>♁</u> 56'45	28.91455 AU
direct	08 Jun 25 j 06:18	12° <u>♁</u> 55'56		direct	16 Jul 16 j 17:10	3° <u>♁</u> 32'12	
conjunction	08 Oct 10 j 16:07	15° <u>♁</u> 41'03	15°31'22	conjunction	16 Oct 30 j 21:17	6° <u>♁</u> 11'41	12°28'22
minimum elong	08 Oct 10 j 16:24	15° <u>♁</u> 41'05	15°31'22	minimum elong	16 Oct 30 j 21:41	6° <u>♁</u> 11'43	12°28'21
max. Earth dist.	08 Oct 09 j 19:28	15° <u>♁</u> 38'57	30.59318 AU	max. Earth dist.	16 Oct 31 j 01:42	6° <u>♁</u> 12'07	30.90085 AU
retrograde	09 Jan 22 j 05:50	18° <u>♁</u> 22'01		retrograde	17 Feb 11 j 14:38	8° <u>♁</u> 48'24	
opposition	09 Apr 09 j 09:03	16° <u>♁</u> 58'33	16°26'44	opposition	17 Apr 30 j 14:12	7° <u>♁</u> 25'59	13°04'23
min. Earth dist.	09 Apr 10 j 04:40	16° <u>♁</u> 57'10	28.66873 AU	min. Earth dist.	17 Apr 30 j 08:24	7° <u>♁</u> 26'23	28.99002 AU
direct	09 Jun 28 j 04:39	15° <u>♁</u> 32'32		direct	17 Jul 19 j 13:43	6° <u>♁</u> 01'53	
conjunction	09 Oct 13 j 11:48	18° <u>♁</u> 17'18	15°14'07	conjunction	17 Nov 02 j 13:32	8° <u>♁</u> 40'15	11°59'16
minimum elong	09 Oct 13 j 12:05	18° <u>♁</u> 17'20	15°14'06	minimum elong	17 Nov 02 j 13:56	8° <u>♁</u> 40'17	11°59'16
max. Earth dist.	09 Oct 12 j 17:41	18° <u>♁</u> 15'28	30.59384 AU	max. Earth dist.	17 Nov 02 j 22:06	8° <u>♁</u> 41'05	30.98542 AU
retrograde	10 Jan 25 j 03:22	20° <u>♁</u> 58'05		retrograde	18 Feb 14 j 06:12	11° <u>♁</u> 16'03	
opposition	10 Apr 12 j 07:35	19° <u>♁</u> 34'42	16°07'22	opposition	18 May 03 j 09:51	9° <u>♁</u> 53'48	12°32'34
min. Earth dist.	10 Apr 12 j 23:05	19° <u>♁</u> 33'37	28.67229 AU	min. Earth dist.	18 May 03 j 00:49	9° <u>♁</u> 54'25	29.07591 AU
direct	10 Jul 01 j 01:57	18° <u>♁</u> 08'53		direct	18 Jul 22 j 11:51	8° <u>♁</u> 29'59	
conjunction	10 Oct 16 j 07:33	20° <u>♁</u> 53'13	14°55'05	conjunction	18 Nov 05 j 05:07	11° <u>♁</u> 07'09	11°29'04
minimum elong	10 Oct 16 j 07:53	20° <u>♁</u> 53'15	14°55'05	minimum elong	18 Nov 05 j 05:31	11° <u>♁</u> 07'12	11°29'03
max. Earth dist.	10 Oct 15 j 17:45	20° <u>♁</u> 51'49	30.60612 AU	max. Earth dist.	18 Nov 05 j 16:08	11° <u>♁</u> 08'14	31.08064 AU
retrograde	11 Jan 27 j 22:01	23° <u>♁</u> 33'42		retrograde	19 Feb 16 j 21:27	13° <u>♁</u> 42'00	
opposition	11 Apr 15 j 05:59	22° <u>♁</u> 10'26	15°46'08	opposition	19 May 06 j 04:41	12° <u>♁</u> 19'56	11°59'37
min. Earth dist.	11 Apr 15 j 19:17	22° <u>♁</u> 09'31	28.68698 AU	min. Earth dist.	19 May 05 j 15:53	12° <u>♁</u> 20'48	29.17283 AU
direct	11 Jul 04 j 00:36	20° <u>♁</u> 44'51		direct	19 Jul 25 j 06:40	10° <u>♁</u> 56'26	
conjunction	11 Oct 19 j 02:54	23° <u>♁</u> 28'38	14°34'23	conjunction	19 Nov 07 j 20:12	13° <u>♁</u> 32'24	10°57'51
minimum elong	11 Oct 19 j 03:14	23° <u>♁</u> 28'40	14°34'23	minimum elong	19 Nov 07 j 20:35	13° <u>♁</u> 32'26	10°57'51
max. Earth dist.	11 Oct 18 j 15:36	23° <u>♁</u> 27'29	30.62962 AU	max. Earth dist.	19 Nov 08 j 11:37	13° <u>♁</u> 33'54	31.18691 AU
retrograde	12 Jan 30 j 18:47	26° <u>♁</u> 08'43			19 Dec 17 j 14:33	15° <u>♁</u>	
opposition	12 Apr 17 j 04:12	24° <u>♁</u> 45'35	15°23'06	retrograde	20 Feb 19 j 10:07	16° <u>♁</u> 06'14	
min. Earth dist.	12 Apr 17 j 13:21	24° <u>♁</u> 44'57	28.71240 AU		20 Apr 28 j 07:11	15° <u>R</u> ♁	
direct	12 Jul 05 j 23:43	23° <u>♁</u> 20'13		opposition	20 May 07 j 23:08	14° <u>♁</u> 44'24	11°25'38
conjunction	12 Oct 20 j 21:56	26° <u>♁</u> 03'21	14°12'04	min. Earth dist.	20 May 07 j 07:32	14° <u>♁</u> 45'28	29.28074 AU
minimum elong	12 Oct 20 j 22:18	26° <u>♁</u> 03'23	14°12'03	direct	20 Jul 27 j 02:19	13° <u>♁</u> 21'15	
max. Earth dist.	12 Oct 20 j 14:26	26° <u>♁</u> 02'35	30.66366 AU		20 Oct 15 j 19:35	15° <u>♁</u>	
retrograde	13 Feb 01 j 13:19	28° <u>♁</u> 42'58		conjunction	20 Nov 09 j 10:19	15° <u>♁</u> 55'57	10°25'43
opposition	13 Apr 20 j 02:22	27° <u>♁</u> 19'58	14°58'23	minimum elong	20 Nov 09 j 10:42	15° <u>♁</u> 56'00	10°25'43
min. Earth dist.	13 Apr 20 j 09:29	27° <u>♁</u> 19'28	28.74810 AU	max. Earth dist.	20 Nov 10 j 04:02	15° <u>♁</u> 57'40	31.30416 AU
direct	13 Jul 08 j 20:49	25° <u>♁</u> 54'51		retrograde	21 Feb 21 j 01:20	18° <u>♁</u> 28'47	
conjunction	13 Oct 23 j 16:35	28° <u>♁</u> 37'12	13°48'13	opposition	21 May 10 j 16:50	17° <u>♁</u> 07'12	10°50'44
minimum elong	13 Oct 23 j 16:56	28° <u>♁</u> 37'14	13°48'13	min. Earth dist.	21 May 09 j 20:57	17° <u>♁</u> 08'33	29.39963 AU
max. Earth dist.	13 Oct 23 j 11:58	28° <u>♁</u> 36'44	30.70810 AU	direct	21 Jul 29 j 19:41	15° <u>♁</u> 44'25	
	13 Nov 28 j 17:42	0° <u>♁</u>		conjunction	21 Nov 12 j 00:00	18° <u>♁</u> 17'52	9°52'48

minimum elong	21 Nov 12 j 00:22	18° \mathbb{L} 17'54	9°52'48	minimum elong	29 Nov 29 j 12:11	6° \mathbb{A} 11'49	5°12'39
max. Earth dist.	21 Nov 12 j 21:52	18° \mathbb{L} 19'58	31.43197 AU	max. Earth dist.	29 Dec 01 j 04:58	6° \mathbb{A} 15'31	32.75100 AU
retrograde	22 Feb 23 j 12:57	20° \mathbb{L} 49'39		retrograde	30 Mar 13 j 01:27	8° \mathbb{A} 34'28	
min. Earth dist.	22 May 12 j 11:54	19° \mathbb{L} 29'50	29.52889 AU	min. Earth dist.	30 May 30 j 05:04	7° \mathbb{A} 18'25	30.85448 AU
opposition	22 May 13 j 09:51	19° \mathbb{L} 28'21	10°15'01	opposition	30 Jun 01 j 00:23	7° \mathbb{A} 15'39	5°13'51
direct	22 Aug 01 j 12:48	18° \mathbb{L} 05'59		direct	30 Aug 20 j 10:22	5° \mathbb{A} 56'31	
conjunction	22 Nov 14 j 12:52	20° \mathbb{L} 38'07	9°19'10	conjunction	30 Dec 01 j 19:14	8° \mathbb{A} 17'48	4°36'52
minimum elong	22 Nov 14 j 13:14	20° \mathbb{L} 38'09	9°19'10	minimum elong	30 Dec 01 j 19:26	8° \mathbb{A} 17'49	4°36'51
max. Earth dist.	22 Nov 15 j 12:57	20° \mathbb{L} 40'26	31.56977 AU	max. Earth dist.	30 Dec 03 j 15:31	8° \mathbb{A} 21'47	32.94595 AU
retrograde	23 Feb 26 j 02:17	23° \mathbb{L} 08'50		retrograde	31 Mar 15 j 05:49	10° \mathbb{A} 39'16	
min. Earth dist.	23 May 15 j 00:08	21° \mathbb{L} 49'35	29.66781 AU	min. Earth dist.	31 Jun 01 j 14:09	9° \mathbb{A} 23'36	31.05100 AU
opposition	23 May 16 j 02:06	21° \mathbb{L} 47'51	9°38'38	opposition	31 Jun 03 j 10:48	9° \mathbb{A} 20'46	4°35'39
direct	23 Aug 04 j 05:35	20° \mathbb{L} 25'53		direct	31 Aug 22 j 21:47	8° \mathbb{A} 02'02	
conjunction	23 Nov 17 j 01:06	22° \mathbb{L} 56'43	8°44'57	conjunction	31 Dec 04 j 01:34	10° \mathbb{A} 21'55	4°01'09
minimum elong	23 Nov 17 j 01:26	22° \mathbb{L} 56'45	8°44'57	minimum elong	31 Dec 04 j 01:43	10° \mathbb{A} 21'56	4°01'09
max. Earth dist.	23 Nov 18 j 04:37	22° \mathbb{L} 59'20	31.71656 AU	max. Earth dist.	31 Dec 05 j 23:23	10° \mathbb{A} 26'01	33.14772 AU
retrograde	24 Feb 28 j 14:08	25° \mathbb{L} 26'22		retrograde	32 Mar 16 j 11:46	12° \mathbb{A} 42'13	
opposition	24 May 17 j 17:52	24° \mathbb{L} 05'42	9°01'41	min. Earth dist.	32 Jun 02 j 20:11	11° \mathbb{A} 27'05	31.25462 AU
min. Earth dist.	24 May 16 j 14:01	24° \mathbb{L} 07'32	29.81562 AU	opposition	32 Jun 04 j 20:21	11° \mathbb{A} 24'02	3°57'36
direct	24 Aug 05 j 20:07	22° \mathbb{L} 44'09		direct	32 Aug 24 j 07:23	10° \mathbb{A} 05'42	
conjunction	24 Nov 18 j 12:42	25° \mathbb{L} 13'39	8°10'15	conjunction	32 Dec 05 j 07:19	12° \mathbb{A} 24'15	3°25'34
minimum elong	24 Nov 18 j 13:01	25° \mathbb{L} 13'41	8°10'14	minimum elong	32 Dec 05 j 07:28	12° \mathbb{A} 24'15	3°25'33
max. Earth dist.	24 Nov 19 j 18:41	25° \mathbb{L} 16'29	31.87182 AU	max. Earth dist.	32 Dec 07 j 08:03	12° \mathbb{A} 28'34	33.35632 AU
retrograde	25 Mar 02 j 02:15	27° \mathbb{L} 42'11		retrograde	33 Mar 18 j 17:21	14° \mathbb{A} 43'24	
min. Earth dist.	25 May 19 j 01:30	26° \mathbb{L} 23'54	29.97156 AU	min. Earth dist.	33 Jun 05 j 03:35	13° \mathbb{A} 28'40	31.46534 AU
opposition	25 May 20 j 08:49	26° \mathbb{L} 21'50	8°24'17	opposition	33 Jun 07 j 05:20	13° \mathbb{A} 25'32	3°19'45
direct	25 Aug 08 j 12:46	25° \mathbb{L} 00'43		direct	33 Aug 26 j 14:21	12° \mathbb{A} 07'38	
conjunction	25 Nov 20 j 23:30	27° \mathbb{L} 28'53	7°35'09	conjunction	33 Dec 07 j 12:22	14° \mathbb{A} 24'51	2°50'11
minimum elong	25 Nov 20 j 23:48	27° \mathbb{L} 28'55	7°35'09	minimum elong	33 Dec 07 j 12:29	14° \mathbb{A} 24'51	2°50'11
max. Earth dist.	25 Nov 22 j 07:50	27° \mathbb{L} 31'55	32.03455 AU	max. Earth dist.	33 Dec 09 j 15:11	14° \mathbb{A} 29'19	33.57165 AU
retrograde	26 Mar 04 j 14:29	29° \mathbb{L} 56'17		retrograde	34 Mar 20 j 22:39	16° \mathbb{A} 42'52	
opposition	26 May 22 j 23:10	28° \mathbb{L} 36'15	7°46'31	min. Earth dist.	34 Jun 07 j 08:48	15° \mathbb{A} 28'38	31.68252 AU
min. Earth dist.	26 May 21 j 13:50	28° \mathbb{L} 38'26	30.13501 AU	opposition	34 Jun 09 j 13:23	15° \mathbb{A} 25'21	2°42'09
direct	26 Aug 11 j 03:19	27° \mathbb{L} 15'33		direct	34 Aug 28 j 23:54	14° \mathbb{A} 07'53	
conjunction	26 Nov 23 j 09:51	29° \mathbb{L} 42'22	6°59'46	conjunction	34 Dec 09 j 16:44	16° \mathbb{A} 23'48	2°15'03
minimum elong	26 Nov 23 j 10:08	29° \mathbb{L} 42'24	6°59'45	minimum elong	34 Dec 09 j 16:49	16° \mathbb{A} 23'49	2°15'02
max. Earth dist.	26 Nov 24 j 20:53	29° \mathbb{L} 45'38	32.20427 AU	max. Earth dist.	34 Dec 11 j 21:15	16° \mathbb{A} 28'23	33.79283 AU
retrograde	26 Dec 01 j 07:45	0° \mathbb{A}		retrograde	35 Mar 23 j 05:16	18° \mathbb{A} 40'42	
min. Earth dist.	27 Mar 07 j 00:22	2° \mathbb{A} 08'37		min. Earth dist.	35 Jun 09 j 14:21	17° \mathbb{A} 26'55	31.90567 AU
opposition	27 May 24 j 00:48	0° \mathbb{A} 51'13	30.30513 AU	opposition	35 Jun 11 j 20:46	17° \mathbb{A} 23'32	2°04'53
direct	27 May 25 j 12:31	0° \mathbb{A} 48'54	7°08'31	direct	35 Aug 31 j 06:34	16° \mathbb{A} 06'30	
conjunction	27 Jun 28 j 03:45	30° \mathbb{R} \mathbb{L}		conjunction	35 Dec 11 j 20:37	18° \mathbb{A} 21'10	1°40'12
minimum elong	27 Aug 13 j 19:14	29° \mathbb{L} 28'36		minimum elong	35 Dec 11 j 20:41	18° \mathbb{A} 21'11	1°40'13
direct	27 Sep 27 j 11:19	0° \mathbb{A}		max. Earth dist.	35 Dec 14 j 03:41	18° \mathbb{A} 25'56	34.01940 AU
conjunction	27 Nov 25 j 19:20	1° \mathbb{A} 54'03	6°24'10	retrograde	36 Mar 24 j 09:06	20° \mathbb{A} 36'57	
minimum elong	27 Nov 25 j 19:35	1° \mathbb{A} 54'05	6°24'10	min. Earth dist.	36 Jun 10 j 19:37	19° \mathbb{A} 23'37	32.13382 AU
max. Earth dist.	27 Nov 27 j 07:50	1° \mathbb{A} 57'25	32.38029 AU	opposition	36 Jun 13 j 03:34	19° \mathbb{A} 20'10	1°28'00
retrograde	28 Mar 08 j 10:07	4° \mathbb{A} 19'07		direct	36 Sep 01 j 14:52	18° \mathbb{A} 03'34	
min. Earth dist.	28 May 25 j 11:00	3° \mathbb{A} 02'11	30.48183 AU	conjunction	36 Dec 12 j 23:38	20° \mathbb{A} 16'58	1°05'43
opposition	28 May 27 j 01:21	2° \mathbb{A} 59'43	6°30'21	minimum elong	36 Dec 12 j 23:41	20° \mathbb{A} 16'59	1°05'43
direct	28 Aug 15 j 07:53	1° \mathbb{A} 39'49		max. Earth dist.	36 Dec 15 j 07:34	20° \mathbb{A} 21'46	34.25034 AU
conjunction	28 Nov 27 j 04:05	4° \mathbb{A} 03'52	5°48'26	retrograde	37 Mar 26 j 13:07	22° \mathbb{A} 31'39	
minimum elong	28 Nov 27 j 04:20	4° \mathbb{A} 03'54	5°48'26	min. Earth dist.	37 Jun 12 j 23:25	21° \mathbb{A} 18'48	32.36635 AU
max. Earth dist.	28 Nov 28 j 19:52	4° \mathbb{A} 07'31	32.56254 AU	opposition	37 Jun 15 j 09:44	21° \mathbb{A} 15'14	0°51'32
retrograde	29 Mar 10 j 16:49	6° \mathbb{A} 27'45		direct	37 Sep 03 j 20:42	19° \mathbb{A} 59'04	
min. Earth dist.	29 May 27 j 21:19	5° \mathbb{A} 11'13	30.66481 AU	conjunction	37 Dec 15 j 02:23	22° \mathbb{A} 11'14	0°31'38
opposition	29 May 29 j 13:23	5° \mathbb{A} 08'38	5°52'06	minimum elong	37 Dec 15 j 02:24	22° \mathbb{A} 11'15	0°31'39
direct	29 Aug 17 j 22:46	3° \mathbb{A} 49'08		max. Earth dist.	37 Dec 17 j 12:53	22° \mathbb{A} 16'13	34.48489 AU
conjunction	29 Nov 29 j 11:59	6° \mathbb{A} 11'48	5°12'39	retrograde	38 Mar 28 j 13:41	24° \mathbb{A} 24'50	

min. Earth dist.	38 Jun 15 j 04:19	23° \overline{A} 12'21	32.60220 AU	minimum elong	45 Dec 29 j 02:07	6° \overline{B} 29'17	3°43'19
opposition	38 Jun 17 j 15:06	23° \overline{A} 08'45	0°15'33	max. Earth dist.	45 Dec 31 j 21:27	6° \overline{B} 34'40	36.44037 AU
direct	38 Sep 06 j 04:50	21° \overline{A} 53'01		retrograde	46 Apr 11 j 12:11	8° \overline{B} 34'37	
desc. node	38 Nov 24 j 19:53	23° \overline{A} 19'30		min. Earth dist.	46 Jun 29 j 13:10	7° \overline{B} 25'05	34.57173 AU
				opposition	46 Jul 02 j 10:57	7° \overline{B} 21'00	-4°-11'-57
conjunction	38 Dec 17 j 04:28	24° \overline{A} 03'58	0°-2'-5	direct	46 Sep 21 j 04:29	6° \overline{B} 08'10	
minimum elong	38 Dec 17 j 04:27	24° \overline{A} 03'58	0°02'06				
behind sun begin	38 Dec 16 j 22:05	24° \overline{A} 03'27		conjunction	46 Dec 30 j 23:43	8° \overline{B} 10'02	-4°-12'-37
behind sun end	38 Dec 17 j 10:48	24° \overline{A} 04'28		minimum elong	46 Dec 30 j 23:35	8° \overline{B} 10'01	4°12'37
max. Earth dist.	38 Dec 19 j 15:08	24° \overline{A} 08'55	34.72225 AU	max. Earth dist.	47 Jan 02 j 20:48	8° \overline{B} 15'31	36.69527 AU
retrograde	39 Mar 30 j 16:06	26° \overline{A} 16'28		retrograde	47 Apr 13 j 08:07	10° \overline{B} 14'27	
min. Earth dist.	39 Jun 17 j 06:43	25° \overline{A} 04'27	32.84071 AU	min. Earth dist.	47 Jul 01 j 12:54	9° \overline{B} 05'14	34.82898 AU
opposition	39 Jun 19 j 19:50	25° \overline{A} 00'44	0°-19'-56	opposition	47 Jul 04 j 10:45	9° \overline{B} 01'10	-4°-42'-31
direct	39 Sep 08 j 10:17	23° \overline{A} 45'23		direct	47 Sep 23 j 04:58	7° \overline{B} 48'43	
conjunction	39 Dec 19 j 05:54	25° \overline{A} 55'07	0°-35'-14	conjunction	48 Jan 01 j 20:38	9° \overline{B} 49'35	-4°-41'-18
minimum elong	39 Dec 19 j 05:52	25° \overline{A} 55'07	0°35'15	minimum elong	48 Jan 01 j 20:30	9° \overline{B} 49'34	4°41'19
max. Earth dist.	39 Dec 21 j 18:31	26° \overline{A} 00'12	34.96164 AU	max. Earth dist.	48 Jan 04 j 18:23	9° \overline{B} 55'06	36.95208 AU
retrograde	40 Mar 31 j 15:56	28° \overline{A} 06'34		retrograde	48 Apr 14 j 05:26	11° \overline{B} 53'07	
min. Earth dist.	40 Jun 18 j 10:49	26° \overline{A} 54'51	33.08129 AU	min. Earth dist.	48 Jul 02 j 10:27	10° \overline{B} 44'19	35.08781 AU
opposition	40 Jun 21 j 00:07	26° \overline{A} 51'09	0°-54'-53	opposition	48 Jul 05 j 09:56	10° \overline{B} 40'11	-5°-12'-24
direct	40 Sep 09 j 14:54	25° \overline{A} 36'11		direct	48 Sep 24 j 03:42	9° \overline{B} 28'07	
conjunction	40 Dec 20 j 06:51	27° \overline{A} 44'42	-1°-7'-56	conjunction	49 Jan 02 j 17:09	11° \overline{B} 28'01	-5°-9'-21
minimum elong	40 Dec 20 j 06:49	27° \overline{A} 44'42	1°07'57	minimum elong	49 Jan 02 j 16:59	11° \overline{B} 28'00	5°09'22
max. Earth dist.	40 Dec 22 j 20:12	27° \overline{A} 49'49	35.20290 AU	max. Earth dist.	49 Jan 05 j 15:40	11° \overline{B} 33'32	37.20995 AU
retrograde	41 Apr 02 j 16:28	29° \overline{A} 55'05		retrograde	49 Apr 16 j 03:43	13° \overline{B} 30'42	
min. Earth dist.	41 Jun 20 j 12:19	28° \overline{A} 43'46	33.32370 AU	min. Earth dist.	49 Jul 04 j 08:44	12° \overline{B} 22'13	35.34769 AU
opposition	41 Jun 23 j 03:31	28° \overline{A} 39'58	-1°-29'-16	opposition	49 Jul 07 j 08:40	12° \overline{B} 18'05	-5°-41'-35
direct	41 Sep 11 j 18:46	27° \overline{A} 25'21		direct	49 Sep 26 j 00:09	11° \overline{B} 06'23	
conjunction	41 Dec 22 j 07:03	29° \overline{A} 32'41	-1°-40'-8	conjunction	50 Jan 04 j 13:22	13° \overline{B} 05'21	-5°-36'-47
minimum elong	41 Dec 22 j 07:00	29° \overline{A} 32'41	1°40'09	minimum elong	50 Jan 04 j 13:13	13° \overline{B} 05'20	5°36'49
max. Earth dist.	41 Dec 24 j 21:31	29° \overline{A} 37'50	35.44574 AU	max. Earth dist.	50 Jan 07 j 13:10	13° \overline{B} 10'56	37.46836 AU
	42 Jan 05 j 04:32	0° \overline{B}		retrograde	50 Apr 18 j 00:21	15° \overline{B} 07'10	
retrograde	42 Apr 04 j 18:06	1° \overline{B} 42'00		min. Earth dist.	50 Jul 06 j 06:34	13° \overline{B} 59'02	35.60758 AU
min. Earth dist.	42 Jun 22 j 14:19	0° \overline{B} 31'00	33.56816 AU	opposition	50 Jul 09 j 06:49	13° \overline{B} 54'53	-6°-10'-5
opposition	42 Jun 25 j 06:22	0° \overline{B} 27'10	-2°-3'-4	direct	50 Sep 27 j 23:12	12° \overline{B} 43'33	
	42 Jul 14 j 15:07	30° \overline{R} \overline{A}					
direct	42 Sep 13 j 19:50	29° \overline{A} 12'54		conjunction	51 Jan 06 j 09:02	14° \overline{B} 41'36	-6°-3'-36
	42 Nov 10 j 18:59	0° \overline{B}		minimum elong	51 Jan 06 j 08:51	14° \overline{B} 41'35	6°03'37
				max. Earth dist.	51 Jan 09 j 08:17	14° \overline{B} 47'06	37.72632 AU
conjunction	42 Dec 24 j 06:46	1° \overline{B} 19'04	-2°-11'-47	retrograde	51 Apr 19 j 22:21	16° \overline{B} 42'34	
minimum elong	42 Dec 24 j 06:41	1° \overline{B} 19'04	2°11'49	min. Earth dist.	51 Jul 08 j 03:13	15° \overline{B} 34'47	35.86696 AU
max. Earth dist.	42 Dec 26 j 22:54	1° \overline{B} 24'19	35.69061 AU	opposition	51 Jul 11 j 04:30	15° \overline{B} 30'36	-6°-37'-55
retrograde	43 Apr 06 j 16:39	3° \overline{B} 27'20		direct	51 Sep 29 j 19:58	14° \overline{B} 19'37	
min. Earth dist.	43 Jun 24 j 15:13	2° \overline{B} 16'40	33.81482 AU				
opposition	43 Jun 27 j 08:22	2° \overline{B} 12'48	-2°-36'-16	conjunction	52 Jan 08 j 04:30	16° \overline{B} 16'45	-6°-29'-47
direct	43 Sep 15 j 23:38	0° \overline{B} 58'52		minimum elong	52 Jan 08 j 04:19	16° \overline{B} 16'44	6°29'48
				max. Earth dist.	52 Jan 11 j 05:07	16° \overline{B} 22'19	37.98335 AU
conjunction	43 Dec 26 j 05:45	3° \overline{B} 03'54	-2°-42'-53	retrograde	52 Apr 20 j 16:58	18° \overline{B} 16'53	
minimum elong	43 Dec 26 j 05:39	3° \overline{B} 03'54	2°42'54	min. Earth dist.	52 Jul 09 j 01:17	17° \overline{B} 09'19	36.12517 AU
max. Earth dist.	43 Dec 28 j 22:19	3° \overline{B} 09'09	35.93781 AU	opposition	52 Jul 12 j 01:50	17° \overline{B} 05'12	-7°-5'-3
retrograde	44 Apr 07 j 17:02	5° \overline{B} 11'09		direct	52 Sep 30 j 18:20	15° \overline{B} 54'32	
min. Earth dist.	44 Jun 25 j 14:52	4° \overline{B} 00'52	34.06437 AU				
opposition	44 Jun 28 j 09:56	3° \overline{B} 56'55	-3°-8'-49	conjunction	53 Jan 08 j 23:22	17° \overline{B} 50'45	-6°-55'-20
direct	44 Sep 17 j 01:07	2° \overline{B} 43'20		minimum elong	53 Jan 08 j 23:11	17° \overline{B} 50'44	6°55'20
				max. Earth dist.	53 Jan 11 j 23:22	17° \overline{B} 56'14	38.23905 AU
conjunction	44 Dec 27 j 04:14	4° \overline{B} 47'17	-3°-13'-23	retrograde	53 Apr 22 j 09:54	19° \overline{B} 50'03	
minimum elong	44 Dec 27 j 04:08	4° \overline{B} 47'16	3°13'25	min. Earth dist.	53 Jul 10 j 20:40	18° \overline{B} 42'49	36.38197 AU
max. Earth dist.	44 Dec 29 j 23:14	4° \overline{B} 52'41	36.18776 AU	opposition	53 Jul 13 j 22:33	18° \overline{B} 38'38	-7°-31'-31
retrograde	45 Apr 09 j 14:18	6° \overline{B} 53'33		direct	53 Oct 02 j 16:56	17° \overline{B} 28'15	
min. Earth dist.	45 Jun 27 j 15:23	5° \overline{B} 43'35	34.31670 AU				
opposition	45 Jun 30 j 10:53	5° \overline{B} 39'37	-3°-40'-43	conjunction	54 Jan 10 j 17:54	19° \overline{B} 23'34	-7°-20'-16
direct	45 Sep 19 j 04:08	4° \overline{B} 26'24		minimum elong	54 Jan 10 j 17:42	19° \overline{B} 23'34	7°20'17
				max. Earth dist.	54 Jan 13 j 18:44	19° \overline{B} 29'05	38.49319 AU
conjunction	45 Dec 29 j 02:14	6° \overline{B} 29'17	-3°-43'-18	retrograde	54 Apr 24 j 02:44	21° \overline{B} 22'02	

min. Earth dist.	54 Jul 12 j 17:30	20°☾14'59	36.63751 AU	max. Earth dist.	62 Jan 25 j 11:05	1°☾11'47	40.51139 AU
opposition	54 Jul 15 j 18:42	20°☾10'52	-7°-57'-18	retrograde	62 May 05 j 15:32	2°☾58'51	
direct	54 Oct 04 j 14:33	19°☾00'45		min. Earth dist.	62 Jul 24 j 15:34	1°☾53'51	38.67048 AU
conjunction	55 Jan 12 j 11:57	20°☾55'11	-7°-44'-34	opposition	62 Jul 27 j 19:42	1°☾49'43	-10°-59'-4
minimum elong	55 Jan 12 j 11:44	20°☾55'10	7°44'34	direct	62 Oct 16 j 16:32	0°☾41'53	
max. Earth dist.	55 Jan 15 j 13:01	21°☾00'40	38.74630 AU	conjunction	63 Jan 23 j 21:50	2°☾30'06	-10°-36'-14
retrograde	55 Apr 25 j 20:01	22°☾52'49		minimum elong	63 Jan 23 j 21:38	2°☾30'06	10°36'15
min. Earth dist.	55 Jul 14 j 12:15	21°☾46'02	36.89216 AU	max. Earth dist.	63 Jan 27 j 01:15	2°☾35'29	40.76003 AU
opposition	55 Jul 17 j 14:21	21°☾41'52	-8°-22'-25	retrograde	63 May 07 j 09:22	4°☾22'01	
direct	55 Oct 06 j 10:50	20°☾32'02		min. Earth dist.	63 Jul 26 j 07:49	3°☾17'17	38.92018 AU
conjunction	56 Jan 14 j 05:17	22°☾25'34	-8°-8'-14	opposition	63 Jul 29 j 12:09	3°☾13'09	-11°-18'-50
minimum elong	56 Jan 14 j 05:05	22°☾25'33	8°08'16	direct	63 Oct 18 j 06:42	2°☾05'36	
max. Earth dist.	56 Jan 17 j 06:31	22°☾31'02	38.99872 AU	conjunction	64 Jan 25 j 12:41	3°☾53'10	-10°-54'-58
retrograde	56 Apr 26 j 15:00	24°☾22'25		minimum elong	64 Jan 25 j 12:28	3°☾53'09	10°54'59
min. Earth dist.	56 Jul 15 j 07:07	23°☾15'52	37.14668 AU	max. Earth dist.	64 Jan 28 j 17:02	3°☾58'35	41.00612 AU
opposition	56 Jul 18 j 09:41	23°☾11'42	-8°-46'-50	retrograde	64 May 08 j 00:04	5°☾44'27	
direct	56 Oct 07 j 04:51	22°☾02'08		min. Earth dist.	64 Jul 27 j 01:06	4°☾39'53	39.16693 AU
conjunction	57 Jan 14 j 22:31	23°☾54'49	-8°-31'-16	opposition	64 Jul 30 j 04:18	4°☾35'50	-11°-37'-59
minimum elong	57 Jan 14 j 22:19	23°☾54'48	8°31'16	direct	64 Oct 18 j 23:19	3°☾28'33	
max. Earth dist.	57 Jan 18 j 01:13	24°☾00'21	39.25116 AU	conjunction	65 Jan 26 j 03:19	5°☾15'27	-11°-13'-8
retrograde	57 Apr 28 j 08:26	25°☾50'52		minimum elong	65 Jan 26 j 03:07	5°☾15'26	11°13'08
min. Earth dist.	57 Jul 17 j 01:43	24°☾44'33	37.40123 AU	max. Earth dist.	65 Jan 29 j 06:22	5°☾20'45	41.24920 AU
opposition	57 Jul 20 j 04:21	24°☾40'24	-9°-10'-33	retrograde	65 May 09 j 14:48	7°☾06'05	
direct	57 Oct 08 j 23:36	23°☾31'06		min. Earth dist.	65 Jul 28 j 16:00	6°☾01'47	39.41055 AU
conjunction	58 Jan 16 j 15:12	25°☾22'59	-8°-53'-39	opposition	65 Jul 31 j 19:53	5°☾57'43	-11°-56'-33
minimum elong	58 Jan 16 j 15:00	25°☾22'58	8°53'41	direct	65 Oct 20 j 14:42	4°☾50'41	
max. Earth dist.	58 Jan 19 j 17:22	25°☾28'26	39.50374 AU	conjunction	66 Jan 27 j 17:38	6°☾36'55	-11°-30'-44
retrograde	58 Apr 30 j 02:59	27°☾18'16		minimum elong	66 Jan 27 j 17:25	6°☾36'54	11°30'45
min. Earth dist.	58 Jul 18 j 18:36	26°☾12'15	37.65601 AU	max. Earth dist.	66 Jan 30 j 20:53	6°☾42'12	41.48902 AU
opposition	58 Jul 21 j 22:37	26°☾08'03	-9°-33'-36	retrograde	66 May 11 j 02:41	8°☾26'56	
direct	58 Oct 10 j 16:42	24°☾59'01		min. Earth dist.	66 Jul 30 j 08:47	7°☾22'46	39.65104 AU
conjunction	59 Jan 18 j 07:33	26°☾50'08	-9°-15'-25	opposition	66 Aug 02 j 11:17	7°☾18'46	-12°-14'-31
minimum elong	59 Jan 18 j 07:20	26°☾50'07	9°15'25	direct	66 Oct 22 j 08:26	6°☾11'58	
max. Earth dist.	59 Jan 21 j 11:08	26°☾55'39	39.75636 AU	conjunction	67 Jan 29 j 07:31	7°☾57'33	-11°-47'-47
retrograde	59 May 01 j 17:15	28°☾44'42		minimum elong	67 Jan 29 j 07:20	7°☾57'32	11°47'48
min. Earth dist.	59 Jul 20 j 13:09	27°☾38'54	37.91073 AU	max. Earth dist.	67 Feb 01 j 10:35	8°☾02'47	41.72601 AU
opposition	59 Jul 23 j 16:32	27°☾34'44	-9°-55'-57	retrograde	67 May 12 j 15:24	9°☾46'57	
direct	59 Oct 12 j 12:04	26°☾26'01		min. Earth dist.	67 Jul 31 j 23:16	8°☾42'59	39.88880 AU
conjunction	60 Jan 19 j 23:35	28°☾16'21	-9°-36'-32	opposition	67 Aug 04 j 02:10	8°☾38'59	-12°-31'-54
minimum elong	60 Jan 19 j 23:22	28°☾16'20	9°36'34	direct	67 Oct 24 j 00:54	7°☾32'24	
max. Earth dist.	60 Jan 23 j 03:00	28°☾21'51	40.00891 AU	conjunction	68 Jan 30 j 21:02	9°☾17'20	-12°-4'-16
retrograde	60 Apr 03 j 23:20	0°☾		minimum elong	68 Jan 30 j 20:50	9°☾17'19	12°04'17
min. Earth dist.	60 May 02 j 07:47	0°☾10'14		max. Earth dist.	68 Feb 02 j 23:35	9°☾22'30	41.96059 AU
opposition	60 May 31 j 07:00	30°☾☾		retrograde	68 May 13 j 07:10	11°☾06'08	
direct	60 Jul 21 j 05:21	29°☾04'45	38.16512 AU	min. Earth dist.	68 Aug 01 j 14:05	10°☾02'20	40.12466 AU
conjunction	60 Jul 24 j 09:59	29°☾00'32	-10°-17'-39	opposition	68 Aug 04 j 16:50	9°☾58'22	-12°-48'-41
minimum elong	60 Oct 13 j 07:06	27°☾52'06		direct	68 Oct 24 j 13:25	8°☾52'00	
max. Earth dist.	61 Jan 20 j 15:12	29°☾41'43	-9°-57'-2	conjunction	69 Jan 31 j 10:23	10°☾36'18	-12°-20'-12
retrograde	61 Jan 20 j 14:59	29°☾41'43	9°57'03	minimum elong	69 Jan 31 j 10:12	10°☾36'18	12°20'13
min. Earth dist.	61 Jan 23 j 19:06	29°☾47'13	40.26074 AU	max. Earth dist.	69 Feb 03 j 13:51	10°☾41'30	42.19350 AU
opposition	61 Jan 31 j 05:16	0°☾		retrograde	69 May 14 j 20:18	12°☾24'30	
direct	61 May 04 j 00:19	1°☾34'56		min. Earth dist.	69 Aug 03 j 04:49	11°☾20'53	40.35880 AU
conjunction	61 Jul 22 j 23:00	0°☾29'41	38.41865 AU	opposition	69 Aug 06 j 07:04	11°☾16'57	-13°-4'-52
minimum elong	61 Jul 26 j 03:11	0°☾25'31	-10°-38'-41	direct	69 Oct 26 j 04:10	10°☾10'49	
max. Earth dist.	61 Aug 15 j 01:04	30°☾☾		conjunction	70 Feb 01 j 23:22	11°☾54'31	-12°-35'-34
retrograde	61 Oct 14 j 23:42	29°☾17'23		minimum elong	70 Feb 01 j 23:10	11°☾54'30	12°35'35
min. Earth dist.	61 Dec 11 j 23:25	0°☾		max. Earth dist.	70 Feb 05 j 01:44	11°☾59'37	42.42493 AU
conjunction	62 Jan 22 j 06:44	1°☾06'18	-10°-16'-56	retrograde	70 May 16 j 10:35	13°☾42'08	
minimum elong	62 Jan 22 j 06:31	1°☾06'17	10°16'58	min. Earth dist.	70 Aug 04 j 17:48	12°☾38'45	40.59162 AU

opposition	70 Aug 07 j 20:49	12°34'48	-13°-20'-29	opposition	78 Aug 18 j 02:16	22°35'32	-15°-5'-47
direct	70 Oct 27 j 16:16	11°28'53		direct	78 Nov 07 j 00:11	21°31'21	
conjunction	71 Feb 03 j 12:07	13°12'01	-12°-50'-23	conjunction	79 Feb 13 j 10:21	23°10'19	-14°-30'-38
minimum elong	71 Feb 03 j 11:56	13°12'00	12°50'24	minimum elong	79 Feb 13 j 10:12	23°10'18	14°30'40
max. Earth dist.	71 Feb 06 j 15:28	13°17'09	42.65500 AU	max. Earth dist.	79 Feb 16 j 09:47	23°15'00	44.40202 AU
retrograde	71 May 17 j 22:33	14°59'04		retrograde	79 May 27 j 17:33	24°53'20	
min. Earth dist.	71 Aug 06 j 08:35	13°55'51	40.82300 AU	min. Earth dist.	79 Aug 16 j 15:57	23°51'26	42.57095 AU
opposition	71 Aug 09 j 10:32	13°51'57	-13°-35'-30	opposition	79 Aug 19 j 13:41	23°47'51	-15°-16'-44
direct	71 Oct 29 j 06:26	12°46'17		direct	79 Nov 08 j 13:29	22°43'50	
conjunction	72 Feb 05 j 00:29	14°28'51	-13°-4'-40	conjunction	80 Feb 14 j 20:56	24°22'17	-14°-41'-5
minimum elong	72 Feb 05 j 00:18	14°28'50	13°04'40	minimum elong	80 Feb 14 j 20:49	24°22'17	14°41'05
max. Earth dist.	72 Feb 08 j 03:22	14°33'56	42.88370 AU	max. Earth dist.	80 Feb 17 j 19:00	24°26'52	44.60348 AU
	72 Feb 24 j 10:00	15°		retrograde	80 May 28 j 06:36	26°04'50	
retrograde	72 May 18 j 08:57	16°15'23		min. Earth dist.	80 Aug 17 j 03:36	25°03'03	42.77252 AU
min. Earth dist.	72 Aug 06 j 21:03	15°12'25	41.05271 AU	opposition	80 Aug 20 j 00:58	24°59'30	-15°-27'-12
opposition	72 Aug 09 j 23:50	15°08'30	-13°-49'-58	direct	80 Nov 08 j 23:00	23°55'39	
	72 Aug 16 j 18:13	15°R					
direct	72 Oct 29 j 21:19	14°03'03		conjunction	81 Feb 15 j 07:35	25°33'37	-14°-51'-4
	73 Jan 07 j 18:29	15°		minimum elong	81 Feb 15 j 07:26	25°33'37	14°51'05
conjunction	73 Feb 05 j 12:43	15°45'05	-13°-18'-24	max. Earth dist.	81 Feb 18 j 06:19	25°38'13	44.80196 AU
minimum elong	73 Feb 05 j 12:33	15°45'04	13°18'26	retrograde	81 May 29 j 17:41	27°15'42	
max. Earth dist.	73 Feb 08 j 15:18	15°50'07	43.11047 AU	min. Earth dist.	81 Aug 18 j 15:42	26°13'59	42.97120 AU
retrograde	73 May 19 j 21:16	17°31'06		opposition	81 Aug 21 j 11:48	26°10'31	-15°-37'-12
min. Earth dist.	73 Aug 08 j 11:02	16°28'18	41.28038 AU	direct	81 Nov 10 j 09:16	25°06'50	
opposition	73 Aug 11 j 12:52	16°24'26	-14°-3'-52				
direct	73 Oct 31 j 11:03	15°19'15		conjunction	82 Feb 16 j 17:54	26°44'22	-15°00'-35
conjunction	74 Feb 07 j 00:52	17°00'44	-13°-31'-38	minimum elong	82 Feb 16 j 17:48	26°44'21	15°00'36
minimum elong	74 Feb 07 j 00:42	17°00'44	13°31'39	max. Earth dist.	82 Feb 19 j 15:21	26°48'52	44.99795 AU
max. Earth dist.	74 Feb 10 j 03:48	17°05'47	43.33497 AU	retrograde	82 May 31 j 03:57	28°25'59	
retrograde	74 May 21 j 10:07	18°46'15		min. Earth dist.	82 Aug 20 j 01:42	27°24'29	43.16748 AU
min. Earth dist.	74 Aug 10 j 00:18	17°43'39	41.50522 AU	opposition	82 Aug 22 j 22:26	27°20'59	-15°-46'-43
opposition	74 Aug 13 j 01:36	17°39'49	-14°-17'-14	direct	82 Nov 11 j 18:59	26°17'28	
direct	74 Nov 01 j 23:35	16°34'52		conjunction	83 Feb 18 j 03:52	27°54'34	-15°-9'-39
conjunction	75 Feb 08 j 12:35	18°15'51	-13°-44'-22	minimum elong	83 Feb 18 j 03:45	27°54'34	15°09'40
minimum elong	75 Feb 08 j 12:25	18°15'50	13°44'24	max. Earth dist.	83 Feb 21 j 01:24	27°59'03	45.19154 AU
max. Earth dist.	75 Feb 11 j 14:07	18°20'46	43.55637 AU	retrograde	83 Jun 01 j 11:44	29°35'47	
retrograde	75 May 23 j 00:30	20°00'52		min. Earth dist.	83 Aug 21 j 13:38	28°34'22	43.36142 AU
min. Earth dist.	75 Aug 11 j 12:56	18°58'27	41.72677 AU	opposition	83 Aug 24 j 09:01	28°30'56	-15°-55'-46
opposition	75 Aug 14 j 14:11	18°54'39	-14°-30'-6	direct	83 Nov 13 j 07:37	27°27'37	
direct	75 Nov 03 j 09:48	17°49'55		conjunction	84 Feb 19 j 13:52	29°04'18	-15°-18'-16
conjunction	76 Feb 10 j 00:23	19°30'23	-13°-56'-37	minimum elong	84 Feb 19 j 13:47	29°04'18	15°18'18
minimum elong	76 Feb 10 j 00:13	19°30'23	13°56'38	max. Earth dist.	84 Feb 22 j 11:11	29°08'46	45.38299 AU
max. Earth dist.	76 Feb 13 j 02:14	19°35'18	43.77413 AU	retrograde	84 Mar 28 j 21:54	0°K	
retrograde	76 May 23 j 11:40	21°14'55			84 Jun 01 j 20:01	0°K45'07	
min. Earth dist.	76 Aug 12 j 02:57	20°12'36	41.94430 AU	min. Earth dist.	84 Aug 08 j 11:12	30°R	
opposition	76 Aug 15 j 02:31	20°08'54	-14°-42'-28	opposition	84 Aug 21 j 23:41	29°43'53	43.55291 AU
direct	76 Nov 03 j 22:27	19°04'23		direct	84 Aug 24 j 19:11	29°40'28	-16°-4'-21
conjunction	77 Feb 10 j 11:56	20°44'21	-14°-8'-25	direct	84 Nov 13 j 19:43	28°37'20	
minimum elong	77 Feb 10 j 11:46	20°44'20	14°08'26		85 Feb 11 j 01:39	0°K	
max. Earth dist.	77 Feb 13 j 12:14	20°49'08	43.98779 AU	conjunction	85 Feb 19 j 23:33	0°K13'38	-15°-26'-27
retrograde	77 May 24 j 22:06	22°28'22		minimum elong	85 Feb 19 j 23:26	0°K13'37	15°26'28
min. Earth dist.	77 Aug 13 j 14:52	21°26'14	42.15743 AU	max. Earth dist.	85 Feb 22 j 19:43	0°K17'59	45.57185 AU
opposition	77 Aug 16 j 14:32	21°22'32	-14°-54'-21	retrograde	85 Jun 03 j 07:45	1°K54'04	
direct	77 Nov 05 j 11:14	20°18'12		min. Earth dist.	85 Aug 23 j 10:30	0°K52'59	43.74174 AU
conjunction	78 Feb 11 j 23:15	21°57'40	-14°-19'-45	opposition	85 Aug 26 j 05:19	0°K49'36	-16°-12'-29
minimum elong	78 Feb 11 j 23:07	21°57'39	14°19'45	direct	85 Oct 12 j 04:28	30°R	
max. Earth dist.	78 Feb 14 j 22:58	22°02'24	44.19692 AU		85 Nov 15 j 04:31	29°46'41	
retrograde	78 May 26 j 08:09	23°41'11		direct	85 Dec 18 j 11:45	0°K	
min. Earth dist.	78 Aug 15 j 04:14	22°39'08	42.36619 AU	conjunction	86 Feb 21 j 09:15	1°K22'35	-15°-34'-13
				minimum elong	86 Feb 21 j 09:10	1°K22'35	15°34'14
				max. Earth dist.	86 Feb 24 j 05:49	1°K26'57	45.75781 AU

retrograde	86 Jun 04 j 18:11	3° ✕ 02'38		direct	94 Nov 25 j 14:38	9° ✕ 51'27	
min. Earth dist.	86 Aug 24 j 21:27	2° ✕ 01'41	43.92720 AU				
opposition	86 Aug 27 j 15:02	1° ✕ 58'23	-16°-20'-11	conjunction	95 Mar 03 j 16:50	11° ✕ 24'06	-16°-26'-55
direct	86 Nov 16 j 13:53	0° ✕ 55'39		minimum elong	95 Mar 03 j 16:49	11° ✕ 24'06	16°26'56
				max. Earth dist.	95 Mar 06 j 05:10	11° ✕ 27'49	47.24725 AU
conjunction	87 Feb 22 j 18:41	2° ✕ 31'11	-15°-41'-34	retrograde	95 Jun 14 j 22:01	13° ✕ 00'49	
minimum elong	87 Feb 22 j 18:36	2° ✕ 31'11	15°41'34	min. Earth dist.	95 Sep 04 j 12:52	12° ✕ 00'40	45.40827 AU
max. Earth dist.	87 Feb 25 j 13:27	2° ✕ 35'25	45.94031 AU	opposition	95 Sep 06 j 22:53	11° ✕ 57'48	-17°-11'-57
retrograde	87 Jun 06 j 05:50	4° ✕ 10'52		direct	95 Nov 26 j 23:40	10° ✕ 56'16	
min. Earth dist.	87 Aug 26 j 07:08	3° ✕ 10'05	44.10894 AU				
opposition	87 Aug 29 j 00:42	3° ✕ 06'48	-16°-27'-28	conjunction	96 Mar 04 j 00:51	12° ✕ 28'35	-16°-30'-54
direct	87 Nov 17 j 20:45	2° ✕ 04'15		minimum elong	96 Mar 04 j 00:49	12° ✕ 28'35	16°30'55
				max. Earth dist.	96 Mar 06 j 13:29	12° ✕ 32'18	47.39601 AU
conjunction	88 Feb 24 j 03:59	3° ✕ 39'26	-15°-48'-31	retrograde	96 Jun 15 j 04:54	14° ✕ 04'59	
minimum elong	88 Feb 24 j 03:55	3° ✕ 39'26	15°48'33	min. Earth dist.	96 Sep 04 j 21:21	13° ✕ 04'56	45.55630 AU
max. Earth dist.	88 Feb 26 j 22:36	3° ✕ 43'39	46.11867 AU	opposition	96 Sep 07 j 06:47	13° ✕ 02'06	-17°-15'-46
retrograde	88 Jun 06 j 14:54	5° ✕ 18'45		direct	96 Nov 27 j 09:19	12° ✕ 00'43	
min. Earth dist.	88 Aug 26 j 18:51	4° ✕ 18'02	44.28621 AU				
opposition	88 Aug 29 j 10:19	4° ✕ 14'52	-16°-34'-22	conjunction	97 Mar 05 j 08:45	13° ✕ 32'43	-16°-34'-32
direct	88 Nov 18 j 05:58	3° ✕ 12'29		minimum elong	97 Mar 05 j 08:45	13° ✕ 32'43	16°34'32
				max. Earth dist.	97 Mar 07 j 19:39	13° ✕ 36'19	47.54212 AU
conjunction	89 Feb 24 j 13:22	4° ✕ 47'18	-15°-55'-7	retrograde	97 Jun 16 j 15:40	15° ✕ 08'49	
minimum elong	89 Feb 24 j 13:18	4° ✕ 47'18	15°55'07	min. Earth dist.	97 Sep 06 j 05:16	14° ✕ 08'54	45.70160 AU
max. Earth dist.	89 Feb 27 j 06:48	4° ✕ 51'25	46.29247 AU	opposition	97 Sep 08 j 14:27	14° ✕ 06'05	-17°-19'-13
retrograde	89 Jun 07 j 20:49	6° ✕ 26'14		direct	97 Nov 28 j 14:31	13° ✕ 04'50	
min. Earth dist.	89 Aug 28 j 04:12	5° ✕ 25'40	44.45857 AU				
opposition	89 Aug 30 j 19:26	5° ✕ 22'30	-16°-40'-53	conjunction	98 Mar 06 j 16:36	14° ✕ 36'34	-16°-37'-47
direct	89 Nov 19 j 18:08	4° ✕ 20'16		minimum elong	98 Mar 06 j 16:35	14° ✕ 36'34	16°37'48
				max. Earth dist.	98 Mar 09 j 03:38	14° ✕ 40'10	47.68523 AU
conjunction	90 Feb 25 j 22:26	5° ✕ 54'42	-16°-1'-20	retrograde	98 Jun 18 j 00:48	16° ✕ 12'23	
minimum elong	90 Feb 25 j 22:22	5° ✕ 54'42	16°01'21	min. Earth dist.	98 Sep 07 j 14:48	15° ✕ 12'31	45.84357 AU
max. Earth dist.	90 Feb 28 j 14:11	5° ✕ 58'42	46.46131 AU	opposition	98 Sep 09 j 22:10	15° ✕ 09'48	-17°-22'-18
retrograde	90 Jun 09 j 05:36	7° ✕ 33'17		direct	98 Nov 29 j 20:48	14° ✕ 08'43	
min. Earth dist.	90 Aug 29 j 14:52	6° ✕ 32'45	44.62612 AU				
opposition	90 Sep 01 j 04:38	6° ✕ 29'40	-16°-47'-1	conjunction	99 Mar 08 j 00:12	15° ✕ 40'11	-16°-40'-42
direct	90 Nov 21 j 04:36	5° ✕ 27'34		minimum elong	99 Mar 08 j 00:13	15° ✕ 40'11	16°40'44
				max. Earth dist.	99 Mar 10 j 10:04	15° ✕ 43'41	47.82491 AU
conjunction	91 Feb 27 j 07:15	7° ✕ 01'37	-16°-7'-12	retrograde	99 Jun 19 j 06:53	17° ✕ 15'42	
minimum elong	91 Feb 27 j 07:12	7° ✕ 01'37	16°07'12	min. Earth dist.	99 Sep 08 j 22:15	16° ✕ 16'00	45.98167 AU
max. Earth dist.	91 Mar 01 j 23:05	7° ✕ 05'37	46.62554 AU	opposition	99 Sep 11 j 05:39	16° ✕ 13'17	-17°-25'-2
retrograde	91 Jun 10 j 14:41	8° ✕ 39'49		direct	99 Dec 01 j 04:41	15° ✕ 12'20	
min. Earth dist.	91 Aug 31 j 00:53	7° ✕ 39'20	44.78910 AU				
opposition	91 Sep 02 j 13:31	7° ✕ 36'19	-16°-52'-47	conjunction	100 Mar 08 j 07:52	16° ✕ 43'33	-16°-43'-18
direct	91 Nov 22 j 14:02	6° ✕ 34'20		minimum elong	100 Mar 08 j 07:51	16° ✕ 43'33	16°43'19
				max. Earth dist.	100 Mar 10 j 16:17	16° ✕ 46'58	47.96033 AU
conjunction	92 Feb 28 j 15:53	8° ✕ 08'00	-16°-12'-41	retrograde	100 Jun 19 j 13:13	18° ✕ 18'49	
minimum elong	92 Feb 28 j 15:49	8° ✕ 08'00	16°12'43	min. Earth dist.	100 Sep 09 j 07:38	17° ✕ 19'09	46.11531 AU
max. Earth dist.	92 Mar 02 j 05:55	8° ✕ 11'52	46.78569 AU	opposition	100 Sep 11 j 13:06	17° ✕ 16'33	-17°-27'-27
retrograde	92 Jun 11 j 01:20	9° ✕ 45'49		direct	100 Dec 01 j 13:44	16° ✕ 15'44	
min. Earth dist.	92 Aug 31 j 09:37	8° ✕ 45'26	44.94839 AU				
opposition	92 Sep 02 j 22:08	8° ✕ 42'26	-16°-58'-10				
direct	92 Nov 22 j 20:46	7° ✕ 40'33					
conjunction	93 Mar 01 j 00:24	9° ✕ 13'52	-16°-17'-49				
minimum elong	93 Mar 01 j 00:22	9° ✕ 13'52	16°17'50				
max. Earth dist.	93 Mar 03 j 14:30	9° ✕ 17'42	46.94234 AU				
retrograde	93 Jun 12 j 08:43	10° ✕ 51'17					
min. Earth dist.	93 Sep 01 j 19:45	9° ✕ 50'56	45.10438 AU				
opposition	93 Sep 04 j 06:37	9° ✕ 48'01	-17°-3'-9				
direct	93 Nov 24 j 05:20	8° ✕ 46'15					
conjunction	94 Mar 02 j 08:44	10° ✕ 19'13	-16°-22'-33				
minimum elong	94 Mar 02 j 08:42	10° ✕ 19'13	16°22'34				
max. Earth dist.	94 Mar 04 j 21:58	10° ✕ 23'00	47.09612 AU				
retrograde	94 Jun 13 j 14:25	11° ✕ 56'16					
min. Earth dist.	94 Sep 03 j 03:34	10° ✕ 56'03	45.25756 AU				
opposition	94 Sep 05 j 14:41	10° ✕ 53'07	-17°-7'-45				