

Planetary Phenomena of Neptune 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.

direct	-400 Feb 20 j 17:28	6°II03'39		conjunction	-392 Jun 24 j 02:13	26°II27'10	0°-37'-46
				minimum elong	-392 Jun 24 j 02:13	26°II27'10	0°37'47
conjunction	-400 Jun 05 j 09:55	8°II35'02	-1°-9'-16	max. Earth dist.	-392 Jun 23 j 17:40	26°II26'23	30.98498 AU
minimum elong	-400 Jun 05 j 09:55	8°II35'02	1°09'17	retrograde	-392 Oct 06 j 17:29	28°II57'26	
max. Earth dist.	-400 Jun 05 j 08:31	8°II34'54	30.90639 AU	opposition	-392 Dec 23 j 02:51	27°II34'02	0°-38'-7
retrograde	-400 Sep 18 j 21:19	11°II06'35		min. Earth dist.	-392 Dec 23 j 11:21	27°II33'26	28.98899 AU
opposition	-400 Dec 05 j 15:57	9°II42'27	-1°-12'-8	direct	-391 Mar 12 j 06:55	26°II08'56	
min. Earth dist.	-400 Dec 05 j 16:24	9°II42'26	28.91105 AU				
direct	-399 Feb 22 j 04:35	8°II17'30		conjunction	-391 Jun 26 j 15:56	28°II40'48	0°-33'-32
				minimum elong	-391 Jun 26 j 15:57	28°II40'48	0°33'32
conjunction	-399 Jun 08 j 00:01	10°II48'57	-1°-5'-38	max. Earth dist.	-391 Jun 26 j 05:37	28°II39'51	30.99270 AU
minimum elong	-399 Jun 08 j 00:02	10°II48'57	1°05'39		-391 Aug 02 j 23:17	0°☾	
max. Earth dist.	-399 Jun 07 j 22:18	10°II48'47	30.91521 AU	retrograde	-391 Oct 09 j 05:39	1°☾10'52	
retrograde	-399 Sep 21 j 06:55	13°II20'21			-391 Dec 18 j 03:15	30°RII	
opposition	-399 Dec 08 j 02:17	11°II56'20	-1°-8'-11	opposition	-391 Dec 25 j 12:55	29°II47'30	0°-33'-34
min. Earth dist.	-399 Dec 08 j 04:22	11°II56'11	28.92058 AU	min. Earth dist.	-391 Dec 25 j 21:20	29°II46'54	28.99662 AU
direct	-398 Feb 24 j 14:56	10°II31'22		direct	-390 Mar 14 j 18:56	28°II22'19	
					-390 Jun 04 j 09:16	0°☾	
conjunction	-398 Jun 10 j 14:08	13°II02'54	-1°-1'-54	conjunction	-390 Jun 29 j 05:42	0°☾54'11	0°-29'-15
minimum elong	-398 Jun 10 j 14:08	13°II02'54	1°01'55	minimum elong	-390 Jun 29 j 05:42	0°☾54'11	0°29'16
max. Earth dist.	-398 Jun 10 j 11:43	13°II02'40	30.92548 AU	max. Earth dist.	-390 Jun 28 j 18:56	0°☾53'12	31.00034 AU
retrograde	-398 Sep 23 j 18:49	15°II34'10		retrograde	-390 Oct 11 j 14:12	3°☾24'03	
opposition	-398 Dec 10 j 12:32	14°II10'16	-1°-4'-9	opposition	-390 Dec 27 j 23:16	2°☾00'43	0°-28'-58
min. Earth dist.	-398 Dec 10 j 14:26	14°II10'07	28.93118 AU	min. Earth dist.	-390 Dec 28 j 09:25	2°☾00'00	29.00447 AU
direct	-397 Feb 27 j 04:14	12°II45'18		direct	-389 Mar 17 j 06:05	0°☾35'29	
conjunction	-397 Jun 13 j 04:09	15°II16'55	0°-58'-4	conjunction	-389 Jul 01 j 19:09	3°☾07'20	0°-24'-56
minimum elong	-397 Jun 13 j 04:09	15°II16'55	0°58'04	minimum elong	-389 Jul 01 j 19:09	3°☾07'20	0°24'56
max. Earth dist.	-397 Jun 13 j 00:29	15°II16'35	30.93640 AU	max. Earth dist.	-389 Jul 01 j 07:41	3°☾06'17	31.00853 AU
retrograde	-397 Sep 26 j 06:22	17°II48'04		retrograde	-389 Oct 14 j 00:41	5°☾37'00	
opposition	-397 Dec 12 j 22:55	16°II24'16	-1°00'00	opposition	-389 Dec 30 j 09:26	4°☾13'43	0°-24'-20
min. Earth dist.	-397 Dec 13 j 02:25	16°II24'01	28.94233 AU	min. Earth dist.	-389 Dec 30 j 19:13	4°☾13'01	29.01301 AU
direct	-396 Feb 29 j 15:09	14°II59'19		direct	-388 Mar 18 j 18:57	2°☾48'26	
conjunction	-396 Jun 14 j 18:16	17°II31'02	0°-54'-9	conjunction	-388 Jul 03 j 08:31	5°☾20'17	0°-20'-34
minimum elong	-396 Jun 14 j 18:16	17°II31'02	0°54'10	minimum elong	-388 Jul 03 j 08:31	5°☾20'17	0°20'35
max. Earth dist.	-396 Jun 14 j 14:17	17°II30'40	30.94760 AU	max. Earth dist.	-388 Jul 02 j 20:12	5°☾19'09	31.01758 AU
retrograde	-396 Sep 27 j 18:23	20°II02'01		retrograde	-388 Oct 15 j 11:01	7°☾49'46	
opposition	-396 Dec 14 j 09:13	18°II38'21	0°-55'-46	opposition	-388 Dec 31 j 19:40	6°☾26'32	0°-19'-39
min. Earth dist.	-396 Dec 14 j 13:09	18°II38'04	28.95327 AU	min. Earth dist.	-387 Jan 01 j 06:39	6°☾25'46	29.02279 AU
direct	-395 Mar 03 j 04:03	17°II13'24		direct	-387 Mar 21 j 05:06	5°☾01'13	
conjunction	-395 Jun 17 j 08:12	19°II45'11	0°-50'-9	conjunction	-387 Jul 05 j 21:51	7°☾33'05	0°-16'-12
minimum elong	-395 Jun 17 j 08:12	19°II45'11	0°50'09	minimum elong	-387 Jul 05 j 21:51	7°☾33'05	0°16'12
max. Earth dist.	-395 Jun 17 j 02:04	19°II44'37	30.95827 AU	max. Earth dist.	-387 Jul 05 j 09:38	7°☾31'57	31.02802 AU
retrograde	-395 Sep 30 j 07:53	22°II16'01		retrograde	-387 Oct 17 j 21:38	10°☾02'24	
opposition	-395 Dec 16 j 19:40	20°II52'26	0°-51'-28	opposition	-386 Jan 03 j 05:55	8°☾39'15	0°-14'-57
min. Earth dist.	-395 Dec 17 j 00:49	20°II52'04	28.96357 AU	min. Earth dist.	-386 Jan 03 j 16:50	8°☾38'29	29.03374 AU
direct	-394 Mar 05 j 16:37	19°II27'28		direct	-386 Mar 23 j 18:15	7°☾13'55	
conjunction	-394 Jun 19 j 22:26	21°II59'18	0°-46'-5	conjunction	-386 Jul 08 j 11:06	9°☾45'49	0°-11'-48
minimum elong	-394 Jun 19 j 22:26	21°II59'18	0°46'06	minimum elong	-386 Jul 08 j 11:06	9°☾45'49	0°11'49
max. Earth dist.	-394 Jun 19 j 16:10	21°II58'43	30.96807 AU	behind sun begin	-386 Jul 08 j 06:35	9°☾45'25	
retrograde	-394 Oct 02 j 18:46	24°II29'58		behind sun end	-386 Jul 08 j 15:38	9°☾46'13	
opposition	-394 Dec 19 j 06:02	23°II06'27	0°-47'-5	max. Earth dist.	-386 Jul 07 j 21:21	9°☾44'33	31.03961 AU
min. Earth dist.	-394 Dec 19 j 12:28	23°II06'00	28.97278 AU	retrograde	-386 Oct 20 j 09:53	12°☾14'59	
direct	-393 Mar 08 j 06:20	21°II41'28		opposition	-385 Jan 05 j 16:07	10°☾51'56	0°-10'-14
				min. Earth dist.	-385 Jan 06 j 03:42	10°☾51'07	29.04592 AU
conjunction	-393 Jun 22 j 12:23	24°II13'19	0°-41'-57	direct	-385 Mar 26 j 06:00	9°☾26'38	
minimum elong	-393 Jun 22 j 12:23	24°II13'19	0°41'58	max. Earth dist.	-385 Jul 10 j 11:11	11°☾57'22	31.05220 AU
max. Earth dist.	-393 Jun 22 j 03:51	24°II12'32	30.97692 AU				
retrograde	-393 Oct 05 j 07:11	26°II43'48		conjunction	-385 Jul 11 j 00:26	11°☾58'35	0°-7'-23
opposition	-393 Dec 21 j 16:25	25°II20'20	0°-42'-38	minimum elong	-385 Jul 11 j 00:26	11°☾58'35	0°07'23
min. Earth dist.	-393 Dec 21 j 23:18	25°II19'51	28.98123 AU	behind sun begin	-385 Jul 10 j 18:26	11°☾58'03	
direct	-392 Mar 09 j 18:32	23°II55'18					

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Attention, astronomical year style is used: The year -385 in astronomical counting style is the year 386 BCE in historical counting style.

behind sun end	-385 Jul 11 j 06:26	11° $\mathfrak{E}$ 59'07		max. Earth dist.	-378 Jul 25 j 23:58	27° $\mathfrak{E}$ 26'29	31.12418 AU
retrograde	-385 Oct 22 j 20:23	14° $\mathfrak{E}$ 27'37		retrograde	-378 Nov 06 j 22:38	29° $\mathfrak{E}$ 56'21	
opposition	-384 Jan 08 j 02:30	13° $\mathfrak{E}$ 04'41	0°-5'-30	opposition	-377 Jan 23 j 03:23	28° $\mathfrak{E}$ 33'54	0°27'25
min. Earth dist.	-384 Jan 08 j 14:57	13° $\mathfrak{E}$ 03'48	29.05869 AU	min. Earth dist.	-377 Jan 23 j 21:00	28° $\mathfrak{E}$ 32'40	29.12795 AU
direct	-384 Mar 27 j 19:02	11° $\mathfrak{E}$ 39'25		direct	-377 Apr 13 j 06:43	27° $\mathfrak{E}$ 08'35	
				max. Earth dist.	-377 Jul 28 j 11:01	29° $\mathfrak{E}$ 38'40	31.13135 AU
conjunction	-384 Jul 12 j 13:24	14° $\mathfrak{E}$ 11'24	0°-2'-57				
minimum elong	-384 Jul 12 j 13:24	14° $\mathfrak{E}$ 11'24	0°02'58	conjunction	-377 Jul 29 j 07:49	29° $\mathfrak{E}$ 40'36	0°27'51
behind sun begin	-384 Jul 12 j 06:50	14° $\mathfrak{E}$ 10'50		minimum elong	-377 Jul 29 j 07:49	29° $\mathfrak{E}$ 40'36	0°27'52
behind sun end	-384 Jul 12 j 19:57	14° $\mathfrak{E}$ 11'59			-377 Aug 07 j 01:11	0° $\mathfrak{Q}$	
max. Earth dist.	-384 Jul 11 j 22:24	14° $\mathfrak{E}$ 10'02	31.06511 AU	retrograde	-377 Nov 09 j 09:55	2° $\mathfrak{Q}$ 08'31	
retrograde	-384 Oct 24 j 09:02	16° $\mathfrak{E}$ 40'20		opposition	-376 Jan 25 j 13:50	0° $\mathfrak{Q}$ 46'06	0°31'59
opposition	-383 Jan 09 j 12:47	15° $\mathfrak{E}$ 17'30	0°00'-45	min. Earth dist.	-376 Jan 26 j 07:55	0° $\mathfrak{Q}$ 44'50	29.13536 AU
min. Earth dist.	-383 Jan 10 j 01:28	15° $\mathfrak{E}$ 16'37	29.07155 AU		-376 Feb 23 j 15:05	30° $\mathfrak{R}$ $\mathfrak{E}$	
asc. node	-383 Mar 09 j 15:51	13° $\mathfrak{E}$ 59'09		direct	-376 Apr 14 j 18:21	29° $\mathfrak{E}$ 20'44	
direct	-383 Mar 30 j 06:49	13° $\mathfrak{E}$ 52'16			-376 Jun 03 j 21:10	0° $\mathfrak{Q}$	
max. Earth dist.	-383 Jul 14 j 11:50	16° $\mathfrak{E}$ 22'57	31.07759 AU				
				conjunction	-376 Jul 30 j 20:07	1° $\mathfrak{Q}$ 52'43	0°32'06
conjunction	-383 Jul 15 j 02:43	16° $\mathfrak{E}$ 24'19	0°01'36	minimum elong	-376 Jul 30 j 20:06	1° $\mathfrak{Q}$ 52'43	0°32'06
minimum elong	-383 Jul 15 j 02:41	16° $\mathfrak{E}$ 24'19	0°01'36	max. Earth dist.	-376 Jul 30 j 00:06	1° $\mathfrak{Q}$ 50'52	31.13891 AU
behind sun begin	-383 Jul 14 j 20:06	16° $\mathfrak{E}$ 23'44		retrograde	-376 Nov 10 j 19:15	4° $\mathfrak{Q}$ 20'30	
behind sun end	-383 Jul 15 j 09:16	16° $\mathfrak{E}$ 24'54		opposition	-375 Jan 27 j 00:19	2° $\mathfrak{Q}$ 58'05	0°36'30
retrograde	-383 Oct 26 j 19:41	18° $\mathfrak{E}$ 53'07		min. Earth dist.	-375 Jan 27 j 19:01	2° $\mathfrak{Q}$ 56'47	29.14324 AU
opposition	-382 Jan 11 j 23:10	17° $\mathfrak{E}$ 30'23	0°03'59	direct	-375 Apr 17 j 07:13	1° $\mathfrak{Q}$ 32'42	
min. Earth dist.	-382 Jan 12 j 13:32	17° $\mathfrak{E}$ 29'23	29.08363 AU	max. Earth dist.	-375 Aug 01 j 10:57	4° $\mathfrak{Q}$ 02'40	31.14724 AU
direct	-382 Apr 01 j 19:15	16° $\mathfrak{E}$ 05'11					
				conjunction	-375 Aug 02 j 08:18	4° $\mathfrak{Q}$ 04'39	0°36'19
conjunction	-382 Jul 17 j 15:50	18° $\mathfrak{E}$ 37'16	0°06'03	minimum elong	-375 Aug 02 j 08:18	4° $\mathfrak{Q}$ 04'39	0°36'19
minimum elong	-382 Jul 17 j 15:50	18° $\mathfrak{E}$ 37'16	0°06'02	retrograde	-375 Nov 13 j 07:15	6° $\mathfrak{Q}$ 32'18	
behind sun begin	-382 Jul 17 j 09:35	18° $\mathfrak{E}$ 36'42		opposition	-374 Jan 29 j 10:37	5° $\mathfrak{Q}$ 09'56	0°40'58
behind sun end	-382 Jul 17 j 22:04	18° $\mathfrak{E}$ 37'49		min. Earth dist.	-374 Jan 30 j 04:56	5° $\mathfrak{Q}$ 08'39	29.15217 AU
max. Earth dist.	-382 Jul 16 j 23:06	18° $\mathfrak{E}$ 35'43	31.08919 AU	direct	-374 Apr 19 j 19:12	3° $\mathfrak{Q}$ 44'32	
retrograde	-382 Oct 29 j 08:05	21° $\mathfrak{E}$ 05'56					
opposition	-381 Jan 14 j 09:36	19° $\mathfrak{E}$ 43'18	0°08'43	conjunction	-374 Aug 04 j 20:35	6° $\mathfrak{Q}$ 16'28	0°40'28
min. Earth dist.	-381 Jan 14 j 23:51	19° $\mathfrak{E}$ 42'18	29.09464 AU	minimum elong	-374 Aug 04 j 20:35	6° $\mathfrak{Q}$ 16'28	0°40'27
direct	-381 Apr 04 j 07:35	18° $\mathfrak{E}$ 18'05		max. Earth dist.	-374 Aug 04 j 00:05	6° $\mathfrak{Q}$ 14'34	31.15663 AU
max. Earth dist.	-381 Jul 19 j 11:39	20° $\mathfrak{E}$ 48'36	31.09946 AU	retrograde	-374 Nov 15 j 17:42	8° $\mathfrak{Q}$ 44'00	
				opposition	-373 Jan 31 j 21:14	7° $\mathfrak{Q}$ 21'41	0°45'23
conjunction	-381 Jul 20 j 04:51	20° $\mathfrak{E}$ 50'11	0°10'27	min. Earth dist.	-373 Feb 01 j 16:32	7° $\mathfrak{Q}$ 20'20	29.16211 AU
minimum elong	-381 Jul 20 j 04:51	20° $\mathfrak{E}$ 50'11	0°10'27	direct	-373 Apr 22 j 08:29	5° $\mathfrak{Q}$ 56'19	
behind sun begin	-381 Jul 19 j 23:44	20° $\mathfrak{E}$ 49'44		max. Earth dist.	-373 Aug 06 j 10:58	8° $\mathfrak{Q}$ 26'14	31.16709 AU
behind sun end	-381 Jul 20 j 09:57	20° $\mathfrak{E}$ 50'38					
retrograde	-381 Oct 31 j 16:50	23° $\mathfrak{E}$ 18'43		conjunction	-373 Aug 07 j 08:27	8° $\mathfrak{Q}$ 28'14	0°44'33
opposition	-380 Jan 16 j 20:10	21° $\mathfrak{E}$ 56'09	0°13'26	minimum elong	-373 Aug 07 j 08:27	8° $\mathfrak{Q}$ 28'14	0°44'34
min. Earth dist.	-380 Jan 17 j 12:16	21° $\mathfrak{E}$ 55'02	29.10438 AU	retrograde	-373 Nov 18 j 05:23	10° $\mathfrak{Q}$ 55'40	
direct	-380 Apr 05 j 18:47	20° $\mathfrak{E}$ 30'56		opposition	-372 Feb 03 j 07:41	9° $\mathfrak{Q}$ 33'25	0°49'43
				min. Earth dist.	-372 Feb 04 j 02:12	9° $\mathfrak{Q}$ 32'08	29.17291 AU
conjunction	-380 Jul 21 j 17:46	23° $\mathfrak{E}$ 03'02	0°14'50	direct	-372 Apr 23 j 21:15	8° $\mathfrak{Q}$ 08'05	
minimum elong	-380 Jul 21 j 17:46	23° $\mathfrak{E}$ 03'02	0°14'50				
behind sun begin	-380 Jul 21 j 15:24	23° $\mathfrak{E}$ 02'49		conjunction	-372 Aug 08 j 20:30	10° $\mathfrak{Q}$ 40'00	0°48'35
behind sun end	-380 Jul 21 j 20:08	23° $\mathfrak{E}$ 03'14		minimum elong	-372 Aug 08 j 20:30	10° $\mathfrak{Q}$ 40'00	0°48'35
max. Earth dist.	-380 Jul 20 j 23:33	23° $\mathfrak{E}$ 01'21	31.10866 AU	max. Earth dist.	-372 Aug 07 j 23:13	10° $\mathfrak{Q}$ 38'02	31.17801 AU
retrograde	-380 Nov 02 j 03:11	25° $\mathfrak{E}$ 31'24		retrograde	-372 Nov 19 j 14:28	13° $\mathfrak{Q}$ 07'21	
opposition	-379 Jan 18 j 06:30	24° $\mathfrak{E}$ 08'54	0°18'08	opposition	-371 Feb 04 j 18:13	11° $\mathfrak{Q}$ 45'11	0°53'59
min. Earth dist.	-379 Jan 18 j 22:32	24° $\mathfrak{E}$ 07'47	29.11299 AU	min. Earth dist.	-371 Feb 05 j 14:12	11° $\mathfrak{Q}$ 43'48	29.18399 AU
direct	-379 Apr 08 j 07:19	22° $\mathfrak{E}$ 43'39		direct	-371 Apr 26 j 08:11	10° $\mathfrak{Q}$ 19'53	
max. Earth dist.	-379 Jul 23 j 11:19	25° $\mathfrak{E}$ 13'57	31.11674 AU	max. Earth dist.	-371 Aug 10 j 10:37	12° $\mathfrak{Q}$ 49'46	31.18896 AU
conjunction	-379 Jul 24 j 06:36	25° $\mathfrak{E}$ 15'44	0°19'13	conjunction	-371 Aug 11 j 08:29	12° $\mathfrak{Q}$ 51'48	0°52'32
minimum elong	-379 Jul 24 j 06:36	25° $\mathfrak{E}$ 15'44	0°19'14	minimum elong	-371 Aug 11 j 08:28	12° $\mathfrak{Q}$ 51'48	0°52'33
retrograde	-379 Nov 04 j 13:10	27° $\mathfrak{E}$ 43'58			-371 Oct 19 j 13:41	15° $\mathfrak{Q}$	
opposition	-378 Jan 20 j 16:59	26° $\mathfrak{E}$ 21'30	0°22'47	retrograde	-371 Nov 22 j 01:07	15° $\mathfrak{Q}$ 19'03	
min. Earth dist.	-378 Jan 21 j 10:28	26° $\mathfrak{E}$ 20'17	29.12076 AU		-371 Dec 26 j 02:08	15° $\mathfrak{R}$ $\mathfrak{Q}$	
direct	-378 Apr 10 j 17:07	24° $\mathfrak{E}$ 56'13		opposition	-370 Feb 07 j 04:49	13° $\mathfrak{Q}$ 56'58	0°58'10
				min. Earth dist.	-370 Feb 08 j 00:28	13° $\mathfrak{Q}$ 55'36	29.19459 AU
conjunction	-378 Jul 26 j 19:20	27° $\mathfrak{E}$ 28'16	0°23'33	direct	-370 Apr 28 j 20:45	12° $\mathfrak{Q}$ 31'42	
minimum elong	-378 Jul 26 j 19:20	27° $\mathfrak{E}$ 28'16	0°23'33		-370 Aug 12 j 05:45	15° $\mathfrak{Q}$	

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Attention, astronomical year style is used: The year -370 in astronomical counting style is the year 371 BCE in historical counting style.

conjunction	-370 Aug 13 j 20:24	15°Ω03'35	0°56'25	direct	-362 May 16 j 20:49	0°♄02'26		
minimum elong	-370 Aug 13 j 20:23	15°Ω03'35	0°56'25					
max. Earth dist.	-370 Aug 12 j 21:48	15°Ω01'30	31.19904 AU	conjunction	-362 Aug 31 j 15:25	2°♄33'53	1°23'56	
retrograde	-370 Nov 24 j 11:05	17°Ω30'46		minimum elong	-362 Aug 31 j 15:25	2°♄33'53	1°23'55	
opposition	-369 Feb 09 j 15:37	16°Ω08'44	1°02'16	max. Earth dist.	-362 Aug 30 j 15:29	2°♄31'40	31.24943 AU	
min. Earth dist.	-369 Feb 10 j 12:26	16°Ω07'17	29.20433 AU	retrograde	-362 Dec 11 j 19:46	5°♄00'24		
	-369 Mar 29 j 17:41	15°RΩ		opposition	-361 Feb 27 j 06:14	3°♄38'28	1°31'12	
direct	-369 May 01 j 06:38	14°Ω43'29		min. Earth dist.	-361 Feb 28 j 03:54	3°♄36'58	29.25388 AU	
	-369 Jun 02 j 10:27	15°Ω		direct	-361 May 19 j 09:41	2°♄13'14		
max. Earth dist.	-369 Aug 15 j 09:47	17°Ω13'15	31.20815 AU	max. Earth dist.	-361 Sep 02 j 02:21	4°♄42'25	31.25676 AU	
conjunction	-369 Aug 16 j 08:18	17°Ω15'21	1°00'12	conjunction	-361 Sep 03 j 02:15	4°♄44'39	1°26'52	
minimum elong	-369 Aug 16 j 08:17	17°Ω15'21	1°00'13	minimum elong	-361 Sep 03 j 02:15	4°♄44'39	1°26'53	
retrograde	-369 Nov 26 j 20:08	19°Ω42'26		retrograde	-361 Dec 14 j 05:40	7°♄11'09		
opposition	-368 Feb 12 j 02:25	18°Ω20'27	1°06'16	opposition	-360 Feb 29 j 17:12	5°♄49'15	1°34'17	
min. Earth dist.	-368 Feb 12 j 23:20	18°Ω19'00	29.21280 AU	min. Earth dist.	-360 Mar 01 j 15:16	5°♄47'44	29.26185 AU	
direct	-368 May 02 j 19:50	16°Ω55'13		direct	-360 May 20 j 19:19	4°♄24'05		
conjunction	-368 Aug 17 j 19:54	19°Ω27'02	1°03'54	conjunction	-360 Sep 04 j 12:59	6°♄55'27	1°29'40	
minimum elong	-368 Aug 17 j 19:54	19°Ω27'02	1°03'54	minimum elong	-360 Sep 04 j 12:59	6°♄55'27	1°29'40	
max. Earth dist.	-368 Aug 16 j 19:57	19°Ω24'48	31.21595 AU	max. Earth dist.	-360 Sep 03 j 13:58	6°♄53'19	31.26507 AU	
retrograde	-368 Nov 28 j 06:56	21°Ω54'02		retrograde	-360 Dec 15 j 14:13	9°♄21'56		
opposition	-367 Feb 13 j 13:12	20°Ω32'04	1°10'10	opposition	-359 Mar 03 j 04:12	8°♄00'07	1°37'13	
min. Earth dist.	-367 Feb 14 j 10:37	20°Ω30'35	29.22008 AU	min. Earth dist.	-359 Mar 04 j 01:52	7°♄58'37	29.27027 AU	
direct	-367 May 05 j 06:31	19°Ω06'49		direct	-359 May 23 j 07:59	6°♄35'01		
max. Earth dist.	-367 Aug 19 j 08:15	21°Ω36'25	31.22252 AU					
conjunction	-367 Aug 20 j 07:40	21°Ω38'35	1°07'31	conjunction	-359 Sep 06 j 23:40	9°♄06'22	1°32'21	
minimum elong	-367 Aug 20 j 07:40	21°Ω38'35	1°07'31	minimum elong	-359 Sep 06 j 23:39	9°♄06'22	1°32'22	
retrograde	-367 Nov 30 j 16:01	24°Ω05'29		max. Earth dist.	-359 Sep 05 j 23:47	9°♄04'08	31.27352 AU	
opposition	-366 Feb 15 j 23:59	22°Ω43'32	1°13'58	retrograde	-359 Dec 18 j 00:51	11°♄32'51		
min. Earth dist.	-366 Feb 16 j 22:16	22°Ω41'59	29.22606 AU	opposition	-358 Mar 05 j 15:13	10°♄11'04	1°40'00	
direct	-366 May 07 j 18:54	21°Ω18'17		min. Earth dist.	-358 Mar 06 j 12:51	10°♄09'35	29.27875 AU	
conjunction	-366 Aug 22 j 19:07	23°Ω49'59	1°11'01	direct	-358 May 25 j 17:23	8°♄46'02		
minimum elong	-366 Aug 22 j 19:07	23°Ω49'59	1°11'00	max. Earth dist.	-358 Sep 08 j 11:40	11°♄15'14	31.28169 AU	
max. Earth dist.	-366 Aug 21 j 18:18	23°Ω47'41	31.22805 AU	conjunction	-358 Sep 09 j 10:27	11°♄17'22	1°34'54	
retrograde	-366 Dec 03 j 03:42	26°Ω16'48		minimum elong	-358 Sep 09 j 10:26	11°♄17'22	1°34'53	
opposition	-365 Feb 18 j 10:47	24°Ω54'50	1°17'39	retrograde	-358 Dec 20 j 10:07	13°♄43'51		
min. Earth dist.	-365 Feb 19 j 08:42	24°Ω53'19	29.23131 AU	opposition	-357 Mar 08 j 02:34	12°♄22'07	1°42'39	
direct	-365 May 10 j 07:02	23°Ω29'34		min. Earth dist.	-357 Mar 09 j 00:43	12°♄20'36	29.28655 AU	
max. Earth dist.	-365 Aug 24 j 06:31	25°Ω58'59	31.23295 AU	direct	-357 May 28 j 04:36	10°♄57'09		
conjunction	-365 Aug 25 j 06:24	26°Ω01'12	1°14'25	conjunction	-357 Sep 11 j 20:53	13°♄28'25	1°37'18	
minimum elong	-365 Aug 25 j 06:24	26°Ω01'12	1°14'25	minimum elong	-357 Sep 11 j 20:53	13°♄28'25	1°37'19	
retrograde	-365 Dec 05 j 13:37	28°Ω27'56		max. Earth dist.	-357 Sep 10 j 21:04	13°♄26'11	31.28902 AU	
opposition	-364 Feb 20 j 21:43	27°Ω05'57	1°21'14	retrograde	-357 Dec 22 j 21:58	15°♄54'55		
min. Earth dist.	-364 Feb 21 j 20:38	27°Ω04'22	29.23614 AU	opposition	-356 Mar 09 j 13:49	14°♄33'12	1°45'09	
direct	-364 May 11 j 20:23	25°Ω40'40		min. Earth dist.	-356 Mar 10 j 11:21	14°♄31'43	29.29342 AU	
conjunction	-364 Aug 26 j 17:28	28°Ω12'14	1°17'42	direct	-356 May 29 j 16:17	13°♄08'17		
minimum elong	-364 Aug 26 j 17:28	28°Ω12'14	1°17'41	max. Earth dist.	-356 Sep 12 j 08:39	15°♄37'21	31.29514 AU	
max. Earth dist.	-364 Aug 25 j 16:47	28°Ω09'56	31.23783 AU	conjunction	-356 Sep 13 j 07:35	15°♄39'29	1°39'35	
retrograde	-364 Oct 19 j 14:56	0°♄		minimum elong	-356 Sep 13 j 07:35	15°♄39'29	1°39'34	
retrograde	-364 Dec 07 j 00:45	0°♄38'52		retrograde	-356 Dec 24 j 08:13	18°♄05'58		
opposition	-363 Jan 25 j 23:05	30°RΩ		opposition	-355 Mar 12 j 01:08	16°♄44'16	1°47'30	
min. Earth dist.	-363 Feb 22 j 08:20	29°Ω16'54	1°24'41	min. Earth dist.	-355 Mar 12 j 23:43	16°♄42'43	29.29892 AU	
direct	-363 Feb 23 j 06:15	29°Ω15'23	29.24123 AU	direct	-355 Jun 01 j 04:59	15°♄19'23		
	-363 May 14 j 09:20	27°Ω51'36		conjunction	-355 Sep 15 j 18:07	17°♄50'31	1°41'42	
	-363 Aug 18 j 19:28	0°♄		minimum elong	-355 Sep 15 j 18:07	17°♄50'31	1°41'43	
max. Earth dist.	-363 Aug 28 j 04:26	0°♄20'52	31.24311 AU	max. Earth dist.	-355 Sep 14 j 18:19	17°♄48'18	31.29998 AU	
conjunction	-363 Aug 29 j 04:34	0°♄23'07	1°20'52	retrograde	-355 Dec 26 j 19:33	20°♄16'58		
minimum elong	-363 Aug 29 j 04:34	0°♄23'07	1°20'53	opposition	-354 Mar 14 j 12:29	18°♄55'15	1°49'42	
retrograde	-363 Dec 09 j 09:39	2°♄49'41		min. Earth dist.	-354 Mar 15 j 10:07	18°♄53'47	29.30307 AU	
opposition	-362 Feb 24 j 19:20	1°♄27'43	1°28'00	direct	-354 Jun 03 j 17:36	17°♄30'23		
min. Earth dist.	-362 Feb 25 j 18:06	1°♄26'08	29.24705 AU	max. Earth dist.	-354 Sep 17 j 05:07	19°♄59'15	31.30339 AU	

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Attention, astronomical year style is used: The year -354 in astronomical counting style is the year 355 BCE in historical counting style.

conjunction	-354 Sep 18 j 04:33	20° $\mathring{\text{M}}$ 01'26	1°43'41	minimum elong	-346 Oct 05 j 11:53	7° $\mathring{\text{U}}$ 24'30	1°53'59
minimum elong	-354 Sep 18 j 04:33	20° $\mathring{\text{M}}$ 01'26	1°43'41	max. Earth dist.	-346 Oct 04 j 16:00	7° $\mathring{\text{U}}$ 22'38	31.32756 AU
retrograde	-354 Dec 29 j 05:14	22° $\mathring{\text{M}}$ 27'52		retrograde	-345 Jan 15 j 14:03	9° $\mathring{\text{U}}$ 51'05	
opposition	-353 Mar 17 j 00:03	21° $\mathring{\text{M}}$ 06'08	1°51'44	opposition	-345 Apr 03 j 20:46	8° $\mathring{\text{U}}$ 29'16	2°02'04
min. Earth dist.	-353 Mar 17 j 22:40	21° $\mathring{\text{M}}$ 04'35	29.30600 AU	min. Earth dist.	-345 Apr 04 j 14:59	8° $\mathring{\text{U}}$ 28'01	29.33076 AU
direct	-353 Jun 06 j 05:50	19° $\mathring{\text{M}}$ 41'16		direct	-345 Jun 24 j 02:50	7° $\mathring{\text{U}}$ 04'46	
conjunction	-353 Sep 20 j 14:52	22° $\mathring{\text{M}}$ 12'13	1°45'31	conjunction	-345 Oct 07 j 21:41	9° $\mathring{\text{U}}$ 35'04	1°54'33
minimum elong	-353 Sep 20 j 14:51	22° $\mathring{\text{M}}$ 12'13	1°45'32	minimum elong	-345 Oct 07 j 21:41	9° $\mathring{\text{U}}$ 35'04	1°54'34
max. Earth dist.	-353 Sep 19 j 15:35	22° $\mathring{\text{M}}$ 10'02	31.30588 AU	max. Earth dist.	-345 Oct 07 j 02:23	9° $\mathring{\text{U}}$ 33'16	31.33102 AU
retrograde	-353 Dec 31 j 15:45	24° $\mathring{\text{M}}$ 38'36		retrograde	-344 Jan 18 j 00:39	12° $\mathring{\text{U}}$ 01'44	
opposition	-352 Mar 18 j 11:24	23° $\mathring{\text{M}}$ 16'49	1°53'37	opposition	-344 Apr 05 j 08:43	10° $\mathring{\text{U}}$ 39'55	2°02'36
min. Earth dist.	-352 Mar 19 j 09:06	23° $\mathring{\text{M}}$ 15'20	29.30808 AU	min. Earth dist.	-344 Apr 06 j 03:42	10° $\mathring{\text{U}}$ 38'38	29.33382 AU
direct	-352 Jun 07 j 19:47	21° $\mathring{\text{M}}$ 51'57		direct	-344 Jun 25 j 14:30	9° $\mathring{\text{U}}$ 15'31	
max. Earth dist.	-352 Sep 21 j 01:38	24° $\mathring{\text{M}}$ 20'37	31.30767 AU				
conjunction	-352 Sep 22 j 00:59	24° $\mathring{\text{M}}$ 22'47	1°47'12	conjunction	-344 Oct 09 j 07:25	11° $\mathring{\text{U}}$ 45'46	1°54'57
minimum elong	-352 Sep 22 j 00:59	24° $\mathring{\text{M}}$ 22'47	1°47'12	minimum elong	-344 Oct 09 j 07:25	11° $\mathring{\text{U}}$ 45'46	1°54'57
retrograde	-351 Jan 02 j 01:27	26° $\mathring{\text{M}}$ 49'09		max. Earth dist.	-344 Oct 08 j 12:31	11° $\mathring{\text{U}}$ 43'59	31.33346 AU
opposition	-351 Mar 20 j 22:53	25° $\mathring{\text{M}}$ 27'19	1°55'19	retrograde	-343 Jan 19 j 11:59	14° $\mathring{\text{U}}$ 12'29	
min. Earth dist.	-351 Mar 21 j 20:54	25° $\mathring{\text{M}}$ 25'49	29.30987 AU	opposition	-343 Apr 07 j 20:42	12° $\mathring{\text{U}}$ 50'41	2°02'56
direct	-351 Jun 10 j 06:50	24° $\mathring{\text{M}}$ 02'28		min. Earth dist.	-343 Apr 08 j 14:39	12° $\mathring{\text{U}}$ 49'28	29.33545 AU
conjunction	-351 Sep 24 j 11:02	26° $\mathring{\text{M}}$ 33'11	1°48'44	conjunction	-343 Oct 11 j 17:05	13° $\mathring{\text{U}}$ 56'31	1°55'12
minimum elong	-351 Sep 24 j 11:02	26° $\mathring{\text{M}}$ 33'11	1°48'44	minimum elong	-343 Oct 11 j 17:05	13° $\mathring{\text{U}}$ 56'31	1°55'12
max. Earth dist.	-351 Sep 23 j 12:53	26° $\mathring{\text{M}}$ 31'06	31.30945 AU	max. Earth dist.	-343 Oct 10 j 21:58	13° $\mathring{\text{U}}$ 54'44	31.33429 AU
retrograde	-350 Jan 04 j 09:24	28° $\mathring{\text{M}}$ 59'30		retrograde	-342 Jan 21 j 22:34	16° $\mathring{\text{U}}$ 23'19	
opposition	-350 Mar 23 j 10:22	27° $\mathring{\text{M}}$ 37'39	1°56'53	opposition	-342 Apr 10 j 08:50	15° $\mathring{\text{U}}$ 01'30	2°03'06
min. Earth dist.	-350 Mar 24 j 07:37	27° $\mathring{\text{M}}$ 36'12	29.31179 AU	min. Earth dist.	-342 Apr 11 j 03:06	15° $\mathring{\text{U}}$ 00'15	29.33560 AU
direct	-350 Jun 12 j 19:51	26° $\mathring{\text{M}}$ 12'48		direct	-342 Jun 30 j 15:24	13° $\mathring{\text{U}}$ 37'12	
				max. Earth dist.	-342 Oct 13 j 08:49	16° $\mathring{\text{U}}$ 05'37	31.33367 AU
conjunction	-350 Sep 26 j 20:55	28° $\mathring{\text{M}}$ 43'25	1°50'06	conjunction	-342 Oct 14 j 02:50	16° $\mathring{\text{U}}$ 07'18	1°55'16
minimum elong	-350 Sep 26 j 20:54	28° $\mathring{\text{M}}$ 43'25	1°50'05	minimum elong	-342 Oct 14 j 02:50	16° $\mathring{\text{U}}$ 07'18	1°55'16
max. Earth dist.	-350 Sep 25 j 22:22	28° $\mathring{\text{M}}$ 41'18	31.31173 AU	retrograde	-341 Jan 24 j 07:04	18° $\mathring{\text{U}}$ 34'09	
	-350 Nov 01 j 16:09	0° $\mathring{\text{U}}$		opposition	-341 Apr 12 j 21:00	17° $\mathring{\text{U}}$ 12'18	2°03'06
retrograde	-349 Jan 06 j 19:40	1° $\mathring{\text{U}}$ 09'45		min. Earth dist.	-341 Apr 13 j 14:41	17° $\mathring{\text{U}}$ 11'06	29.33413 AU
	-349 Mar 18 j 11:28	30° $\mathring{\text{R}}$ $\mathring{\text{M}}$		direct	-341 Jul 03 j 04:37	15° $\mathring{\text{U}}$ 48'02	
opposition	-349 Mar 25 j 21:57	29° $\mathring{\text{M}}$ 47'53	1°58'16				
min. Earth dist.	-349 Mar 26 j 18:26	29° $\mathring{\text{M}}$ 46'29	29.31462 AU	conjunction	-341 Oct 16 j 12:16	18° $\mathring{\text{U}}$ 18'02	1°55'11
direct	-349 Jun 15 j 05:41	28° $\mathring{\text{M}}$ 23'04		minimum elong	-341 Oct 16 j 12:16	18° $\mathring{\text{U}}$ 18'02	1°55'11
	-349 Sep 04 j 21:01	0° $\mathring{\text{U}}$		max. Earth dist.	-341 Oct 15 j 17:35	18° $\mathring{\text{U}}$ 16'17	31.33156 AU
max. Earth dist.	-349 Sep 28 j 09:54	0° $\mathring{\text{U}}$ 51'38	31.31494 AU	retrograde	-340 Jan 26 j 17:32	20° $\mathring{\text{U}}$ 44'56	
conjunction	-349 Sep 29 j 06:43	0° $\mathring{\text{U}}$ 53'35	1°51'19	opposition	-340 Apr 14 j 09:07	19° $\mathring{\text{U}}$ 23'01	2°02'55
minimum elong	-349 Sep 29 j 06:43	0° $\mathring{\text{U}}$ 53'35	1°51'19	min. Earth dist.	-340 Apr 15 j 02:16	19° $\mathring{\text{U}}$ 21'52	29.33144 AU
retrograde	-348 Jan 09 j 04:31	3° $\mathring{\text{U}}$ 19'58		direct	-340 Jul 04 j 15:09	17° $\mathring{\text{U}}$ 58'46	
opposition	-348 Mar 27 j 09:36	1° $\mathring{\text{U}}$ 58'05	1°59'28				
min. Earth dist.	-348 Mar 28 j 05:59	1° $\mathring{\text{U}}$ 56'41	29.31820 AU	conjunction	-340 Oct 17 j 21:51	20° $\mathring{\text{U}}$ 28'40	1°54'56
direct	-348 Jun 16 j 17:04	0° $\mathring{\text{U}}$ 33'20		minimum elong	-340 Oct 17 j 21:51	20° $\mathring{\text{U}}$ 28'40	1°54'55
conjunction	-348 Sep 30 j 16:26	3° $\mathring{\text{U}}$ 03'47	1°52'22	max. Earth dist.	-340 Oct 17 j 04:41	20° $\mathring{\text{U}}$ 27'03	31.32833 AU
minimum elong	-348 Sep 30 j 16:26	3° $\mathring{\text{U}}$ 03'47	1°52'21	retrograde	-339 Jan 28 j 02:18	22° $\mathring{\text{U}}$ 55'36	
max. Earth dist.	-348 Sep 29 j 19:13	3° $\mathring{\text{U}}$ 01'48	31.31896 AU	opposition	-339 Apr 16 j 21:11	21° $\mathring{\text{U}}$ 33'38	2°02'34
retrograde	-347 Jan 10 j 15:58	5° $\mathring{\text{U}}$ 30'12		min. Earth dist.	-339 Apr 17 j 14:25	21° $\mathring{\text{U}}$ 32'28	29.32776 AU
opposition	-347 Mar 29 j 21:03	4° $\mathring{\text{U}}$ 08'21	2°00'31	direct	-339 Jul 07 j 03:18	20° $\mathring{\text{U}}$ 09'23	
min. Earth dist.	-347 Mar 30 j 16:12	4° $\mathring{\text{U}}$ 07'02	29.32248 AU				
direct	-347 Jun 19 j 03:47	2° $\mathring{\text{U}}$ 43'40		conjunction	-339 Oct 20 j 07:08	22° $\mathring{\text{U}}$ 39'08	1°54'31
max. Earth dist.	-347 Oct 02 j 06:33	5° $\mathring{\text{U}}$ 12'14	31.32330 AU	minimum elong	-339 Oct 20 j 07:08	22° $\mathring{\text{U}}$ 39'08	1°54'31
conjunction	-347 Oct 03 j 02:19	5° $\mathring{\text{U}}$ 14'05	1°53'16	max. Earth dist.	-339 Oct 19 j 13:44	22° $\mathring{\text{U}}$ 37'30	31.32457 AU
minimum elong	-347 Oct 03 j 02:19	5° $\mathring{\text{U}}$ 14'05	1°53'16	retrograde	-338 Jan 30 j 13:07	25° $\mathring{\text{U}}$ 06'08	
retrograde	-346 Jan 13 j 02:22	7° $\mathring{\text{U}}$ 40'34		opposition	-338 Apr 19 j 09:21	23° $\mathring{\text{U}}$ 44'05	2°02'03
opposition	-346 Apr 01 j 08:56	6° $\mathring{\text{U}}$ 18'44	2°01'23	min. Earth dist.	-338 Apr 20 j 01:04	23° $\mathring{\text{U}}$ 43'01	29.32400 AU
min. Earth dist.	-346 Apr 02 j 04:35	6° $\mathring{\text{U}}$ 17'24	29.32683 AU	direct	-338 Jul 09 j 14:14	22° $\mathring{\text{U}}$ 19'51	
direct	-346 Jun 21 j 15:12	4° $\mathring{\text{U}}$ 54'09					
conjunction	-346 Oct 05 j 11:54	7° $\mathring{\text{U}}$ 24'30	1°53'59	conjunction	-338 Oct 22 j 16:22	24° $\mathring{\text{U}}$ 49'29	1°53'57
				minimum elong	-338 Oct 22 j 16:22	24° $\mathring{\text{U}}$ 49'29	1°53'56
				max. Earth dist.	-338 Oct 22 j 00:41	24° $\mathring{\text{U}}$ 48'01	31.32089 AU
				retrograde	-337 Feb 01 j 22:58	27° $\mathring{\text{U}}$ 16'33	

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Attention, astronomical year style is used: The year -337 in astronomical counting style is the year 338 BCE in historical counting style.

opposition	-337 Apr 21 j 21:42	25°♄54'25	2°01'21	opposition	-329 May 10 j 01:03	13°♌18'34	1°49'36
min. Earth dist.	-337 Apr 22 j 13:26	25°♄53'21	29.32064 AU	min. Earth dist.	-329 May 10 j 10:03	13°♌17'57	29.30019 AU
direct	-337 Jul 12 j 01:02	24°♄30'12		direct	-329 Jul 29 j 22:23	11°♌54'49	
max. Earth dist.	-337 Oct 24 j 10:17	26°♄58'18	31.31800 AU				
				conjunction	-329 Nov 11 j 02:59	14°♌23'44	1°41'35
conjunction	-337 Oct 25 j 01:33	26°♄59'45	1°53'13	minimum elong	-329 Nov 11 j 03:00	14°♌23'44	1°41'36
minimum elong	-337 Oct 25 j 01:33	26°♄59'45	1°53'13	max. Earth dist.	-329 Nov 10 j 17:49	14°♌22'52	31.29596 AU
retrograde	-336 Feb 04 j 10:13	29°♄26'52			-329 Nov 27 j 06:36	15°♌	
opposition	-336 Apr 23 j 09:42	28°♄04'42	2°00'28	retrograde	-328 Feb 21 j 23:56	16°♌51'46	
min. Earth dist.	-336 Apr 23 j 23:26	28°♄03'46	29.31811 AU	opposition	-328 May 11 j 13:41	15°♌29'19	1°47'24
direct	-336 Jul 13 j 11:52	26°♄40'31		min. Earth dist.	-328 May 11 j 23:07	15°♌28'40	29.29344 AU
					-328 May 30 j 01:27	15°♌	
conjunction	-336 Oct 26 j 10:46	29°♄09'59	1°52'19	direct	-328 Jul 31 j 09:02	14°♌05'35	
minimum elong	-336 Oct 26 j 10:46	29°♄09'59	1°52'18		-328 Sep 28 j 07:01	15°♌	
max. Earth dist.	-336 Oct 25 j 20:27	29°♄08'38	31.31586 AU				
	-336 Nov 18 j 00:09	0°♌		conjunction	-328 Nov 12 j 12:10	16°♌34'25	1°39'27
retrograde	-335 Feb 05 j 21:19	1°♌37'12		minimum elong	-328 Nov 12 j 12:10	16°♌34'25	1°39'27
opposition	-335 Apr 25 j 22:02	0°♌14'59	1°59'26	max. Earth dist.	-328 Nov 12 j 03:15	16°♌33'34	31.28877 AU
min. Earth dist.	-335 Apr 26 j 11:52	0°♌14'03	29.31636 AU	retrograde	-327 Feb 23 j 11:28	19°♌02'33	
	-335 May 05 j 04:49	30°♌		opposition	-327 May 14 j 02:17	17°♌40'00	1°45'03
direct	-335 Jul 15 j 23:36	28°♄50'53		min. Earth dist.	-327 May 14 j 09:56	17°♌39'29	29.28567 AU
	-335 Sep 21 j 06:51	0°♌		direct	-327 Aug 02 j 20:13	16°♌16'16	
conjunction	-335 Oct 28 j 19:52	1°♌20'15	1°51'15	conjunction	-327 Nov 14 j 21:09	18°♌45'00	1°37'11
minimum elong	-335 Oct 28 j 19:53	1°♌20'15	1°51'15	minimum elong	-327 Nov 14 j 21:09	18°♌45'00	1°37'12
max. Earth dist.	-335 Oct 28 j 06:47	1°♌19'01	31.31448 AU	max. Earth dist.	-327 Nov 14 j 13:01	18°♌44'14	31.28069 AU
retrograde	-334 Feb 08 j 09:02	3°♌47'35		retrograde	-326 Feb 25 j 22:52	21°♌13'15	
opposition	-334 Apr 28 j 10:18	2°♌25'21	1°58'13	opposition	-326 May 16 j 15:07	19°♌50'36	1°42'34
min. Earth dist.	-334 Apr 28 j 22:30	2°♌24'31	29.31502 AU	min. Earth dist.	-326 May 16 j 22:51	19°♌50'05	29.27750 AU
direct	-334 Jul 18 j 12:43	1°♌01'18		direct	-326 Aug 05 j 07:48	18°♌26'54	
conjunction	-334 Oct 31 j 04:58	3°♌30'37	1°50'02	conjunction	-326 Nov 17 j 06:12	20°♌55'31	1°34'47
minimum elong	-334 Oct 31 j 04:58	3°♌30'37	1°50'01	minimum elong	-326 Nov 17 j 06:12	20°♌55'31	1°34'46
max. Earth dist.	-334 Oct 30 j 16:08	3°♌29'25	31.31327 AU	max. Earth dist.	-326 Nov 16 j 23:33	20°♌54'53	31.27268 AU
retrograde	-333 Feb 10 j 20:11	5°♌58'04		retrograde	-325 Feb 28 j 10:46	23°♌23'52	
opposition	-333 Apr 30 j 22:44	4°♌35'49	1°56'49	opposition	-325 May 19 j 03:42	22°♌01'08	1°39'55
min. Earth dist.	-333 May 01 j 10:44	4°♌35'00	29.31385 AU	min. Earth dist.	-325 May 19 j 09:35	22°♌00'44	29.26963 AU
direct	-333 Jul 20 j 23:12	3°♌11'50		direct	-325 Aug 07 j 20:32	20°♌37'26	
conjunction	-333 Nov 02 j 14:08	5°♌41'05	1°48'39	conjunction	-325 Nov 19 j 15:05	23°♌05'59	1°32'15
minimum elong	-333 Nov 02 j 14:08	5°♌41'05	1°48'39	minimum elong	-325 Nov 19 j 15:05	23°♌05'59	1°32'15
max. Earth dist.	-333 Nov 02 j 02:56	5°♌40'02	31.31194 AU	max. Earth dist.	-325 Nov 19 j 08:48	23°♌05'24	31.26518 AU
retrograde	-332 Feb 13 j 05:37	8°♌08'39		retrograde	-324 Mar 01 j 22:13	25°♌34'28	
opposition	-332 May 02 j 11:12	6°♌46'23	1°55'16	opposition	-324 May 20 j 16:24	24°♌11'40	1°37'08
min. Earth dist.	-332 May 02 j 22:19	6°♌45'38	29.31208 AU	min. Earth dist.	-324 May 20 j 21:42	24°♌11'19	29.26263 AU
direct	-332 Jul 22 j 12:24	5°♌22'29		direct	-324 Aug 09 j 06:49	22°♌48'00	
conjunction	-332 Nov 03 j 23:14	7°♌51'40	1°47'06	conjunction	-324 Nov 21 j 00:07	25°♌16'29	1°29'34
minimum elong	-332 Nov 03 j 23:14	7°♌51'40	1°47'05	minimum elong	-324 Nov 21 j 00:08	25°♌16'29	1°29'33
max. Earth dist.	-332 Nov 03 j 11:34	7°♌50'34	31.30979 AU	max. Earth dist.	-324 Nov 20 j 19:54	25°♌16'05	31.25868 AU
retrograde	-331 Feb 14 j 17:04	10°♌19'20		retrograde	-323 Mar 04 j 08:07	27°♌45'06	
opposition	-331 May 04 j 23:37	8°♌57'03	1°53'32	opposition	-323 May 23 j 05:01	26°♌22'15	1°34'13
min. Earth dist.	-331 May 05 j 10:01	8°♌56'21	29.30945 AU	min. Earth dist.	-323 May 23 j 08:55	26°♌22'00	29.25649 AU
direct	-331 Jul 24 j 23:19	7°♌33'13		direct	-323 Aug 11 j 20:04	24°♌58'39	
conjunction	-331 Nov 06 j 08:34	10°♌02'19	1°45'25	conjunction	-323 Nov 23 j 09:03	27°♌27'05	1°26'46
minimum elong	-331 Nov 06 j 08:35	10°♌02'19	1°45'25	minimum elong	-323 Nov 23 j 09:03	27°♌27'05	1°26'46
max. Earth dist.	-331 Nov 05 j 22:30	10°♌01'22	31.30656 AU	max. Earth dist.	-323 Nov 23 j 04:51	27°♌26'41	31.25316 AU
retrograde	-330 Feb 17 j 02:37	12°♌30'07		retrograde	-322 Mar 06 j 20:32	29°♌55'51	
opposition	-330 May 07 j 12:23	11°♌07'47	1°51'39	opposition	-322 May 25 j 17:48	28°♌32'58	1°31'09
min. Earth dist.	-330 May 07 j 22:44	11°♌07'05	29.30549 AU	min. Earth dist.	-322 May 25 j 20:22	28°♌32'48	29.25140 AU
direct	-330 Jul 27 j 11:36	9°♌44'01		direct	-322 Aug 14 j 07:10	27°♌09'27	
conjunction	-330 Nov 08 j 17:40	12°♌13'01	1°43'34	conjunction	-322 Nov 25 j 18:04	29°♌37'50	1°23'50
minimum elong	-330 Nov 08 j 17:40	12°♌13'01	1°43'34	minimum elong	-322 Nov 25 j 18:04	29°♌37'50	1°23'49
max. Earth dist.	-330 Nov 08 j 07:17	12°♌12'02	31.30201 AU	max. Earth dist.	-322 Nov 25 j 15:58	29°♌37'38	31.24838 AU
retrograde	-329 Feb 19 j 13:50	14°♌40'57			-322 Dec 05 j 13:11	0°♌	

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Attention, astronomical year style is used: The year -321 in astronomical counting style is the year 322 BCE in historical counting style.

retrograde	-321 Mar 09 j 06:32	2°♌06'46		opposition	-313 Jun 15 j 14:30	18°♌15'02	0°58'07
opposition	-321 May 28 j 06:40	0°♌43'52	1°27'57	min. Earth dist.	-313 Jun 15 j 10:06	18°♌15'20	29.18429 AU
min. Earth dist.	-321 May 28 j 08:47	0°♌43'43	29.24673 AU	direct	-313 Sep 03 j 12:58	16°♌51'48	
	-321 Jun 25 j 18:58	30°♍					
direct	-321 Aug 16 j 19:08	29°♍20'25		conjunction	-313 Dec 15 j 05:40	19°♌19'37	0°52'28
	-321 Oct 05 j 06:47	0°♌		minimum elong	-313 Dec 15 j 05:40	19°♌19'37	0°52'28
				max. Earth dist.	-313 Dec 15 j 10:33	19°♌20'05	31.17875 AU
conjunction	-321 Nov 28 j 03:07	1°♌48'45	1°20'47	retrograde	-312 Mar 28 j 15:40	21°♌49'50	
minimum elong	-321 Nov 28 j 03:07	1°♌48'45	1°20'47	opposition	-312 Jun 17 j 03:23	20°♌26'19	0°53'57
max. Earth dist.	-321 Nov 28 j 01:10	1°♌48'34	31.24394 AU	min. Earth dist.	-312 Jun 16 j 22:27	20°♌26'39	29.17396 AU
retrograde	-320 Mar 10 j 17:41	4°♌17'51		direct	-312 Sep 05 j 01:10	19°♌03'06	
opposition	-320 May 29 j 19:18	2°♌54'57	1°24'37				
min. Earth dist.	-320 May 29 j 19:50	2°♌54'55	29.24220 AU	conjunction	-312 Dec 16 j 15:00	21°♌30'51	0°48'32
direct	-320 Aug 18 j 05:36	1°♌31'34		minimum elong	-312 Dec 16 j 15:00	21°♌30'51	0°48'31
				max. Earth dist.	-312 Dec 16 j 20:16	21°♌31'21	31.16895 AU
conjunction	-320 Nov 29 j 12:21	3°♌59'52	1°17'36	retrograde	-311 Mar 31 j 03:25	24°♌01'13	
minimum elong	-320 Nov 29 j 12:21	3°♌59'52	1°17'35	opposition	-311 Jun 19 j 16:20	22°♌37'37	0°49'42
max. Earth dist.	-320 Nov 29 j 11:46	3°♌59'49	31.23919 AU	min. Earth dist.	-311 Jun 19 j 09:31	22°♌38'05	29.16461 AU
retrograde	-319 Mar 13 j 04:15	6°♌29'09		direct	-311 Sep 07 j 12:24	21°♌14'25	
opposition	-319 Jun 01 j 08:20	5°♌06'13	1°21'09				
min. Earth dist.	-319 Jun 01 j 09:03	5°♌06'10	29.23716 AU	conjunction	-311 Dec 19 j 00:20	23°♌42'08	0°44'31
direct	-319 Aug 20 j 15:47	3°♌42'55		minimum elong	-311 Dec 19 j 00:20	23°♌42'08	0°44'32
				max. Earth dist.	-311 Dec 19 j 07:10	23°♌42'47	31.16003 AU
conjunction	-319 Dec 01 j 21:28	6°♌11'09	1°14'18	retrograde	-310 Apr 02 j 14:17	26°♌12'40	
minimum elong	-319 Dec 01 j 21:28	6°♌11'09	1°14'19	opposition	-310 Jun 22 j 05:29	24°♌49'01	0°45'23
max. Earth dist.	-319 Dec 01 j 21:28	6°♌11'09	31.23388 AU	min. Earth dist.	-310 Jun 21 j 22:30	24°♌49'30	29.15616 AU
retrograde	-318 Mar 15 j 16:25	8°♌40'36		direct	-310 Sep 09 j 23:05	23°♌25'52	
opposition	-318 Jun 03 j 21:18	7°♌17'38	1°17'34				
min. Earth dist.	-318 Jun 03 j 20:12	7°♌17'42	29.23126 AU	conjunction	-310 Dec 21 j 09:50	25°♌53'33	0°40'27
direct	-318 Aug 23 j 02:44	5°♌54'23		minimum elong	-310 Dec 21 j 09:50	25°♌53'33	0°40'26
				max. Earth dist.	-310 Dec 21 j 17:39	25°♌54'17	31.15212 AU
conjunction	-318 Dec 04 j 06:50	8°♌22'34	1°10'54	retrograde	-309 Apr 05 j 02:34	28°♌24'16	
minimum elong	-318 Dec 04 j 06:50	8°♌22'35	1°10'54	opposition	-309 Jun 24 j 18:18	27°♌00'35	0°40'59
max. Earth dist.	-318 Dec 04 j 07:12	8°♌22'37	31.22737 AU	min. Earth dist.	-309 Jun 24 j 09:15	27°♌01'12	29.14853 AU
retrograde	-317 Mar 18 j 04:36	10°♌52'11		direct	-309 Sep 12 j 09:55	25°♌37'29	
opposition	-317 Jun 06 j 10:22	9°♌29'09	1°13'53				
min. Earth dist.	-317 Jun 06 j 09:39	9°♌29'12	29.22417 AU	conjunction	-309 Dec 23 j 19:21	28°♌05'09	0°36'18
direct	-317 Aug 25 j 13:21	8°♌05'57		minimum elong	-309 Dec 23 j 19:21	28°♌05'09	0°36'19
				max. Earth dist.	-309 Dec 24 j 03:43	28°♌05'56	31.14470 AU
conjunction	-317 Dec 06 j 16:15	10°♌34'04	1°07'24		-308 Feb 19 j 05:14	0°♌	
minimum elong	-317 Dec 06 j 16:15	10°♌34'04	1°07'24	retrograde	-308 Apr 06 j 14:53	0°♌36'04	
max. Earth dist.	-317 Dec 06 j 17:47	10°♌34'13	31.21963 AU		-308 May 26 j 02:46	30°♍	
retrograde	-316 Mar 19 j 17:00	13°♌03'49		opposition	-308 Jun 26 j 07:25	29°♌12'21	0°36'31
opposition	-316 Jun 07 j 23:20	11°♌40'43	1°10'05	min. Earth dist.	-308 Jun 25 j 22:30	29°♌12'58	29.14128 AU
min. Earth dist.	-316 Jun 07 j 21:12	11°♌40'51	29.21555 AU	direct	-308 Sep 13 j 19:44	27°♌49'19	
direct	-316 Aug 27 j 01:15	10°♌17'31			-308 Dec 17 j 17:31	0°♌	
conjunction	-316 Dec 08 j 01:33	12°♌45'34	1°03'48	conjunction	-308 Dec 25 j 04:59	0°♌16'59	0°32'06
minimum elong	-316 Dec 08 j 01:33	12°♌45'35	1°03'47	minimum elong	-308 Dec 25 j 04:59	0°♌16'59	0°32'05
max. Earth dist.	-316 Dec 08 j 02:52	12°♌45'42	31.21037 AU	max. Earth dist.	-308 Dec 25 j 14:57	0°♌17'56	31.13752 AU
retrograde	-315 Mar 22 j 05:15	15°♌15'27		retrograde	-307 Apr 09 j 03:35	2°♌48'05	
opposition	-315 Jun 10 j 12:25	13°♌52'15	1°06'11	opposition	-307 Jun 28 j 20:27	1°♌24'22	0°32'00
min. Earth dist.	-315 Jun 10 j 10:13	13°♌52'24	29.20570 AU	min. Earth dist.	-307 Jun 28 j 09:55	1°♌25'05	29.13392 AU
direct	-315 Aug 29 j 11:40	12°♌29'02		direct	-307 Sep 16 j 06:43	0°♌01'23	
conjunction	-315 Dec 10 j 11:01	14°♌57'01	1°00'06	conjunction	-307 Dec 27 j 14:41	2°♌29'04	0°27'51
minimum elong	-315 Dec 10 j 11:02	14°♌57'01	1°00'06	minimum elong	-307 Dec 27 j 14:41	2°♌29'04	0°27'51
max. Earth dist.	-315 Dec 10 j 14:06	14°♌57'18	31.20010 AU	max. Earth dist.	-307 Dec 28 j 00:31	2°♌30'00	31.13002 AU
retrograde	-314 Mar 24 j 16:31	17°♌27'00		retrograde	-306 Apr 11 j 17:05	5°♌00'23	
opposition	-314 Jun 13 j 01:29	16°♌03'41	1°02'12	opposition	-306 Jul 01 j 09:40	3°♌36'37	0°27'25
min. Earth dist.	-314 Jun 12 j 22:11	16°♌03'54	29.19499 AU	min. Earth dist.	-306 Jun 30 j 23:06	3°♌37'20	29.12620 AU
direct	-314 Sep 01 j 01:23	14°♌40'28		direct	-306 Sep 18 j 16:16	2°♌13'41	
conjunction	-314 Dec 12 j 20:12	17°♌08'21	0°56'20	conjunction	-306 Dec 30 j 00:40	4°♌41'23	0°23'33
minimum elong	-314 Dec 12 j 20:13	17°♌08'21	0°56'18	minimum elong	-306 Dec 30 j 00:40	4°♌41'23	0°23'32
max. Earth dist.	-314 Dec 12 j 23:09	17°♌08'38	31.18935 AU	max. Earth dist.	-306 Dec 30 j 12:08	4°♌42'28	31.12182 AU
retrograde	-313 Mar 27 j 05:43	19°♌38'27		retrograde	-305 Apr 14 j 05:56	7°♌12'52	

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Attention, astronomical year style is used: The year -305 in astronomical counting style is the year 306 BCE in historical counting style.

opposition	-305 Jul 03 j 22:49	5°☾49'04	0°22'48	max. Earth dist.	-298 Jan 14 j 15:45	20°☾10'45	31.04031 AU
min. Earth dist.	-305 Jul 03 j 11:26	5°☾49'51	29.11738 AU	retrograde	-298 Apr 29 j 19:04	22°☾41'40	
direct	-305 Sep 21 j 05:24	4°☾26'11		opposition	-298 Jul 19 j 18:00	21°☾17'15	0°-10'-3
				min. Earth dist.	-298 Jul 19 j 01:30	21°☾18'22	29.03522 AU
conjunction	-304 Jan 01 j 10:41	6°☾53'53	0°19'13	direct	-298 Oct 06 j 13:25	19°☾54'15	
minimum elong	-304 Jan 01 j 10:41	6°☾53'53	0°19'13				
max. Earth dist.	-304 Jan 01 j 21:30	6°☾54'54	31.11242 AU	conjunction	-297 Jan 16 j 09:54	22°☾21'45	0°-11'-36
retrograde	-304 Apr 15 j 20:38	9°☾25'32		minimum elong	-297 Jan 16 j 09:54	22°☾21'45	0°11'38
opposition	-304 Jul 05 j 11:52	8°☾01'41	0°18'09	behind sun begin	-297 Jan 16 j 05:16	22°☾21'20	
min. Earth dist.	-304 Jul 04 j 23:55	8°☾02'29	29.10732 AU	behind sun end	-297 Jan 16 j 14:31	22°☾22'10	
direct	-304 Sep 22 j 16:40	6°☾38'48		max. Earth dist.	-297 Jan 17 j 01:57	22°☾23'16	31.03014 AU
				retrograde	-297 May 02 j 08:35	24°☾54'21	
conjunction	-303 Jan 02 j 20:53	9°☾06'30	0°14'52	opposition	-297 Jul 22 j 06:58	23°☾29'51	0°-14'-45
minimum elong	-303 Jan 02 j 20:54	9°☾06'30	0°14'51	min. Earth dist.	-297 Jul 21 j 14:17	23°☾31'00	29.02566 AU
behind sun begin	-303 Jan 02 j 18:13	9°☾06'15		direct	-297 Oct 08 j 23:05	22°☾06'51	
behind sun end	-303 Jan 02 j 23:34	9°☾06'44					
max. Earth dist.	-303 Jan 03 j 09:03	9°☾07'38	31.10160 AU	conjunction	-296 Jan 18 j 20:24	24°☾34'22	0°-15'-58
retrograde	-303 Apr 18 j 07:41	11°☾38'18		minimum elong	-296 Jan 18 j 20:24	24°☾34'22	0°15'59
opposition	-303 Jul 08 j 01:07	10°☾14'22	0°13'29	behind sun begin	-296 Jan 18 j 19:23	24°☾34'17	
min. Earth dist.	-303 Jul 07 j 13:07	10°☾15'11	29.09580 AU	behind sun end	-296 Jan 18 j 21:26	24°☾34'28	
direct	-303 Sep 25 j 04:50	8°☾51'29		max. Earth dist.	-296 Jan 19 j 14:20	24°☾36'04	31.02099 AU
				retrograde	-296 May 03 j 21:13	27°☾07'07	
conjunction	-302 Jan 05 j 06:55	11°☾19'08	0°10'29	opposition	-296 Jul 23 j 19:45	25°☾42'35	0°-19'-26
minimum elong	-302 Jan 05 j 06:55	11°☾19'08	0°10'30	min. Earth dist.	-296 Jul 23 j 02:00	25°☾43'48	29.01690 AU
behind sun begin	-302 Jan 05 j 01:52	11°☾18'41		direct	-296 Oct 10 j 11:13	24°☾19'36	
behind sun end	-302 Jan 05 j 11:58	11°☾19'36					
max. Earth dist.	-302 Jan 05 j 19:02	11°☾20'16	31.08963 AU	conjunction	-295 Jan 20 j 06:52	26°☾47'09	0°-20'-20
retrograde	-302 Apr 20 j 20:31	13°☾51'04		minimum elong	-295 Jan 20 j 06:52	26°☾47'09	0°20'22
opposition	-302 Jul 10 j 14:13	12°☾27'02	0°08'47	max. Earth dist.	-295 Jan 21 j 00:30	26°☾48'49	31.01268 AU
min. Earth dist.	-302 Jul 10 j 00:58	12°☾27'56	29.08334 AU	retrograde	-295 May 06 j 12:05	29°☾20'03	
direct	-302 Sep 27 j 17:11	11°☾04'08		opposition	-295 Jul 26 j 08:43	27°☾55'28	0°-24'-5
				min. Earth dist.	-295 Jul 25 j 14:12	27°☾56'44	29.00892 AU
conjunction	-301 Jan 07 j 17:05	13°☾31'44	0°06'07	direct	-295 Oct 12 j 21:26	26°☾32'31	
minimum elong	-301 Jan 07 j 17:05	13°☾31'44	0°06'06				
behind sun begin	-301 Jan 07 j 10:59	13°☾31'11		conjunction	-294 Jan 22 j 17:31	29°☾00'06	0°-24'-41
behind sun end	-301 Jan 07 j 23:11	13°☾32'18		minimum elong	-294 Jan 22 j 17:31	29°☾00'06	0°24'41
max. Earth dist.	-301 Jan 08 j 06:12	13°☾32'58	31.07679 AU	max. Earth dist.	-294 Jan 23 j 12:43	29°☾01'55	31.00475 AU
retrograde	-301 Apr 23 j 08:09	16°☾03'47			-294 Feb 18 j 18:22	0°≈	
opposition	-301 Jul 13 j 03:12	14°☾39'39	0°04'05	retrograde	-294 May 09 j 00:15	1°≈33'09	
min. Earth dist.	-301 Jul 12 j 14:17	14°☾40'32	29.07042 AU	opposition	-294 Jul 28 j 21:42	0°≈08'33	0°-28'-43
direct	-301 Sep 30 j 04:49	13°☾16'42		min. Earth dist.	-294 Jul 28 j 03:08	0°≈09'50	29.00102 AU
					-294 Aug 03 j 02:41	30°R☾	
conjunction	-300 Jan 10 j 03:18	15°☾44'16	0°01'42	direct	-294 Oct 15 j 09:05	28°☾45'38	
minimum elong	-300 Jan 10 j 03:17	15°☾44'16	0°01'42		-294 Dec 22 j 13:34	0°≈	
behind sun begin	-300 Jan 09 j 20:53	15°☾43'42					
behind sun end	-300 Jan 10 j 09:42	15°☾44'51		conjunction	-293 Jan 25 j 04:24	1°≈13'15	0°-28'-59
max. Earth dist.	-300 Jan 10 j 17:12	15°☾45'35	31.06397 AU	minimum elong	-293 Jan 25 j 04:23	1°≈13'15	0°29'01
retrograde	-300 Apr 24 j 19:54	18°☾16'27		max. Earth dist.	-293 Jan 25 j 23:30	1°≈15'03	30.99682 AU
desc. node	-300 May 25 j 23:00	18°☾01'25		retrograde	-293 May 11 j 15:02	3°≈46'27	
opposition	-300 Jul 14 j 16:06	16°☾52'12	0°00'-37	opposition	-293 Jul 31 j 10:27	2°≈21'49	0°-33'-18
min. Earth dist.	-300 Jul 14 j 01:18	16°☾53'12	29.05778 AU	min. Earth dist.	-293 Jul 30 j 14:56	2°≈23'10	28.99290 AU
direct	-300 Oct 01 j 16:36	15°☾29'13		direct	-293 Oct 17 j 21:04	0°≈58'55	
conjunction	-299 Jan 11 j 13:19	17°☾56'45	0°-2'-49	conjunction	-292 Jan 27 j 15:26	3°≈26'35	0°-33'-15
minimum elong	-299 Jan 11 j 13:19	17°☾56'45	0°02'51	minimum elong	-292 Jan 27 j 15:26	3°≈26'35	0°33'16
behind sun begin	-299 Jan 11 j 06:55	17°☾56'10		max. Earth dist.	-292 Jan 28 j 11:06	3°≈28'26	30.98819 AU
behind sun end	-299 Jan 11 j 19:43	17°☾57'20		retrograde	-292 May 13 j 03:57	5°≈59'56	
max. Earth dist.	-299 Jan 12 j 03:42	17°☾58'06	31.05158 AU	opposition	-292 Aug 01 j 23:29	4°≈35'16	0°-37'-50
retrograde	-299 Apr 27 j 07:04	20°☾29'04		min. Earth dist.	-292 Aug 01 j 04:40	4°≈36'33	28.98390 AU
opposition	-299 Jul 17 j 05:10	19°☾04'43	0°-5'-20	direct	-292 Oct 19 j 08:40	3°≈12'22	
min. Earth dist.	-299 Jul 16 j 14:25	19°☾05'43	29.04595 AU				
direct	-299 Oct 04 j 02:37	17°☾41'43		conjunction	-291 Jan 29 j 02:30	5°≈40'03	0°-37'-28
				minimum elong	-291 Jan 29 j 02:30	5°≈40'03	0°37'30
conjunction	-298 Jan 13 j 23:39	20°☾09'14	0°-7'-13	max. Earth dist.	-291 Jan 29 j 22:30	5°≈41'57	30.97871 AU
minimum elong	-298 Jan 13 j 23:39	20°☾09'14	0°07'14	retrograde	-291 May 15 j 16:51	8°≈13'33	
behind sun begin	-298 Jan 13 j 17:44	20°☾08'42		opposition	-291 Aug 04 j 12:25	6°≈48'50	0°-42'-20
behind sun end	-298 Jan 14 j 05:34	20°☾09'46		min. Earth dist.	-291 Aug 03 j 16:17	6°≈50'13	28.97386 AU

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Attention, astronomical year style is used: The year -291 in astronomical counting style is the year 292 BCE in historical counting style.

direct	-291 Oct 21 j 20:47	5°≈25'55		direct	-283 Nov 08 j 13:31	23°≈15'20	
conjunction	-290 Jan 31 j 13:42	7°≈53'37	0°-41'-38	conjunction	-282 Feb 18 j 09:35	25°≈43'21	-1°-12'-16
minimum elong	-290 Jan 31 j 13:42	7°≈53'37	0°41'39	minimum elong	-282 Feb 18 j 09:35	25°≈43'21	1°12'17
max. Earth dist.	-290 Feb 01 j 09:25	7°≈55'29	30.96809 AU	max. Earth dist.	-282 Feb 19 j 09:48	25°≈45'39	30.89655 AU
retrograde	-290 May 18 j 04:47	10°≈27'14		retrograde	-282 Jun 05 j 15:55	28°≈17'49	
min. Earth dist.	-290 Aug 06 j 06:01	9°≈03'46	28.96290 AU	min. Earth dist.	-282 Aug 24 j 06:23	26°≈54'17	28.89488 AU
opposition	-290 Aug 07 j 01:22	9°≈02'26	0°-46'-45	opposition	-282 Aug 25 j 05:58	26°≈52'39	-1°-19'-8
direct	-290 Oct 24 j 07:09	7°≈39'29		direct	-282 Nov 11 j 01:27	25°≈29'35	
conjunction	-289 Feb 03 j 01:03	10°≈07'12	0°-45'-44	conjunction	-281 Feb 20 j 21:37	27°≈57'41	-1°-15'-40
minimum elong	-289 Feb 03 j 01:03	10°≈07'12	0°45'46	minimum elong	-281 Feb 20 j 21:37	27°≈57'41	1°15'42
max. Earth dist.	-289 Feb 03 j 21:53	10°≈09'10	30.95682 AU	max. Earth dist.	-281 Feb 21 j 21:29	27°≈59'56	30.89173 AU
retrograde	-289 May 20 j 17:07	12°≈40'55		retrograde	-281 Apr 24 j 02:32	0°✕	
opposition	-289 Aug 09 j 14:05	11°≈16'02	0°-51'-6	retrograde	-281 Jun 08 j 05:14	0°✕32'16	
min. Earth dist.	-289 Aug 08 j 17:35	11°≈17'27	28.95138 AU		-281 Jul 24 j 10:40	30°R≈	
direct	-289 Oct 26 j 18:33	9°≈53'03		opposition	-281 Aug 27 j 18:34	29°≈07'05	-1°-22'-43
conjunction	-288 Feb 05 j 12:13	12°≈20'46	0°-49'-47	min. Earth dist.	-281 Aug 26 j 19:58	29°≈08'39	28.89017 AU
minimum elong	-288 Feb 05 j 12:13	12°≈20'46	0°49'48	direct	-281 Nov 13 j 12:07	27°≈44'03	
max. Earth dist.	-288 Feb 06 j 08:33	12°≈22'41	30.94523 AU		-280 Feb 18 j 00:40	0°✕	
retrograde	-288 May 22 j 06:08	14°≈54'35		conjunction	-280 Feb 23 j 09:52	0°✕12'13	-1°-18'-58
min. Earth dist.	-288 Aug 10 j 06:36	13°≈31'01	28.94008 AU	minimum elong	-280 Feb 23 j 09:52	0°✕12'13	1°18'59
opposition	-288 Aug 11 j 02:49	13°≈29'37	0°-55'-23	max. Earth dist.	-280 Feb 24 j 10:34	0°✕14'33	30.88682 AU
direct	-288 Oct 28 j 04:34	12°≈06'35		retrograde	-280 Jun 09 j 18:46	2°✕46'53	
conjunction	-287 Feb 06 j 23:38	14°≈34'19	0°-53'-44	min. Earth dist.	-280 Aug 28 j 07:36	1°✕23'20	28.88499 AU
minimum elong	-287 Feb 06 j 23:38	14°≈34'19	0°53'46	opposition	-280 Aug 29 j 06:59	1°✕21'43	-1°-26'-11
max. Earth dist.	-287 Feb 07 j 21:36	14°≈36'24	30.93417 AU		-280 Nov 06 j 04:20	30°R≈	
retrograde	-287 Feb 18 j 07:40	15°≈		direct	-280 Nov 15 j 00:03	29°≈58'40	
retrograde	-287 May 24 j 18:24	17°≈08'14			-280 Nov 23 j 15:44	0°✕	
opposition	-287 Aug 13 j 15:26	15°≈43'12	0°-59'-35	conjunction	-279 Feb 24 j 22:12	2°✕26'54	-1°-22'-9
min. Earth dist.	-287 Aug 12 j 18:20	15°≈44'39	28.92950 AU	minimum elong	-279 Feb 24 j 22:12	2°✕26'54	1°22'10
direct	-287 Sep 10 j 00:05	15°R≈		max. Earth dist.	-279 Feb 25 j 21:49	2°✕29'08	30.88123 AU
	-287 Oct 30 j 16:30	14°≈20'08		retrograde	-279 Jun 12 j 07:29	5°✕01'40	
	-287 Dec 18 j 09:42	15°≈		opposition	-279 Aug 31 j 19:37	3°✕36'28	-1°-29'-31
conjunction	-286 Feb 09 j 10:54	16°≈47'54	0°-57'-37	min. Earth dist.	-279 Aug 30 j 21:08	3°✕38'02	28.87907 AU
minimum elong	-286 Feb 09 j 10:54	16°≈47'54	0°57'38	direct	-279 Nov 17 j 10:14	2°✕13'24	
max. Earth dist.	-286 Feb 10 j 08:25	16°≈49'56	30.92415 AU	conjunction	-278 Feb 27 j 10:48	4°✕41'41	-1°-25'-12
retrograde	-286 May 27 j 08:50	19°≈21'55		minimum elong	-278 Feb 27 j 10:48	4°✕41'41	1°25'13
min. Earth dist.	-286 Aug 15 j 06:23	17°≈58'19	28.92019 AU	max. Earth dist.	-278 Feb 28 j 11:17	4°✕43'59	30.87473 AU
opposition	-286 Aug 16 j 04:04	17°≈56'49	-1°-3'-41	retrograde	-278 Jun 14 j 19:17	7°✕16'29	
direct	-286 Nov 02 j 02:25	16°≈33'43		min. Earth dist.	-278 Sep 02 j 09:28	5°✕52'49	28.87202 AU
conjunction	-285 Feb 11 j 22:32	19°≈01'33	-1°-1'-25	opposition	-278 Sep 03 j 08:05	5°✕51'15	-1°-32'-43
minimum elong	-285 Feb 11 j 22:31	19°≈01'33	1°01'27	direct	-278 Nov 19 j 22:11	4°✕28'08	
max. Earth dist.	-285 Feb 12 j 21:27	19°≈03'43	30.91534 AU	conjunction	-277 Mar 01 j 23:23	6°✕56'27	-1°-28'-8
retrograde	-285 May 29 j 21:13	21°≈35'40		minimum elong	-277 Mar 01 j 23:23	6°✕56'27	1°28'09
opposition	-285 Aug 18 j 16:28	20°≈10'32	-1°-7'-42	max. Earth dist.	-277 Mar 02 j 22:31	6°✕58'38	30.86727 AU
min. Earth dist.	-285 Aug 17 j 18:40	20°≈12'03	28.91209 AU	retrograde	-277 Jun 17 j 09:29	9°✕31'17	
direct	-285 Nov 04 j 13:44	18°≈47'26		opposition	-277 Sep 05 j 20:23	8°✕05'59	-1°-35'-47
conjunction	-284 Feb 14 j 10:05	21°≈15'19	-1°-5'-8	min. Earth dist.	-277 Sep 04 j 22:01	8°✕07'33	28.86430 AU
minimum elong	-284 Feb 14 j 10:05	21°≈15'19	1°05'08	direct	-277 Nov 22 j 08:10	6°✕42'48	
max. Earth dist.	-284 Feb 15 j 09:00	21°≈17'29	30.90797 AU	conjunction	-276 Mar 03 j 12:04	9°✕11'10	-1°-30'-56
retrograde	-284 May 31 j 12:50	23°≈49'33		minimum elong	-276 Mar 03 j 12:04	9°✕11'10	1°30'56
min. Earth dist.	-284 Aug 19 j 06:02	22°≈25'58	28.90541 AU	max. Earth dist.	-276 Mar 04 j 12:01	9°✕13'25	30.85925 AU
opposition	-284 Aug 20 j 04:57	22°≈24'23	-1°-11'-37	retrograde	-276 Jun 18 j 21:29	11°✕46'01	
direct	-284 Nov 06 j 02:00	21°≈01'17		min. Earth dist.	-276 Sep 06 j 10:43	10°✕22'11	28.85626 AU
conjunction	-283 Feb 15 j 21:40	23°≈29'14	-1°-8'-45	opposition	-276 Sep 07 j 08:42	10°✕20'39	-1°-38'-42
minimum elong	-283 Feb 15 j 21:40	23°≈29'14	1°08'46	direct	-276 Nov 23 j 20:09	8°✕57'24	
max. Earth dist.	-283 Feb 16 j 21:24	23°≈31'29	30.90173 AU	conjunction	-275 Mar 06 j 00:34	11°✕25'47	-1°-33'-35
retrograde	-283 Jun 03 j 02:04	26°≈03'35		minimum elong	-275 Mar 06 j 00:33	11°✕25'47	1°33'36
opposition	-283 Aug 22 j 17:36	24°≈38'25	-1°-15'-26	max. Earth dist.	-275 Mar 06 j 23:59	11°✕28'00	30.85141 AU
min. Earth dist.	-283 Aug 21 j 19:13	24°≈39'58	28.89975 AU	retrograde	-275 Jun 21 j 12:25	14°✕00'39	

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Attention, astronomical year style is used: The year -275 in astronomical counting style is the year 276 BCE in historical counting style.

opposition	-275 Sep 09 j 20:55	12° $\mathring{K}$ 35'13	-1°-41'-28			-267 Oct 18 j 18:40	30° $\mathring{R}$ $\mathring{K}$	
min. Earth dist.	-275 Sep 08 j 22:20	12° $\mathring{K}$ 36'48	28.84873 AU	direct		-267 Dec 14 j 02:38	29° $\mathring{K}$ 10'52	
direct	-275 Nov 26 j 08:25	11° $\mathring{K}$ 11'54				-266 Feb 06 j 14:21	0° $\mathring{Y}$	
conjunction	-274 Mar 08 j 13:19	13° $\mathring{K}$ 40'20	-1°-36'-6	conjunction		-266 Mar 26 j 22:48	1° $\mathring{Y}$ 40'02	-1°-50'-41
minimum elong	-274 Mar 08 j 13:19	13° $\mathring{K}$ 40'20	1°36'07	minimum elong		-266 Mar 26 j 22:48	1° $\mathring{Y}$ 40'02	1°50'41
max. Earth dist.	-274 Mar 09 j 13:11	13° $\mathring{K}$ 42'35	30.84410 AU	max. Earth dist.		-266 Mar 27 j 20:50	1° $\mathring{Y}$ 42'07	30.82051 AU
retrograde	-274 Jun 24 j 00:50	16° $\mathring{K}$ 15'13		retrograde		-266 Jul 12 j 12:45	4° $\mathring{Y}$ 15'10	
min. Earth dist.	-274 Sep 11 j 11:19	14° $\mathring{K}$ 51'16	28.84201 AU	opposition		-266 Sep 30 j 08:34	2° $\mathring{Y}$ 49'50	-1°-58'-58
opposition	-274 Sep 12 j 09:01	14° $\mathring{K}$ 49'45	-1°-44'-4	min. Earth dist.		-266 Sep 29 j 12:03	2° $\mathring{Y}$ 51'17	28.82032 AU
direct	-274 Nov 28 j 19:56	13° $\mathring{K}$ 26'22		direct		-266 Dec 16 j 14:40	1° $\mathring{Y}$ 26'21	
conjunction	-273 Mar 11 j 02:11	15° $\mathring{K}$ 54'52	-1°-38'-28	conjunction		-265 Mar 29 j 12:38	3° $\mathring{Y}$ 55'37	-1°-51'-46
minimum elong	-273 Mar 11 j 02:11	15° $\mathring{K}$ 54'52	1°38'29	minimum elong		-265 Mar 29 j 12:38	3° $\mathring{Y}$ 55'37	1°51'47
max. Earth dist.	-273 Mar 12 j 02:10	15° $\mathring{K}$ 57'08	30.83797 AU	max. Earth dist.		-265 Mar 30 j 10:23	3° $\mathring{Y}$ 57'40	30.81713 AU
retrograde	-273 Jun 26 j 15:25	18° $\mathring{K}$ 29'46		retrograde		-265 Jul 15 j 00:56	6° $\mathring{Y}$ 30'43	
opposition	-273 Sep 14 j 21:02	17° $\mathring{K}$ 04'16	-1°-46'-32	opposition		-265 Oct 02 j 20:29	5° $\mathring{Y}$ 05'22	-2°00'-2
min. Earth dist.	-273 Sep 13 j 22:15	17° $\mathring{K}$ 05'52	28.83650 AU	min. Earth dist.		-265 Oct 02 j 01:28	5° $\mathring{Y}$ 06'42	28.81652 AU
direct	-273 Dec 01 j 08:27	15° $\mathring{K}$ 40'51		direct		-265 Dec 19 j 01:56	3° $\mathring{Y}$ 41'50	
conjunction	-272 Mar 12 j 14:53	18° $\mathring{K}$ 09'25	-1°-40'-41	conjunction		-264 Mar 31 j 02:17	6° $\mathring{Y}$ 11'09	-1°-52'-41
minimum elong	-272 Mar 12 j 14:53	18° $\mathring{K}$ 09'25	1°40'42	minimum elong		-264 Mar 31 j 02:17	6° $\mathring{Y}$ 11'09	1°52'42
max. Earth dist.	-272 Mar 13 j 14:32	18° $\mathring{K}$ 11'39	30.83298 AU	max. Earth dist.		-264 Mar 31 j 23:25	6° $\mathring{Y}$ 13'08	30.81311 AU
retrograde	-272 Jun 28 j 05:02	20° $\mathring{K}$ 44'22		retrograde		-264 Jul 16 j 15:38	8° $\mathring{Y}$ 46'11	
min. Earth dist.	-272 Sep 15 j 11:14	19° $\mathring{K}$ 20'23	28.83230 AU	opposition		-264 Oct 04 j 08:10	7° $\mathring{Y}$ 20'49	-2°00'-56
opposition	-272 Sep 16 j 09:09	19° $\mathring{K}$ 18'51	-1°-48'-49	min. Earth dist.		-264 Oct 03 j 12:42	7° $\mathring{Y}$ 22'11	28.81227 AU
direct	-272 Dec 02 j 19:36	17° $\mathring{K}$ 55'26		direct		-264 Dec 20 j 15:16	5° $\mathring{Y}$ 57'12	
conjunction	-271 Mar 15 j 03:55	20° $\mathring{K}$ 24'04	-1°-42'-45	conjunction		-263 Apr 02 j 16:02	8° $\mathring{Y}$ 26'34	-1°-53'-26
minimum elong	-271 Mar 15 j 03:55	20° $\mathring{K}$ 24'04	1°42'47	minimum elong		-263 Apr 02 j 16:02	8° $\mathring{Y}$ 26'34	1°53'27
max. Earth dist.	-271 Mar 16 j 04:25	20° $\mathring{K}$ 26'23	30.82949 AU	max. Earth dist.		-263 Apr 03 j 12:18	8° $\mathring{Y}$ 28'28	30.80877 AU
retrograde	-271 Jun 30 j 18:53	22° $\mathring{K}$ 59'03		retrograde		-263 Jul 19 j 05:13	11° $\mathring{Y}$ 01'32	
opposition	-271 Sep 18 j 21:03	21° $\mathring{K}$ 33'33	-1°-50'-57	opposition		-263 Oct 06 j 19:49	9° $\mathring{Y}$ 36'07	-2°-1'-38
min. Earth dist.	-271 Sep 17 j 22:14	21° $\mathring{K}$ 35'09	28.82941 AU	min. Earth dist.		-263 Oct 06 j 01:48	9° $\mathring{Y}$ 37'23	28.80812 AU
direct	-271 Dec 05 j 07:55	20° $\mathring{K}$ 10'08		direct		-263 Dec 23 j 03:31	8° $\mathring{Y}$ 12'25	
conjunction	-270 Mar 17 j 16:54	22° $\mathring{K}$ 38'52	-1°-44'-40	conjunction		-262 Apr 05 j 05:55	10° $\mathring{Y}$ 41'51	-1°-54'00
minimum elong	-270 Mar 17 j 16:54	22° $\mathring{K}$ 38'52	1°44'41	minimum elong		-262 Apr 05 j 05:55	10° $\mathring{Y}$ 41'51	1°54'01
max. Earth dist.	-270 Mar 18 j 16:27	22° $\mathring{K}$ 41'05	30.82713 AU	max. Earth dist.		-262 Apr 06 j 02:25	10° $\mathring{Y}$ 43'46	30.80490 AU
retrograde	-270 Jul 03 j 07:40	25° $\mathring{K}$ 13'54		retrograde		-262 Jul 21 j 18:38	13° $\mathring{Y}$ 16'44	
min. Earth dist.	-270 Sep 20 j 11:10	23° $\mathring{K}$ 49'59	28.82759 AU	opposition		-262 Oct 09 j 07:15	11° $\mathring{Y}$ 51'17	-2°-2'-9
opposition	-270 Sep 21 j 09:05	23° $\mathring{K}$ 48'26	-1°-52'-54	min. Earth dist.		-262 Oct 08 j 12:43	11° $\mathring{Y}$ 52'36	28.80453 AU
direct	-270 Dec 07 j 17:59	22° $\mathring{K}$ 25'01		direct		-262 Dec 25 j 17:11	10° $\mathring{Y}$ 27'31	
conjunction	-269 Mar 20 j 06:14	24° $\mathring{K}$ 53'52	-1°-46'-25	conjunction		-261 Apr 07 j 19:39	12° $\mathring{Y}$ 56'59	-1°-54'-24
minimum elong	-269 Mar 20 j 06:14	24° $\mathring{K}$ 53'52	1°46'26	minimum elong		-261 Apr 07 j 19:39	12° $\mathring{Y}$ 56'59	1°54'24
max. Earth dist.	-269 Mar 21 j 06:43	24° $\mathring{K}$ 56'11	30.82560 AU	max. Earth dist.		-261 Apr 08 j 14:54	12° $\mathring{Y}$ 58'48	30.80174 AU
retrograde	-269 Jul 05 j 19:51	27° $\mathring{K}$ 28'56		retrograde		-261 Jul 24 j 07:24	15° $\mathring{Y}$ 31'48	
opposition	-269 Sep 23 j 20:51	26° $\mathring{K}$ 03'31	-1°-54'-41	opposition		-261 Oct 11 j 18:41	14° $\mathring{Y}$ 06'20	-2°-2'-29
min. Earth dist.	-269 Sep 22 j 22:53	26° $\mathring{K}$ 05'04	28.82624 AU	min. Earth dist.		-261 Oct 11 j 01:13	14° $\mathring{Y}$ 07'34	28.80206 AU
direct	-269 Dec 10 j 05:26	24° $\mathring{K}$ 40'07		direct		-261 Dec 28 j 03:53	12° $\mathring{Y}$ 42'29	
conjunction	-268 Mar 21 j 19:34	27° $\mathring{K}$ 09'05	-1°-48'00	conjunction		-260 Apr 09 j 09:33	15° $\mathring{Y}$ 12'01	-1°-54'-37
minimum elong	-268 Mar 21 j 19:33	27° $\mathring{K}$ 09'05	1°48'01	minimum elong		-260 Apr 09 j 09:33	15° $\mathring{Y}$ 12'01	1°54'38
max. Earth dist.	-268 Mar 22 j 18:34	27° $\mathring{K}$ 11'15	30.82437 AU	max. Earth dist.		-260 Apr 10 j 05:37	15° $\mathring{Y}$ 13'54	30.79992 AU
retrograde	-268 Jul 07 j 10:22	29° $\mathring{K}$ 44'12		retrograde		-260 Jul 25 j 20:12	17° $\mathring{Y}$ 46'45	
min. Earth dist.	-268 Sep 24 j 11:20	28° $\mathring{K}$ 20'20	28.82502 AU	opposition		-260 Oct 13 j 06:01	16° $\mathring{Y}$ 21'17	-2°-2'-38
opposition	-268 Sep 25 j 08:49	28° $\mathring{K}$ 18'49	-1°-56'-17	min. Earth dist.		-260 Oct 12 j 12:23	16° $\mathring{Y}$ 22'32	28.80092 AU
direct	-268 Dec 11 j 14:51	26° $\mathring{K}$ 55'25		direct		-260 Dec 29 j 16:27	14° $\mathring{Y}$ 57'24	
conjunction	-267 Mar 24 j 09:04	29° $\mathring{K}$ 24'30	-1°-49'-26	conjunction		-259 Apr 11 j 23:14	17° $\mathring{Y}$ 26'59	-1°-54'-40
minimum elong	-267 Mar 24 j 09:04	29° $\mathring{K}$ 24'30	1°49'26	minimum elong		-259 Apr 11 j 23:14	17° $\mathring{Y}$ 26'59	1°54'41
max. Earth dist.	-267 Mar 25 j 08:32	29° $\mathring{K}$ 26'42	30.82281 AU	max. Earth dist.		-259 Apr 12 j 17:54	17° $\mathring{Y}$ 28'44	30.79962 AU
retrograde	-267 Apr 09 j 05:07	0° $\mathring{Y}$		retrograde		-259 Jul 28 j 09:27	20° $\mathring{Y}$ 01'39	
retrograde	-267 Jul 09 j 22:10	1° $\mathring{Y}$ 59'38		opposition		-259 Oct 15 j 17:24	18° $\mathring{Y}$ 36'13	-2°-2'-35
opposition	-267 Sep 27 j 20:47	0° $\mathring{Y}$ 34'17	-1°-57'-43	min. Earth dist.		-259 Oct 15 j 00:07	18° $\mathring{Y}$ 37'26	28.80142 AU
min. Earth dist.	-267 Sep 27 j 00:09	0° $\mathring{Y}$ 35'45	28.82310 AU	direct		-258 Jan 01 j 02:42	17° $\mathring{Y}$ 12'16	

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Attention, astronomical year style is used: The year -258 in astronomical counting style is the year 259 BCE in historical counting style.

conjunction	-258 Apr 14 j 13:19	19° $\Upsilon$ 41'57	-1°-54'-33	conjunction	-250 May 03 j 07:37	7° $\text{C}$ 43'54	-1°-47'-15
minimum elong	-258 Apr 14 j 13:19	19° $\Upsilon$ 41'57	1°54'33	minimum elong	-250 May 03 j 07:37	7° $\text{C}$ 43'54	1°47'16
max. Earth dist.	-258 Apr 15 j 08:35	19° $\Upsilon$ 43'45	30.80080 AU	max. Earth dist.	-250 May 03 j 19:14	7° $\text{C}$ 44'59	30.82115 AU
retrograde	-258 Jul 30 j 20:17	22° $\Upsilon$ 16'33		retrograde	-250 Aug 18 j 05:42	10° $\text{C}$ 17'46	
min. Earth dist.	-258 Oct 17 j 11:57	20° $\Upsilon$ 52'20	28.80326 AU	opposition	-250 Nov 04 j 21:38	8° $\text{C}$ 52'45	-1°-53'-49
opposition	-258 Oct 18 j 04:36	20° $\Upsilon$ 51'09	-2°-2'-21	min. Earth dist.	-250 Nov 04 j 11:01	8° $\text{C}$ 53'30	28.82310 AU
direct	-257 Jan 03 j 14:23	19° $\Upsilon$ 27'12		direct	-249 Jan 21 j 14:01	7° $\text{C}$ 28'28	
conjunction	-257 Apr 17 j 03:19	21° $\Upsilon$ 56'58	-1°-54'-14	conjunction	-249 May 05 j 22:04	9° $\text{C}$ 58'56	-1°-45'-36
minimum elong	-257 Apr 17 j 03:19	21° $\Upsilon$ 56'58	1°54'15	minimum elong	-249 May 05 j 22:04	9° $\text{C}$ 58'56	1°45'36
max. Earth dist.	-257 Apr 17 j 21:18	21° $\Upsilon$ 58'39	30.80340 AU	max. Earth dist.	-249 May 06 j 10:01	10° $\text{C}$ 00'03	30.82301 AU
retrograde	-257 Aug 02 j 10:00	24° $\Upsilon$ 31'30		retrograde	-249 Aug 20 j 16:20	12° $\text{C}$ 32'39	
opposition	-257 Oct 20 j 15:50	23° $\Upsilon$ 06'11	-2°-1'-55	opposition	-249 Nov 07 j 08:31	11° $\text{C}$ 07'41	-1°-51'-58
min. Earth dist.	-257 Oct 19 j 23:07	23° $\Upsilon$ 07'22	28.80635 AU	min. Earth dist.	-249 Nov 06 j 22:43	11° $\text{C}$ 08'22	28.82531 AU
direct	-256 Jan 06 j 01:18	21° $\Upsilon$ 42'12		direct	-248 Jan 24 j 02:14	9° $\text{C}$ 43'20	
conjunction	-256 Apr 18 j 17:19	24° $\Upsilon$ 12'05	-1°-53'-45	conjunction	-248 May 07 j 12:09	12° $\text{C}$ 13'52	-1°-43'-47
minimum elong	-256 Apr 18 j 17:19	24° $\Upsilon$ 12'05	1°53'47	minimum elong	-248 May 07 j 12:10	12° $\text{C}$ 13'52	1°43'48
max. Earth dist.	-256 Apr 19 j 11:23	24° $\Upsilon$ 13'46	30.80679 AU	max. Earth dist.	-248 May 07 j 22:33	12° $\text{C}$ 14'50	30.82588 AU
retrograde	-256 Aug 03 j 21:50	26° $\Upsilon$ 46'35		retrograde	-248 Aug 22 j 05:24	14° $\text{C}$ 47'27	
min. Earth dist.	-256 Oct 21 j 11:57	25° $\Upsilon$ 22'24	28.80997 AU	opposition	-248 Nov 08 j 19:18	13° $\text{C}$ 22'30	-1°-49'-56
opposition	-256 Oct 22 j 03:11	25° $\Upsilon$ 21'19	-2°-1'-19	min. Earth dist.	-248 Nov 08 j 09:27	13° $\text{C}$ 23'12	28.82880 AU
direct	-255 Jan 07 j 11:45	23° $\Upsilon$ 57'20		direct	-247 Jan 25 j 13:09	11° $\text{C}$ 58'06	
conjunction	-255 Apr 21 j 07:35	26° $\Upsilon$ 27'20	-1°-53'-6	conjunction	-247 May 10 j 02:32	14° $\text{C}$ 28'42	-1°-41'-48
minimum elong	-255 Apr 21 j 07:36	26° $\Upsilon$ 27'20	1°53'07	minimum elong	-247 May 10 j 02:33	14° $\text{C}$ 28'42	1°41'49
max. Earth dist.	-255 Apr 22 j 00:41	26° $\Upsilon$ 28'56	30.81059 AU	max. Earth dist.	-247 May 10 j 13:03	14° $\text{C}$ 29'40	30.83000 AU
retrograde	-255 Aug 06 j 11:59	29° $\Upsilon$ 01'45		retrograde	-247 May 24 j 03:52	15° $\text{C}$	
opposition	-255 Oct 24 j 14:15	27° $\Upsilon$ 36'34	-2°00'-31	retrograde	-247 Aug 24 j 16:04	17° $\text{C}$ 02'09	
min. Earth dist.	-255 Oct 23 j 22:56	27° $\Upsilon$ 37'40	28.81362 AU	opposition	-247 Nov 11 j 06:02	15° $\text{C}$ 37'15	-1°-47'-44
direct	-254 Jan 10 j 00:40	26° $\Upsilon$ 12'34		min. Earth dist.	-247 Nov 10 j 21:35	15° $\text{C}$ 37'51	28.83363 AU
conjunction	-254 Apr 23 j 21:59	28° $\Upsilon$ 42'41	-1°-52'-16	direct	-247 Dec 03 j 20:16	15° $\text{R}$ $\text{C}$	
minimum elong	-254 Apr 23 j 21:59	28° $\Upsilon$ 42'41	1°52'17	direct	-246 Jan 27 j 23:07	14° $\text{C}$ 12'48	
max. Earth dist.	-254 Apr 24 j 13:51	28° $\Upsilon$ 44'10	30.81391 AU	direct	-246 Mar 22 j 22:54	15° $\text{C}$	
retrograde	-254 May 29 j 21:17	0° $\text{C}$		conjunction	-246 May 12 j 16:54	16° $\text{C}$ 43'29	-1°-39'-40
retrograde	-254 Aug 09 j 01:00	1° $\text{C}$ 17'02		minimum elong	-246 May 12 j 16:55	16° $\text{C}$ 43'29	1°39'42
retrograde	-254 Oct 22 j 07:12	30° $\text{R}$ $\Upsilon$		max. Earth dist.	-246 May 13 j 02:25	16° $\text{C}$ 44'22	30.83572 AU
opposition	-254 Oct 27 j 01:36	29° $\Upsilon$ 51'54	-1°-59'-32	retrograde	-246 Aug 27 j 04:30	19° $\text{C}$ 16'48	
min. Earth dist.	-254 Oct 26 j 12:08	29° $\Upsilon$ 52'51	28.81661 AU	opposition	-246 Nov 13 j 16:42	17° $\text{C}$ 51'59	-1°-45'-22
direct	-253 Jan 12 j 12:36	28° $\Upsilon$ 27'52		min. Earth dist.	-246 Nov 13 j 07:50	17° $\text{C}$ 52'37	28.84001 AU
direct	-253 Mar 31 j 00:23	0° $\text{C}$		direct	-245 Jan 30 j 12:12	16° $\text{C}$ 27'30	
conjunction	-253 Apr 26 j 12:28	0° $\text{C}$ 58'05	-1°-51'-16	conjunction	-245 May 15 j 07:09	18° $\text{C}$ 58'16	-1°-37'-23
minimum elong	-253 Apr 26 j 12:28	0° $\text{C}$ 58'05	1°51'16	minimum elong	-245 May 15 j 07:10	18° $\text{C}$ 58'16	1°37'24
max. Earth dist.	-253 Apr 27 j 03:46	0° $\text{C}$ 59'30	30.81653 AU	max. Earth dist.	-245 May 15 j 16:00	18° $\text{C}$ 59'06	30.84277 AU
retrograde	-253 Aug 11 j 14:33	3° $\text{C}$ 32'20		retrograde	-245 Aug 29 j 16:03	21° $\text{C}$ 31'28	
opposition	-253 Oct 29 j 12:40	2° $\text{C}$ 07'14	-1°-58'-22	opposition	-245 Nov 16 j 03:28	20° $\text{C}$ 06'44	-1°-42'-51
min. Earth dist.	-253 Oct 28 j 23:11	2° $\text{C}$ 08'12	28.81871 AU	min. Earth dist.	-245 Nov 15 j 20:07	20° $\text{C}$ 07'15	28.84772 AU
direct	-252 Jan 15 j 02:18	0° $\text{C}$ 43'10		direct	-244 Feb 01 j 23:23	18° $\text{C}$ 42'15	
conjunction	-252 Apr 28 j 02:48	3° $\text{C}$ 13'27	-1°-50'-5	conjunction	-244 May 16 j 21:33	21° $\text{C}$ 13'07	-1°-34'-57
minimum elong	-252 Apr 28 j 02:48	3° $\text{C}$ 13'27	1°50'07	minimum elong	-244 May 16 j 21:33	21° $\text{C}$ 13'07	1°34'59
max. Earth dist.	-252 Apr 28 j 16:16	3° $\text{C}$ 14'42	30.81833 AU	max. Earth dist.	-244 May 17 j 06:01	21° $\text{C}$ 13'54	30.85117 AU
retrograde	-252 Aug 13 j 03:53	5° $\text{C}$ 47'35		retrograde	-244 Aug 31 j 05:13	23° $\text{C}$ 46'11	
opposition	-252 Oct 30 j 23:50	4° $\text{C}$ 22'31	-1°-57'-2	opposition	-244 Nov 17 j 14:01	22° $\text{C}$ 21'34	-1°-40'-9
min. Earth dist.	-252 Oct 30 j 11:56	4° $\text{C}$ 23'22	28.82029 AU	min. Earth dist.	-244 Nov 17 j 06:32	22° $\text{C}$ 22'06	28.85637 AU
direct	-251 Jan 16 j 13:28	2° $\text{C}$ 58'23		direct	-243 Feb 03 j 12:19	20° $\text{C}$ 57'04	
conjunction	-251 Apr 30 j 17:15	5° $\text{C}$ 28'44	-1°-48'-45	conjunction	-243 May 19 j 11:55	23° $\text{C}$ 28'02	-1°-32'-22
minimum elong	-251 Apr 30 j 17:15	5° $\text{C}$ 28'44	1°48'46	minimum elong	-243 May 19 j 11:56	23° $\text{C}$ 28'03	1°32'22
max. Earth dist.	-251 May 01 j 06:53	5° $\text{C}$ 30'00	30.81977 AU	max. Earth dist.	-243 May 19 j 18:45	23° $\text{C}$ 28'41	30.86006 AU
retrograde	-251 Aug 15 j 17:08	8° $\text{C}$ 02'44		retrograde	-243 Sep 02 j 18:32	26° $\text{C}$ 01'00	
opposition	-251 Nov 02 j 10:48	6° $\text{C}$ 37'42	-1°-55'-31	opposition	-243 Nov 20 j 00:46	24° $\text{C}$ 36'28	-1°-37'-19
min. Earth dist.	-251 Nov 01 j 23:20	6° $\text{C}$ 38'31	28.82151 AU	min. Earth dist.	-243 Nov 19 j 18:57	24° $\text{C}$ 36'53	28.86531 AU
direct	-250 Jan 19 j 02:58	5° $\text{C}$ 13'29		direct	-242 Feb 05 j 23:40	23° $\text{C}$ 11'58	

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Attention, astronomical year style is used: The year -242 in astronomical counting style is the year 243 BCE in historical counting style.

conjunction	-242 May 22 j 02:35	25°♃43'02	-1°-29'-38	direct	-234 Feb 24 j 01:55	11°♁07'35		
minimum elong	-242 May 22 j 02:35	25°♃43'02	1°29'39					
max. Earth dist.	-242 May 22 j 09:15	25°♃43'40	30.86884 AU	conjunction	-234 Jun 09 j 21:17	13°♁39'00	-1°-3'-26	
retrograde	-242 Sep 05 j 07:44	28°♃15'51		minimum elong	-234 Jun 09 j 21:17	13°♁39'00	1°03'27	
opposition	-242 Nov 22 j 11:23	26°♃51'25	-1°-34'-20	max. Earth dist.	-234 Jun 09 j 18:44	13°♁38'46	30.92144 AU	
min. Earth dist.	-242 Nov 22 j 06:16	26°♃51'46	28.87367 AU	retrograde	-234 Sep 23 j 04:38	16°♁10'22		
direct	-241 Feb 08 j 13:49	25°♃26'54		opposition	-234 Dec 09 j 23:28	14°♁46'21	-1°-5'-50	
				min. Earth dist.	-234 Dec 10 j 01:35	14°♁46'12	28.92617 AU	
conjunction	-241 May 24 j 17:05	27°♃58'03	-1°-26'-47	direct	-233 Feb 26 j 13:23	13°♁21'23		
minimum elong	-241 May 24 j 17:05	27°♃58'03	1°26'47					
max. Earth dist.	-241 May 24 j 21:24	27°♃58'27	30.87688 AU	conjunction	-233 Jun 12 j 11:25	15°♁52'53	0°-59'-41	
	-241 Jul 26 j 12:41	0°♁		minimum elong	-233 Jun 12 j 11:25	15°♁52'53	0°59'42	
retrograde	-241 Sep 07 j 20:27	0°♁30'42		max. Earth dist.	-233 Jun 12 j 09:06	15°♁52'40	30.93044 AU	
	-241 Oct 21 j 17:44	30°♃		retrograde	-233 Sep 25 j 16:48	18°♁24'05		
opposition	-241 Nov 24 j 22:09	29°♃06'20	-1°-31'-12	opposition	-233 Dec 12 j 09:49	17°♁00'10	-1°-1'-46	
min. Earth dist.	-241 Nov 24 j 18:07	29°♃06'37	28.88129 AU	min. Earth dist.	-233 Dec 12 j 12:09	17°♁00'00	28.93568 AU	
direct	-240 Feb 11 j 01:26	27°♃41'47		direct	-232 Feb 29 j 03:17	15°♁35'12		
	-240 May 20 j 12:10	0°♁						
conjunction	-240 May 26 j 07:34	0°♁12'59	-1°-23'-47	conjunction	-232 Jun 14 j 01:15	18°♁06'45	0°-55'-51	
minimum elong	-240 May 26 j 07:34	0°♁12'59	1°23'48	minimum elong	-232 Jun 14 j 01:15	18°♁06'45	0°55'52	
max. Earth dist.	-240 May 26 j 11:45	0°♁13'22	30.88400 AU	max. Earth dist.	-232 Jun 13 j 21:11	18°♁06'23	30.94062 AU	
retrograde	-240 Sep 09 j 07:57	2°♁45'28		retrograde	-232 Sep 27 j 05:13	20°♁37'50		
opposition	-240 Nov 26 j 08:53	1°♁21'09	-1°-27'-56	opposition	-232 Dec 13 j 20:10	19°♁14'01	0°-57'-37	
min. Earth dist.	-240 Nov 26 j 06:09	1°♁21'21	28.88782 AU	min. Earth dist.	-232 Dec 13 j 23:14	19°♁13'48	28.94631 AU	
	-239 Jan 29 j 05:47	30°♃		direct	-231 Mar 02 j 14:34	17°♁49'03		
direct	-239 Feb 12 j 14:19	29°♃56'33		conjunction	-231 Jun 16 j 15:26	20°♁20'43	0°-51'-55	
	-239 Feb 26 j 19:13	0°♁		minimum elong	-231 Jun 16 j 15:26	20°♁20'43	0°51'56	
				max. Earth dist.	-231 Jun 16 j 11:36	20°♁20'21	30.95155 AU	
conjunction	-239 May 28 j 22:02	2°♁27'47	-1°-20'-40	retrograde	-231 Sep 29 j 16:58	22°♁51'38		
minimum elong	-239 May 28 j 22:02	2°♁27'47	1°20'41	opposition	-231 Dec 16 j 06:27	21°♁27'57	0°-53'-23	
max. Earth dist.	-239 May 28 j 23:56	2°♁27'58	30.89028 AU	min. Earth dist.	-231 Dec 16 j 10:44	21°♁27'39	28.95727 AU	
retrograde	-239 Sep 11 j 21:08	5°♁00'04		direct	-230 Mar 05 j 03:24	20°♁03'01		
opposition	-239 Nov 28 j 19:21	3°♁35'48	-1°-24'-32					
min. Earth dist.	-239 Nov 28 j 17:06	3°♁35'58	28.89372 AU	conjunction	-230 Jun 19 j 05:28	22°♁34'45	0°-47'-55	
direct	-238 Feb 15 j 02:03	2°♁11'08		minimum elong	-230 Jun 19 j 05:28	22°♁34'45	0°47'56	
				max. Earth dist.	-230 Jun 18 j 23:29	22°♁34'12	30.96256 AU	
conjunction	-238 May 31 j 12:35	4°♁42'24	-1°-17'-26	retrograde	-230 Oct 02 j 06:32	25°♁05'32		
minimum elong	-238 May 31 j 12:35	4°♁42'24	1°17'28	opposition	-230 Dec 18 j 16:49	23°♁41'58	0°-49'-4	
max. Earth dist.	-238 May 31 j 14:09	4°♁42'33	30.89589 AU	min. Earth dist.	-230 Dec 18 j 21:27	23°♁41'38	28.96808 AU	
retrograde	-238 Sep 14 j 07:02	7°♁14'30		direct	-229 Mar 07 j 15:11	22°♁17'01		
opposition	-238 Dec 01 j 05:58	5°♁50'16	-1°-21'-1					
min. Earth dist.	-238 Dec 01 j 05:31	5°♁50'18	28.89915 AU	conjunction	-229 Jun 21 j 19:28	24°♁48'50	0°-43'-51	
direct	-237 Feb 17 j 13:07	4°♁25'32		minimum elong	-229 Jun 21 j 19:28	24°♁48'50	0°43'51	
				max. Earth dist.	-229 Jun 21 j 13:15	24°♁48'16	30.97295 AU	
conjunction	-237 Jun 03 j 02:46	6°♁56'49	-1°-14'-6	retrograde	-229 Oct 04 j 16:19	27°♁19'29		
minimum elong	-237 Jun 03 j 02:46	6°♁56'49	1°14'06	opposition	-229 Dec 21 j 03:20	25°♁56'00	0°-44'-41	
max. Earth dist.	-237 Jun 03 j 02:56	6°♁56'50	30.90143 AU	min. Earth dist.	-229 Dec 21 j 09:51	25°♁55'33	28.97804 AU	
retrograde	-237 Sep 16 j 18:29	9°♁28'43		direct	-228 Mar 09 j 02:27	24°♁31'03		
opposition	-237 Dec 03 j 16:21	8°♁04'32	-1°-17'-23					
min. Earth dist.	-237 Dec 03 j 15:46	8°♁04'34	28.90471 AU	conjunction	-228 Jun 23 j 09:26	27°♁02'55	0°-39'-43	
direct	-236 Feb 20 j 02:08	6°♁39'43		minimum elong	-228 Jun 23 j 09:26	27°♁02'55	0°39'44	
				max. Earth dist.	-228 Jun 23 j 01:26	27°♁02'10	30.98250 AU	
conjunction	-236 Jun 04 j 17:00	9°♁11'02	-1°-10'-39	retrograde	-228 Oct 06 j 03:38	29°♁33'23		
minimum elong	-236 Jun 04 j 17:01	9°♁11'02	1°10'40	opposition	-228 Dec 22 j 13:35	28°♁09'59	0°-40'-13	
max. Earth dist.	-236 Jun 04 j 16:26	9°♁10'59	30.90719 AU	min. Earth dist.	-228 Dec 22 j 20:13	28°♁09'31	28.98701 AU	
retrograde	-236 Sep 18 j 04:54	11°♁42'45		direct	-227 Mar 11 j 15:03	26°♁45'00		
opposition	-236 Dec 05 j 02:46	10°♁18'36	-1°-13'-39					
min. Earth dist.	-236 Dec 05 j 03:53	10°♁18'32	28.91086 AU	conjunction	-227 Jun 25 j 23:27	29°♁16'54	0°-35'-31	
direct	-235 Feb 21 j 12:56	8°♁53'43		minimum elong	-227 Jun 25 j 23:27	29°♁16'54	0°35'32	
				max. Earth dist.	-227 Jun 25 j 14:28	29°♁16'04	30.99090 AU	
conjunction	-235 Jun 07 j 07:12	11°♁25'05	-1°-7'-5	retrograde	-227 Jul 15 j 13:16	0°♁		
minimum elong	-235 Jun 07 j 07:12	11°♁25'05	1°07'05	retrograde	-227 Oct 08 j 14:00	1°♁47'11		
max. Earth dist.	-235 Jun 07 j 06:02	11°♁24'59	30.91385 AU	opposition	-227 Dec 25 j 00:04	0°♁23'51	0°-35'-43	
retrograde	-235 Sep 20 j 16:45	13°♁56'37		min. Earth dist.	-227 Dec 25 j 08:40	0°♁23'15	28.99494 AU	
opposition	-235 Dec 07 j 13:05	12°♁32'32	-1°-9'-47					
min. Earth dist.	-235 Dec 07 j 13:56	12°♁32'28	28.91788 AU	direct	-226 Mar 14 j 01:18	28°♁58'48		

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Attention, astronomical year style is used: The year -226 in astronomical counting style is the year 227 BCE in historical counting style.

	-226 May 16 j 00:08	0°♄		behind sun end	-219 Jul 14 j 17:08	17°♄02'06	
				max. Earth dist.	-219 Jul 13 j 19:38	17°♄00'09	31.05920 AU
conjunction	-226 Jun 28 j 13:18	1°♄30'42	0°-31'-17	asc. node	-219 Sep 20 j 22:50	19°♄09'24	
minimum elong	-226 Jun 28 j 13:18	1°♄30'42	0°31'18	retrograde	-219 Oct 26 j 05:29	19°♄30'23	
max. Earth dist.	-226 Jun 28 j 03:19	1°♄29'47	30.99847 AU	opposition	-218 Jan 11 j 09:58	18°♄07'29	0°01'26
retrograde	-226 Oct 11 j 00:32	4°♄00'48		min. Earth dist.	-218 Jan 11 j 22:31	18°♄06'36	29.06530 AU
opposition	-226 Dec 27 j 10:19	2°♄37'31	0°-31'-10	direct	-218 Apr 01 j 05:14	16°♄42'09	
min. Earth dist.	-226 Dec 27 j 18:58	2°♄36'55	29.00207 AU				
direct	-225 Mar 16 j 14:09	1°♄12'25		conjunction	-218 Jul 16 j 23:36	19°♄14'08	0°03'39
				minimum elong	-218 Jul 16 j 23:37	19°♄14'09	0°03'39
conjunction	-225 Jul 01 j 02:58	3°♄44'19	0°-27'-1	behind sun begin	-218 Jul 16 j 17:05	19°♄13'34	
minimum elong	-225 Jul 01 j 02:58	3°♄44'19	0°27'01	behind sun end	-218 Jul 17 j 06:08	19°♄14'43	
max. Earth dist.	-225 Jun 30 j 15:28	3°♄43'15	31.00539 AU	max. Earth dist.	-218 Jul 16 j 08:23	19°♄12'44	31.07128 AU
retrograde	-225 Oct 13 j 11:00	6°♄14'13		retrograde	-218 Oct 28 j 15:47	21°♄42'53	
opposition	-225 Dec 29 j 20:39	4°♄50'57	0°-26'-35	opposition	-217 Jan 13 j 20:22	20°♄20'05	0°06'09
min. Earth dist.	-225 Dec 30 j 06:44	4°♄50'15	29.00899 AU	min. Earth dist.	-217 Jan 14 j 10:33	20°♄19'05	29.07746 AU
direct	-224 Mar 18 j 01:53	3°♄25'47		direct	-217 Apr 03 j 15:10	18°♄54'47	
conjunction	-224 Jul 02 j 16:29	5°♄57'40	0°-22'-42	conjunction	-217 Jul 19 j 12:38	21°♄26'48	0°08'02
minimum elong	-224 Jul 02 j 16:29	5°♄57'40	0°22'43	minimum elong	-217 Jul 19 j 12:38	21°♄26'48	0°08'03
max. Earth dist.	-224 Jul 02 j 05:03	5°♄56'37	31.01233 AU	behind sun begin	-217 Jul 19 j 06:47	21°♄26'17	
retrograde	-224 Oct 14 j 21:33	8°♄27'22		behind sun end	-217 Jul 19 j 18:28	21°♄27'19	
opposition	-224 Dec 31 j 06:54	7°♄04'08	0°-21'-57	max. Earth dist.	-217 Jul 18 j 20:40	21°♄25'20	31.08330 AU
min. Earth dist.	-224 Dec 31 j 17:24	7°♄03'24	29.01591 AU	retrograde	-217 Oct 31 j 02:08	23°♄55'26	
direct	-223 Mar 20 j 15:49	5°♄38'53		opposition	-216 Jan 16 j 06:40	22°♄32'44	0°10'50
				min. Earth dist.	-216 Jan 16 j 20:47	22°♄31'44	29.08914 AU
conjunction	-223 Jul 05 j 05:53	8°♄10'47	0°-18'-22	direct	-216 Apr 05 j 03:34	21°♄07'27	
minimum elong	-223 Jul 05 j 05:53	8°♄10'47	0°18'22	max. Earth dist.	-216 Jul 20 j 08:12	23°♄37'54	31.09450 AU
max. Earth dist.	-223 Jul 04 j 16:44	8°♄09'34	31.01952 AU				
retrograde	-223 Oct 17 j 09:09	10°♄40'17		conjunction	-216 Jul 21 j 01:34	23°♄39'30	0°12'24
opposition	-222 Jan 02 j 17:02	9°♄17'05	0°-17'-18	minimum elong	-216 Jul 21 j 01:33	23°♄39'30	0°12'24
min. Earth dist.	-222 Jan 03 j 04:06	9°♄16'18	29.02355 AU	behind sun begin	-216 Jul 20 j 21:20	23°♄39'07	
direct	-222 Mar 23 j 03:08	7°♄51'46		behind sun end	-216 Jul 21 j 05:47	23°♄39'52	
				retrograde	-216 Nov 01 j 12:30	26°♄08'00	
conjunction	-222 Jul 07 j 19:17	10°♄23'39	0°-14'-1	opposition	-215 Jan 17 j 17:09	24°♄45'23	0°15'30
minimum elong	-222 Jul 07 j 19:17	10°♄23'39	0°14'02	min. Earth dist.	-215 Jan 18 j 08:42	24°♄44'18	29.09995 AU
behind sun begin	-222 Jul 07 j 16:10	10°♄23'23		direct	-215 Apr 07 j 14:26	23°♄20'07	
behind sun end	-222 Jul 07 j 22:25	10°♄23'56					
max. Earth dist.	-222 Jul 07 j 06:42	10°♄22'30	31.02757 AU	conjunction	-215 Jul 23 j 14:35	25°♄52'10	0°16'45
retrograde	-222 Oct 19 j 20:01	12°♄52'58		minimum elong	-215 Jul 23 j 14:35	25°♄52'10	0°16'45
opposition	-221 Jan 05 j 03:23	11°♄29'49	0°-12'-38	max. Earth dist.	-215 Jul 22 j 21:04	25°♄50'33	31.10470 AU
min. Earth dist.	-221 Jan 05 j 15:12	11°♄28'59	29.03213 AU	retrograde	-215 Nov 03 j 22:40	28°♄20'32	
direct	-221 Mar 25 j 16:56	10°♄04'28		opposition	-214 Jan 20 j 03:33	26°♄58'00	0°20'09
				min. Earth dist.	-214 Jan 20 j 19:42	26°♄56'52	29.10952 AU
conjunction	-221 Jul 10 j 08:15	12°♄36'21	0°-9'-39	direct	-214 Apr 10 j 03:32	25°♄32'43	
minimum elong	-221 Jul 10 j 08:15	12°♄36'21	0°09'39	max. Earth dist.	-214 Jul 25 j 08:03	28°♄02'59	31.11376 AU
behind sun begin	-221 Jul 10 j 02:52	12°♄35'52					
behind sun end	-221 Jul 10 j 13:39	12°♄36'50		conjunction	-214 Jul 26 j 03:24	28°♄04'47	0°21'04
max. Earth dist.	-221 Jul 09 j 18:07	12°♄35'03	31.03686 AU	minimum elong	-214 Jul 26 j 03:23	28°♄04'46	0°21'04
retrograde	-221 Oct 22 j 08:25	15°♄05'30					
opposition	-220 Jan 07 j 13:34	13°♄42'24	0°-7'-57	retrograde	-214 Sep 22 j 23:26	0°♁	
min. Earth dist.	-220 Jan 08 j 01:04	13°♄41'35	29.04212 AU		-214 Nov 06 j 10:16	0°♁33'01	
direct	-220 Mar 27 j 05:27	12°♄17'02			-214 Dec 21 j 22:55	30°♁	
				opposition	-213 Jan 22 j 14:03	29°♄10'31	0°24'45
conjunction	-220 Jul 11 j 21:27	14°♄48'57	0°-5'-16	min. Earth dist.	-213 Jan 23 j 06:49	29°♄09'21	29.11820 AU
minimum elong	-220 Jul 11 j 21:28	14°♄48'57	0°05'18	direct	-213 Apr 12 j 14:28	27°♄45'13	
behind sun begin	-220 Jul 11 j 15:06	14°♄48'23			-213 Jul 20 j 21:45	0°♁	
behind sun end	-220 Jul 12 j 03:50	14°♄49'31		conjunction	-213 Jul 28 j 16:02	0°♁17'16	0°25'22
max. Earth dist.	-220 Jul 11 j 07:45	14°♄47'41	31.04746 AU	minimum elong	-213 Jul 28 j 16:02	0°♁17'16	0°25'22
retrograde	-220 Oct 23 j 17:56	17°♄17'57		max. Earth dist.	-213 Jul 27 j 21:07	0°♁15'31	31.12195 AU
opposition	-219 Jan 08 j 23:46	15°♄54'56	0°-3'-15	retrograde	-213 Nov 08 j 20:51	2°♁45'21	
min. Earth dist.	-219 Jan 09 j 12:41	15°♄54'01	29.05330 AU	opposition	-212 Jan 25 j 00:33	1°♁22'53	0°29'20
direct	-219 Mar 29 j 17:03	14°♄29'35		min. Earth dist.	-212 Jan 25 j 18:22	1°♁21'39	29.12601 AU
					-212 Apr 01 j 22:19	30°♁	
conjunction	-219 Jul 14 j 10:34	17°♄01'32	0°00'-50	direct	-212 Apr 14 j 04:34	29°♄57'34	
minimum elong	-219 Jul 14 j 10:33	17°♄01'32	0°00'51		-212 Apr 26 j 09:37	0°♁	
behind sun begin	-219 Jul 14 j 03:59	17°♄00'57		max. Earth dist.	-212 Jul 29 j 07:50	2°♁27'41	31.12956 AU

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Attention, astronomical year style is used: The year -212 in astronomical counting style is the year 213 BCE in historical counting style.

conjunction	-212 Jul 30 j 04:31	2°Ω29'36	0°29'37	conjunction	-204 Aug 17 j 04:43	20°Ω04'10	1°01'29
minimum elong	-212 Jul 30 j 04:31	2°Ω29'35	0°29'37	minimum elong	-204 Aug 17 j 04:42	20°Ω04'10	1°01'29
retrograde	-212 Nov 10 j 08:53	4°Ω57'32		retrograde	-204 Nov 27 j 16:55	22°Ω31'18	
opposition	-211 Jan 26 j 10:46	3°Ω35'06	0°33'51	opposition	-203 Feb 12 j 23:14	21°Ω09'19	1°07'36
min. Earth dist.	-211 Jan 27 j 04:27	3°Ω33'52	29.13353 AU	min. Earth dist.	-203 Feb 13 j 20:09	21°Ω07'52	29.21325 AU
direct	-211 Apr 16 j 17:33	2°Ω09'44		direct	-203 May 04 j 15:16	19°Ω44'07	
conjunction	-211 Aug 01 j 17:03	4°Ω41'45	0°33'49	conjunction	-203 Aug 19 j 16:27	22°Ω15'57	1°05'07
minimum elong	-211 Aug 01 j 17:03	4°Ω41'45	0°33'50	minimum elong	-203 Aug 19 j 16:27	22°Ω15'57	1°05'07
max. Earth dist.	-211 Jul 31 j 20:48	4°Ω39'52	31.13696 AU	max. Earth dist.	-203 Aug 18 j 17:00	22°Ω13'46	31.21732 AU
retrograde	-211 Nov 12 j 18:06	7°Ω09'32		retrograde	-203 Nov 30 j 04:52	24°Ω43'00	
opposition	-210 Jan 28 j 21:17	5°Ω47'08	0°38'19	opposition	-202 Feb 15 j 10:04	23°Ω21'03	1°11'26
min. Earth dist.	-210 Jan 29 j 16:21	5°Ω45'48	29.14109 AU	min. Earth dist.	-202 Feb 16 j 06:42	23°Ω19'38	29.22228 AU
direct	-210 Apr 19 j 05:50	4°Ω21'45		direct	-202 May 07 j 03:41	21°Ω55'52	
max. Earth dist.	-210 Aug 03 j 07:58	6°Ω51'45	31.14478 AU	max. Earth dist.	-202 Aug 21 j 05:05	24°Ω25'32	31.22552 AU
conjunction	-210 Aug 04 j 05:09	6°Ω53'42	0°37'58	conjunction	-202 Aug 22 j 04:08	24°Ω27'40	1°08'40
minimum elong	-210 Aug 04 j 05:08	6°Ω53'42	0°37'58	minimum elong	-202 Aug 22 j 04:08	24°Ω27'40	1°08'39
retrograde	-210 Nov 15 j 05:11	9°Ω21'22		retrograde	-202 Dec 02 j 14:31	26°Ω54'38	
opposition	-209 Jan 31 j 07:41	7°Ω58'59	0°42'43	opposition	-201 Feb 17 j 21:05	25°Ω32'43	1°15'09
min. Earth dist.	-209 Feb 01 j 01:59	7°Ω57'42	29.14929 AU	min. Earth dist.	-201 Feb 18 j 19:09	25°Ω31'11	29.22986 AU
direct	-209 Apr 21 j 18:46	6°Ω33'35		direct	-201 May 09 j 16:00	24°Ω07'32	
conjunction	-209 Aug 06 j 17:18	9°Ω05'31	0°42'04	conjunction	-201 Aug 24 j 15:39	26°Ω39'16	1°12'06
minimum elong	-209 Aug 06 j 17:17	9°Ω05'31	0°42'04	minimum elong	-201 Aug 24 j 15:39	26°Ω39'16	1°12'06
max. Earth dist.	-209 Aug 05 j 20:19	9°Ω03'35	31.15336 AU	max. Earth dist.	-201 Aug 23 j 15:32	26°Ω37'02	31.23246 AU
retrograde	-209 Nov 17 j 15:16	11°Ω33'03		retrograde	-201 Dec 05 j 01:57	29°Ω06'08	
opposition	-208 Feb 02 j 18:10	10°Ω10'43	0°47'03	opposition	-200 Feb 20 j 07:48	27°Ω44'14	1°18'46
min. Earth dist.	-208 Feb 03 j 13:32	10°Ω09'22	29.15859 AU	min. Earth dist.	-200 Feb 21 j 05:21	27°Ω42'44	29.23619 AU
direct	-208 Apr 23 j 05:11	8°Ω45'19		direct	-200 May 11 j 05:35	26°Ω19'02	
max. Earth dist.	-208 Aug 07 j 08:11	11°Ω15'16	31.16325 AU	max. Earth dist.	-200 Aug 25 j 03:00	28°Ω48'28	31.23811 AU
conjunction	-208 Aug 08 j 05:16	11°Ω17'14	0°46'06	conjunction	-200 Aug 26 j 03:11	28°Ω50'43	1°15'25
minimum elong	-208 Aug 08 j 05:16	11°Ω17'14	0°46'06	minimum elong	-200 Aug 26 j 03:11	28°Ω50'43	1°15'26
retrograde	-208 Nov 19 j 00:22	13°Ω44'39		retrograde	-200 Sep 27 j 08:06	0°Ω	
opposition	-207 Feb 04 j 04:36	12°Ω22'23	0°51'20	retrograde	-200 Dec 06 j 12:00	1°Ω17'29	
min. Earth dist.	-207 Feb 04 j 23:18	12°Ω21'05	29.16893 AU	retrograde	-199 Feb 19 j 02:45	30°RΩ	
direct	-207 Apr 25 j 17:50	10°Ω57'01		opposition	-199 Feb 21 j 18:48	29°Ω55'35	1°22'16
conjunction	-207 Aug 10 j 17:13	13°Ω28'55	0°50'03	min. Earth dist.	-199 Feb 22 j 17:37	29°Ω54'00	29.24146 AU
minimum elong	-207 Aug 10 j 17:13	13°Ω28'55	0°50'04	direct	-199 May 13 j 17:16	28°Ω30'22	
max. Earth dist.	-207 Aug 09 j 19:29	13°Ω26'54	31.17403 AU	direct	-199 Jul 31 j 00:34	0°Ω	
retrograde	-207 Sep 23 j 13:14	15°Ω		conjunction	-199 Aug 28 j 14:28	1°Ω01'59	1°18'38
retrograde	-207 Nov 21 j 09:56	15°Ω56'15		minimum elong	-199 Aug 28 j 14:28	1°Ω01'59	1°18'39
opposition	-206 Jan 21 j 19:34	15°RΩ		max. Earth dist.	-199 Aug 27 j 14:10	0°Ω59'43	31.24300 AU
min. Earth dist.	-206 Feb 06 j 15:10	14°Ω34'04	0°55'31	retrograde	-199 Dec 08 j 20:54	3°Ω28'39	
direct	-206 Feb 07 j 10:37	14°Ω32'42	29.18021 AU	opposition	-198 Feb 24 j 05:40	2°Ω06'44	1°25'39
direct	-206 Apr 28 j 03:48	13°Ω08'44		min. Earth dist.	-198 Feb 25 j 03:52	2°Ω05'12	29.24606 AU
max. Earth dist.	-206 Jul 25 j 18:51	15°Ω		direct	-198 May 16 j 06:36	0°Ω41'31	
conjunction	-206 Aug 12 j 07:59	15°Ω38'40	31.18554 AU	max. Earth dist.	-198 Aug 30 j 00:47	3°Ω10'44	31.24748 AU
conjunction	-206 Aug 13 j 05:09	15°Ω40'38	0°53'57	conjunction	-198 Aug 31 j 01:35	3°Ω13'03	1°21'44
minimum elong	-206 Aug 13 j 05:09	15°Ω40'38	0°53'57	minimum elong	-198 Aug 31 j 01:35	3°Ω13'03	1°21'45
retrograde	-206 Nov 23 j 19:32	18°Ω07'53		retrograde	-198 Dec 11 j 06:16	5°Ω39'39	
opposition	-205 Feb 09 j 01:49	16°Ω45'47	0°59'38	opposition	-197 Feb 26 j 16:40	4°Ω17'43	1°28'54
min. Earth dist.	-205 Feb 09 j 21:26	16°Ω44'25	29.19174 AU	min. Earth dist.	-197 Feb 27 j 15:20	4°Ω16'10	29.25080 AU
direct	-205 Apr 30 j 15:25	15°Ω20'30		direct	-197 May 18 j 16:55	2°Ω52'30	
conjunction	-205 Aug 15 j 16:47	17°Ω52'23	0°57'46	conjunction	-197 Sep 02 j 12:29	5°Ω23'57	1°24'43
minimum elong	-205 Aug 15 j 16:47	17°Ω52'23	0°57'46	minimum elong	-197 Sep 02 j 12:29	5°Ω23'57	1°24'43
max. Earth dist.	-205 Aug 14 j 18:22	17°Ω50'18	31.19695 AU	max. Earth dist.	-197 Sep 01 j 12:40	5°Ω21'44	31.25235 AU
retrograde	-205 Nov 26 j 06:53	20°Ω19'35		retrograde	-197 Dec 13 j 15:00	7°Ω50'29	
opposition	-204 Feb 11 j 12:30	18°Ω57'33	1°03'40	opposition	-196 Feb 29 j 03:39	6°Ω28'34	1°32'01
min. Earth dist.	-204 Feb 12 j 08:23	18°Ω56'10	29.20303 AU	min. Earth dist.	-196 Mar 01 j 02:03	6°Ω27'01	29.25594 AU
direct	-204 May 02 j 01:53	17°Ω32'18		direct	-196 May 20 j 04:44	5°Ω03'21	
max. Earth dist.	-204 Aug 16 j 06:55	20°Ω02'09	31.20771 AU	conjunction	-196 Sep 03 j 23:19	7°Ω34'44	1°27'35

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Attention, astronomical year style is used: The year -196 in astronomical counting style is the year 197 BCE in historical counting style.

minimum elong	-196 Sep 03 j 23:19	7° $\mathring{\text{M}}$ 34'44	1°27'34	opposition	-187 Mar 20 j 08:58	26° $\mathring{\text{M}}$ 07'17	1°53'36
max. Earth dist.	-196 Sep 02 j 22:45	7° $\mathring{\text{M}}$ 32'27	31.25789 AU	min. Earth dist.	-187 Mar 21 j 07:08	26° $\mathring{\text{M}}$ 05'46	29.30542 AU
retrograde	-196 Dec 15 j 01:43	10° $\mathring{\text{M}}$ 01'15		direct	-187 Jun 09 j 16:14	24° $\mathring{\text{M}}$ 42'28	
opposition	-195 Mar 02 j 14:31	8° $\mathring{\text{M}}$ 39'20	1°35'00				
min. Earth dist.	-195 Mar 03 j 12:29	8° $\mathring{\text{M}}$ 37'50	29.26207 AU	conjunction	-187 Sep 23 j 22:15	27° $\mathring{\text{M}}$ 13'22	1°47'09
direct	-195 May 22 j 15:02	7° $\mathring{\text{M}}$ 14'09		minimum elong	-187 Sep 23 j 22:15	27° $\mathring{\text{M}}$ 13'22	1°47'09
max. Earth dist.	-195 Sep 05 j 11:03	9° $\mathring{\text{M}}$ 43'21	31.26442 AU	max. Earth dist.	-187 Sep 22 j 22:27	27° $\mathring{\text{M}}$ 11'08	31.30460 AU
				retrograde	-186 Jan 03 j 21:40	29° $\mathring{\text{M}}$ 39'49	
conjunction	-195 Sep 06 j 10:14	9° $\mathring{\text{M}}$ 45'30	1°30'18	opposition	-186 Mar 22 j 20:31	28° $\mathring{\text{M}}$ 18'02	1°55'14
minimum elong	-195 Sep 06 j 10:14	9° $\mathring{\text{M}}$ 45'30	1°30'18	min. Earth dist.	-186 Mar 23 j 18:15	28° $\mathring{\text{M}}$ 16'33	29.30619 AU
retrograde	-195 Dec 17 j 11:23	12° $\mathring{\text{M}}$ 12'00		direct	-186 Jun 12 j 03:11	26° $\mathring{\text{M}}$ 53'13	
opposition	-194 Mar 05 j 01:41	10° $\mathring{\text{M}}$ 50'08	1°37'51	max. Earth dist.	-186 Sep 25 j 09:59	29° $\mathring{\text{M}}$ 21'54	31.30502 AU
min. Earth dist.	-194 Mar 05 j 23:57	10° $\mathring{\text{M}}$ 48'36	29.26900 AU				
direct	-194 May 25 j 03:29	9° $\mathring{\text{M}}$ 25'01		conjunction	-186 Sep 26 j 08:18	29° $\mathring{\text{M}}$ 23'59	1°48'36
				minimum elong	-186 Sep 26 j 08:18	29° $\mathring{\text{M}}$ 23'59	1°48'35
conjunction	-194 Sep 08 j 20:45	11° $\mathring{\text{M}}$ 56'20	1°32'54				
minimum elong	-194 Sep 08 j 20:45	11° $\mathring{\text{M}}$ 56'20	1°32'54	retrograde	-186 Oct 12 j 12:32	0° $\mathring{\text{M}}$	
max. Earth dist.	-194 Sep 07 j 20:47	11° $\mathring{\text{M}}$ 54'05	31.27172 AU	opposition	-185 Jan 06 j 06:09	1° $\mathring{\text{M}}$ 50'25	
retrograde	-194 Dec 19 j 23:08	14° $\mathring{\text{M}}$ 22'49		min. Earth dist.	-185 Mar 25 j 08:09	0° $\mathring{\text{M}}$ 28'35	1°56'41
opposition	-193 Mar 07 j 12:44	13° $\mathring{\text{M}}$ 01'00	1°40'33	direct	-185 Mar 26 j 06:07	0° $\mathring{\text{M}}$ 27'05	29.30647 AU
min. Earth dist.	-193 Mar 08 j 10:00	12° $\mathring{\text{M}}$ 59'32	29.27654 AU				
direct	-193 May 27 j 14:40	11° $\mathring{\text{M}}$ 35'57		direct	-185 Apr 12 j 03:01	30° $\mathring{\text{R}}$ $\mathring{\text{M}}$	
max. Earth dist.	-193 Sep 10 j 08:32	14° $\mathring{\text{M}}$ 05'06	31.27922 AU		-185 Jun 14 j 15:13	29° $\mathring{\text{M}}$ 03'45	
					-185 Aug 14 j 06:04	0° $\mathring{\text{M}}$	
conjunction	-193 Sep 11 j 07:29	14° $\mathring{\text{M}}$ 07'15	1°35'22	conjunction	-185 Sep 28 j 18:11	1° $\mathring{\text{M}}$ 34'24	1°49'53
minimum elong	-193 Sep 11 j 07:29	14° $\mathring{\text{M}}$ 07'15	1°35'22	minimum elong	-185 Sep 28 j 18:11	1° $\mathring{\text{M}}$ 34'24	1°49'52
retrograde	-193 Dec 22 j 09:04	16° $\mathring{\text{M}}$ 33'45		max. Earth dist.	-185 Sep 27 j 19:20	1° $\mathring{\text{M}}$ 32'16	31.30539 AU
opposition	-192 Mar 08 j 23:53	15° $\mathring{\text{M}}$ 11'59	1°43'06	retrograde	-184 Jan 08 j 17:06	4° $\mathring{\text{M}}$ 00'49	
min. Earth dist.	-192 Mar 09 j 22:13	15° $\mathring{\text{M}}$ 10'27	29.28399 AU	opposition	-184 Mar 26 j 19:29	2° $\mathring{\text{M}}$ 38'55	1°57'59
direct	-192 May 29 j 02:10	13° $\mathring{\text{M}}$ 47'00		min. Earth dist.	-184 Mar 27 j 16:07	2° $\mathring{\text{M}}$ 37'31	29.30709 AU
				direct	-184 Jun 16 j 01:53	1° $\mathring{\text{M}}$ 14'05	
conjunction	-192 Sep 12 j 18:06	16° $\mathring{\text{M}}$ 18'16	1°37'42	max. Earth dist.	-184 Sep 29 j 06:39	3° $\mathring{\text{M}}$ 42'38	31.30625 AU
minimum elong	-192 Sep 12 j 18:05	16° $\mathring{\text{M}}$ 18'16	1°37'42				
max. Earth dist.	-192 Sep 11 j 18:34	16° $\mathring{\text{M}}$ 16'04	31.28643 AU	conjunction	-184 Sep 30 j 04:09	3° $\mathring{\text{M}}$ 44'38	1°51'01
retrograde	-192 Dec 23 j 21:05	18° $\mathring{\text{M}}$ 44'46		minimum elong	-184 Sep 30 j 04:09	3° $\mathring{\text{M}}$ 44'38	1°51'00
opposition	-191 Mar 11 j 11:06	17° $\mathring{\text{M}}$ 23'03	1°45'31	retrograde	-183 Jan 10 j 02:44	6° $\mathring{\text{M}}$ 11'04	
min. Earth dist.	-191 Mar 12 j 08:31	17° $\mathring{\text{M}}$ 21'34	29.29079 AU	opposition	-183 Mar 29 j 07:12	4° $\mathring{\text{M}}$ 49'08	1°59'06
direct	-191 May 31 j 15:51	15° $\mathring{\text{M}}$ 58'08		min. Earth dist.	-183 Mar 30 j 04:14	4° $\mathring{\text{M}}$ 47'42	29.30843 AU
max. Earth dist.	-191 Sep 14 j 05:25	18° $\mathring{\text{M}}$ 27'11	31.29259 AU	direct	-183 Jun 18 j 13:38	3° $\mathring{\text{M}}$ 24'19	
conjunction	-191 Sep 15 j 04:41	18° $\mathring{\text{M}}$ 29'22	1°39'53	conjunction	-183 Oct 02 j 13:49	5° $\mathring{\text{M}}$ 54'47	1°51'59
minimum elong	-191 Sep 15 j 04:41	18° $\mathring{\text{M}}$ 29'22	1°39'53	minimum elong	-183 Oct 02 j 13:49	5° $\mathring{\text{M}}$ 54'47	1°51'59
retrograde	-191 Dec 26 j 07:56	20° $\mathring{\text{M}}$ 55'53		max. Earth dist.	-183 Oct 01 j 16:35	5° $\mathring{\text{M}}$ 52'47	31.30813 AU
opposition	-190 Mar 13 j 22:35	19° $\mathring{\text{M}}$ 34'10	1°47'46	retrograde	-182 Jan 12 j 14:18	8° $\mathring{\text{M}}$ 21'13	
min. Earth dist.	-190 Mar 14 j 21:00	19° $\mathring{\text{M}}$ 32'38	29.29651 AU	opposition	-182 Mar 31 j 18:49	6° $\mathring{\text{M}}$ 59'16	2°00'04
direct	-190 Jun 03 j 03:41	18° $\mathring{\text{M}}$ 09'18		min. Earth dist.	-182 Apr 01 j 14:08	6° $\mathring{\text{M}}$ 57'57	29.31076 AU
				direct	-182 Jun 21 j 02:47	5° $\mathring{\text{M}}$ 34'31	
conjunction	-190 Sep 17 j 15:13	20° $\mathring{\text{M}}$ 40'29	1°41'55				
minimum elong	-190 Sep 17 j 15:13	20° $\mathring{\text{M}}$ 40'29	1°41'55	conjunction	-182 Oct 04 j 23:34	8° $\mathring{\text{M}}$ 04'54	1°52'47
max. Earth dist.	-190 Sep 16 j 16:03	20° $\mathring{\text{M}}$ 38'19	31.29766 AU	minimum elong	-182 Oct 04 j 23:34	8° $\mathring{\text{M}}$ 04'54	1°52'48
retrograde	-190 Dec 28 j 16:58	23° $\mathring{\text{M}}$ 06'59		max. Earth dist.	-182 Oct 04 j 03:12	8° $\mathring{\text{M}}$ 03'00	31.31091 AU
opposition	-189 Mar 16 j 10:01	21° $\mathring{\text{M}}$ 45'18	1°49'53	retrograde	-181 Jan 15 j 01:11	10° $\mathring{\text{M}}$ 31'24	
min. Earth dist.	-189 Mar 17 j 07:42	21° $\mathring{\text{M}}$ 43'48	29.30087 AU	opposition	-181 Apr 03 j 06:33	9° $\mathring{\text{M}}$ 09'27	2°00'50
direct	-189 Jun 05 j 16:50	20° $\mathring{\text{M}}$ 20'28		min. Earth dist.	-181 Apr 04 j 02:10	9° $\mathring{\text{M}}$ 08'07	29.31402 AU
max. Earth dist.	-189 Sep 19 j 01:48	22° $\mathring{\text{M}}$ 49'20	31.30126 AU	direct	-181 Jun 23 j 13:53	7° $\mathring{\text{M}}$ 44'47	
conjunction	-189 Sep 20 j 01:35	22° $\mathring{\text{M}}$ 51'34	1°43'49	conjunction	-181 Oct 07 j 09:12	10° $\mathring{\text{M}}$ 15'06	1°53'26
minimum elong	-189 Sep 20 j 01:35	22° $\mathring{\text{M}}$ 51'34	1°43'49	minimum elong	-181 Oct 07 j 09:12	10° $\mathring{\text{M}}$ 15'06	1°53'27
retrograde	-189 Dec 31 j 02:45	25° $\mathring{\text{M}}$ 18'03		max. Earth dist.	-181 Oct 06 j 13:44	10° $\mathring{\text{M}}$ 13'17	31.31445 AU
opposition	-188 Mar 17 j 21:31	23° $\mathring{\text{M}}$ 56'21	1°51'49	retrograde	-180 Jan 17 j 10:43	12° $\mathring{\text{M}}$ 41'39	
min. Earth dist.	-188 Mar 18 j 19:43	23° $\mathring{\text{M}}$ 54'50	29.30387 AU	opposition	-180 Apr 04 j 18:15	11° $\mathring{\text{M}}$ 19'44	2°01'27
direct	-188 Jun 07 j 03:45	22° $\mathring{\text{M}}$ 31'32		min. Earth dist.	-180 Apr 05 j 12:38	11° $\mathring{\text{M}}$ 18'29	29.31753 AU
				direct	-180 Jun 25 j 02:45	9° $\mathring{\text{M}}$ 55'08	
conjunction	-188 Sep 21 j 12:02	25° $\mathring{\text{M}}$ 02'33	1°45'33				
minimum elong	-188 Sep 21 j 12:02	25° $\mathring{\text{M}}$ 02'33	1°45'33	conjunction	-180 Oct 08 j 18:49	12° $\mathring{\text{M}}$ 25'25	1°53'56
max. Earth dist.	-188 Sep 20 j 13:03	25° $\mathring{\text{M}}$ 00'24	31.30353 AU	minimum elong	-180 Oct 08 j 18:49	12° $\mathring{\text{M}}$ 25'25	1°53'55
retrograde	-187 Jan 01 j 11:24	27° $\mathring{\text{M}}$ 29'01		max. Earth dist.	-180 Oct 07 j 23:11	12° $\mathring{\text{M}}$ 23'35	31.31791 AU
				retrograde	-179 Jan 18 j 21:20	14° $\mathring{\text{M}}$ 52'03	

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Attention, astronomical year style is used: The year -179 in astronomical counting style is the year 180 BCE in historical counting style.

opposition	-179 Apr 07 j 06:05	13°♁30'08	2°01'53	opposition	-171 Apr 25 j 07:11	0°♌54'57	1°59'07
min. Earth dist.	-179 Apr 08 j 00:29	13°♁28'53	29.32092 AU	min. Earth dist.	-171 Apr 25 j 21:17	0°♌54'00	29.31175 AU
direct	-179 Jun 27 j 13:35	12°♁05'38			-171 Jun 01 j 03:54	30°♊♁	
max. Earth dist.	-179 Oct 10 j 10:16	14°♁34'09	31.32100 AU	direct	-171 Jul 15 j 11:10	29°♁30'47	
					-171 Aug 27 j 06:14	0°♌	
conjunction	-179 Oct 11 j 04:33	14°♁35'52	1°54'15	conjunction	-171 Oct 28 j 07:57	2°♌00'17	1°51'00
minimum elong	-179 Oct 11 j 04:33	14°♁35'52	1°54'15	minimum elong	-171 Oct 28 j 07:58	2°♌00'17	1°51'00
retrograde	-178 Jan 21 j 06:41	17°♁02'34		max. Earth dist.	-171 Oct 27 j 17:13	1°♌58'53	31.30927 AU
opposition	-178 Apr 09 j 18:08	15°♁40'41	2°02'08	retrograde	-170 Feb 07 j 20:11	4°♌27'32	
min. Earth dist.	-178 Apr 10 j 12:08	15°♁39'27	29.32354 AU	opposition	-170 Apr 27 j 19:33	3°♌05'19	1°58'00
direct	-178 Jun 30 j 01:57	14°♁16'16		min. Earth dist.	-170 Apr 28 j 09:00	3°♌04'24	29.30954 AU
				direct	-170 Jul 17 j 22:48	1°♌41'11	
conjunction	-178 Oct 13 j 14:01	16°♁46'25	1°54'24	conjunction	-170 Oct 30 j 17:06	4°♌10'36	1°49'53
minimum elong	-178 Oct 13 j 14:01	16°♁46'25	1°54'24	minimum elong	-170 Oct 30 j 17:06	4°♌10'36	1°49'52
max. Earth dist.	-178 Oct 12 j 19:09	16°♁44'39	31.32316 AU	max. Earth dist.	-170 Oct 30 j 04:19	4°♌09'24	31.30752 AU
retrograde	-177 Jan 23 j 17:37	19°♁13'13		retrograde	-169 Feb 10 j 05:42	6°♌37'58	
opposition	-177 Apr 12 j 06:10	17°♁51'20	2°02'13	opposition	-169 Apr 30 j 07:53	5°♌15'42	1°56'43
min. Earth dist.	-177 Apr 12 j 23:32	17°♁50'09	29.32519 AU	min. Earth dist.	-169 Apr 30 j 20:24	5°♌14'52	29.30804 AU
direct	-177 Jul 02 j 12:26	16°♁26'59		direct	-169 Jul 20 j 11:43	3°♌51'39	
conjunction	-177 Oct 15 j 23:47	18°♁57'04	1°54'24	conjunction	-169 Nov 02 j 02:10	6°♌20'59	1°48'35
minimum elong	-177 Oct 15 j 23:47	18°♁57'04	1°54'24	minimum elong	-169 Nov 02 j 02:11	6°♌20'59	1°48'35
max. Earth dist.	-177 Oct 15 j 06:16	18°♁55'26	31.32407 AU	max. Earth dist.	-169 Nov 01 j 13:17	6°♌19'46	31.30642 AU
retrograde	-176 Jan 26 j 02:37	21°♁23'57		retrograde	-168 Feb 12 j 16:23	8°♌48'27	
opposition	-176 Apr 13 j 18:11	20°♁02'03	2°02'08	opposition	-168 May 01 j 20:05	7°♌26'11	1°55'15
min. Earth dist.	-176 Apr 14 j 11:56	20°♁00'51	29.32535 AU	min. Earth dist.	-168 May 02 j 07:28	7°♌25'25	29.30714 AU
direct	-176 Jul 03 j 23:49	18°♁37'45		direct	-168 Jul 21 j 22:03	6°♌02'12	
conjunction	-176 Oct 17 j 09:21	21°♁07'46	1°54'14	conjunction	-168 Nov 03 j 11:26	8°♌31'28	1°47'09
minimum elong	-176 Oct 17 j 09:21	21°♁07'46	1°54'14	minimum elong	-168 Nov 03 j 11:26	8°♌31'28	1°47'09
max. Earth dist.	-176 Oct 16 j 15:10	21°♁06'03	31.32360 AU	max. Earth dist.	-168 Nov 03 j 00:25	8°♌30'26	31.30559 AU
retrograde	-175 Jan 27 j 14:09	23°♁34'43		retrograde	-167 Feb 14 j 01:18	10°♌59'04	
opposition	-175 Apr 16 j 06:18	22°♁12'47	2°01'52	opposition	-167 May 04 j 08:41	9°♌36'47	1°53'38
min. Earth dist.	-175 Apr 16 j 22:47	22°♁11'40	29.32415 AU	min. Earth dist.	-167 May 04 j 19:55	9°♌36'02	29.30620 AU
direct	-175 Jul 06 j 10:03	20°♁48'31		direct	-167 Jul 24 j 09:33	8°♌12'53	
conjunction	-175 Oct 19 j 18:53	23°♁18'27	1°53'54	conjunction	-167 Nov 05 j 20:27	10°♌42'05	1°45'33
minimum elong	-175 Oct 19 j 18:54	23°♁18'27	1°53'55	minimum elong	-167 Nov 05 j 20:27	10°♌42'05	1°45'33
max. Earth dist.	-175 Oct 19 j 01:47	23°♁16'50	31.32169 AU	max. Earth dist.	-167 Nov 05 j 09:22	10°♌41'02	31.30461 AU
retrograde	-174 Jan 30 j 00:17	25°♁45'28		retrograde	-166 Feb 16 j 13:14	13°♌09'48	
opposition	-174 Apr 18 j 18:40	24°♁23'29	2°01'26	opposition	-166 May 06 j 21:14	11°♌47'31	1°51'50
min. Earth dist.	-174 Apr 19 j 11:45	24°♁22'19	29.32166 AU	min. Earth dist.	-166 May 07 j 06:50	11°♌46'52	29.30490 AU
direct	-174 Jul 08 j 21:48	22°♁59'15		direct	-166 Jul 26 j 19:48	10°♌23'41	
max. Earth dist.	-174 Oct 21 j 11:25	25°♁27'28	31.31883 AU				
conjunction	-174 Oct 22 j 04:18	25°♁29'03	1°53'25	conjunction	-166 Nov 08 j 05:44	12°♌52'48	1°43'48
minimum elong	-174 Oct 22 j 04:18	25°♁29'03	1°53'26	minimum elong	-166 Nov 08 j 05:44	12°♌52'48	1°43'48
retrograde	-173 Feb 01 j 12:12	27°♁56'07		max. Earth dist.	-166 Nov 07 j 19:50	12°♌51'52	31.30285 AU
opposition	-173 Apr 21 j 06:42	26°♁34'04	2°00'50		-165 Jan 14 j 19:08	15°♌	
min. Earth dist.	-173 Apr 21 j 22:15	26°♁33'01	29.31839 AU	retrograde	-165 Feb 18 j 23:39	15°♌20'40	
direct	-173 Jul 11 j 10:46	25°♁09'51			-165 Mar 27 j 09:37	15°♊♌	
conjunction	-173 Oct 24 j 13:36	27°♁39'33	1°52'46	opposition	-165 May 09 j 09:51	13°♌58'20	1°49'53
minimum elong	-173 Oct 24 j 13:36	27°♁39'33	1°52'46	min. Earth dist.	-165 May 09 j 19:57	13°♌57'39	29.30266 AU
max. Earth dist.	-173 Oct 23 j 21:24	27°♁38'02	31.31533 AU	direct	-165 Jul 29 j 06:46	12°♌34'35	
	-172 Jan 15 j 01:14	0°♌			-165 Nov 09 j 00:35	15°♌	
retrograde	-172 Feb 03 j 23:22	0°♌06'41		conjunction	-165 Nov 10 j 15:00	15°♌03'38	1°41'54
	-172 Feb 24 j 02:09	30°♊♁		minimum elong	-165 Nov 10 j 15:00	15°♌03'38	1°41'53
opposition	-172 Apr 22 j 18:59	28°♁44'33	2°00'03	max. Earth dist.	-165 Nov 10 j 05:27	15°♌02'44	31.30008 AU
min. Earth dist.	-172 Apr 23 j 10:45	28°♁43'29	29.31491 AU	retrograde	-164 Feb 21 j 11:48	17°♌31'36	
direct	-172 Jul 12 j 21:51	27°♁20'21		opposition	-164 May 10 j 22:28	16°♌09'15	1°47'46
conjunction	-172 Oct 25 j 22:49	29°♁49'57	1°51'58	min. Earth dist.	-164 May 11 j 07:02	16°♌08'40	29.29907 AU
minimum elong	-172 Oct 25 j 22:49	29°♁49'57	1°51'57		-164 Jun 30 j 06:00	15°♊♌	
max. Earth dist.	-172 Oct 25 j 07:54	29°♁48'33	31.31201 AU	direct	-164 Jul 30 j 18:36	14°♌45'32	
	-172 Oct 30 j 09:38	0°♌			-164 Aug 29 j 14:36	15°♌	
retrograde	-171 Feb 05 j 08:50	2°♌17'08					

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Attention, astronomical year style is used: The year -164 in astronomical counting style is the year 165 BCE in historical counting style.

conjunction	-164 Nov 12 j 00:14	17°M.14'31	1°39'51	conjunction	-156 Nov 29 j 01:06	4°Z.40'35	1°18'39
minimum elong	-164 Nov 12 j 00:14	17°M.14'31	1°39'50	minimum elong	-156 Nov 29 j 01:06	4°Z.40'35	1°18'39
max. Earth dist.	-164 Nov 11 j 15:01	17°M.13'38	31.29571 AU	max. Earth dist.	-156 Nov 28 j 23:19	4°Z.40'25	31.23800 AU
retrograde	-163 Feb 22 j 23:34	19°M.42'37		retrograde	-155 Mar 12 j 15:17	7°Z.09'42	
opposition	-163 May 13 j 11:19	18°M.20'11	1°45'31	opposition	-155 May 31 j 17:25	5°Z.46'45	1°22'19
min. Earth dist.	-163 May 13 j 20:17	18°M.19'35	29.29396 AU	min. Earth dist.	-155 May 31 j 18:01	5°Z.46'43	29.23570 AU
direct	-163 Aug 02 j 04:59	16°M.56'31		direct	-155 Aug 20 j 02:08	4°Z.23'20	
conjunction	-163 Nov 14 j 09:35	19°M.25'24	1°37'39	conjunction	-155 Dec 01 j 10:13	6°Z.51'38	1°15'26
minimum elong	-163 Nov 14 j 09:35	19°M.25'24	1°37'39	minimum elong	-155 Dec 01 j 10:13	6°Z.51'38	1°15'26
max. Earth dist.	-163 Nov 14 j 01:26	19°M.24'38	31.28992 AU	max. Earth dist.	-155 Dec 01 j 09:06	6°Z.51'32	31.23239 AU
retrograde	-162 Feb 25 j 10:20	21°M.53'36		retrograde	-154 Mar 15 j 03:40	9°Z.20'56	
opposition	-162 May 16 j 00:05	20°M.31'07	1°43'06	opposition	-154 Jun 03 j 06:24	7°Z.57'57	1°18'50
min. Earth dist.	-162 May 16 j 07:41	20°M.30'36	29.28730 AU	min. Earth dist.	-154 Jun 03 j 07:04	7°Z.57'55	29.23012 AU
direct	-162 Aug 04 j 18:28	19°M.07'28		direct	-154 Aug 22 j 11:06	6°Z.34'37	
conjunction	-162 Nov 16 j 18:42	21°M.36'15	1°35'20	conjunction	-154 Dec 03 j 19:26	9°Z.02'52	1°12'07
minimum elong	-162 Nov 16 j 18:42	21°M.36'15	1°35'20	minimum elong	-154 Dec 03 j 19:26	9°Z.02'52	1°12'06
max. Earth dist.	-162 Nov 16 j 10:18	21°M.35'28	31.28266 AU	max. Earth dist.	-154 Dec 03 j 19:50	9°Z.02'55	31.22672 AU
retrograde	-161 Feb 27 j 22:37	24°M.04'34		retrograde	-153 Mar 17 j 15:28	11°Z.32'21	
opposition	-161 May 18 j 12:51	22°M.41'59	1°40'33	opposition	-153 Jun 05 j 19:18	10°Z.09'20	1°15'13
min. Earth dist.	-161 May 18 j 20:13	22°M.41'29	29.27948 AU	min. Earth dist.	-153 Jun 05 j 18:26	10°Z.09'24	29.22404 AU
direct	-161 Aug 07 j 06:11	21°M.18'20		direct	-153 Aug 25 j 00:09	8°Z.46'03	
conjunction	-161 Nov 19 j 03:56	23°M.47'02	1°32'52	conjunction	-153 Dec 06 j 04:39	11°Z.14'17	1°08'41
minimum elong	-161 Nov 19 j 03:56	23°M.47'02	1°32'51	minimum elong	-153 Dec 06 j 04:39	11°Z.14'17	1°08'40
max. Earth dist.	-161 Nov 18 j 21:17	23°M.46'24	31.27443 AU	max. Earth dist.	-153 Dec 06 j 04:48	11°Z.14'18	31.22030 AU
retrograde	-160 Mar 01 j 08:23	26°M.15'26		retrograde	-152 Mar 19 j 05:27	13°Z.43'55	
opposition	-160 May 20 j 01:30	24°M.52'46	1°37'51	opposition	-152 Jun 07 j 08:17	12°Z.20'52	1°11'30
min. Earth dist.	-160 May 20 j 08:04	24°M.52'19	29.27087 AU	min. Earth dist.	-152 Jun 07 j 07:08	12°Z.20'57	29.21719 AU
direct	-160 Aug 08 j 19:29	23°M.29'07		direct	-152 Aug 26 j 11:13	10°Z.57'39	
conjunction	-160 Nov 20 j 12:58	25°M.57'43	1°30'17	conjunction	-152 Dec 07 j 14:08	13°Z.25'50	1°05'09
minimum elong	-160 Nov 20 j 12:58	25°M.57'43	1°30'16	minimum elong	-152 Dec 07 j 14:09	13°Z.25'50	1°05'09
max. Earth dist.	-160 Nov 20 j 06:16	25°M.57'05	31.26588 AU	max. Earth dist.	-152 Dec 07 j 15:59	13°Z.26'01	31.21290 AU
retrograde	-159 Mar 03 j 19:32	28°M.26'13		retrograde	-151 Mar 21 j 16:21	15°Z.55'38	
opposition	-159 May 22 j 14:17	27°M.03'28	1°35'01	opposition	-151 Jun 09 j 21:26	14°Z.32'31	1°07'41
min. Earth dist.	-159 May 22 j 19:31	27°M.03'07	29.26246 AU	min. Earth dist.	-151 Jun 09 j 19:34	14°Z.32'39	29.20907 AU
direct	-159 Aug 11 j 06:24	25°M.39'50		direct	-151 Aug 29 j 00:00	13°Z.09'20	
conjunction	-159 Nov 22 j 21:59	28°M.08'21	1°27'33	conjunction	-151 Dec 09 j 23:26	15°Z.37'28	1°01'32
minimum elong	-159 Nov 22 j 21:59	28°M.08'21	1°27'33	minimum elong	-151 Dec 09 j 23:26	15°Z.37'28	1°01'32
max. Earth dist.	-159 Nov 22 j 17:22	28°M.07'54	31.25767 AU	max. Earth dist.	-151 Dec 10 j 00:56	15°Z.37'36	31.20423 AU
retrograde	-158 Jan 17 j 13:21	0°Z.36'59		retrograde	-150 Mar 24 j 04:41	18°Z.07'24	
opposition	-158 Apr 25 j 03:13	30°R.M.		opposition	-150 Jun 12 j 10:34	16°Z.44'13	1°03'45
min. Earth dist.	-158 May 25 j 03:09	29°M.14'09	1°32'02	min. Earth dist.	-150 Jun 12 j 07:47	16°Z.44'24	29.19971 AU
direct	-158 Aug 13 j 18:24	27°M.50'33		direct	-150 Aug 31 j 11:22	15°Z.21'02	
retrograde	-158 Nov 16 j 21:51	0°Z.01'20		conjunction	-150 Dec 12 j 09:01	17°Z.49'06	0°57'49
conjunction	-158 Nov 25 j 07:00	0°Z.18'59	1°24'43	minimum elong	-150 Dec 12 j 09:02	17°Z.49'06	0°57'49
minimum elong	-158 Nov 25 j 07:00	0°Z.18'59	1°24'43	max. Earth dist.	-150 Dec 12 j 11:59	17°Z.49'22	31.19416 AU
max. Earth dist.	-158 Nov 25 j 02:43	0°Z.18'35	31.25035 AU	retrograde	-149 Mar 26 j 14:41	20°Z.19'09	
retrograde	-157 Mar 08 j 16:32	2°Z.47'46		opposition	-149 Jun 14 j 23:33	18°Z.55'52	0°59'45
opposition	-157 May 27 j 15:43	1°Z.24'53	1°28'56	min. Earth dist.	-149 Jun 14 j 20:46	18°Z.56'03	29.18899 AU
min. Earth dist.	-157 May 27 j 18:23	1°Z.24'42	29.24764 AU	direct	-149 Sep 03 j 00:23	17°Z.32'41	
direct	-157 Aug 16 j 04:43	0°Z.01'20		conjunction	-149 Dec 14 j 18:26	20°Z.00'39	0°54'02
conjunction	-157 Nov 27 j 16:07	2°Z.29'42	1°21'44	minimum elong	-149 Dec 14 j 18:26	20°Z.00'39	0°54'02
minimum elong	-157 Nov 27 j 16:07	2°Z.29'43	1°21'44	max. Earth dist.	-149 Dec 14 j 21:27	20°Z.00'56	31.18312 AU
max. Earth dist.	-157 Nov 27 j 13:16	2°Z.29'26	31.24380 AU	retrograde	-148 Mar 28 j 03:09	22°Z.30'49	
retrograde	-156 Mar 10 j 02:59	4°Z.58'39		opposition	-148 Jun 16 j 12:31	21°Z.07'26	0°55'39
opposition	-156 May 29 j 04:36	3°Z.35'44	1°25'41	min. Earth dist.	-148 Jun 16 j 08:03	21°Z.07'44	29.17756 AU
min. Earth dist.	-156 May 29 j 07:14	3°Z.35'34	29.24143 AU	direct	-148 Sep 04 j 11:57	19°Z.44'13	
direct	-156 Aug 17 j 15:19	2°Z.12'15		conjunction	-148 Dec 16 j 03:44	22°Z.12'06	0°50'10
				minimum elong	-148 Dec 16 j 03:44	22°Z.12'06	0°50'09
				max. Earth dist.	-148 Dec 16 j 07:57	22°Z.12'30	31.17149 AU

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Attention, astronomical year style is used: The year -147 in astronomical counting style is the year 148 BCE in historical counting style.

retrograde	-147 Mar 30 j 12:46	24° $\overline{\text{A}}$ 42'24		retrograde	-139 Apr 17 j 17:21	12° $\overline{\text{B}}$ 16'53	
opposition	-147 Jun 19 j 01:40	23° $\overline{\text{A}}$ 18'53	0°51'29	opposition	-139 Jul 07 j 09:37	10° $\overline{\text{B}}$ 52'58	0°15'48
min. Earth dist.	-147 Jun 18 j 21:14	23° $\overline{\text{A}}$ 19'11	29.16600 AU	min. Earth dist.	-139 Jul 06 j 20:52	10° $\overline{\text{B}}$ 53'50	29.09895 AU
direct	-147 Sep 06 j 23:06	21° $\overline{\text{A}}$ 55'39		direct	-139 Sep 24 j 16:16	9° $\overline{\text{B}}$ 30'03	
conjunction	-147 Dec 18 j 13:09	24° $\overline{\text{A}}$ 23'27	0°46'13	conjunction	-138 Jan 04 j 18:33	11° $\overline{\text{B}}$ 57'45	0°12'40
minimum elong	-147 Dec 18 j 13:09	24° $\overline{\text{A}}$ 23'27	0°46'13	minimum elong	-138 Jan 04 j 18:33	11° $\overline{\text{B}}$ 57'45	0°12'40
max. Earth dist.	-147 Dec 18 j 18:34	24° $\overline{\text{A}}$ 23'58	31.16026 AU	behind sun begin	-138 Jan 04 j 14:25	11° $\overline{\text{B}}$ 57'22	
retrograde	-146 Apr 02 j 00:17	26° $\overline{\text{A}}$ 53'52		behind sun end	-138 Jan 04 j 22:42	11° $\overline{\text{B}}$ 58'07	
opposition	-146 Jun 21 j 14:31	25° $\overline{\text{A}}$ 30'15	0°47'14	max. Earth dist.	-138 Jan 05 j 06:53	11° $\overline{\text{B}}$ 58'54	31.09437 AU
min. Earth dist.	-146 Jun 21 j 07:59	25° $\overline{\text{A}}$ 30'41	29.15509 AU	retrograde	-138 Apr 20 j 03:56	14° $\overline{\text{B}}$ 29'34	
direct	-146 Sep 09 j 10:09	24° $\overline{\text{A}}$ 07'00		opposition	-138 Jul 09 j 22:48	13° $\overline{\text{B}}$ 05'36	0°11'08
conjunction	-146 Dec 20 j 22:30	26° $\overline{\text{A}}$ 34'44	0°42'13	min. Earth dist.	-138 Jul 09 j 10:35	13° $\overline{\text{B}}$ 06'26	29.08976 AU
minimum elong	-146 Dec 20 j 22:30	26° $\overline{\text{A}}$ 34'45	0°42'13	direct	-138 Sep 27 j 03:11	11° $\overline{\text{B}}$ 42'42	
max. Earth dist.	-146 Dec 21 j 04:33	26° $\overline{\text{A}}$ 35'19	31.14977 AU	conjunction	-137 Jan 07 j 04:49	14° $\overline{\text{B}}$ 10'24	0°08'19
retrograde	-145 Apr 04 j 12:23	29° $\overline{\text{A}}$ 05'18		minimum elong	-137 Jan 07 j 04:49	14° $\overline{\text{B}}$ 10'23	0°08'19
opposition	-145 Jun 24 j 03:31	27° $\overline{\text{A}}$ 41'36	0°42'55	behind sun begin	-137 Jan 06 j 23:09	14° $\overline{\text{B}}$ 09'53	
min. Earth dist.	-145 Jun 23 j 20:51	27° $\overline{\text{A}}$ 42'03	29.14518 AU	behind sun end	-137 Jan 07 j 10:29	14° $\overline{\text{B}}$ 10'54	
direct	-145 Sep 11 j 19:22	26° $\overline{\text{A}}$ 18'22		max. Earth dist.	-137 Jan 07 j 17:48	14° $\overline{\text{B}}$ 11'37	31.08461 AU
conjunction	-145 Dec 23 j 08:00	28° $\overline{\text{A}}$ 46'04	0°38'09	retrograde	-137 Apr 22 j 16:11	16° $\overline{\text{B}}$ 42'21	
minimum elong	-145 Dec 23 j 08:00	28° $\overline{\text{A}}$ 46'04	0°38'08	opposition	-137 Jul 12 j 11:52	15° $\overline{\text{B}}$ 18'20	0°06'28
max. Earth dist.	-145 Dec 23 j 15:53	28° $\overline{\text{A}}$ 46'48	31.14043 AU	min. Earth dist.	-137 Jul 11 j 22:11	15° $\overline{\text{B}}$ 19'16	29.07927 AU
retrograde	-144 Jan 26 j 06:39	0° $\overline{\text{B}}$		direct	-137 Sep 29 j 14:27	13° $\overline{\text{B}}$ 55'26	
retrograde	-144 Apr 06 j 00:16	1° $\overline{\text{B}}$ 16'46		conjunction	-136 Jan 09 j 14:56	16° $\overline{\text{B}}$ 23'06	0°03'58
opposition	-144 Jun 25 j 16:21	29° $\overline{\text{A}}$ 53'01	0°38'32	minimum elong	-136 Jan 09 j 14:56	16° $\overline{\text{B}}$ 23'06	0°03'57
min. Earth dist.	-144 Jun 25 j 07:46	29° $\overline{\text{A}}$ 53'36	29.13629 AU	behind sun begin	-136 Jan 09 j 08:36	16° $\overline{\text{B}}$ 22'32	
direct	-144 Sep 13 j 07:49	28° $\overline{\text{A}}$ 29'49		behind sun end	-136 Jan 09 j 21:16	16° $\overline{\text{B}}$ 23'41	
conjunction	-144 Dec 24 j 17:25	0° $\overline{\text{B}}$ 57'29	0°34'01	max. Earth dist.	-136 Jan 10 j 03:52	16° $\overline{\text{B}}$ 24'19	31.07349 AU
minimum elong	-144 Dec 24 j 17:25	0° $\overline{\text{B}}$ 57'29	0°34'01	retrograde	-136 Apr 24 j 04:32	18° $\overline{\text{B}}$ 55'13	
max. Earth dist.	-144 Dec 25 j 01:23	0° $\overline{\text{B}}$ 58'14	31.13213 AU	min. Earth dist.	-136 Jul 13 j 11:50	17° $\overline{\text{B}}$ 32'00	29.06775 AU
retrograde	-143 Apr 08 j 14:33	3° $\overline{\text{B}}$ 28'22		opposition	-136 Jul 14 j 01:03	17° $\overline{\text{B}}$ 31'06	0°01'47
opposition	-143 Jun 28 j 05:24	2° $\overline{\text{B}}$ 04'34	0°34'05	direct	-136 Sep 30 j 23:54	16° $\overline{\text{B}}$ 08'11	
min. Earth dist.	-143 Jun 27 j 20:10	2° $\overline{\text{B}}$ 05'12	29.12851 AU	desc. node	-136 Dec 01 j 07:15	17° $\overline{\text{B}}$ 08'55	
direct	-143 Sep 15 j 17:44	0° $\overline{\text{B}}$ 41'25		conjunction	-135 Jan 11 j 01:17	18° $\overline{\text{B}}$ 35'49	0°00'-29
conjunction	-143 Dec 27 j 03:02	3° $\overline{\text{B}}$ 09'05	0°29'50	minimum elong	-135 Jan 11 j 01:15	18° $\overline{\text{B}}$ 35'49	0°00'31
minimum elong	-143 Dec 27 j 03:02	3° $\overline{\text{B}}$ 09'05	0°29'49	behind sun begin	-135 Jan 10 j 18:52	18° $\overline{\text{B}}$ 35'14	
max. Earth dist.	-143 Dec 27 j 13:06	3° $\overline{\text{B}}$ 10'02	31.12471 AU	behind sun end	-135 Jan 11 j 07:39	18° $\overline{\text{B}}$ 36'23	
retrograde	-142 Apr 11 j 02:04	5° $\overline{\text{B}}$ 40'09		max. Earth dist.	-135 Jan 11 j 15:40	18° $\overline{\text{B}}$ 37'10	31.06172 AU
opposition	-142 Jun 30 j 18:26	4° $\overline{\text{B}}$ 16'19	0°29'35	retrograde	-135 Apr 26 j 16:36	21° $\overline{\text{B}}$ 08'03	
min. Earth dist.	-142 Jun 30 j 08:13	4° $\overline{\text{B}}$ 17'01	29.12126 AU	opposition	-135 Jul 16 j 14:04	19° $\overline{\text{B}}$ 43'50	0°-2'-53
direct	-142 Sep 18 j 05:41	2° $\overline{\text{B}}$ 53'14		min. Earth dist.	-135 Jul 15 j 23:23	19° $\overline{\text{B}}$ 44'51	29.05579 AU
conjunction	-142 Dec 29 j 12:42	5° $\overline{\text{B}}$ 20'54	0°25'35	direct	-135 Oct 03 j 12:38	18° $\overline{\text{B}}$ 20'54	
minimum elong	-142 Dec 29 j 12:42	5° $\overline{\text{B}}$ 20'54	0°25'35	conjunction	-134 Jan 13 j 11:23	20° $\overline{\text{B}}$ 48'29	0°-4'-55
max. Earth dist.	-142 Dec 29 j 22:40	5° $\overline{\text{B}}$ 21'50	31.11771 AU	minimum elong	-134 Jan 13 j 11:23	20° $\overline{\text{B}}$ 48'29	0°04'57
retrograde	-141 Apr 13 j 15:49	7° $\overline{\text{B}}$ 52'09		behind sun begin	-134 Jan 13 j 05:08	20° $\overline{\text{B}}$ 47'55	
opposition	-141 Jul 03 j 07:19	6° $\overline{\text{B}}$ 28'18	0°25'01	behind sun end	-134 Jan 13 j 17:38	20° $\overline{\text{B}}$ 49'03	
min. Earth dist.	-141 Jul 02 j 20:06	6° $\overline{\text{B}}$ 29'03	29.11431 AU	max. Earth dist.	-134 Jan 14 j 01:33	20° $\overline{\text{B}}$ 49'49	31.04981 AU
direct	-141 Sep 20 j 16:24	5° $\overline{\text{B}}$ 05'16		retrograde	-134 Apr 29 j 06:47	23° $\overline{\text{B}}$ 20'51	
conjunction	-141 Dec 31 j 22:35	7° $\overline{\text{B}}$ 32'57	0°21'19	opposition	-134 Jul 19 j 03:08	21° $\overline{\text{B}}$ 56'32	0°-7'-34
minimum elong	-141 Dec 31 j 22:35	7° $\overline{\text{B}}$ 32'57	0°21'19	min. Earth dist.	-134 Jul 18 j 12:08	21° $\overline{\text{B}}$ 57'33	29.04416 AU
max. Earth dist.	-140 Jan 01 j 10:09	7° $\overline{\text{B}}$ 34'02	31.11059 AU	direct	-134 Oct 05 j 22:18	20° $\overline{\text{B}}$ 33'33	
retrograde	-140 Apr 15 j 03:33	10° $\overline{\text{B}}$ 04'24		conjunction	-133 Jan 15 j 21:48	23° $\overline{\text{B}}$ 01'08	0°-9'-16
opposition	-140 Jul 04 j 20:29	8° $\overline{\text{B}}$ 40'31	0°20'26	minimum elong	-133 Jan 15 j 21:49	23° $\overline{\text{B}}$ 01'08	0°09'17
min. Earth dist.	-140 Jul 04 j 09:13	8° $\overline{\text{B}}$ 41'17	29.10697 AU	behind sun begin	-133 Jan 15 j 16:23	23° $\overline{\text{B}}$ 00'38	
direct	-140 Sep 22 j 04:54	7° $\overline{\text{B}}$ 17'33		behind sun end	-133 Jan 16 j 03:14	23° $\overline{\text{B}}$ 01'37	
conjunction	-139 Jan 02 j 08:25	9° $\overline{\text{B}}$ 45'15	0°17'00	max. Earth dist.	-133 Jan 16 j 13:53	23° $\overline{\text{B}}$ 02'39	31.03841 AU
minimum elong	-139 Jan 02 j 08:25	9° $\overline{\text{B}}$ 45'15	0°17'00	retrograde	-133 May 01 j 18:10	25° $\overline{\text{B}}$ 33'37	
max. Earth dist.	-139 Jan 02 j 20:05	9° $\overline{\text{B}}$ 46'20	31.10302 AU	opposition	-133 Jul 21 j 15:55	24° $\overline{\text{B}}$ 09'13	0°-12'-14
				min. Earth dist.	-133 Jul 20 j 23:59	24° $\overline{\text{B}}$ 10'18	29.03318 AU
				direct	-133 Oct 08 j 09:57	22° $\overline{\text{B}}$ 46'13	
				conjunction	-132 Jan 18 j 08:07	25° $\overline{\text{B}}$ 13'47	0°-13'-37

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Attention, astronomical year style is used: The year -132 in astronomical counting style is the year 133 BCE in historical counting style.

minimum elong	-132 Jan 18 j 08:07	25°☾13'47	0°13'38	conjunction	-124 Feb 04 j 23:24	12°☾59'53	0°-47'-22
behind sun begin	-132 Jan 18 j 04:32	25°☾13'28		minimum elong	-124 Feb 04 j 23:24	12°☾59'53	0°47'24
behind sun end	-132 Jan 18 j 11:42	25°☾14'07		max. Earth dist.	-124 Feb 05 j 20:23	13°☾01'52	30.96173 AU
max. Earth dist.	-132 Jan 19 j 00:08	25°☾15'18	31.02800 AU		-124 Apr 05 j 16:03	15°☾	
retrograde	-132 May 03 j 08:51	27°☾46'24		retrograde	-124 May 21 j 15:23	15°☾33'38	
min. Earth dist.	-132 Jul 22 j 11:50	26°☾23'06	29.02340 AU		-124 Jul 08 j 04:45	15°☾	
opposition	-132 Jul 23 j 04:52	26°☾21'56	0°-16'-53	opposition	-124 Aug 10 j 12:10	14°☾08'49	0°-52'-49
direct	-132 Oct 09 j 21:09	24°☾58'56		min. Earth dist.	-124 Aug 09 j 16:00	14°☾10'13	28.95667 AU
				direct	-124 Oct 27 j 15:04	12°☾45'53	
conjunction	-131 Jan 19 j 18:29	27°☾26'30	0°-17'-57		-123 Jan 31 j 10:23	15°☾	
minimum elong	-131 Jan 19 j 18:30	27°☾26'30	0°17'58				
max. Earth dist.	-131 Jan 20 j 12:13	27°☾28'11	31.01866 AU	conjunction	-123 Feb 06 j 10:40	15°☾13'40	0°-51'-21
retrograde	-131 May 05 j 21:33	29°☾59'16		minimum elong	-123 Feb 06 j 10:39	15°☾13'40	0°51'22
opposition	-131 Jul 25 j 17:52	28°☾34'44	0°-21'-31	max. Earth dist.	-123 Feb 07 j 07:00	15°☾15'35	30.95066 AU
min. Earth dist.	-131 Jul 25 j 00:34	28°☾35'55	29.01462 AU	retrograde	-123 May 24 j 06:19	17°☾47'31	
direct	-131 Oct 12 j 09:47	27°☾11'45		min. Earth dist.	-123 Aug 12 j 04:32	16°☾24'02	28.94535 AU
				opposition	-123 Aug 13 j 01:03	16°☾22'37	0°-57'-2
conjunction	-130 Jan 22 j 05:03	29°☾39'20	0°-22'-17		-123 Oct 25 j 11:40	15°☾	
minimum elong	-130 Jan 22 j 05:03	29°☾39'20	0°22'17	direct	-123 Oct 30 j 02:23	14°☾59'38	
max. Earth dist.	-130 Jan 22 j 23:05	29°☾41'03	31.01047 AU		-123 Nov 03 j 17:53	15°☾	
	-130 Jan 31 j 07:29	0°☾		conjunction	-122 Feb 08 j 22:12	17°☾27'25	0°-55'-15
retrograde	-130 May 08 j 11:29	2°☾12'15		minimum elong	-122 Feb 08 j 22:12	17°☾27'25	0°55'16
min. Earth dist.	-130 Jul 27 j 11:45	0°☾48'58	29.00688 AU	max. Earth dist.	-122 Feb 09 j 19:40	17°☾29'27	30.93908 AU
opposition	-130 Jul 28 j 06:37	0°☾47'40	0°-26'-8	retrograde	-122 May 26 j 19:04	20°☾01'21	
	-130 Aug 28 j 02:55	30°☾		opposition	-122 Aug 15 j 13:41	18°☾36'22	-1°-1'-9
direct	-130 Oct 14 j 20:58	29°☾24'43		min. Earth dist.	-122 Aug 14 j 17:26	18°☾37'46	28.93386 AU
	-130 Nov 29 j 16:41	0°☾		direct	-122 Nov 01 j 14:53	17°☾13'20	
conjunction	-129 Jan 24 j 15:43	1°☾52'19	0°-26'-34				
minimum elong	-129 Jan 24 j 15:43	1°☾52'19	0°26'35	conjunction	-121 Feb 11 j 09:42	19°☾41'09	0°-59'-4
max. Earth dist.	-129 Jan 25 j 10:32	1°☾54'06	31.00294 AU	minimum elong	-121 Feb 11 j 09:42	19°☾41'09	0°59'05
retrograde	-129 May 10 j 22:58	4°☾25'23		max. Earth dist.	-121 Feb 12 j 07:07	19°☾43'10	30.92783 AU
opposition	-129 Jul 30 j 19:35	3°☾00'47	0°-30'-42	retrograde	-121 May 29 j 09:18	22°☾15'10	
min. Earth dist.	-129 Jul 30 j 01:07	3°☾02'03	28.99964 AU	min. Earth dist.	-121 Aug 17 j 04:47	20°☾51'35	28.92301 AU
direct	-129 Oct 17 j 08:10	1°☾37'51		opposition	-121 Aug 18 j 02:17	20°☾50'06	-1°-5'-11
				direct	-121 Nov 04 j 02:26	19°☾27'01	
conjunction	-128 Jan 27 j 02:27	4°☾05'29	0°-30'-50				
minimum elong	-128 Jan 27 j 02:27	4°☾05'29	0°30'51	conjunction	-120 Feb 13 j 21:07	21°☾54'52	-1°-2'-48
max. Earth dist.	-128 Jan 27 j 22:13	4°☾07'22	30.99588 AU	minimum elong	-120 Feb 13 j 21:07	21°☾54'52	1°02'49
retrograde	-128 May 12 j 12:24	6°☾38'42		max. Earth dist.	-120 Feb 14 j 19:10	21°☾56'57	30.91726 AU
opposition	-128 Aug 01 j 08:26	5°☾14'05	0°-35'-15	retrograde	-120 May 30 j 21:35	24°☾28'59	
min. Earth dist.	-128 Jul 31 j 12:29	5°☾15'27	28.99256 AU	opposition	-120 Aug 19 j 14:59	23°☾03'51	-1°-9'-8
direct	-128 Oct 18 j 19:58	3°☾51'11		min. Earth dist.	-120 Aug 18 j 17:54	23°☾05'19	28.91310 AU
				direct	-120 Nov 05 j 14:13	21°☾40'45	
conjunction	-127 Jan 28 j 13:25	6°☾18'51	0°-35'-3				
minimum elong	-127 Jan 28 j 13:24	6°☾18'51	0°35'04	conjunction	-119 Feb 15 j 08:49	24°☾08'38	-1°-6'-26
max. Earth dist.	-127 Jan 29 j 09:01	6°☾20'43	30.98862 AU	minimum elong	-119 Feb 15 j 08:49	24°☾08'38	1°06'26
retrograde	-127 May 15 j 01:03	8°☾52'14		max. Earth dist.	-119 Feb 16 j 07:44	24°☾10'48	30.90801 AU
opposition	-127 Aug 03 j 21:28	7°☾27'35	0°-39'-44	retrograde	-119 Jun 02 j 12:03	26°☾42'51	
min. Earth dist.	-127 Aug 03 j 02:14	7°☾28'54	28.98519 AU	min. Earth dist.	-119 Aug 21 j 04:51	25°☾19'14	28.90452 AU
direct	-127 Oct 21 j 05:36	6°☾04'42		opposition	-119 Aug 22 j 03:25	25°☾17'41	-1°-12'-58
				direct	-119 Nov 08 j 02:28	23°☾54'34	
conjunction	-126 Jan 31 j 00:38	8°☾32'24	0°-39'-13				
minimum elong	-126 Jan 31 j 00:38	8°☾32'24	0°39'14	conjunction	-118 Feb 17 j 20:30	26°☾22'30	-1°-9'-58
max. Earth dist.	-126 Jan 31 j 21:23	8°☾34'22	30.98084 AU	minimum elong	-118 Feb 17 j 20:29	26°☾22'30	1°10'00
retrograde	-126 May 17 j 13:16	11°☾05'55		max. Earth dist.	-118 Feb 18 j 19:18	26°☾24'40	30.89997 AU
opposition	-126 Aug 06 j 10:21	9°☾41'14	0°-44'-9	retrograde	-118 Jun 05 j 00:11	28°☾56'50	
min. Earth dist.	-126 Aug 05 j 14:09	9°☾42'38	28.97687 AU	opposition	-118 Aug 24 j 16:02	27°☾31'38	-1°-16'-42
direct	-126 Oct 23 j 17:46	8°☾18'22		min. Earth dist.	-118 Aug 23 j 18:04	27°☾33'09	28.89721 AU
				direct	-118 Nov 10 j 12:26	26°☾08'31	
conjunction	-125 Feb 02 j 11:55	10°☾46'06	0°-43'-19				
minimum elong	-125 Feb 02 j 11:55	10°☾46'06	0°43'20	conjunction	-117 Feb 20 j 08:25	28°☾36'31	-1°-13'-24
max. Earth dist.	-125 Feb 03 j 07:41	10°☾47'58	30.97188 AU	minimum elong	-117 Feb 20 j 08:24	28°☾36'31	1°13'25
retrograde	-125 May 20 j 03:09	13°☾19'45		max. Earth dist.	-117 Feb 21 j 08:32	28°☾38'47	30.89319 AU
opposition	-125 Aug 08 j 23:15	11°☾55'01	0°-48'-31		-117 Mar 31 j 04:36	0°☾	
min. Earth dist.	-125 Aug 08 j 03:27	11°☾56'22	28.96739 AU	retrograde	-117 Jun 07 j 12:04	1°☾10'57	
direct	-125 Oct 26 j 03:11	10°☾32'06			-117 Aug 18 j 13:57	30°☾	

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Attention, astronomical year style is used: The year -117 in astronomical counting style is the year 118 BCE in historical counting style.

min. Earth dist.	-117 Aug 26 j 05:16	29° <del>47</del> '20	28.89093 AU	direct	-109 Nov 30 j 19:07	16° <del>19</del> '35	
opposition	-117 Aug 27 j 04:21	29° <del>45</del> '44	-1°-20'-19				
direct	-117 Nov 13 j 00:17	28° <del>22</del> '38		conjunction	-108 Mar 12 j 00:44	18° <del>48</del> '06	-1°-38'-49
	-116 Jan 31 j 01:57	0° <del>00</del> '		minimum elong	-108 Mar 12 j 00:44	18° <del>48</del> '05	1°38'51
				max. Earth dist.	-108 Mar 13 j 00:48	18° <del>50</del> '22	30.83434 AU
conjunction	-116 Feb 22 j 20:17	0° <del>50</del> '42	-1°-16'-44	retrograde	-108 Jun 27 j 13:22	21° <del>23</del> '00	
minimum elong	-116 Feb 22 j 20:16	0° <del>50</del> '42	1°16'45	opposition	-108 Sep 15 j 19:12	19° <del>57</del> '28	-1°-46'-51
max. Earth dist.	-116 Feb 23 j 19:41	0° <del>52</del> '55	30.88738 AU	min. Earth dist.	-108 Sep 14 j 20:54	19° <del>59</del> '02	28.83234 AU
retrograde	-116 Jun 09 j 01:45	3° <del>25</del> '15		direct	-108 Dec 02 j 07:45	18° <del>34</del> '02	
opposition	-116 Aug 28 j 16:55	2° <del>00</del> '02	-1°-23'-48				
min. Earth dist.	-116 Aug 27 j 18:07	2° <del>01</del> '37	28.88559 AU	conjunction	-107 Mar 14 j 13:27	21° <del>02</del> '36	-1°-40'-57
direct	-116 Nov 14 j 08:59	0° <del>36</del> '57		minimum elong	-107 Mar 14 j 13:27	21° <del>02</del> '36	1°40'57
				max. Earth dist.	-107 Mar 15 j 12:33	21° <del>04</del> '46	30.82836 AU
conjunction	-115 Feb 24 j 08:25	3° <del>05</del> '06	-1°-19'-56	retrograde	-107 Jun 30 j 02:52	23° <del>37</del> '31	
minimum elong	-115 Feb 24 j 08:25	3° <del>05</del> '06	1°19'57	min. Earth dist.	-107 Sep 17 j 09:27	22° <del>13</del> '29	28.82714 AU
max. Earth dist.	-115 Feb 25 j 09:10	3° <del>07</del> '26	30.88218 AU	opposition	-107 Sep 18 j 07:16	22° <del>11</del> '57	-1°-49'-3
retrograde	-115 Jun 11 j 14:15	5° <del>39</del> '46		direct	-107 Dec 04 j 17:29	20° <del>48</del> '29	
min. Earth dist.	-115 Aug 30 j 06:20	4° <del>16</del> '09	28.88046 AU				
opposition	-115 Aug 31 j 05:22	4° <del>14</del> '33	-1°-27'-11	conjunction	-106 Mar 17 j 02:32	23° <del>17</del> '06	-1°-42'-56
direct	-115 Nov 16 j 20:28	2° <del>51</del> '28		minimum elong	-106 Mar 17 j 02:31	23° <del>17</del> '06	1°42'57
				max. Earth dist.	-106 Mar 18 j 02:46	23° <del>19</del> '23	30.82378 AU
conjunction	-114 Feb 26 j 20:44	5° <del>19</del> '42	-1°-23'-2	retrograde	-106 Jul 02 j 14:25	25° <del>52</del> '01	
minimum elong	-114 Feb 26 j 20:44	5° <del>19</del> '42	1°23'03	opposition	-106 Sep 20 j 19:02	24° <del>26</del> '28	-1°-51'-5
max. Earth dist.	-114 Feb 27 j 20:30	5° <del>21</del> '56	30.87701 AU	min. Earth dist.	-106 Sep 19 j 20:56	24° <del>28</del> '01	28.82329 AU
retrograde	-114 Jun 14 j 04:51	7° <del>54</del> '27		direct	-106 Dec 07 j 05:18	23° <del>02</del> '58	
opposition	-114 Sep 02 j 17:42	6° <del>29</del> '14	-1°-30'-25				
min. Earth dist.	-114 Sep 01 j 18:45	6° <del>30</del> '50	28.87519 AU	conjunction	-105 Mar 19 j 15:29	25° <del>31</del> '40	-1°-44'-45
direct	-114 Nov 19 j 07:04	5° <del>06</del> '08		minimum elong	-105 Mar 19 j 15:29	25° <del>31</del> '40	1°44'45
				max. Earth dist.	-105 Mar 20 j 14:47	25° <del>33</del> '52	30.82072 AU
conjunction	-113 Mar 01 j 09:18	7° <del>34</del> '27	-1°-26'00	retrograde	-105 Jul 05 j 04:04	28° <del>06</del> '37	
minimum elong	-113 Mar 01 j 09:18	7° <del>34</del> '27	1°26'01	min. Earth dist.	-105 Sep 22 j 08:45	26° <del>42</del> '38	28.82101 AU
max. Earth dist.	-113 Mar 02 j 09:42	7° <del>36</del> '45	30.87124 AU	opposition	-105 Sep 23 j 06:58	26° <del>41</del> '05	-1°-52'-56
retrograde	-113 Jun 16 j 17:33	10° <del>09</del> '17		direct	-105 Dec 09 j 15:24	25° <del>17</del> '34	
min. Earth dist.	-113 Sep 04 j 07:57	8° <del>45</del> '35	28.86904 AU				
opposition	-113 Sep 05 j 06:12	8° <del>44</del> '02	-1°-33'-31	conjunction	-104 Mar 21 j 04:30	27° <del>46</del> '22	-1°-46'-25
direct	-113 Nov 21 j 18:50	7° <del>20</del> '55		minimum elong	-104 Mar 21 j 04:30	27° <del>46</del> '22	1°46'26
				max. Earth dist.	-104 Mar 22 j 04:45	27° <del>48</del> '39	30.81900 AU
conjunction	-112 Mar 02 j 21:45	9° <del>49</del> '17	-1°-28'-51		-104 May 31 j 09:14	0° <del>00</del> '	
minimum elong	-112 Mar 02 j 21:45	9° <del>49</del> '17	1°28'52	retrograde	-104 Jul 06 j 16:15	0° <del>21</del> '22	
max. Earth dist.	-112 Mar 03 j 21:26	9° <del>51</del> '31	30.86469 AU		-104 Aug 12 j 16:03	30° <del>00</del> '	
retrograde	-112 Jun 18 j 08:25	12° <del>24</del> '10		opposition	-104 Sep 24 j 18:55	28° <del>55</del> '51	-1°-54'-38
opposition	-112 Sep 06 j 18:37	10° <del>58</del> '53	-1°-36'-29	min. Earth dist.	-104 Sep 23 j 21:16	28° <del>57</del> '22	28.81986 AU
min. Earth dist.	-112 Sep 05 j 19:49	11° <del>00</del> '28	28.86206 AU	direct	-104 Dec 11 j 02:23	27° <del>32</del> '21	
direct	-112 Nov 23 j 06:24	9° <del>35</del> '42					
				conjunction	-103 Mar 23 j 17:46	0° <del>01</del> '15	-1°-47'-54
conjunction	-111 Mar 05 j 10:26	12° <del>04</del> '07	-1°-31'-33	minimum elong	-103 Mar 23 j 17:46	0° <del>01</del> '15	1°47'55
minimum elong	-111 Mar 05 j 10:26	12° <del>04</del> '07	1°31'33		-103 Mar 23 j 04:31	0° <del>00</del> '	
max. Earth dist.	-111 Mar 06 j 09:59	12° <del>06</del> '21	30.85719 AU	max. Earth dist.	-103 Mar 24 j 17:18	0° <del>03</del> '28	30.81842 AU
retrograde	-111 Jun 20 j 21:46	14° <del>39</del> '01		retrograde	-103 Jul 09 j 07:12	2° <del>36</del> '17	
min. Earth dist.	-111 Sep 08 j 09:18	13° <del>15</del> '11	28.85432 AU	min. Earth dist.	-103 Sep 26 j 08:36	1° <del>12</del> '22	28.81964 AU
opposition	-111 Sep 09 j 06:57	13° <del>13</del> '40	-1°-39'-19	opposition	-103 Sep 27 j 06:39	1° <del>10</del> '49	-1°-56'-8
direct	-111 Nov 25 j 18:57	11° <del>50</del> '26			-103 Nov 16 j 05:21	30° <del>00</del> '	
				direct	-103 Dec 13 j 13:20	29° <del>47</del> '19	
conjunction	-110 Mar 07 j 23:15	14° <del>18</del> '53	-1°-34'-7		-102 Jan 09 j 15:17	0° <del>00</del> '	
minimum elong	-110 Mar 07 j 23:14	14° <del>18</del> '53	1°34'09				
max. Earth dist.	-110 Mar 08 j 22:55	14° <del>21</del> '07	30.84934 AU	conjunction	-102 Mar 26 j 07:15	2° <del>16</del> '21	-1°-49'-14
retrograde	-110 Jun 23 j 12:32	16° <del>53</del> '47		minimum elong	-102 Mar 26 j 07:15	2° <del>16</del> '21	1°49'16
opposition	-110 Sep 11 j 19:05	15° <del>28</del> '22	-1°-41'-59	max. Earth dist.	-102 Mar 27 j 06:37	2° <del>18</del> '33	30.81825 AU
min. Earth dist.	-110 Sep 10 j 20:36	15° <del>29</del> '56	28.84641 AU	retrograde	-102 Jul 11 j 20:48	4° <del>51</del> '25	
direct	-110 Nov 28 j 08:18	14° <del>05</del> '04		opposition	-102 Sep 29 j 18:34	3° <del>26</del> '00	-1°-57'-28
				min. Earth dist.	-102 Sep 28 j 21:53	3° <del>27</del> '28	28.81954 AU
conjunction	-109 Mar 10 j 11:53	16° <del>33</del> '32	-1°-36'-32	direct	-102 Dec 16 j 01:26	2° <del>02</del> '31	
minimum elong	-109 Mar 10 j 11:52	16° <del>33</del> '32	1°36'33				
max. Earth dist.	-109 Mar 11 j 10:58	16° <del>35</del> '43	30.84143 AU	conjunction	-101 Mar 28 j 20:49	4° <del>31</del> '40	-1°-50'-24
retrograde	-109 Jun 26 j 00:37	19° <del>08</del> '26		minimum elong	-101 Mar 28 j 20:49	4° <del>31</del> '40	1°50'25
min. Earth dist.	-109 Sep 13 j 09:48	17° <del>44</del> '28	28.83890 AU	max. Earth dist.	-101 Mar 29 j 19:50	4° <del>33</del> '50	30.81804 AU
opposition	-109 Sep 14 j 07:14	17° <del>42</del> '58	-1°-44'-30	retrograde	-101 Jul 14 j 11:52	7° <del>06</del> '45	

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Attention, astronomical year style is used: The year -101 in astronomical counting style is the year 102 BCE in historical counting style.

min. Earth dist.	-101 Oct 01 j 09:12	5°♃42'52	28.81903 AU	conjunction	-92 Apr 18 j 01:33	24°♃49'30	-1°-53'-12
opposition	-101 Oct 02 j 06:20	5°♃41'23	-1°-58'-38	minimum elong	-92 Apr 18 j 01:33	24°♃49'30	1°53'14
direct	-101 Dec 18 j 14:39	4°♃17'53		max. Earth dist.	-92 Apr 18 j 19:52	24°♃51'13	30.80750 AU
				retrograde	-92 Aug 03 j 07:26	27°♃24'02	
conjunction	-100 Mar 30 j 10:30	6°♃47'08	-1°-51'-24	opposition	-92 Oct 21 j 13:47	25°♃58'43	-2°00'-46
minimum elong	-100 Mar 30 j 10:30	6°♃47'08	1°51'26	min. Earth dist.	-92 Oct 20 j 21:00	25°♃59'54	28.81029 AU
max. Earth dist.	-100 Mar 31 j 08:22	6°♃49'12	30.81709 AU	direct	-91 Jan 06 j 23:47	24°♃34'44	
retrograde	-100 Jul 16 j 01:03	9°♃22'13					
opposition	-100 Oct 03 j 18:15	7°♃56'52	-1°-59'-36	conjunction	-91 Apr 20 j 15:38	27°♃04'37	-1°-52'-38
min. Earth dist.	-100 Oct 02 j 22:46	7°♃58'14	28.81774 AU	minimum elong	-91 Apr 20 j 15:38	27°♃04'37	1°52'39
direct	-100 Dec 20 j 01:35	6°♃33'21		max. Earth dist.	-91 Apr 21 j 09:05	27°♃06'15	30.81075 AU
				retrograde	-91 Aug 05 j 20:34	29°♃39'05	
conjunction	-99 Apr 02 j 00:23	9°♃02'41	-1°-52'-14	min. Earth dist.	-91 Oct 23 j 09:53	28°♃14'54	28.81402 AU
minimum elong	-99 Apr 02 j 00:23	9°♃02'41	1°52'14	opposition	-91 Oct 24 j 01:07	28°♃13'49	-2°00'-5
max. Earth dist.	-99 Apr 02 j 22:20	9°♃04'45	30.81539 AU	direct	-90 Jan 09 j 10:43	26°♃49'50	
retrograde	-99 Jul 18 j 15:18	11°♃37'43					
min. Earth dist.	-99 Oct 05 j 10:20	10°♃13'45	28.81551 AU	conjunction	-90 Apr 23 j 05:56	29°♃19'49	-1°-51'-54
opposition	-99 Oct 06 j 05:58	10°♃12'22	-2°00'-24	minimum elong	-90 Apr 23 j 05:56	29°♃19'49	1°51'55
direct	-99 Dec 22 j 15:02	8°♃48'48		max. Earth dist.	-90 Apr 23 j 23:29	29°♃21'28	30.81485 AU
					-90 May 11 j 07:29	0°♂	
conjunction	-98 Apr 04 j 14:12	11°♃18'13	-1°-52'-53	retrograde	-90 Aug 08 j 10:54	1°♂54'12	
minimum elong	-98 Apr 04 j 14:12	11°♃18'13	1°52'55	opposition	-90 Oct 26 j 12:10	0°♂29'01	-1°-59'-12
max. Earth dist.	-98 Apr 05 j 10:23	11°♃20'06	30.81283 AU	min. Earth dist.	-90 Oct 25 j 20:52	0°♂30'07	28.81819 AU
retrograde	-98 Jul 21 j 05:06	13°♃53'12			-90 Nov 12 j 22:07	30°♂♃	
opposition	-98 Oct 08 j 17:36	12°♃27'50	-2°-1'00	direct	-89 Jan 12 j 00:22	29°♃05'02	
min. Earth dist.	-98 Oct 07 j 23:12	12°♃29'08	28.81279 AU		-89 Mar 11 j 03:33	0°♂	
direct	-98 Dec 25 j 01:44	11°♃04'12					
				conjunction	-89 Apr 25 j 20:10	1°♂35'08	-1°-51'00
conjunction	-97 Apr 07 j 04:07	13°♃33'39	-1°-53'-22	minimum elong	-89 Apr 25 j 20:10	1°♂35'08	1°51'00
minimum elong	-97 Apr 07 j 04:07	13°♃33'39	1°53'23	max. Earth dist.	-89 Apr 26 j 11:54	1°♂36'36	30.81908 AU
max. Earth dist.	-97 Apr 08 j 00:50	13°♃35'36	30.81000 AU	retrograde	-89 Aug 11 j 00:41	4°♂09'27	
retrograde	-97 Jul 23 j 16:12	16°♃08'34		opposition	-89 Oct 28 j 23:27	2°♂44'20	-1°-58'-8
min. Earth dist.	-97 Oct 10 j 10:53	14°♃44'29	28.80996 AU	min. Earth dist.	-89 Oct 28 j 09:33	2°♂45'19	28.82236 AU
opposition	-97 Oct 11 j 05:07	14°♃43'12	-2°-1'-26	direct	-88 Jan 14 j 11:32	1°♂20'20	
direct	-97 Dec 27 j 14:28	13°♃19'30					
				conjunction	-88 Apr 27 j 10:35	3°♂50'31	-1°-49'-55
conjunction	-96 Apr 08 j 17:45	15°♃48'59	-1°-53'-41	minimum elong	-88 Apr 27 j 10:36	3°♂50'31	1°49'56
minimum elong	-96 Apr 08 j 17:45	15°♃48'59	1°53'42	max. Earth dist.	-88 Apr 28 j 02:24	3°♂52'00	30.82293 AU
max. Earth dist.	-96 Apr 09 j 13:00	15°♃50'48	30.80745 AU	retrograde	-88 Aug 12 j 12:57	6°♂24'45	
retrograde	-96 Jul 25 j 05:02	18°♃23'50		opposition	-88 Oct 30 j 10:40	4°♂59'42	-1°-56'-53
opposition	-96 Oct 12 j 16:38	16°♃58'27	-2°-1'-40	min. Earth dist.	-88 Oct 29 j 21:24	5°♂00'39	28.82570 AU
min. Earth dist.	-96 Oct 11 j 22:48	16°♃59'42	28.80776 AU	direct	-87 Jan 16 j 00:29	3°♂35'41	
direct	-96 Dec 29 j 00:59	15°♃34'40					
				conjunction	-87 Apr 30 j 01:04	6°♂05'57	-1°-48'-40
conjunction	-95 Apr 11 j 07:45	18°♃04'13	-1°-53'-50	minimum elong	-87 Apr 30 j 01:05	6°♂05'57	1°48'40
minimum elong	-95 Apr 11 j 07:45	18°♃04'13	1°53'50	max. Earth dist.	-87 Apr 30 j 14:37	6°♂07'13	30.82589 AU
max. Earth dist.	-95 Apr 12 j 03:34	18°♃06'05	30.80557 AU	retrograde	-87 Aug 15 j 02:36	8°♂40'04	
retrograde	-95 Jul 27 j 16:32	20°♃38'58		opposition	-87 Nov 01 j 21:46	7°♂15'04	-1°-55'-28
min. Earth dist.	-95 Oct 14 j 10:58	19°♃14'47	28.80639 AU	min. Earth dist.	-87 Nov 01 j 09:27	7°♂15'56	28.82817 AU
opposition	-95 Oct 15 j 03:57	19°♃13'35	-2°-1'-44	direct	-86 Jan 18 j 11:30	5°♂50'59	
direct	-95 Dec 31 j 11:50	17°♃49'44					
				conjunction	-86 May 02 j 15:42	8°♂21'20	-1°-47'-15
conjunction	-94 Apr 13 j 21:40	20°♃19'21	-1°-53'-47	minimum elong	-86 May 02 j 15:43	8°♂21'20	1°47'17
minimum elong	-94 Apr 13 j 21:40	20°♃19'21	1°53'49	max. Earth dist.	-86 May 03 j 05:11	8°♂22'36	30.82787 AU
max. Earth dist.	-94 Apr 14 j 16:23	20°♃21'07	30.80488 AU	retrograde	-86 Aug 17 j 14:02	10°♂55'20	
retrograde	-94 Jul 30 j 05:48	22°♃54'02		opposition	-86 Nov 04 j 08:56	9°♂30'21	-1°-53'-52
opposition	-94 Oct 17 j 15:15	21°♃28'39	-2°-1'-36	min. Earth dist.	-86 Nov 03 j 21:58	9°♂31'08	28.82969 AU
min. Earth dist.	-94 Oct 16 j 21:54	21°♃29'53	28.80634 AU	direct	-85 Jan 20 j 22:56	8°♂06'13	
direct	-93 Jan 02 j 23:10	20°♃04'44					
				conjunction	-85 May 05 j 05:59	10°♂36'37	-1°-45'-41
conjunction	-93 Apr 16 j 11:31	22°♃34'26	-1°-53'-35	minimum elong	-85 May 05 j 05:59	10°♂36'37	1°45'42
minimum elong	-93 Apr 16 j 11:32	22°♃34'26	1°53'35	max. Earth dist.	-85 May 05 j 17:43	10°♂37'43	30.82927 AU
max. Earth dist.	-93 Apr 17 j 06:14	22°♃36'11	30.80540 AU	retrograde	-85 Aug 20 j 02:34	13°♂10'29	
retrograde	-93 Aug 01 j 17:26	25°♃09'02		opposition	-85 Nov 06 j 19:54	11°♂45'32	-1°-52'-6
min. Earth dist.	-93 Oct 19 j 10:27	23°♃44'49	28.80760 AU	min. Earth dist.	-85 Nov 06 j 09:05	11°♂46'18	28.83090 AU
opposition	-93 Oct 20 j 02:39	23°♃43'40	-2°-1'-17	direct	-84 Jan 23 j 10:44	10°♂21'18	
direct	-92 Jan 05 j 11:10	22°♃19'44					

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Attention, astronomical year style is used: The year -84 in astronomical counting style is the year 85 BCE in historical counting style.

conjunction	-84 May 06 j 20:26	12°♄51'46	-1°-43'-57	opposition	-77 Nov 24 j 09:32	29°♄43'37	-1°-32'-10
minimum elong	-84 May 06 j 20:26	12°♄51'46	1°43'59	min. Earth dist.	-77 Nov 24 j 04:42	29°♄43'58	28.87065 AU
max. Earth dist.	-84 May 07 j 07:46	12°♄52'49	30.83042 AU	direct	-76 Feb 10 j 11:47	28°♄19'05	
	-84 Jul 13 j 03:46	15°♄			-76 May 02 j 18:33	0°♄	
retrograde	-84 Aug 21 j 13:12	15°♄25'29					
	-84 Sep 30 j 13:51	15°♄		conjunction	-76 May 25 j 15:04	0°♄50'12	-1°-24'-44
opposition	-84 Nov 08 j 06:48	14°♄00'33	-1°-50'-10	minimum elong	-76 May 25 j 15:04	0°♄50'12	1°24'45
min. Earth dist.	-84 Nov 07 j 21:37	14°♄01'12	28.83215 AU	max. Earth dist.	-76 May 25 j 19:47	0°♄50'38	30.87424 AU
direct	-83 Jan 24 j 22:33	12°♄36'15		retrograde	-76 Sep 08 j 18:16	3°♄22'49	
	-83 May 06 j 10:21	15°♄		opposition	-76 Nov 25 j 20:02	1°♄58'27	-1°-28'-59
				min. Earth dist.	-76 Nov 25 j 15:34	1°♄58'46	28.87896 AU
conjunction	-83 May 09 j 10:51	15°♄06'46	-1°-42'-4	direct	-75 Feb 11 j 23:28	0°♄33'53	
minimum elong	-83 May 09 j 10:51	15°♄06'46	1°42'05				
max. Earth dist.	-83 May 09 j 21:13	15°♄07'44	30.83203 AU	conjunction	-75 May 28 j 05:41	3°♄05'04	-1°-21'-42
retrograde	-83 Aug 24 j 02:19	17°♄40'20		minimum elong	-75 May 28 j 05:41	3°♄05'04	1°21'43
opposition	-83 Nov 10 j 17:33	16°♄15'26	-1°-48'-4	max. Earth dist.	-75 May 28 j 09:45	3°♄05'27	30.88213 AU
min. Earth dist.	-83 Nov 10 j 08:03	16°♄16'06	28.83400 AU	retrograde	-75 Sep 11 j 04:47	5°♄37'33	
	-82 Jan 04 j 11:07	15°♄		opposition	-75 Nov 28 j 06:47	4°♄13'15	-1°-25'-41
direct	-82 Jan 27 j 11:06	14°♄51'03		min. Earth dist.	-75 Nov 28 j 04:15	4°♄13'25	28.88640 AU
	-82 Feb 19 j 08:59	15°♄		direct	-74 Feb 14 j 10:35	2°♄48'38	
conjunction	-82 May 12 j 01:08	17°♄21'38	-1°-40'-2	conjunction	-74 May 30 j 20:06	5°♄19'53	-1°-18'-33
minimum elong	-82 May 12 j 01:08	17°♄21'38	1°40'03	minimum elong	-74 May 30 j 20:06	5°♄19'53	1°18'34
max. Earth dist.	-82 May 12 j 10:34	17°♄22'31	30.83428 AU	max. Earth dist.	-74 May 30 j 22:35	5°♄20'07	30.88922 AU
retrograde	-82 Aug 26 j 14:02	19°♄55'04		retrograde	-74 Sep 13 j 17:26	7°♄52'11	
opposition	-82 Nov 13 j 04:19	18°♄30'12	-1°-45'-48	opposition	-74 Nov 30 j 17:17	6°♄27'56	-1°-22'-15
min. Earth dist.	-82 Nov 12 j 20:23	18°♄30'45	28.83686 AU	min. Earth dist.	-74 Nov 30 j 14:47	6°♄28'07	28.89296 AU
direct	-81 Jan 29 j 22:16	17°♄05'45		direct	-73 Feb 16 j 22:32	5°♄03'16	
conjunction	-81 May 14 j 15:27	19°♄36'24	-1°-37'-51	conjunction	-73 Jun 02 j 10:30	7°♄34'33	-1°-15'-17
minimum elong	-81 May 14 j 15:27	19°♄36'24	1°37'51	minimum elong	-73 Jun 02 j 10:30	7°♄34'33	1°15'18
max. Earth dist.	-81 May 15 j 00:54	19°♄37'17	30.83788 AU	max. Earth dist.	-73 Jun 02 j 11:42	7°♄34'40	30.89543 AU
retrograde	-81 Aug 29 j 03:28	22°♄09'41		retrograde	-73 Sep 16 j 03:43	10°♄06'40	
opposition	-81 Nov 15 j 14:57	20°♄44'51	-1°-43'-23	opposition	-73 Dec 03 j 03:53	8°♄42'28	-1°-18'-42
min. Earth dist.	-81 Nov 15 j 06:43	20°♄45'27	28.84108 AU	min. Earth dist.	-73 Dec 03 j 03:20	8°♄42'30	28.89892 AU
direct	-80 Feb 01 j 12:22	19°♄20'22		direct	-72 Feb 19 j 10:04	7°♄17'43	
conjunction	-80 May 16 j 05:35	21°♄51'06	-1°-35'-31	conjunction	-72 Jun 04 j 00:51	9°♄49'02	-1°-11'-55
minimum elong	-80 May 16 j 05:35	21°♄51'06	1°35'31	minimum elong	-72 Jun 04 j 00:52	9°♄49'02	1°11'56
max. Earth dist.	-80 May 16 j 13:33	21°♄51'51	30.84290 AU	max. Earth dist.	-72 Jun 04 j 01:28	9°♄49'05	30.90129 AU
retrograde	-80 Aug 30 j 16:15	24°♄24'16		retrograde	-72 Sep 17 j 15:37	12°♄20'56	
opposition	-80 Nov 17 j 01:41	22°♄59'29	-1°-40'-49	opposition	-72 Dec 04 j 14:17	10°♄56'46	-1°-15'-3
min. Earth dist.	-80 Nov 16 j 18:33	23°♄00'00	28.84688 AU	min. Earth dist.	-72 Dec 04 j 13:54	10°♄56'48	28.90450 AU
direct	-79 Feb 02 j 23:59	21°♄34'58		direct	-71 Feb 21 j 00:11	9°♄31'57	
conjunction	-79 May 18 j 20:01	24°♄05'48	-1°-33'-2	conjunction	-71 Jun 06 j 15:07	12°♄03'17	-1°-8'-27
minimum elong	-79 May 18 j 20:01	24°♄05'48	1°33'02	minimum elong	-71 Jun 06 j 15:07	12°♄03'17	1°08'27
max. Earth dist.	-79 May 19 j 04:19	24°♄06'34	30.84945 AU	max. Earth dist.	-71 Jun 06 j 13:56	12°♄03'11	30.90691 AU
retrograde	-79 Sep 02 j 04:27	26°♄38'48		retrograde	-71 Sep 20 j 03:26	14°♄35'00	
opposition	-79 Nov 19 j 12:12	25°♄14'08	-1°-38'-5	opposition	-71 Dec 07 j 00:39	13°♄10'52	-1°-11'-17
min. Earth dist.	-79 Nov 19 j 05:24	25°♄14'37	28.85395 AU	min. Earth dist.	-71 Dec 07 j 01:41	13°♄10'47	28.91030 AU
direct	-78 Feb 05 j 12:47	23°♄49'36		direct	-70 Feb 23 j 11:54	11°♄45'57	
conjunction	-78 May 21 j 10:19	26°♄20'32	-1°-30'-24	conjunction	-70 Jun 09 j 05:22	14°♄17'20	-1°-4'-52
minimum elong	-78 May 21 j 10:19	26°♄20'32	1°30'25	minimum elong	-70 Jun 09 j 05:23	14°♄17'20	1°04'53
max. Earth dist.	-78 May 21 j 16:43	26°♄21'08	30.85723 AU	max. Earth dist.	-70 Jun 09 j 04:19	14°♄17'14	30.91299 AU
retrograde	-78 Sep 04 j 18:42	28°♄53'25		retrograde	-70 Sep 22 j 15:03	16°♄48'50	
opposition	-78 Nov 21 j 22:51	27°♄28'50	-1°-35'-11	opposition	-70 Dec 09 j 11:01	15°♄24'44	-1°-7'-24
min. Earth dist.	-78 Nov 21 j 16:41	27°♄29'17	28.86216 AU	min. Earth dist.	-70 Dec 09 j 12:27	15°♄24'38	28.91663 AU
direct	-77 Feb 08 j 00:09	26°♄04'18		direct	-69 Feb 26 j 01:18	13°♄59'47	
conjunction	-77 May 24 j 00:38	28°♄35'20	-1°-27'-38	conjunction	-69 Jun 11 j 19:11	16°♄31'11	-1°-1'-12
minimum elong	-77 May 24 j 00:38	28°♄35'20	1°27'38	minimum elong	-69 Jun 11 j 19:11	16°♄31'11	1°01'13
max. Earth dist.	-77 May 24 j 07:20	28°♄35'57	30.86569 AU	max. Earth dist.	-69 Jun 11 j 16:18	16°♄30'55	30.91988 AU
	-77 Jul 03 j 00:27	0°♄		retrograde	-69 Sep 25 j 04:20	19°♄02'30	
retrograde	-77 Sep 07 j 05:48	1°♄08'06		opposition	-69 Dec 11 j 21:21	17°♄38'27	-1°-3'-26
	-77 Nov 14 j 17:28	30°♄		min. Earth dist.	-69 Dec 11 j 23:15	17°♄38'19	28.92413 AU

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Attention, astronomical year style is used: The year -68 in astronomical counting style is the year 69 BCE in historical counting style.

direct	-68 Feb 28 j 13:34	16° <b>II</b> 13'26		opposition	-61 Dec 29 j 08:01	5° <b>☾</b> 28'14	0°-28'-47
				min. Earth dist.	-61 Dec 29 j 16:38	5° <b>☾</b> 27'38	29.00880 AU
conjunction	-68 Jun 13 j 09:18	18° <b>II</b> 44'53	0°-57'-27	direct	-60 Mar 17 j 12:04	4° <b>☾</b> 03'11	
minimum elong	-68 Jun 13 j 09:18	18° <b>II</b> 44'53	0°57'28				
max. Earth dist.	-68 Jun 13 j 06:51	18° <b>II</b> 44'39	30.92799 AU	conjunction	-60 Jul 02 j 00:21	6° <b>☾</b> 35'07	0°-24'-47
retrograde	-68 Sep 26 j 14:39	21° <b>II</b> 16'01		minimum elong	-60 Jul 02 j 00:21	6° <b>☾</b> 35'07	0°24'48
opposition	-68 Dec 13 j 07:36	19° <b>II</b> 52'03	0°-59'-22	max. Earth dist.	-60 Jul 01 j 13:02	6° <b>☾</b> 34'04	31.01292 AU
min. Earth dist.	-68 Dec 13 j 10:35	19° <b>II</b> 51'50	28.93286 AU	retrograde	-60 Oct 14 j 11:13	9° <b>☾</b> 05'03	
direct	-67 Mar 02 j 01:53	18° <b>II</b> 27'01		opposition	-60 Dec 30 j 18:15	7° <b>☾</b> 41'51	0°-24'-12
				min. Earth dist.	-60 Dec 31 j 03:40	7° <b>☾</b> 41'11	29.01706 AU
conjunction	-67 Jun 15 j 23:14	20° <b>II</b> 58'31	0°-53'-36	direct	-59 Mar 20 j 01:12	6° <b>☾</b> 16'45	
minimum elong	-67 Jun 15 j 23:14	20° <b>II</b> 58'31	0°53'37				
max. Earth dist.	-67 Jun 15 j 19:09	20° <b>II</b> 58'08	30.93755 AU	conjunction	-59 Jul 04 j 14:09	8° <b>☾</b> 48'41	0°-20'-29
retrograde	-67 Sep 29 j 03:00	23° <b>II</b> 29'29		minimum elong	-59 Jul 04 j 14:10	8° <b>☾</b> 48'41	0°20'30
opposition	-67 Dec 15 j 17:52	22° <b>II</b> 05'37	0°-55'-13	max. Earth dist.	-59 Jul 04 j 02:56	8° <b>☾</b> 47'40	31.02080 AU
min. Earth dist.	-67 Dec 15 j 20:40	22° <b>II</b> 05'25	28.94308 AU	retrograde	-59 Oct 16 j 20:59	11° <b>☾</b> 18'26	
direct	-66 Mar 04 j 13:36	20° <b>II</b> 40'34		opposition	-58 Jan 02 j 04:39	9° <b>☾</b> 55'16	0°-19'-36
				min. Earth dist.	-58 Jan 02 j 15:28	9° <b>☾</b> 54'31	29.02466 AU
conjunction	-66 Jun 18 j 13:07	23° <b>II</b> 12'09	0°-49'-41	direct	-58 Mar 22 j 14:23	8° <b>☾</b> 30'07	
minimum elong	-66 Jun 18 j 13:08	23° <b>II</b> 12'09	0°49'42				
max. Earth dist.	-66 Jun 18 j 09:08	23° <b>II</b> 11'47	30.94836 AU	conjunction	-58 Jul 07 j 03:29	11° <b>☾</b> 02'03	0°-16'-10
retrograde	-66 Oct 01 j 13:20	25° <b>II</b> 42'59		minimum elong	-58 Jul 07 j 03:28	11° <b>☾</b> 02'03	0°16'11
opposition	-66 Dec 18 j 04:15	24° <b>II</b> 19'14	0°-50'-59	max. Earth dist.	-58 Jul 06 j 14:28	11° <b>☾</b> 00'51	31.02838 AU
min. Earth dist.	-66 Dec 18 j 08:33	24° <b>II</b> 18'55	28.95442 AU	retrograde	-58 Oct 19 j 09:13	13° <b>☾</b> 31'35	
direct	-65 Mar 07 j 00:12	22° <b>II</b> 54'12		opposition	-57 Jan 04 j 14:52	12° <b>☾</b> 08'28	0°-14'-58
				min. Earth dist.	-57 Jan 05 j 01:38	12° <b>☾</b> 07'43	29.03226 AU
conjunction	-65 Jun 21 j 02:58	25° <b>II</b> 25'51	0°-45'-40	direct	-57 Mar 25 j 03:00	10° <b>☾</b> 43'15	
minimum elong	-65 Jun 21 j 02:58	25° <b>II</b> 25'51	0°45'42				
max. Earth dist.	-65 Jun 20 j 21:44	25° <b>II</b> 25'22	30.96025 AU	conjunction	-57 Jul 09 j 16:54	13° <b>☾</b> 15'11	0°-11'-50
retrograde	-65 Oct 04 j 01:39	27° <b>II</b> 56'33		minimum elong	-57 Jul 09 j 16:54	13° <b>☾</b> 15'11	0°11'51
opposition	-65 Dec 20 j 14:23	26° <b>II</b> 32'56	0°-46'-40	behind sun begin	-57 Jul 09 j 12:24	13° <b>☾</b> 14'47	
min. Earth dist.	-65 Dec 20 j 18:30	26° <b>II</b> 32'39	28.96646 AU	behind sun end	-57 Jul 09 j 21:25	13° <b>☾</b> 15'35	
direct	-64 Mar 08 j 11:14	25° <b>II</b> 07'56		max. Earth dist.	-57 Jul 09 j 04:01	13° <b>☾</b> 14'00	31.03604 AU
				retrograde	-57 Oct 21 j 19:20	15° <b>☾</b> 44'31	
conjunction	-64 Jun 22 j 16:54	27° <b>II</b> 39'40	0°-41'-36	opposition	-56 Jan 07 j 01:07	14° <b>☾</b> 21'26	0°-10'-19
minimum elong	-64 Jun 22 j 16:54	27° <b>II</b> 39'40	0°41'37	min. Earth dist.	-56 Jan 07 j 13:25	14° <b>☾</b> 20'34	29.04024 AU
max. Earth dist.	-64 Jun 22 j 10:43	27° <b>II</b> 39'05	30.97230 AU	direct	-56 Mar 26 j 14:43	12° <b>☾</b> 56'10	
	-64 Sep 10 j 23:50	0° <b>☾</b>					
retrograde	-64 Oct 05 j 11:37	0° <b>☾</b> 10'15		conjunction	-56 Jul 11 j 06:08	15° <b>☾</b> 28'05	0°-7'-29
	-64 Oct 30 j 06:33	30° <b>R</b> <b>II</b>		minimum elong	-56 Jul 11 j 06:08	15° <b>☾</b> 28'05	0°07'30
opposition	-64 Dec 22 j 00:49	28° <b>II</b> 46'45	0°-42'-17	behind sun begin	-56 Jul 11 j 00:09	15° <b>☾</b> 27'33	
min. Earth dist.	-64 Dec 22 j 06:52	28° <b>II</b> 46'19	28.97841 AU	behind sun end	-56 Jul 11 j 12:06	15° <b>☾</b> 28'37	
direct	-63 Mar 10 j 22:16	27° <b>II</b> 21'45		max. Earth dist.	-56 Jul 10 j 16:05	15° <b>☾</b> 26'47	31.04444 AU
				retrograde	-56 Oct 23 j 06:28	17° <b>☾</b> 57'14	
conjunction	-63 Jun 25 j 06:55	29° <b>II</b> 53'34	0°-37'-28	opposition	-55 Jan 08 j 11:19	16° <b>☾</b> 34'12	0°-5'-39
minimum elong	-63 Jun 25 j 06:55	29° <b>II</b> 53'34	0°37'29	min. Earth dist.	-55 Jan 08 j 23:05	16° <b>☾</b> 33'22	29.04902 AU
max. Earth dist.	-63 Jun 24 j 23:56	29° <b>II</b> 52'55	30.98397 AU	direct	-55 Mar 29 j 02:57	15° <b>☾</b> 08'53	
	-63 Jun 28 j 04:06	0° <b>☾</b>					
retrograde	-63 Oct 07 j 23:03	2° <b>☾</b> 24'00		conjunction	-55 Jul 13 j 19:18	17° <b>☾</b> 40'48	0°-3'-8
opposition	-63 Dec 24 j 11:07	1° <b>☾</b> 00'37	0°-37'-50	minimum elong	-55 Jul 13 j 19:18	17° <b>☾</b> 40'48	0°03'09
min. Earth dist.	-63 Dec 24 j 17:27	1° <b>☾</b> 00'10	28.98955 AU	behind sun begin	-55 Jul 13 j 12:45	17° <b>☾</b> 40'13	
	-62 Feb 02 j 07:25	30° <b>R</b> <b>II</b>		behind sun end	-55 Jul 14 j 01:52	17° <b>☾</b> 41'23	
direct	-62 Mar 13 j 11:27	29° <b>II</b> 35'37		max. Earth dist.	-55 Jul 13 j 04:50	17° <b>☾</b> 39'28	31.05366 AU
	-62 Apr 21 j 05:15	0° <b>☾</b>		retrograde	-55 Oct 25 j 15:13	20° <b>☾</b> 09'47	
				opposition	-54 Jan 10 j 21:39	18° <b>☾</b> 46'49	0°00'-59
conjunction	-62 Jun 27 j 20:48	2° <b>☾</b> 07'29	0°-33'-17	min. Earth dist.	-54 Jan 11 j 10:46	18° <b>☾</b> 45'54	29.05892 AU
minimum elong	-62 Jun 27 j 20:48	2° <b>☾</b> 07'29	0°33'18	asc. node	-54 Mar 30 j 04:54	17° <b>☾</b> 21'31	
max. Earth dist.	-62 Jun 27 j 11:59	2° <b>☾</b> 06'40	30.99463 AU	direct	-54 Mar 31 j 13:49	17° <b>☾</b> 21'30	
retrograde	-62 Oct 10 j 10:44	4° <b>☾</b> 37'47					
opposition	-62 Dec 26 j 21:37	3° <b>☾</b> 14'28	0°-33'-20	conjunction	-54 Jul 16 j 08:24	19° <b>☾</b> 53'25	0°01'20
min. Earth dist.	-62 Dec 27 j 05:26	3° <b>☾</b> 13'55	28.99978 AU	minimum elong	-54 Jul 16 j 08:24	19° <b>☾</b> 53'25	0°01'20
direct	-61 Mar 15 j 22:24	1° <b>☾</b> 49'27		behind sun begin	-54 Jul 16 j 01:49	19° <b>☾</b> 52'50	
				behind sun end	-54 Jul 16 j 14:58	19° <b>☾</b> 54'00	
conjunction	-61 Jun 30 j 10:36	4° <b>☾</b> 21'21	0°-29'-3	max. Earth dist.	-54 Jul 15 j 17:44	19° <b>☾</b> 52'04	31.06421 AU
minimum elong	-61 Jun 30 j 10:37	4° <b>☾</b> 21'21	0°29'04	retrograde	-54 Oct 28 j 01:37	22° <b>☾</b> 22'15	
max. Earth dist.	-61 Jun 30 j 01:34	4° <b>☾</b> 20'31	31.00430 AU	opposition	-53 Jan 13 j 07:55	20° <b>☾</b> 59'22	0°03'40
retrograde	-61 Oct 12 j 22:05	6° <b>☾</b> 51'29		min. Earth dist.	-53 Jan 13 j 20:44	20° <b>☾</b> 58'27	29.06991 AU

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Attention, astronomical year style is used: The year -53 in astronomical counting style is the year 54 BCE in historical counting style.

direct	-53 Apr 03 j 01:54	19° $\overline{34}$ '02		conjunction	-46 Aug 03 j 14:47	7° $\Omega$ 33'38	0°35'35
				minimum elong	-46 Aug 03 j 14:47	7° $\Omega$ 33'38	0°35'36
conjunction	-53 Jul 18 j 21:16	22° $\overline{05}$ '59	0°05'43	max. Earth dist.	-46 Aug 02 j 17:55	7° $\Omega$ 31'42	31.14199 AU
minimum elong	-53 Jul 18 j 21:16	22° $\overline{05}$ '59	0°05'43	retrograde	-46 Nov 14 j 15:39	10° $\Omega$ 01'27	
behind sun begin	-53 Jul 18 j 14:58	22° $\overline{05}$ '25		opposition	-45 Jan 30 j 19:23	8° $\Omega$ 39'05	0°40'10
behind sun end	-53 Jul 19 j 03:34	22° $\overline{06}$ '32		min. Earth dist.	-45 Jan 31 j 14:33	8° $\Omega$ 37'44	29.14555 AU
max. Earth dist.	-53 Jul 18 j 05:32	22° $\overline{04}$ '32	31.07565 AU	direct	-45 Apr 21 j 02:55	7° $\Omega$ 13'44	
retrograde	-53 Oct 30 j 12:32	24° $\overline{34}$ '42		max. Earth dist.	-45 Aug 05 j 05:57	9° $\Omega$ 43'44	31.14841 AU
opposition	-52 Jan 15 j 18:14	23° $\overline{11}$ '54	0°08'20				
min. Earth dist.	-52 Jan 16 j 08:05	23° $\overline{10}$ '56	29.08172 AU	conjunction	-45 Aug 06 j 03:00	9° $\Omega$ 45'42	0°39'41
direct	-52 Apr 04 j 11:56	21° $\overline{46}$ '35		minimum elong	-45 Aug 06 j 03:00	9° $\Omega$ 45'42	0°39'41
				retrograde	-45 Nov 17 j 01:14	12° $\Omega$ 13'22	
conjunction	-52 Jul 20 j 10:22	24° $\overline{18}$ '34	0°10'03	opposition	-44 Feb 02 j 05:48	10° $\Omega$ 51'01	0°44'31
minimum elong	-52 Jul 20 j 10:22	24° $\overline{18}$ '34	0°10'04	min. Earth dist.	-44 Feb 03 j 00:43	10° $\Omega$ 49'42	29.15192 AU
behind sun begin	-52 Jul 20 j 05:07	24° $\overline{18}$ '06		direct	-44 Apr 22 j 15:05	9° $\Omega$ 25'38	
behind sun end	-52 Jul 20 j 15:37	24° $\overline{19}$ '02					
max. Earth dist.	-52 Jul 19 j 18:50	24° $\overline{17}$ '08	31.08756 AU	conjunction	-44 Aug 07 j 15:10	11° $\Omega$ 57'34	0°43'43
retrograde	-52 Oct 31 j 22:55	26° $\overline{47}$ '10		minimum elong	-44 Aug 07 j 15:09	11° $\Omega$ 57'34	0°43'43
opposition	-51 Jan 17 j 04:30	25° $\overline{24}$ '28	0°12'59	max. Earth dist.	-44 Aug 06 j 17:13	11° $\Omega$ 55'32	31.15488 AU
min. Earth dist.	-51 Jan 17 j 18:57	25° $\overline{23}$ '27	29.09350 AU	retrograde	-44 Nov 18 j 11:13	14° $\Omega$ 25'06	
direct	-51 Apr 07 j 01:10	23° $\overline{59}$ '11		opposition	-43 Feb 03 j 16:14	13° $\Omega$ 02'47	0°48'47
				min. Earth dist.	-43 Feb 04 j 11:49	13° $\Omega$ 01'25	29.15886 AU
conjunction	-51 Jul 22 j 23:18	26° $\overline{31}$ '12	0°14'23	direct	-43 Apr 25 j 00:57	11° $\Omega$ 37'22	
minimum elong	-51 Jul 22 j 23:18	26° $\overline{31}$ '12	0°14'23	max. Earth dist.	-43 Aug 09 j 06:03	14° $\Omega$ 07'18	31.16220 AU
behind sun begin	-51 Jul 22 j 20:28	26° $\overline{30}$ '57					
behind sun end	-51 Jul 23 j 02:08	26° $\overline{31}$ '27		conjunction	-43 Aug 10 j 03:15	14° $\Omega$ 09'16	0°47'41
max. Earth dist.	-51 Jul 22 j 05:52	26° $\overline{29}$ '35	31.09914 AU	minimum elong	-43 Aug 10 j 03:15	14° $\Omega$ 09'16	0°47'40
retrograde	-51 Nov 03 j 11:30	28° $\overline{59}$ '40					
opposition	-50 Jan 19 j 14:57	27° $\overline{37}$ '04	0°17'37	retrograde	-43 Sep 02 j 07:36	15° $\Omega$	
min. Earth dist.	-50 Jan 20 j 05:55	27° $\overline{36}$ '01	29.10485 AU	retrograde	-43 Nov 20 j 20:24	16° $\Omega$ 36'41	
direct	-50 Apr 09 j 13:18	26° $\overline{11}$ '48		opposition	-42 Feb 06 j 02:48	15° $\Omega$ 14'24	0°52'59
				min. Earth dist.	-42 Feb 06 j 22:23	15° $\Omega$ 13'02	29.16667 AU
conjunction	-50 Jul 25 j 12:09	28° $\overline{43}$ '50	0°18'42	direct	-42 Feb 14 j 18:12	15° $\Omega$	
minimum elong	-50 Jul 25 j 12:09	28° $\overline{43}$ '50	0°18'42	direct	-42 Apr 27 j 14:11	13° $\Omega$ 49'00	
max. Earth dist.	-50 Jul 24 j 19:01	28° $\overline{42}$ '15	31.10992 AU		-42 Jul 05 j 09:22	15° $\Omega$	
	-50 Aug 30 j 06:34	0° $\Omega$		conjunction	-42 Aug 12 j 14:57	16° $\Omega$ 20'51	0°51'34
retrograde	-50 Nov 05 j 21:21	1° $\Omega$ 12'12		minimum elong	-42 Aug 12 j 14:56	16° $\Omega$ 20'51	0°51'35
	-49 Jan 15 j 21:24	30° $\overline{R}$ $\overline{3}$		max. Earth dist.	-42 Aug 11 j 16:37	16° $\Omega$ 18'47	31.17059 AU
opposition	-49 Jan 22 j 01:31	29° $\overline{49}$ '39	0°22'13	retrograde	-42 Nov 23 j 08:02	18° $\Omega$ 48'12	
min. Earth dist.	-49 Jan 22 j 17:52	29° $\overline{48}$ '31	29.11509 AU	opposition	-41 Feb 08 j 13:18	17° $\Omega$ 25'56	0°57'06
direct	-49 Apr 12 j 01:59	28° $\overline{24}$ '24		min. Earth dist.	-41 Feb 09 j 08:37	17° $\Omega$ 24'36	29.17576 AU
	-49 Jul 02 j 02:16	0° $\Omega$		direct	-41 Apr 30 j 01:29	16° $\Omega$ 00'33	
max. Earth dist.	-49 Jul 27 j 05:52	0° $\Omega$ 54'41	31.11960 AU	max. Earth dist.	-41 Aug 14 j 05:31	18° $\Omega$ 30'26	31.18016 AU
conjunction	-49 Jul 28 j 00:54	0° $\Omega$ 56'27	0°22'59	conjunction	-41 Aug 15 j 02:51	18° $\Omega$ 32'24	0°55'23
minimum elong	-49 Jul 28 j 00:53	0° $\Omega$ 56'27	0°22'58	minimum elong	-41 Aug 15 j 02:51	18° $\Omega$ 32'24	0°55'23
retrograde	-49 Nov 08 j 09:48	3° $\Omega$ 24'40		retrograde	-41 Nov 25 j 17:22	20° $\Omega$ 59'40	
opposition	-48 Jan 24 j 11:51	2° $\Omega$ 02'12	0°26'47	opposition	-40 Feb 10 j 23:47	19° $\Omega$ 37'29	1°01'08
min. Earth dist.	-48 Jan 25 j 04:13	2° $\Omega$ 01'03	29.12422 AU	min. Earth dist.	-40 Feb 11 j 19:58	19° $\Omega$ 36'04	29.18575 AU
direct	-48 Apr 13 j 14:44	0° $\Omega$ 36'56		direct	-40 May 01 j 13:05	18° $\Omega$ 12'08	
conjunction	-48 Jul 29 j 13:46	3° $\Omega$ 08'59	0°27'14	conjunction	-40 Aug 16 j 14:35	20° $\Omega$ 43'59	0°59'08
minimum elong	-48 Jul 29 j 13:46	3° $\Omega$ 08'59	0°27'14	minimum elong	-40 Aug 16 j 14:35	20° $\Omega$ 43'59	0°59'08
max. Earth dist.	-48 Jul 28 j 18:41	3° $\Omega$ 07'13	31.12802 AU	max. Earth dist.	-40 Aug 15 j 16:03	20° $\Omega$ 41'53	31.19050 AU
retrograde	-48 Nov 09 j 20:08	5° $\Omega$ 37'04		retrograde	-40 Nov 27 j 05:56	23° $\Omega$ 11'10	
opposition	-47 Jan 25 j 22:26	4° $\Omega$ 14'39	0°31'18	opposition	-39 Feb 12 j 10:20	21° $\Omega$ 49'03	1°05'05
min. Earth dist.	-47 Jan 26 j 16:31	4° $\Omega$ 13'23	29.13210 AU	min. Earth dist.	-39 Feb 13 j 05:58	21° $\Omega$ 47'42	29.19627 AU
direct	-47 Apr 16 j 03:04	2° $\Omega$ 49'22		direct	-39 May 04 j 01:59	20° $\Omega$ 23'46	
max. Earth dist.	-47 Jul 31 j 05:54	5° $\Omega$ 19'30	31.13542 AU	max. Earth dist.	-39 Aug 18 j 04:24	22° $\Omega$ 53'35	31.20088 AU
conjunction	-47 Aug 01 j 02:17	5° $\Omega$ 21'23	0°31'26	conjunction	-39 Aug 19 j 02:19	22° $\Omega$ 55'37	1°02'47
minimum elong	-47 Aug 01 j 02:17	5° $\Omega$ 21'23	0°31'26	minimum elong	-39 Aug 19 j 02:19	22° $\Omega$ 55'37	1°02'47
retrograde	-47 Nov 12 j 07:00	7° $\Omega$ 49'20		retrograde	-39 Nov 29 j 16:32	25° $\Omega$ 22'44	
opposition	-46 Jan 28 j 08:52	6° $\Omega$ 26'57	0°35'46	opposition	-38 Feb 14 j 21:10	24° $\Omega$ 00'41	1°08'56
min. Earth dist.	-46 Jan 29 j 02:34	6° $\Omega$ 25'42	29.13905 AU	min. Earth dist.	-38 Feb 15 j 18:06	23° $\Omega$ 59'14	29.20658 AU
direct	-46 Apr 18 j 15:57	5° $\Omega$ 01'38		direct	-38 May 06 j 14:33	22° $\Omega$ 35'26	

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Attention, astronomical year style is used: The year -38 in astronomical counting style is the year 39 BCE in historical counting style.

conjunction	-38 Aug 21 j 13:56	25°Ω07'16	1°06'20	conjunction	-30 Sep 08 j 07:32	12°♄36'49	1°30'53
minimum elong	-38 Aug 21 j 13:56	25°Ω07'16	1°06'21	minimum elong	-30 Sep 08 j 07:32	12°♄36'49	1°30'54
max. Earth dist.	-38 Aug 20 j 15:07	25°Ω05'09	31.21090 AU	retrograde	-30 Dec 19 j 10:38	15°♄03'18	
retrograde	-38 Dec 02 j 03:28	27°Ω34'19		opposition	-29 Mar 06 j 23:22	13°♄41'21	1°38'26
opposition	-37 Feb 17 j 07:49	26°Ω12'20	1°12'42	min. Earth dist.	-29 Mar 07 j 21:51	13°♄39'48	29.26404 AU
min. Earth dist.	-37 Feb 18 j 04:10	26°Ω10'55	29.21622 AU	direct	-29 May 27 j 02:15	12°♄16'11	
direct	-37 May 09 j 03:31	24°Ω47'07		conjunction	-29 Sep 10 j 18:10	14°♄47'27	1°33'24
max. Earth dist.	-37 Aug 23 j 02:23	27°Ω16'46	31.21991 AU	minimum elong	-29 Sep 10 j 18:10	14°♄47'27	1°33'24
conjunction	-37 Aug 24 j 01:33	27°Ω18'55	1°09'48	max. Earth dist.	-29 Sep 09 j 18:34	14°♄45'15	31.26650 AU
minimum elong	-37 Aug 24 j 01:32	27°Ω18'55	1°09'48	retrograde	-29 Dec 21 j 21:23	17°♄13'55	
retrograde	-37 Dec 04 j 12:51	29°Ω45'54		opposition	-28 Mar 08 j 10:23	15°♄52'01	1°41'03
opposition	-36 Feb 19 j 18:45	28°Ω23'57	1°16'20	min. Earth dist.	-28 Mar 09 j 07:34	15°♄50'34	29.27121 AU
min. Earth dist.	-36 Feb 20 j 16:27	28°Ω22'27	29.22476 AU	direct	-28 May 28 j 15:03	14°♄26'54	
direct	-36 May 10 j 14:36	26°Ω58'45		max. Earth dist.	-28 Sep 11 j 05:32	16°♄55'59	31.27395 AU
conjunction	-36 Aug 25 j 13:08	29°Ω30'31	1°13'09	conjunction	-28 Sep 12 j 04:48	16°♄58'09	1°35'47
minimum elong	-36 Aug 25 j 13:08	29°Ω30'31	1°13'10	minimum elong	-28 Sep 12 j 04:48	16°♄58'09	1°35'48
max. Earth dist.	-36 Aug 24 j 13:45	29°Ω28'20	31.22778 AU	retrograde	-28 Dec 23 j 07:07	19°♄24'37	
retrograde	-36 Sep 07 j 19:39	0°♄		opposition	-27 Mar 10 j 21:35	18°♄02'47	1°43'31
opposition	-36 Dec 05 j 22:40	1°♄57'24		min. Earth dist.	-27 Mar 11 j 19:29	18°♄01'16	29.27901 AU
min. Earth dist.	-35 Feb 21 j 05:34	0°♄35'29	1°19'52	direct	-27 May 31 j 02:01	16°♄37'45	
direct	-35 Feb 22 j 03:06	0°♄34'00	29.23196 AU	conjunction	-27 Sep 14 j 15:23	19°♄08'58	1°38'02
max. Earth dist.	-35 Mar 15 j 07:10	30°♄		minimum elong	-27 Sep 14 j 15:23	19°♄08'58	1°38'02
conjunction	-35 May 13 j 03:21	29°Ω10'18		max. Earth dist.	-27 Sep 13 j 16:40	19°♄06'51	31.28186 AU
retrograde	-35 Jul 08 j 22:12	0°♄		retrograde	-27 Dec 25 j 17:12	21°♄35'27	
opposition	-35 Aug 27 j 00:14	1°♄39'43	31.23434 AU	opposition	-26 Mar 13 j 08:51	20°♄13'40	1°45'50
conjunction	-35 Aug 28 j 00:34	1°♄41'59	1°16'24	min. Earth dist.	-26 Mar 14 j 06:05	20°♄12'13	29.28680 AU
minimum elong	-35 Aug 28 j 00:34	1°♄41'59	1°16'24	direct	-26 Jun 02 j 14:34	18°♄48'43	
retrograde	-35 Dec 08 j 08:32	4°♄08'48		max. Earth dist.	-26 Sep 16 j 02:35	21°♄17'45	31.28940 AU
opposition	-34 Feb 23 j 16:34	2°♄46'53	1°23'17	conjunction	-26 Sep 17 j 01:47	21°♄19'55	1°40'08
min. Earth dist.	-34 Feb 24 j 14:45	2°♄45'21	29.23811 AU	minimum elong	-26 Sep 17 j 01:46	21°♄19'55	1°40'09
direct	-34 May 15 j 13:43	1°♄21'41		retrograde	-26 Dec 28 j 03:31	23°♄46'25	
conjunction	-34 Aug 30 j 11:49	3°♄53'19	1°19'33	opposition	-25 Mar 15 j 20:12	22°♄24'41	1°48'00
minimum elong	-34 Aug 30 j 11:49	3°♄53'18	1°19'33	min. Earth dist.	-25 Mar 16 j 17:45	22°♄23'13	29.29412 AU
max. Earth dist.	-34 Aug 29 j 12:08	3°♄51'06	31.23993 AU	direct	-25 Jun 05 j 00:42	20°♄59'49	
retrograde	-34 Dec 10 j 16:56	6°♄20'02		conjunction	-25 Sep 19 j 12:23	23°♄30'58	1°42'06
opposition	-33 Feb 26 j 03:31	4°♄58'07	1°26'34	minimum elong	-25 Sep 19 j 12:23	23°♄30'58	1°42'05
min. Earth dist.	-33 Feb 27 j 01:57	4°♄56'34	29.24322 AU	max. Earth dist.	-25 Sep 18 j 14:05	23°♄28'53	31.29614 AU
direct	-33 May 18 j 02:41	3°♄32'55		retrograde	-25 Dec 30 j 11:54	25°♄57'29	
conjunction	-33 Sep 01 j 22:55	6°♄04'27	1°22'34	opposition	-24 Mar 17 j 07:34	24°♄35'48	1°50'01
minimum elong	-33 Sep 01 j 22:54	6°♄04'27	1°22'33	min. Earth dist.	-24 Mar 18 j 05:16	24°♄34'18	29.30021 AU
max. Earth dist.	-33 Aug 31 j 21:58	6°♄02'07	31.24472 AU	direct	-24 Jun 06 j 13:02	23°♄10'59	
retrograde	-33 Dec 13 j 03:47	8°♄31'05		conjunction	-24 Sep 20 j 22:50	25°♄42'05	1°43'54
opposition	-32 Feb 28 j 14:14	7°♄09'09	1°29'44	minimum elong	-24 Sep 20 j 22:50	25°♄42'05	1°43'54
min. Earth dist.	-32 Feb 29 j 12:29	7°♄07'37	29.24792 AU	max. Earth dist.	-24 Sep 19 j 23:24	25°♄39'53	31.30157 AU
direct	-32 May 19 j 13:24	5°♄43'55		retrograde	-24 Dec 31 j 23:07	28°♄08'37	
max. Earth dist.	-32 Sep 02 j 10:11	8°♄13'10	31.24924 AU	opposition	-23 Mar 19 j 19:06	26°♄46'56	1°51'52
conjunction	-32 Sep 03 j 10:02	8°♄15'23	1°25'28	min. Earth dist.	-23 Mar 20 j 16:24	26°♄45'29	29.30504 AU
minimum elong	-32 Sep 03 j 10:02	8°♄15'23	1°25'28	direct	-23 Jun 08 j 22:56	25°♄22'10	
retrograde	-32 Dec 14 j 12:41	10°♄41'57		max. Earth dist.	-23 Sep 22 j 10:52	27°♄51'06	31.30555 AU
opposition	-31 Mar 02 j 01:20	9°♄20'00	1°32'46	conjunction	-23 Sep 23 j 09:16	27°♄53'12	1°45'34
min. Earth dist.	-31 Mar 03 j 00:15	9°♄18'26	29.25253 AU	minimum elong	-23 Sep 23 j 09:15	27°♄53'12	1°45'33
direct	-31 May 22 j 01:15	7°♄54'47		retrograde	-23 Nov 30 j 07:12	0°♄	
conjunction	-31 Sep 05 j 20:43	10°♄26'09	1°28'15	retrograde	-22 Jan 03 j 08:16	0°♄19'45	
minimum elong	-31 Sep 05 j 20:42	10°♄26'09	1°28'14	opposition	-22 Feb 07 j 10:13	30°♄	
max. Earth dist.	-31 Sep 04 j 20:10	10°♄23'52	31.25409 AU	min. Earth dist.	-22 Mar 22 j 06:48	28°♄58'03	1°53'34
retrograde	-31 Dec 17 j 00:25	12°♄52'40		direct	-22 Mar 23 j 04:53	28°♄56'33	29.30826 AU
opposition	-30 Mar 04 j 12:18	11°♄30'43	1°35'40	retrograde	-22 Jun 11 j 10:24	27°♄33'20	
min. Earth dist.	-30 Mar 05 j 10:06	11°♄29'13	29.25781 AU	direct	-22 Sep 23 j 22:02	0°♄	
direct	-30 May 24 j 14:05	10°♄05'30		conjunction	-22 Sep 25 j 19:32	0°♄04'16	1°47'04
max. Earth dist.	-30 Sep 07 j 08:06	12°♄34'38	31.25971 AU				

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Attention, astronomical year style is used: The year -22 in astronomical counting style is the year 23 BCE in historical counting style.

minimum elong	-22 Sep 25 j 19:32	0° <u>04</u> '16	1°47'05	minimum elong	-14 Oct 13 j 02:16	17° <u>28</u> '12	1°53'31
max. Earth dist.	-22 Sep 24 j 20:15	0° <u>02</u> '05	31.30810 AU	retrograde	-13 Jan 23 j 03:34	19° <u>54</u> '56	
retrograde	-21 Jan 05 j 20:05	2° <u>30</u> '48		opposition	-13 Apr 11 j 16:09	18° <u>33</u> '01	2°01'18
opposition	-21 Mar 24 j 18:12	1° <u>09</u> '05	1°55'06	min. Earth dist.	-13 Apr 12 j 10:29	18° <u>31</u> '46	29.32054 AU
min. Earth dist.	-21 Mar 25 j 15:24	1° <u>07</u> '38	29.31016 AU	direct	-13 Jul 01 j 22:01	17° <u>08</u> '34	
	-21 May 13 j 02:33	30° <u>R</u> ⌚					
direct	-21 Jun 13 j 23:08	29° <u>⌚</u> 44'21		conjunction	-13 Oct 15 j 11:52	19° <u>38</u> '43	1°53'35
	-21 Jul 15 j 07:28	0° <u>0</u>		minimum elong	-13 Oct 15 j 11:52	19° <u>38</u> '43	1°53'34
max. Earth dist.	-21 Sep 27 j 07:23	2° <u>13</u> '06	31.30928 AU	max. Earth dist.	-13 Oct 14 j 17:12	19° <u>36</u> '57	31.32018 AU
				retrograde	-12 Jan 25 j 15:29	22° <u>05</u> '31	
conjunction	-21 Sep 28 j 05:53	2° <u>15</u> '12	1°48'26	opposition	-12 Apr 13 j 04:09	22° <u>43</u> '36	2°01'18
minimum elong	-21 Sep 28 j 05:53	2° <u>15</u> '12	1°48'25	min. Earth dist.	-12 Apr 13 j 21:12	20° <u>42</u> '27	29.32217 AU
retrograde	-20 Jan 08 j 06:25	4° <u>41</u> '44		direct	-12 Jul 03 j 09:27	19° <u>19</u> '14	
opposition	-20 Mar 26 j 05:54	3° <u>19</u> '58	1°56'28				
min. Earth dist.	-20 Mar 27 j 04:01	3° <u>18</u> '27	29.31086 AU	conjunction	-12 Oct 16 j 21:31	21° <u>49</u> '20	1°53'29
direct	-20 Jun 15 j 11:12	1° <u>55</u> '14		minimum elong	-12 Oct 16 j 21:31	21° <u>49</u> '20	1°53'30
				max. Earth dist.	-12 Oct 16 j 03:51	21° <u>47</u> '40	31.32118 AU
conjunction	-20 Sep 29 j 15:53	4° <u>25</u> '58	1°49'38	retrograde	-11 Jan 27 j 02:18	24° <u>16</u> '14	
minimum elong	-20 Sep 29 j 15:53	4° <u>25</u> '58	1°49'38	opposition	-11 Apr 15 j 16:27	22° <u>54</u> '18	2°01'07
max. Earth dist.	-20 Sep 28 j 17:20	4° <u>23</u> '52	31.30963 AU	min. Earth dist.	-11 Apr 16 j 10:10	22° <u>53</u> '06	29.32261 AU
retrograde	-19 Jan 09 j 16:53	6° <u>52</u> '29		direct	-11 Jul 05 j 20:25	21° <u>30</u> '00	
opposition	-19 Mar 28 j 17:29	5° <u>30</u> '40	1°57'40				
min. Earth dist.	-19 Mar 29 j 14:15	5° <u>29</u> '15	29.31091 AU	conjunction	-11 Oct 19 j 07:07	24° <u>00</u> '01	1°53'15
direct	-19 Jun 18 j 00:18	4° <u>05</u> '56		minimum elong	-11 Oct 19 j 07:07	24° <u>00</u> '01	1°53'14
max. Earth dist.	-19 Oct 01 j 03:43	6° <u>34</u> '29	31.30958 AU	max. Earth dist.	-11 Oct 18 j 13:35	23° <u>58</u> '22	31.32102 AU
				retrograde	-10 Jan 29 j 13:30	26° <u>27</u> '00	
conjunction	-19 Oct 02 j 01:51	6° <u>36</u> '33	1°50'41	opposition	-10 Apr 18 j 04:34	25° <u>05</u> '03	2°00'46
minimum elong	-19 Oct 02 j 01:50	6° <u>36</u> '33	1°50'40	min. Earth dist.	-10 Apr 18 j 20:54	25° <u>03</u> '57	29.32168 AU
retrograde	-18 Jan 12 j 03:05	9° <u>03</u> '03		direct	-10 Jul 08 j 08:53	23° <u>40</u> '48	
opposition	-18 Mar 31 j 05:14	7° <u>41</u> '10	1°58'42				
min. Earth dist.	-18 Apr 01 j 02:20	7° <u>39</u> '44	29.31111 AU	conjunction	-10 Oct 21 j 16:40	26° <u>10</u> '44	1°52'50
direct	-18 Jun 20 j 12:22	6° <u>16</u> '27		minimum elong	-10 Oct 21 j 16:40	26° <u>10</u> '44	1°52'50
				max. Earth dist.	-10 Oct 20 j 23:14	26° <u>09</u> '06	31.31931 AU
conjunction	-18 Oct 04 j 11:34	8° <u>46</u> '57	1°51'34	retrograde	-9 Feb 01 j 00:42	28° <u>37</u> '48	
minimum elong	-18 Oct 04 j 11:34	8° <u>46</u> '57	1°51'34	opposition	-9 Apr 20 j 16:52	27° <u>15</u> '49	2°00'15
max. Earth dist.	-18 Oct 03 j 14:32	8° <u>44</u> '59	31.31000 AU	min. Earth dist.	-9 Apr 21 j 09:43	27° <u>14</u> '40	29.31928 AU
retrograde	-17 Jan 14 j 12:58	11° <u>13</u> '27		direct	-9 Jul 10 j 20:54	25° <u>51</u> '36	
opposition	-17 Apr 02 j 16:53	9° <u>51</u> '32	1°59'34	max. Earth dist.	-9 Oct 23 j 09:43	28° <u>19</u> '54	31.31624 AU
min. Earth dist.	-17 Apr 03 j 12:48	9° <u>50</u> '11	29.31177 AU				
direct	-17 Jun 23 j 02:08	8° <u>26</u> '50		conjunction	-9 Oct 24 j 02:14	28° <u>21</u> '27	1°52'16
				minimum elong	-9 Oct 24 j 02:14	28° <u>21</u> '27	1°52'15
conjunction	-17 Oct 06 j 21:18	10° <u>57</u> '14	1°52'17				
minimum elong	-17 Oct 06 j 21:18	10° <u>57</u> '14	1°52'16	retrograde	-9 Dec 10 j 19:24	0° <u>M</u>	
max. Earth dist.	-17 Oct 06 j 00:11	10° <u>55</u> '16	31.31106 AU		-8 Feb 03 j 11:09	0° <u>M</u> 48'34	
retrograde	-16 Jan 16 j 22:53	13° <u>23</u> '46			-8 Mar 31 j 23:37	30° <u>R</u> ⌚	
opposition	-16 Apr 04 j 04:32	12° <u>01</u> '50	2°00'16	opposition	-8 Apr 22 j 05:02	29° <u>26</u> '32	1°59'33
min. Earth dist.	-16 Apr 05 j 00:04	12° <u>00</u> '30	29.31335 AU	min. Earth dist.	-8 Apr 22 j 20:56	29° <u>25</u> '27	29.31542 AU
direct	-16 Jun 24 j 12:37	10° <u>37</u> '10		direct	-8 Jul 12 j 10:57	28° <u>02</u> '20	
max. Earth dist.	-16 Oct 07 j 11:40	13° <u>05</u> '41	31.31304 AU		-8 Oct 11 j 04:02	0° <u>M</u>	
				conjunction	-8 Oct 25 j 11:37	0° <u>M</u> 32'05	1°51'32
conjunction	-16 Oct 08 j 07:05	13° <u>07</u> '30	1°52'51	minimum elong	-8 Oct 25 j 11:37	0° <u>M</u> 32'05	1°51'33
minimum elong	-16 Oct 08 j 07:05	13° <u>07</u> '30	1°52'52	max. Earth dist.	-8 Oct 24 j 18:51	0° <u>M</u> 30'31	31.31194 AU
retrograde	-15 Jan 18 j 07:07	15° <u>34</u> '04		retrograde	-7 Feb 04 j 21:36	2° <u>M</u> 59'16	
opposition	-15 Apr 06 j 16:24	14° <u>12</u> '08	2°00'47	opposition	-7 Apr 24 j 17:22	1° <u>M</u> 37'09	1°58'42
min. Earth dist.	-15 Apr 07 j 11:21	14° <u>10</u> '51	29.31556 AU	min. Earth dist.	-7 Apr 25 j 08:57	1° <u>M</u> 36'06	29.31081 AU
direct	-15 Jun 27 j 01:02	12° <u>47</u> '33		direct	-7 Jul 14 j 21:49	0° <u>M</u> 12'58	
conjunction	-15 Oct 10 j 16:32	15° <u>17</u> '48	1°53'16	conjunction	-7 Oct 27 j 20:54	2° <u>M</u> 42'37	1°50'40
minimum elong	-15 Oct 10 j 16:32	15° <u>17</u> '48	1°53'15	minimum elong	-7 Oct 27 j 20:54	2° <u>M</u> 42'37	1°50'39
max. Earth dist.	-15 Oct 09 j 20:43	15° <u>15</u> '57	31.31555 AU	max. Earth dist.	-7 Oct 27 j 05:55	2° <u>M</u> 41'12	31.30710 AU
retrograde	-14 Jan 20 j 18:19	17° <u>44</u> '27		retrograde	-6 Feb 07 j 05:39	5° <u>M</u> 09'51	
opposition	-14 Apr 09 j 04:16	16° <u>22</u> '31	2°01'08	opposition	-6 Apr 27 j 05:42	3° <u>M</u> 47'40	1°57'41
min. Earth dist.	-14 Apr 09 j 22:10	16° <u>21</u> '18	29.31821 AU	min. Earth dist.	-6 Apr 27 j 20:37	3° <u>M</u> 46'39	29.30582 AU
direct	-14 Jun 29 j 10:50	14° <u>58</u> '00		direct	-6 Jul 17 j 11:03	2° <u>M</u> 23'30	
max. Earth dist.	-14 Oct 12 j 08:01	17° <u>26</u> '29	31.31809 AU				
				conjunction	-6 Oct 30 j 06:03	4° <u>M</u> 53'01	1°49'37
conjunction	-14 Oct 13 j 02:16	17° <u>28</u> '12	1°53'30	minimum elong	-6 Oct 30 j 06:03	4° <u>M</u> 53'01	1°49'38

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Attention, astronomical year style is used: The year -6 in astronomical counting style is the year 7 BCE in historical counting style.

max. Earth dist.	-6 Oct 29 j 14:50	4°M.51'35	31.30231 AU	max. Earth dist.	02 Nov 15 j 23:45	22°M.16'53	31.28021 AU
retrograde	-5 Feb 09 j 16:40	7°M.20'19		retrograde	03 Feb 27 j 07:53	24°M.45'50	
opposition	-5 Apr 29 j 17:46	5°M.58'04	1°56'29	opposition	03 May 17 j 21:57	23°M.23'20	1°41'06
min. Earth dist.	-5 Apr 30 j 07:19	5°M.57'09	29.30135 AU	min. Earth dist.	03 May 18 j 05:39	23°M.22'49	29.27840 AU
direct	-5 Jul 19 j 21:22	4°M.33'55		direct	03 Aug 06 j 17:35	21°M.59'40	
conjunction	-5 Nov 01 j 15:20	7°M.03'20	1°48'26	conjunction	03 Nov 18 j 16:30	24°M.28'31	1°33'26
minimum elong	-5 Nov 01 j 15:20	7°M.03'20	1°48'25	minimum elong	03 Nov 18 j 16:31	24°M.28'31	1°33'26
max. Earth dist.	-5 Nov 01 j 02:00	7°M.02'05	31.29817 AU	max. Earth dist.	03 Nov 18 j 08:27	24°M.27'45	31.27460 AU
retrograde	-4 Feb 12 j 01:35	9°M.30'44		retrograde	04 Feb 29 j 20:01	26°M.56'52	
opposition	-4 May 01 j 06:11	8°M.08'26	1°55'08	opposition	04 May 19 j 10:46	25°M.34'18	1°38'30
min. Earth dist.	-4 May 01 j 19:31	8°M.07'32	29.29764 AU	min. Earth dist.	04 May 19 j 17:20	25°M.33'51	29.27208 AU
direct	-4 Jul 21 j 09:01	6°M.44'20		direct	04 Aug 08 j 04:50	24°M.10'39	
max. Earth dist.	-4 Nov 02 j 11:19	9°M.12'26	31.29508 AU				
conjunction	-4 Nov 03 j 00:19	9°M.13'39	1°47'05	conjunction	04 Nov 20 j 01:44	26°M.39'24	1°30'55
minimum elong	-4 Nov 03 j 00:19	9°M.13'39	1°47'05	minimum elong	04 Nov 20 j 01:44	26°M.39'24	1°30'56
retrograde	-3 Feb 13 j 12:56	11°M.41'09		max. Earth dist.	04 Nov 19 j 19:14	26°M.38'47	31.26762 AU
opposition	-3 May 03 j 18:30	10°M.18'49	1°53'37	retrograde	05 Mar 03 j 05:10	29°M.07'52	
min. Earth dist.	-3 May 04 j 05:50	10°M.18'03	29.29496 AU	opposition	05 May 21 j 23:43	27°M.45'13	1°35'45
direct	-3 Jul 23 j 19:38	8°M.54'46		min. Earth dist.	05 May 22 j 06:22	27°M.44'46	29.26449 AU
conjunction	-3 Nov 05 j 09:28	11°M.24'02	1°45'35	direct	05 Aug 10 j 17:01	26°M.21'35	
minimum elong	-3 Nov 05 j 09:28	11°M.24'02	1°45'34	conjunction	05 Nov 22 j 10:52	28°M.50'13	1°28'17
max. Earth dist.	-3 Nov 04 j 21:56	11°M.22'57	31.29281 AU	minimum elong	05 Nov 22 j 10:53	28°M.50'13	1°28'17
retrograde	-2 Feb 15 j 23:44	13°M.51'39		max. Earth dist.	05 Nov 22 j 04:34	28°M.49'37	31.25980 AU
opposition	-2 May 06 j 06:56	12°M.29'17	1°51'55	retrograde	05 Dec 24 j 10:21	0° <del>27</del>	
min. Earth dist.	-2 May 06 j 18:23	12°M.28'31	29.29305 AU	retrograde	06 Mar 05 j 16:21	1° <del>27</del> 18'47	
direct	-2 Jul 26 j 05:04	11°M.05'19		opposition	06 May 22 j 01:29	30°R.M.	
conjunction	-2 Nov 07 j 18:32	13°M.34'30	1°43'55	opposition	06 May 24 j 12:21	29°M.56'02	1°32'52
minimum elong	-2 Nov 07 j 18:32	13°M.34'30	1°43'56	min. Earth dist.	06 May 24 j 17:16	29°M.55'42	29.25638 AU
max. Earth dist.	-2 Nov 07 j 07:49	13°M.33'30	31.29122 AU	direct	06 Aug 13 j 03:59	28°M.32'24	
retrograde	-2 Dec 17 j 23:30	15°M.		direct	06 Oct 28 j 03:41	0° <del>27</del>	
retrograde	-1 Feb 18 j 11:14	16°M.02'15		conjunction	06 Nov 24 j 19:59	1° <del>27</del> 00'56	1°25'32
opposition	-1 Apr 26 j 06:16	15°R.M.		minimum elong	06 Nov 24 j 20:00	1° <del>27</del> 00'56	1°25'32
min. Earth dist.	-1 May 08 j 19:17	14°M.39'53	1°50'04	max. Earth dist.	06 Nov 24 j 14:55	1° <del>27</del> 00'27	31.25156 AU
direct	-1 May 09 j 04:53	14°M.39'14	29.29138 AU	retrograde	07 Mar 08 j 02:58	3° <del>27</del> 29'37	
conjunction	-1 Jul 28 j 16:56	13°M.15'58		opposition	07 May 27 j 01:13	2° <del>27</del> 06'46	1°29'51
retrograde	-1 Oct 20 j 21:44	15°M.		min. Earth dist.	07 May 27 j 06:12	2° <del>27</del> 06'26	29.24825 AU
conjunction	-1 Nov 10 j 03:36	15°M.45'07	1°42'07	direct	07 Aug 15 j 13:54	0° <del>27</del> 43'09	
minimum elong	-1 Nov 10 j 03:36	15°M.45'07	1°42'06	conjunction	07 Nov 27 j 05:00	3° <del>27</del> 11'36	1°22'39
max. Earth dist.	-1 Nov 09 j 17:19	15°M.44'09	31.28948 AU	minimum elong	07 Nov 27 j 05:01	3° <del>27</del> 11'36	1°22'37
retrograde	00 Feb 20 j 23:30	18°M.13'00		max. Earth dist.	07 Nov 27 j 01:05	3° <del>27</del> 11'14	31.24375 AU
opposition	00 May 10 j 07:52	16°M.50'36	1°48'04	retrograde	08 Mar 09 j 14:27	5° <del>27</del> 40'24	
min. Earth dist.	00 May 10 j 17:34	16°M.49'57	29.28953 AU	opposition	08 May 28 j 13:56	4° <del>27</del> 17'29	1°26'42
direct	00 Jul 30 j 04:13	15°M.26'46		min. Earth dist.	08 May 28 j 16:43	4° <del>27</del> 17'18	29.24069 AU
conjunction	00 Nov 11 j 12:49	17°M.55'51	1°40'09	direct	08 Aug 17 j 01:51	2° <del>27</del> 53'54	
minimum elong	00 Nov 11 j 12:49	17°M.55'51	1°40'10	conjunction	08 Nov 28 j 14:04	5° <del>27</del> 22'16	1°19'38
max. Earth dist.	00 Nov 11 j 03:57	17°M.55'01	31.28743 AU	minimum elong	08 Nov 28 j 14:04	5° <del>27</del> 22'17	1°19'39
retrograde	01 Feb 22 j 10:59	20°M.23'51		max. Earth dist.	08 Nov 28 j 10:45	5° <del>27</del> 21'58	31.23668 AU
opposition	01 May 12 j 20:33	19°M.01'26	1°45'54	retrograde	09 Mar 12 j 03:09	7° <del>27</del> 51'14	
min. Earth dist.	01 May 13 j 05:01	19°M.00'52	29.28697 AU	opposition	09 May 31 j 02:51	6° <del>27</del> 28'16	1°23'26
direct	01 Aug 01 j 17:25	17°M.37'41		min. Earth dist.	09 May 31 j 05:17	6° <del>27</del> 28'06	29.23416 AU
conjunction	01 Nov 13 j 21:53	20°M.06'41	1°38'03	direct	09 Aug 19 j 12:23	5° <del>27</del> 04'43	
minimum elong	01 Nov 13 j 21:53	20°M.06'41	1°38'02	conjunction	09 Nov 30 j 23:09	7° <del>27</del> 33'03	1°16'31
max. Earth dist.	01 Nov 13 j 12:49	20°M.05'50	31.28443 AU	minimum elong	09 Nov 30 j 23:09	7° <del>27</del> 33'03	1°16'30
retrograde	02 Feb 24 j 22:27	22°M.34'50		max. Earth dist.	09 Nov 30 j 21:46	7° <del>27</del> 32'55	31.23065 AU
opposition	02 May 15 j 09:18	21°M.12'22	1°43'34	retrograde	10 Mar 14 j 14:59	10° <del>27</del> 02'10	
min. Earth dist.	02 May 15 j 17:25	21°M.11'49	29.28343 AU	opposition	10 Jun 02 j 15:39	8° <del>27</del> 39'09	1°20'02
direct	02 Aug 04 j 03:58	19°M.48'39		min. Earth dist.	10 Jun 02 j 16:25	8° <del>27</del> 39'06	29.22837 AU
conjunction	02 Nov 16 j 07:16	22°M.17'36	1°35'49	direct	10 Aug 22 j 00:49	7° <del>27</del> 15'41	
minimum elong	02 Nov 16 j 07:16	22°M.17'36	1°35'49	conjunction	10 Dec 03 j 08:14	9° <del>27</del> 43'59	1°13'17
				minimum elong	10 Dec 03 j 08:14	9° <del>27</del> 43'59	1°13'17

max. Earth dist.	10 Dec 03 j 06:55	9° $\overline{\text{A}}$ 43'51	31.22526 AU	min. Earth dist.	19 Jun 23 j 06:57	28° $\overline{\text{A}}$ 24'24	29.15674 AU
retrograde	11 Mar 17 j 03:14	12° $\overline{\text{A}}$ 13'16		direct	19 Sep 11 j 06:40	27° $\overline{\text{A}}$ 00'49	
opposition	11 Jun 05 j 04:25	10° $\overline{\text{A}}$ 50'14	1°16'31				
min. Earth dist.	11 Jun 05 j 04:30	10° $\overline{\text{A}}$ 50'14	29.22321 AU	conjunction	19 Dec 22 j 21:04	29° $\overline{\text{A}}$ 28'39	0°39'53
direct	11 Aug 24 j 10:47	9° $\overline{\text{A}}$ 26'50		minimum elong	19 Dec 22 j 21:04	29° $\overline{\text{A}}$ 28'39	0°39'52
				max. Earth dist.	19 Dec 23 j 02:35	29° $\overline{\text{A}}$ 29'10	31.15087 AU
conjunction	11 Dec 05 j 17:31	11° $\overline{\text{A}}$ 55'07	1°09'56		20 Jan 05 j 17:53	0° $\overline{\text{C}}$	
minimum elong	11 Dec 05 j 17:31	11° $\overline{\text{A}}$ 55'07	1°09'55	retrograde	20 Apr 05 j 13:05	1° $\overline{\text{C}}$ 59'17	
max. Earth dist.	11 Dec 05 j 18:13	11° $\overline{\text{A}}$ 55'11	31.22022 AU	opposition	20 Jun 25 j 02:05	0° $\overline{\text{C}}$ 35'39	0°40'25
retrograde	12 Mar 18 j 13:56	14° $\overline{\text{A}}$ 24'34		min. Earth dist.	20 Jun 24 j 19:21	0° $\overline{\text{C}}$ 36'06	29.14548 AU
opposition	12 Jun 06 j 17:26	13° $\overline{\text{A}}$ 01'31	1°12'53		20 Jul 17 j 17:25	30° $\overline{\text{R}}$ $\overline{\text{A}}$	
min. Earth dist.	12 Jun 06 j 16:41	13° $\overline{\text{A}}$ 01'34	29.21808 AU	direct	20 Sep 12 j 17:14	29° $\overline{\text{A}}$ 12'28	
direct	12 Aug 26 j 00:12	11° $\overline{\text{A}}$ 38'13			20 Nov 05 j 21:03	0° $\overline{\text{C}}$	
conjunction	12 Dec 07 j 02:36	14° $\overline{\text{A}}$ 06'27	1°06'29	conjunction	20 Dec 24 j 06:36	1° $\overline{\text{C}}$ 40'14	0°35'48
minimum elong	12 Dec 07 j 02:36	14° $\overline{\text{A}}$ 06'27	1°06'29	minimum elong	20 Dec 24 j 06:36	1° $\overline{\text{C}}$ 40'14	0°35'49
max. Earth dist.	12 Dec 07 j 03:12	14° $\overline{\text{A}}$ 06'30	31.21511 AU	max. Earth dist.	20 Dec 24 j 14:15	1° $\overline{\text{C}}$ 40'57	31.13992 AU
retrograde	13 Mar 21 j 03:26	16° $\overline{\text{A}}$ 36'05		retrograde	21 Apr 08 j 00:45	4° $\overline{\text{C}}$ 11'00	
opposition	13 Jun 09 j 06:28	15° $\overline{\text{A}}$ 13'01	1°09'08	opposition	21 Jun 27 j 15:09	2° $\overline{\text{C}}$ 47'16	0°36'02
min. Earth dist.	13 Jun 09 j 04:24	15° $\overline{\text{A}}$ 13'10	29.21273 AU	min. Earth dist.	21 Jun 27 j 07:24	2° $\overline{\text{C}}$ 47'47	29.13492 AU
direct	13 Aug 28 j 11:19	13° $\overline{\text{A}}$ 49'47		direct	21 Sep 15 j 06:37	1° $\overline{\text{C}}$ 24'05	
conjunction	13 Dec 09 j 12:05	16° $\overline{\text{A}}$ 18'00	1°02'55	conjunction	21 Dec 26 j 16:09	3° $\overline{\text{C}}$ 51'48	0°31'41
minimum elong	13 Dec 09 j 12:05	16° $\overline{\text{A}}$ 18'00	1°02'55	minimum elong	21 Dec 26 j 16:09	3° $\overline{\text{C}}$ 51'48	0°31'40
max. Earth dist.	13 Dec 09 j 14:12	16° $\overline{\text{A}}$ 18'12	31.20934 AU	max. Earth dist.	21 Dec 26 j 23:52	3° $\overline{\text{C}}$ 52'32	31.12995 AU
retrograde	14 Mar 23 j 13:12	18° $\overline{\text{A}}$ 47'49		retrograde	22 Apr 10 j 14:25	6° $\overline{\text{C}}$ 22'43	
opposition	14 Jun 11 j 19:28	17° $\overline{\text{A}}$ 24'43	1°05'17	opposition	22 Jun 30 j 04:00	4° $\overline{\text{C}}$ 58'55	0°31'35
min. Earth dist.	14 Jun 11 j 17:33	17° $\overline{\text{A}}$ 24'51	29.20648 AU	min. Earth dist.	22 Jun 29 j 18:43	4° $\overline{\text{C}}$ 59'32	29.12546 AU
direct	14 Aug 30 j 23:02	16° $\overline{\text{A}}$ 01'33		direct	22 Sep 17 j 17:35	3° $\overline{\text{C}}$ 35'45	
conjunction	14 Dec 11 j 21:30	18° $\overline{\text{A}}$ 29'43	0°59'17	conjunction	22 Dec 29 j 01:51	6° $\overline{\text{C}}$ 03'27	0°27'30
minimum elong	14 Dec 11 j 21:31	18° $\overline{\text{A}}$ 29'43	0°59'17	minimum elong	22 Dec 29 j 01:51	6° $\overline{\text{C}}$ 03'27	0°27'31
max. Earth dist.	14 Dec 11 j 23:44	18° $\overline{\text{A}}$ 29'55	31.20264 AU	max. Earth dist.	22 Dec 29 j 11:16	6° $\overline{\text{C}}$ 04'20	31.12087 AU
retrograde	15 Mar 26 j 00:49	20° $\overline{\text{A}}$ 59'41		retrograde	23 Apr 13 j 00:49	8° $\overline{\text{C}}$ 34'31	
opposition	15 Jun 14 j 08:29	19° $\overline{\text{A}}$ 36'33	1°01'20	opposition	23 Jul 02 j 17:04	7° $\overline{\text{C}}$ 10'40	0°27'06
min. Earth dist.	15 Jun 14 j 05:03	19° $\overline{\text{A}}$ 36'47	29.19905 AU	min. Earth dist.	23 Jul 02 j 07:32	7° $\overline{\text{C}}$ 11'19	29.11676 AU
direct	15 Sep 02 j 10:07	18° $\overline{\text{A}}$ 13'25		direct	23 Sep 20 j 05:21	5° $\overline{\text{C}}$ 47'33	
conjunction	15 Dec 14 j 06:59	20° $\overline{\text{A}}$ 41'33	0°55'33	conjunction	23 Dec 31 j 11:25	8° $\overline{\text{C}}$ 15'13	0°23'17
minimum elong	15 Dec 14 j 06:59	20° $\overline{\text{A}}$ 41'33	0°55'32	minimum elong	23 Dec 31 j 11:25	8° $\overline{\text{C}}$ 15'13	0°23'16
max. Earth dist.	15 Dec 14 j 09:56	20° $\overline{\text{A}}$ 41'50	31.19442 AU	max. Earth dist.	23 Dec 31 j 21:29	8° $\overline{\text{C}}$ 16'10	31.11263 AU
retrograde	16 Mar 27 j 12:00	23° $\overline{\text{A}}$ 11'41		retrograde	24 Apr 14 j 13:15	10° $\overline{\text{C}}$ 46'28	
opposition	16 Jun 15 j 21:46	21° $\overline{\text{A}}$ 48'29	0°57'18	opposition	24 Jul 04 j 06:06	9° $\overline{\text{C}}$ 22'35	0°22'33
min. Earth dist.	16 Jun 15 j 18:46	21° $\overline{\text{A}}$ 48'41	29.19010 AU	min. Earth dist.	24 Jul 03 j 18:42	9° $\overline{\text{C}}$ 23'21	29.10874 AU
direct	16 Sep 03 j 20:08	20° $\overline{\text{A}}$ 25'22		direct	24 Sep 21 j 16:45	7° $\overline{\text{C}}$ 59'30	
conjunction	16 Dec 15 j 16:35	22° $\overline{\text{A}}$ 53'25	0°51'44	conjunction	25 Jan 01 j 21:12	10° $\overline{\text{C}}$ 27'11	0°19'01
minimum elong	16 Dec 15 j 16:35	22° $\overline{\text{A}}$ 53'25	0°51'45	minimum elong	25 Jan 01 j 21:12	10° $\overline{\text{C}}$ 27'11	0°19'02
max. Earth dist.	16 Dec 15 j 20:20	22° $\overline{\text{A}}$ 53'47	31.18488 AU	max. Earth dist.	25 Jan 02 j 08:14	10° $\overline{\text{C}}$ 28'13	31.10473 AU
retrograde	17 Mar 29 j 23:55	25° $\overline{\text{A}}$ 23'42		retrograde	25 Apr 17 j 01:06	12° $\overline{\text{C}}$ 58'37	
opposition	17 Jun 18 j 10:50	24° $\overline{\text{A}}$ 00'24	0°53'11	opposition	25 Jul 06 j 19:14	11° $\overline{\text{C}}$ 34'42	0°17'59
min. Earth dist.	17 Jun 18 j 06:08	24° $\overline{\text{A}}$ 00'43	29.17979 AU	min. Earth dist.	25 Jul 06 j 08:08	11° $\overline{\text{C}}$ 35'27	29.10096 AU
direct	17 Sep 06 j 08:20	22° $\overline{\text{A}}$ 37'17		direct	25 Sep 24 j 02:45	10° $\overline{\text{C}}$ 11'41	
conjunction	17 Dec 18 j 02:03	25° $\overline{\text{A}}$ 05'15	0°47'51	conjunction	26 Jan 04 j 07:10	12° $\overline{\text{C}}$ 39'21	0°14'44
minimum elong	17 Dec 18 j 02:03	25° $\overline{\text{A}}$ 05'15	0°47'50	minimum elong	26 Jan 04 j 07:10	12° $\overline{\text{C}}$ 39'21	0°14'43
max. Earth dist.	17 Dec 18 j 05:50	25° $\overline{\text{A}}$ 05'37	31.17401 AU	behind sun begin	26 Jan 04 j 04:21	12° $\overline{\text{C}}$ 39'06	
retrograde	18 Apr 01 j 12:38	27° $\overline{\text{A}}$ 35'40		behind sun end	26 Jan 04 j 09:58	12° $\overline{\text{C}}$ 39'36	
opposition	18 Jun 21 j 00:01	26° $\overline{\text{A}}$ 12'15	0°49'00	max. Earth dist.	26 Jan 04 j 19:16	12° $\overline{\text{C}}$ 40'29	31.09694 AU
min. Earth dist.	18 Jun 20 j 19:29	26° $\overline{\text{A}}$ 12'34	29.16849 AU	retrograde	26 Apr 19 j 13:24	15° $\overline{\text{C}}$ 10'58	
direct	18 Sep 08 j 18:36	24° $\overline{\text{A}}$ 49'06		opposition	26 Jul 09 j 08:15	13° $\overline{\text{C}}$ 47'01	0°13'22
				min. Earth dist.	26 Jul 08 j 19:28	13° $\overline{\text{C}}$ 47'54	29.09289 AU
conjunction	18 Dec 20 j 11:38	27° $\overline{\text{A}}$ 17'00	0°43'54	direct	26 Sep 26 j 14:25	12° $\overline{\text{C}}$ 24'03	
minimum elong	18 Dec 20 j 11:39	27° $\overline{\text{A}}$ 17'00	0°43'54				
max. Earth dist.	18 Dec 20 j 17:08	27° $\overline{\text{A}}$ 17'32	31.16246 AU	conjunction	27 Jan 06 j 17:08	14° $\overline{\text{C}}$ 51'44	0°10'25
retrograde	19 Apr 04 j 00:11	29° $\overline{\text{A}}$ 47'31		minimum elong	27 Jan 06 j 17:08	14° $\overline{\text{C}}$ 51'44	0°10'25
opposition	19 Jun 23 j 12:56	28° $\overline{\text{A}}$ 24'00	0°44'44	behind sun begin	27 Jan 06 j 12:04	14° $\overline{\text{C}}$ 51'16	

behind sun end	27 Jan 06 j 22:13	14°☾52'12		opposition	33 Jul 25 j 03:32	29°☾16'11	0°-19'-4
max. Earth dist.	27 Jan 07 j 05:07	14°☾52'51	31.08850 AU	direct	33 Oct 11 j 22:30	27°☾53'09	
retrograde	27 Apr 22 j 02:24	17°☾23'33			34 Jan 12 j 13:57	0°☾	
opposition	27 Jul 11 j 21:24	15°☾59'34	0°08'44				
min. Earth dist.	27 Jul 11 j 08:57	16°☾00'24	29.08413 AU	conjunction	34 Jan 21 j 17:27	0°☾20'46	0°-19'-58
direct	27 Sep 28 j 23:51	14°☾36'37		minimum elong	34 Jan 21 j 17:27	0°☾20'46	0°19'59
				max. Earth dist.	34 Jan 22 j 10:19	0°☾22'22	31.00956 AU
conjunction	28 Jan 09 j 03:27	17°☾04'19	0°06'06	retrograde	34 May 07 j 20:20	2°☾53'33	
minimum elong	28 Jan 09 j 03:26	17°☾04'19	0°06'05	opposition	34 Jul 27 j 16:28	1°☾28'58	0°-23'-38
behind sun begin	28 Jan 08 j 21:20	17°☾03'46		min. Earth dist.	34 Jul 26 j 23:45	1°☾30'07	29.00484 AU
behind sun end	28 Jan 09 j 09:32	17°☾04'52		direct	34 Oct 14 j 09:17	0°☾05'56	
max. Earth dist.	28 Jan 09 j 16:52	17°☾05'35	31.07925 AU				
retrograde	28 Apr 23 j 14:49	19°☾36'18		conjunction	35 Jan 24 j 03:58	2°☾33'33	0°-24'-14
opposition	28 Jul 13 j 10:34	18°☾12'16	0°04'06	minimum elong	35 Jan 24 j 03:58	2°☾33'33	0°24'14
min. Earth dist.	28 Jul 12 j 20:58	18°☾13'11	29.07425 AU	max. Earth dist.	35 Jan 24 j 22:06	2°☾35'15	30.99999 AU
direct	28 Sep 30 j 11:17	16°☾49'20		retrograde	35 May 10 j 07:46	5°☾06'27	
				min. Earth dist.	35 Jul 29 j 10:36	3°☾43'07	28.99586 AU
conjunction	29 Jan 10 j 13:36	19°☾17'02	0°01'44	opposition	35 Jul 30 j 05:13	3°☾41'50	0°-28'-12
minimum elong	29 Jan 10 j 13:36	19°☾17'02	0°01'45	direct	35 Oct 16 j 21:01	2°☾18'48	
behind sun begin	29 Jan 10 j 07:11	19°☾16'27					
behind sun end	29 Jan 10 j 20:00	19°☾17'37		conjunction	36 Jan 26 j 14:31	4°☾46'26	0°-28'-28
max. Earth dist.	29 Jan 11 j 02:29	19°☾18'15	31.06880 AU	minimum elong	36 Jan 26 j 14:31	4°☾46'26	0°28'29
retrograde	29 Apr 26 j 04:50	21°☾49'11		max. Earth dist.	36 Jan 27 j 08:43	4°☾48'09	30.99158 AU
desc. node	29 Jun 02 j 01:24	21°☾28'23		retrograde	36 May 11 j 20:10	7°☾19'30	
opposition	29 Jul 15 j 23:47	20°☾25'04	0°00'-32	opposition	36 Jul 31 j 18:12	5°☾54'50	0°-32'-42
min. Earth dist.	29 Jul 15 j 10:06	20°☾26'00	29.06325 AU	min. Earth dist.	36 Jul 30 j 23:41	5°☾56'06	28.98810 AU
direct	29 Oct 02 j 21:41	19°☾02'08		direct	36 Oct 18 j 06:11	4°☾31'50	
conjunction	30 Jan 13 j 00:04	21°☾29'49	0°-2'-43	conjunction	37 Jan 28 j 01:17	6°☾59'29	0°-32'-40
minimum elong	30 Jan 13 j 00:04	21°☾29'49	0°02'44	minimum elong	37 Jan 28 j 01:17	6°☾59'29	0°32'40
behind sun begin	30 Jan 12 j 17:40	21°☾29'14		max. Earth dist.	37 Jan 28 j 21:15	7°☾01'22	30.98426 AU
behind sun end	30 Jan 13 j 06:28	21°☾30'24		retrograde	37 May 14 j 08:34	9°☾32'42	
max. Earth dist.	30 Jan 13 j 14:26	21°☾31'10	31.05718 AU	min. Earth dist.	37 Aug 02 j 11:14	8°☾09'22	28.98108 AU
retrograde	30 Apr 28 j 17:35	24°☾02'06		opposition	37 Aug 03 j 07:01	8°☾08'00	0°-37'-11
opposition	30 Jul 18 j 12:42	22°☾37'53	0°-5'-11	direct	37 Oct 20 j 17:09	6°☾45'01	
min. Earth dist.	30 Jul 17 j 22:37	22°☾38'51	29.05112 AU				
direct	30 Oct 05 j 10:52	21°☾14'56		conjunction	38 Jan 30 j 12:09	9°☾12'42	0°-36'-49
				minimum elong	38 Jan 30 j 12:08	9°☾12'42	0°36'51
conjunction	31 Jan 15 j 10:22	23°☾42'36	0°-7'-3	max. Earth dist.	38 Jan 31 j 07:40	9°☾14'33	30.97749 AU
minimum elong	31 Jan 15 j 10:22	23°☾42'36	0°07'04	retrograde	38 May 16 j 22:39	11°☾46'05	
behind sun begin	31 Jan 15 j 04:25	23°☾42'04		opposition	38 Aug 05 j 19:48	10°☾21'22	0°-41'-36
behind sun end	31 Jan 15 j 16:18	23°☾43'08		min. Earth dist.	38 Aug 04 j 23:59	10°☾22'43	28.97453 AU
max. Earth dist.	31 Jan 16 j 00:22	23°☾43'55	31.04483 AU	direct	38 Oct 23 j 03:03	8°☾58'24	
retrograde	31 May 01 j 07:47	26°☾15'00					
min. Earth dist.	31 Jul 20 j 10:35	24°☾51'43	29.03865 AU	conjunction	39 Feb 01 j 23:16	11°☾26'08	0°-40'-56
opposition	31 Jul 21 j 01:42	24°☾50'41	0°-9'-50	minimum elong	39 Feb 01 j 23:16	11°☾26'08	0°40'56
direct	31 Oct 07 j 22:00	23°☾27'42		max. Earth dist.	39 Feb 02 j 20:19	11°☾28'07	30.97082 AU
				retrograde	39 May 19 j 11:41	13°☾59'39	
conjunction	32 Jan 17 j 20:36	25°☾55'20	0°-11'-22	opposition	39 Aug 08 j 08:41	12°☾34'55	0°-45'-57
minimum elong	32 Jan 17 j 20:37	25°☾55'20	0°11'24	min. Earth dist.	39 Aug 07 j 12:34	12°☾36'18	28.96774 AU
behind sun begin	32 Jan 17 j 15:53	25°☾54'55		direct	39 Oct 25 j 14:57	11°☾11'59	
behind sun end	32 Jan 18 j 01:20	25°☾55'46					
max. Earth dist.	32 Jan 18 j 12:04	25°☾56'48	31.03229 AU	conjunction	40 Feb 04 j 10:19	13°☾39'45	0°-44'-59
retrograde	32 May 02 j 18:49	28°☾27'52		minimum elong	40 Feb 04 j 10:19	13°☾39'45	0°45'00
opposition	32 Jul 22 j 14:45	27°☾03'27	0°-14'-27	max. Earth dist.	40 Feb 05 j 06:47	13°☾41'41	30.96382 AU
min. Earth dist.	32 Jul 21 j 23:32	27°☾04'29	29.02637 AU		40 Mar 12 j 13:06	15°☾	
direct	32 Oct 09 j 10:14	25°☾40'26		retrograde	40 May 21 j 02:27	16°☾13'25	
					40 Aug 02 j 23:46	15°☾	
conjunction	33 Jan 19 j 07:01	28°☾08'03	0°-15'-40	opposition	40 Aug 09 j 21:38	14°☾48'38	0°-50'-15
minimum elong	33 Jan 19 j 07:00	28°☾08'03	0°15'41	min. Earth dist.	40 Aug 09 j 00:55	14°☾50'04	28.96042 AU
behind sun begin	33 Jan 19 j 05:22	28°☾07'54		direct	40 Oct 27 j 01:26	13°☾25'42	
behind sun end	33 Jan 19 j 08:39	28°☾08'12			41 Jan 12 j 20:59	15°☾	
max. Earth dist.	33 Jan 19 j 23:03	28°☾09'34	31.02046 AU				
retrograde	33 Mar 15 j 13:20	0°☾		conjunction	41 Feb 05 j 21:47	15°☾53'31	0°-48'-58
	33 May 05 j 08:09	0°☾40'41		minimum elong	41 Feb 05 j 21:47	15°☾53'31	0°48'58
	33 Jun 27 j 01:28	30°☾		max. Earth dist.	41 Feb 06 j 19:01	15°☾55'31	30.95586 AU
min. Earth dist.	33 Jul 24 j 10:37	29°☾17'21	29.01505 AU	retrograde	41 May 23 j 15:16	18°☾27'18	

opposition	41 Aug 12 j 10:30	17° $\approx$ 02'28	0°-54'-29	opposition	49 Aug 30 j 15:15	4° $\approx$ 53'49	-1°-24'-51
min. Earth dist.	41 Aug 11 j 14:21	17° $\approx$ 03'51	28.95198 AU	min. Earth dist.	49 Aug 29 j 16:02	4° $\approx$ 55'25	28.88471 AU
direct	41 Oct 29 j 13:39	15° $\approx$ 39'31		direct	49 Nov 16 j 06:32	3° $\approx$ 30'41	
conjunction	42 Feb 08 j 09:19	18° $\approx$ 07'21	0°-52'-52	conjunction	50 Feb 26 j 07:17	5° $\approx$ 58'50	-1°-20'-53
minimum elong	42 Feb 08 j 09:19	18° $\approx$ 07'21	0°52'54	minimum elong	50 Feb 26 j 07:17	5° $\approx$ 58'50	1°20'54
max. Earth dist.	42 Feb 09 j 06:22	18° $\approx$ 09'21	30.94693 AU	max. Earth dist.	50 Feb 27 j 07:44	6° $\approx$ 01'09	30.88155 AU
retrograde	42 May 26 j 06:12	20° $\approx$ 41'14		retrograde	50 Jun 13 j 13:36	8° $\approx$ 33'28	
opposition	42 Aug 14 j 23:18	19° $\approx$ 16'20	0°-58'-37	min. Earth dist.	50 Sep 01 j 04:59	7° $\approx$ 09'49	28.88031 AU
min. Earth dist.	42 Aug 14 j 02:11	19° $\approx$ 17'48	28.94251 AU	opposition	50 Sep 02 j 03:44	7° $\approx$ 08'14	-1°-28'-8
direct	42 Nov 01 j 02:20	17° $\approx$ 53'22		direct	50 Nov 18 j 18:28	5° $\approx$ 45'08	
conjunction	43 Feb 10 j 20:44	20° $\approx$ 21'13	0°-56'-42	conjunction	51 Feb 28 j 19:26	8° $\approx$ 13'22	-1°-23'-53
minimum elong	43 Feb 10 j 20:44	20° $\approx$ 21'13	0°56'43	minimum elong	51 Feb 28 j 19:26	8° $\approx$ 13'22	1°23'54
max. Earth dist.	43 Feb 11 j 17:56	20° $\approx$ 23'13	30.93690 AU	max. Earth dist.	51 Mar 01 j 19:47	8° $\approx$ 15'40	30.87742 AU
retrograde	43 May 28 j 18:41	22° $\approx$ 55'11		retrograde	51 Jun 16 j 05:28	10° $\approx$ 48'06	
opposition	43 Aug 17 j 12:11	21° $\approx$ 30'12	-1°-2'-40	opposition	51 Sep 04 j 16:09	9° $\approx$ 22'53	-1°-31'-17
min. Earth dist.	43 Aug 16 j 15:55	21° $\approx$ 31'36	28.93227 AU	min. Earth dist.	51 Sep 03 j 16:32	9° $\approx$ 24'31	28.87628 AU
direct	43 Nov 03 j 13:49	20° $\approx$ 07'11		direct	51 Nov 21 j 07:04	7° $\approx$ 59'47	
conjunction	44 Feb 13 j 08:21	22° $\approx$ 35'02	-1°00'-27	conjunction	52 Mar 02 j 07:53	10° $\approx$ 28'07	-1°-26'-46
minimum elong	44 Feb 13 j 08:21	22° $\approx$ 35'02	1°00'29	minimum elong	52 Mar 02 j 07:53	10° $\approx$ 28'07	1°26'48
max. Earth dist.	44 Feb 14 j 06:19	22° $\approx$ 37'07	30.92660 AU	max. Earth dist.	52 Mar 03 j 08:12	10° $\approx$ 30'25	30.87319 AU
retrograde	44 May 30 j 07:06	25° $\approx$ 09'05		retrograde	52 Jun 17 j 18:37	13° $\approx$ 02'57	
min. Earth dist.	44 Aug 18 j 03:12	23° $\approx$ 45'31	28.92201 AU	min. Earth dist.	52 Sep 05 j 06:17	11° $\approx$ 39'18	28.87196 AU
opposition	44 Aug 19 j 00:48	23° $\approx$ 44'02	-1°-6'-38	opposition	52 Sep 06 j 04:40	11° $\approx$ 37'44	-1°-34'-18
direct	44 Nov 05 j 02:12	22° $\approx$ 20'58		direct	52 Nov 22 j 18:18	10° $\approx$ 14'39	
conjunction	45 Feb 14 j 19:52	24° $\approx$ 48'49	-1°-4'-7	conjunction	53 Mar 04 j 20:36	12° $\approx$ 43'04	-1°-29'-32
minimum elong	45 Feb 14 j 19:52	24° $\approx$ 48'49	1°04'08	minimum elong	53 Mar 04 j 20:36	12° $\approx$ 43'04	1°29'32
max. Earth dist.	45 Feb 15 j 17:29	24° $\approx$ 50'52	30.91645 AU	max. Earth dist.	53 Mar 05 j 21:06	12° $\approx$ 45'23	30.86852 AU
retrograde	45 Jun 01 j 19:39	27° $\approx$ 22'57		retrograde	53 Jun 20 j 08:47	15° $\approx$ 17'58	
opposition	45 Aug 21 j 13:30	25° $\approx$ 57'50	-1°-10'-30	opposition	53 Sep 08 j 17:02	13° $\approx$ 52'44	-1°-37'-11
min. Earth dist.	45 Aug 20 j 16:26	25° $\approx$ 59'17	28.91231 AU	min. Earth dist.	53 Sep 07 j 17:57	13° $\approx$ 54'21	28.86679 AU
direct	45 Nov 07 j 12:11	24° $\approx$ 34'44		direct	53 Nov 25 j 07:04	12° $\approx$ 29'38	
conjunction	46 Feb 17 j 07:41	27° $\approx$ 02'37	-1°-7'-40	conjunction	54 Mar 07 j 09:20	14° $\approx$ 58'06	-1°-32'-9
minimum elong	46 Feb 17 j 07:41	27° $\approx$ 02'37	1°07'42	minimum elong	54 Mar 07 j 09:20	14° $\approx$ 58'06	1°32'10
max. Earth dist.	46 Feb 18 j 06:43	27° $\approx$ 04'48	30.90710 AU	max. Earth dist.	54 Mar 08 j 08:40	15° $\approx$ 00'19	30.86270 AU
retrograde	46 Jun 04 j 07:47	29° $\approx$ 36'50		retrograde	54 Jun 22 j 22:50	17° $\approx$ 33'03	
min. Earth dist.	46 Aug 23 j 03:39	28° $\approx$ 13'12	28.90350 AU	min. Earth dist.	54 Sep 10 j 07:36	16° $\approx$ 09'19	28.86052 AU
opposition	46 Aug 24 j 01:50	28° $\approx$ 11'39	-1°-14'-15	opposition	54 Sep 11 j 05:27	16° $\approx$ 07'48	-1°-39'-54
direct	46 Nov 09 j 23:35	26° $\approx$ 48'32		direct	54 Nov 27 j 18:02	14° $\approx$ 44'39	
conjunction	47 Feb 19 j 19:20	29° $\approx$ 16'28	-1°-11'-8	conjunction	55 Mar 09 j 22:14	17° $\approx$ 13'11	-1°-34'-38
minimum elong	47 Feb 19 j 19:20	29° $\approx$ 16'28	1°11'09	minimum elong	55 Mar 09 j 22:14	17° $\approx$ 13'10	1°34'38
max. Earth dist.	47 Feb 20 j 17:50	29° $\approx$ 18'35	30.89888 AU	max. Earth dist.	55 Mar 10 j 22:14	17° $\approx$ 15'27	30.85592 AU
retrograde	47 Mar 11 j 05:28	0° $\approx$		retrograde	55 Jun 25 j 11:08	19° $\approx$ 48'08	
opposition	47 Jun 06 j 21:09	1° $\approx$ 50'47		opposition	55 Sep 13 j 17:45	18° $\approx$ 22'50	-1°-42'-29
min. Earth dist.	47 Aug 26 j 14:25	0° $\approx$ 25'34	-1°-17'-54	min. Earth dist.	55 Sep 12 j 19:25	18° $\approx$ 24'23	28.85328 AU
direct	47 Aug 25 j 16:12	0° $\approx$ 27'06	28.89605 AU	direct	55 Nov 30 j 06:37	16° $\approx$ 59'38	
retrograde	47 Sep 11 j 04:31	30° $\approx$					
direct	47 Nov 12 j 09:28	29° $\approx$ 02'25		conjunction	56 Mar 11 j 10:55	19° $\approx$ 28'10	-1°-36'-58
	48 Jan 10 j 13:52	0° $\approx$		minimum elong	56 Mar 11 j 10:55	19° $\approx$ 28'10	1°36'59
conjunction	48 Feb 22 j 07:09	1° $\approx$ 30'25	-1°-14'-30	max. Earth dist.	56 Mar 12 j 09:43	19° $\approx$ 30'19	30.84842 AU
minimum elong	48 Feb 22 j 07:09	1° $\approx$ 30'25	1°14'31	retrograde	56 Jun 26 j 23:41	22° $\approx$ 03'08	
max. Earth dist.	48 Feb 23 j 07:15	1° $\approx$ 32'41	30.89196 AU	min. Earth dist.	56 Sep 14 j 08:27	20° $\approx$ 39'17	28.84570 AU
retrograde	48 Jun 08 j 09:35	4° $\approx$ 04'50		opposition	56 Sep 15 j 06:04	20° $\approx$ 37'46	-1°-44'-54
min. Earth dist.	48 Aug 27 j 04:16	2° $\approx$ 41'10	28.88976 AU	direct	56 Dec 01 j 17:10	19° $\approx$ 14'29	
opposition	48 Aug 28 j 02:55	2° $\approx$ 39'36	-1°-21'-26	conjunction	57 Mar 13 j 23:57	21° $\approx$ 43'03	-1°-39'-9
direct	48 Nov 13 j 20:53	1° $\approx$ 16'28		minimum elong	57 Mar 13 j 23:56	21° $\approx$ 43'03	1°39'10
conjunction	49 Feb 23 j 19:06	3° $\approx$ 44'31	-1°-17'-45	max. Earth dist.	57 Mar 14 j 23:43	21° $\approx$ 45'18	30.84075 AU
minimum elong	49 Feb 23 j 19:06	3° $\approx$ 44'31	1°17'45	retrograde	57 Jun 29 j 11:01	24° $\approx$ 18'01	
max. Earth dist.	49 Feb 24 j 18:39	3° $\approx$ 46'45	30.88631 AU	opposition	57 Sep 17 j 18:02	22° $\approx$ 52'35	-1°-47'-9
retrograde	49 Jun 11 j 00:16	6° $\approx$ 19'03		min. Earth dist.	57 Sep 16 j 20:31	22° $\approx$ 54'05	28.83818 AU
				direct	57 Dec 04 j 04:44	21° $\approx$ 29'13	

conjunction	58 Mar 16 j 12:51	23° $\mathcal{H}$ 57'49	-1°-41'-12	conjunction	66 Apr 03 j 23:28	11° $\mathcal{V}$ 57'06	-1°-51'-44
minimum elong	58 Mar 16 j 12:50	23° $\mathcal{H}$ 57'49	1°41'13	minimum elong	66 Apr 03 j 23:28	11° $\mathcal{V}$ 57'06	1°51'45
max. Earth dist.	58 Mar 17 j 11:36	23° $\mathcal{H}$ 59'58	30.83356 AU	max. Earth dist.	66 Apr 04 j 21:35	11° $\mathcal{V}$ 59'10	30.81388 AU
retrograde	58 Jul 02 j 01:08	26° $\mathcal{H}$ 32'46		retrograde	66 Jul 20 j 11:59	14° $\mathcal{V}$ 32'06	
min. Earth dist.	58 Sep 19 j 08:20	25° $\mathcal{H}$ 08'49	28.83150 AU	min. Earth dist.	66 Oct 07 j 09:16	13° $\mathcal{V}$ 08'06	28.81444 AU
opposition	58 Sep 20 j 06:04	25° $\mathcal{H}$ 07'17	-1°-49'-15	opposition	66 Oct 08 j 04:33	13° $\mathcal{V}$ 06'45	-1°-59'-49
direct	58 Dec 06 j 14:56	23° $\mathcal{H}$ 43'51		direct	66 Dec 24 j 12:18	11° $\mathcal{V}$ 43'10	
conjunction	59 Mar 19 j 01:42	26° $\mathcal{H}$ 12'30	-1°-43'-5	conjunction	67 Apr 06 j 13:07	14° $\mathcal{V}$ 12'33	-1°-52'-18
minimum elong	59 Mar 19 j 01:42	26° $\mathcal{H}$ 12'30	1°43'05	minimum elong	67 Apr 06 j 13:07	14° $\mathcal{V}$ 12'33	1°52'18
max. Earth dist.	59 Mar 20 j 01:14	26° $\mathcal{H}$ 14'43	30.82726 AU	max. Earth dist.	67 Apr 07 j 09:30	14° $\mathcal{V}$ 14'28	30.81214 AU
retrograde	59 Jul 04 j 12:52	28° $\mathcal{H}$ 47'27		retrograde	67 Jul 23 j 01:50	16° $\mathcal{V}$ 47'32	
opposition	59 Sep 22 j 18:06	27° $\mathcal{H}$ 21'55	-1°-51'-11	opposition	67 Oct 10 j 16:18	15° $\mathcal{V}$ 22'11	-2°00'-19
min. Earth dist.	59 Sep 21 j 20:51	27° $\mathcal{H}$ 23'25	28.82585 AU	min. Earth dist.	67 Oct 09 j 21:26	15° $\mathcal{V}$ 23'31	28.81233 AU
direct	59 Dec 09 j 03:01	25° $\mathcal{H}$ 58'26		direct	67 Dec 26 j 22:40	13° $\mathcal{V}$ 58'33	
conjunction	60 Mar 20 j 14:45	28° $\mathcal{H}$ 27'08	-1°-44'-48	conjunction	68 Apr 08 j 03:06	16° $\mathcal{V}$ 28'00	-1°-52'-41
minimum elong	60 Mar 20 j 14:45	28° $\mathcal{H}$ 27'08	1°44'50	minimum elong	68 Apr 08 j 03:06	16° $\mathcal{V}$ 28'00	1°52'43
max. Earth dist.	60 Mar 21 j 13:57	28° $\mathcal{H}$ 29'19	30.82236 AU	max. Earth dist.	68 Apr 08 j 23:33	16° $\mathcal{V}$ 29'56	30.80964 AU
	60 May 03 j 14:56	0° $\mathcal{V}$		retrograde	68 Jul 24 j 12:49	19° $\mathcal{V}$ 02'56	
retrograde	60 Jul 06 j 03:35	1° $\mathcal{V}$ 02'05		min. Earth dist.	68 Oct 11 j 10:10	17° $\mathcal{V}$ 38'49	28.80960 AU
	60 Sep 10 j 03:42	30° $\mathcal{R}$ $\mathcal{H}$		opposition	68 Oct 12 j 03:52	17° $\mathcal{V}$ 37'34	-2°00'-39
min. Earth dist.	60 Sep 23 j 07:51	29° $\mathcal{H}$ 38'05	28.82170 AU	direct	68 Dec 28 j 10:51	16° $\mathcal{V}$ 13'52	
opposition	60 Sep 24 j 05:55	29° $\mathcal{H}$ 36'32	-1°-52'-57				
direct	60 Dec 10 j 15:09	28° $\mathcal{H}$ 13'00		conjunction	69 Apr 10 j 17:02	18° $\mathcal{V}$ 43'23	-1°-52'-55
	61 Mar 04 j 10:41	0° $\mathcal{V}$		minimum elong	69 Apr 10 j 17:02	18° $\mathcal{V}$ 43'23	1°52'56
conjunction	61 Mar 23 j 03:54	0° $\mathcal{V}$ 41'48	-1°-46'-22	max. Earth dist.	69 Apr 11 j 12:20	18° $\mathcal{V}$ 45'12	30.80694 AU
minimum elong	61 Mar 23 j 03:54	0° $\mathcal{V}$ 41'48	1°46'23	retrograde	69 Jul 27 j 02:45	21° $\mathcal{V}$ 18'14	
max. Earth dist.	61 Mar 24 j 03:09	0° $\mathcal{V}$ 43'59	30.81880 AU	opposition	69 Oct 14 j 15:18	19° $\mathcal{V}$ 52'52	-2°00'-48
retrograde	61 Jul 08 j 16:17	3° $\mathcal{V}$ 16'45		min. Earth dist.	69 Oct 13 j 21:23	19° $\mathcal{V}$ 54'08	28.80690 AU
opposition	61 Sep 26 j 17:50	1° $\mathcal{V}$ 51'12	-1°-54'-32	direct	69 Dec 30 j 22:59	18° $\mathcal{V}$ 29'04	
min. Earth dist.	61 Sep 25 j 20:50	1° $\mathcal{V}$ 52'41	28.81888 AU	conjunction	70 Apr 13 j 06:52	20° $\mathcal{V}$ 58'40	-1°-52'-58
direct	61 Dec 13 j 02:10	0° $\mathcal{V}$ 27'39		minimum elong	70 Apr 13 j 06:53	20° $\mathcal{V}$ 58'40	1°52'59
conjunction	62 Mar 25 j 17:08	2° $\mathcal{V}$ 56'32	-1°-47'-47	max. Earth dist.	70 Apr 14 j 01:53	21° $\mathcal{V}$ 00'26	30.80432 AU
minimum elong	62 Mar 25 j 17:08	2° $\mathcal{V}$ 56'32	1°47'48	retrograde	70 Jul 29 j 14:34	23° $\mathcal{V}$ 33'25	
max. Earth dist.	62 Mar 26 j 16:40	2° $\mathcal{V}$ 58'45	30.81667 AU	min. Earth dist.	70 Oct 16 j 10:14	22° $\mathcal{V}$ 09'12	28.80465 AU
retrograde	62 Jul 11 j 06:56	5° $\mathcal{V}$ 31'30		opposition	70 Oct 17 j 02:44	22° $\mathcal{V}$ 08'02	-2°00'-46
min. Earth dist.	62 Sep 28 j 07:39	4° $\mathcal{V}$ 07'31	28.81731 AU	direct	71 Jan 02 j 09:54	20° $\mathcal{V}$ 44'10	
opposition	62 Sep 29 j 05:30	4° $\mathcal{V}$ 05'58	-1°-55'-57	conjunction	71 Apr 15 j 20:47	23° $\mathcal{V}$ 13'49	-1°-52'-51
direct	62 Dec 15 j 15:00	2° $\mathcal{V}$ 42'25		minimum elong	71 Apr 15 j 20:47	23° $\mathcal{V}$ 13'49	1°52'52
conjunction	63 Mar 28 j 06:24	5° $\mathcal{V}$ 11'24	-1°-49'-1	max. Earth dist.	71 Apr 16 j 15:38	23° $\mathcal{V}$ 15'35	30.80262 AU
minimum elong	63 Mar 28 j 06:24	5° $\mathcal{V}$ 11'24	1°49'02	retrograde	71 Aug 01 j 04:51	25° $\mathcal{V}$ 48'29	
max. Earth dist.	63 Mar 29 j 05:05	5° $\mathcal{V}$ 13'32	30.81558 AU	opposition	71 Oct 19 j 13:56	24° $\mathcal{V}$ 23'06	-2°00'-33
retrograde	63 Jul 13 j 21:21	7° $\mathcal{V}$ 46'24		min. Earth dist.	71 Oct 18 j 20:50	24° $\mathcal{V}$ 24'18	28.80346 AU
opposition	63 Oct 01 j 17:23	6° $\mathcal{V}$ 20'54	-1°-57'-11	direct	72 Jan 04 j 23:37	22° $\mathcal{V}$ 59'10	
min. Earth dist.	63 Sep 30 j 20:41	6° $\mathcal{V}$ 22'22	28.81671 AU	conjunction	72 Apr 17 j 10:37	25° $\mathcal{V}$ 28'53	-1°-52'-34
direct	63 Dec 18 j 01:54	4° $\mathcal{V}$ 57'22		minimum elong	72 Apr 17 j 10:37	25° $\mathcal{V}$ 28'53	1°52'34
conjunction	64 Mar 29 j 19:54	7° $\mathcal{V}$ 26'27	-1°-50'-6	max. Earth dist.	72 Apr 18 j 04:30	25° $\mathcal{V}$ 30'33	30.80202 AU
minimum elong	64 Mar 29 j 19:54	7° $\mathcal{V}$ 26'27	1°50'07	retrograde	72 Aug 02 j 18:21	28° $\mathcal{V}$ 03'28	
max. Earth dist.	64 Mar 30 j 19:13	7° $\mathcal{V}$ 28'39	30.81525 AU	min. Earth dist.	72 Oct 20 j 09:25	26° $\mathcal{V}$ 39'12	28.80361 AU
retrograde	64 Jul 15 j 10:21	10° $\mathcal{V}$ 01'28		opposition	72 Oct 21 j 01:17	26° $\mathcal{V}$ 38'05	-2°00'-8
min. Earth dist.	64 Oct 02 j 08:06	8° $\mathcal{V}$ 37'31	28.81639 AU	direct	73 Jan 06 j 11:32	25° $\mathcal{V}$ 14'06	
opposition	64 Oct 03 j 05:05	8° $\mathcal{V}$ 36'02	-1°-58'-15	conjunction	73 Apr 20 j 00:42	27° $\mathcal{V}$ 43'53	-1°-52'-6
direct	64 Dec 19 j 14:29	7° $\mathcal{V}$ 12'30		minimum elong	73 Apr 20 j 00:42	27° $\mathcal{V}$ 43'53	1°52'06
conjunction	65 Apr 01 j 09:33	9° $\mathcal{V}$ 41'42	-1°-51'00	max. Earth dist.	73 Apr 20 j 19:00	27° $\mathcal{V}$ 45'36	30.80291 AU
minimum elong	65 Apr 01 j 09:33	9° $\mathcal{V}$ 41'42	1°51'00	retrograde	73 Jul 02 j 18:56	0° $\mathcal{B}$	
max. Earth dist.	65 Apr 02 j 07:14	9° $\mathcal{V}$ 43'44	30.81484 AU		73 Aug 05 j 07:03	0° $\mathcal{B}$ 18'22	
retrograde	65 Jul 17 j 23:46	12° $\mathcal{V}$ 16'43			73 Sep 08 j 02:42	30° $\mathcal{R}$ $\mathcal{V}$	
opposition	65 Oct 05 j 16:47	10° $\mathcal{V}$ 51'20	-1°-59'-7	opposition	73 Oct 23 j 12:19	28° $\mathcal{V}$ 53'01	-1°-59'-33
min. Earth dist.	65 Oct 04 j 20:58	10° $\mathcal{V}$ 52'44	28.81584 AU	min. Earth dist.	73 Oct 22 j 20:03	28° $\mathcal{V}$ 54'10	28.80518 AU
direct	65 Dec 22 j 00:47	9° $\mathcal{V}$ 27'47		direct	74 Jan 09 j 00:34	27° $\mathcal{V}$ 29'00	
				conjunction	74 Apr 22 j 14:37	29° $\mathcal{V}$ 58'51	-1°-51'-28

minimum elong	74 Apr 22 j 14:37	29°♃58'51	1°51'29	direct	82 Jan 26 j 21:39	15°♃29'47	
max. Earth dist.	74 Apr 23 j 07:30	0°♃00'26	30.80532 AU				
	74 Apr 23 j 02:51	0°♃		conjunction	82 May 11 j 09:27	18°♃00'20	-1°-40'-21
retrograde	74 Aug 07 j 20:57	2°♃33'16		minimum elong	82 May 11 j 09:28	18°♃00'20	1°40'21
opposition	74 Oct 25 j 23:34	1°♃07'57	-1°-58'-47	max. Earth dist.	82 May 11 j 20:18	18°♃01'21	30.83792 AU
min. Earth dist.	74 Oct 25 j 08:06	1°♃09'03	28.80838 AU	retrograde	82 Aug 26 j 01:23	20°♃33'53	
	74 Dec 11 j 10:47	30°♃		opposition	82 Nov 12 j 15:51	19°♃09'01	-1°-46'-11
direct	75 Jan 11 j 11:21	29°♃43'55		min. Earth dist.	82 Nov 12 j 06:28	19°♃09'41	28.84017 AU
	75 Feb 11 j 02:05	0°♃		direct	83 Jan 29 j 11:07	17°♃44'40	
conjunction	75 Apr 25 j 04:37	2°♃13'52	-1°-50'-39	conjunction	83 May 13 j 23:38	20°♃15'16	-1°-38'-15
minimum elong	75 Apr 25 j 04:38	2°♃13'52	1°50'40	minimum elong	83 May 13 j 23:38	20°♃15'16	1°38'16
max. Earth dist.	75 Apr 25 j 22:17	2°♃15'31	30.80921 AU	max. Earth dist.	83 May 14 j 08:43	20°♃16'07	30.84074 AU
retrograde	75 Aug 10 j 09:33	4°♃48'12		retrograde	83 Aug 28 j 15:01	22°♃48'40	
opposition	75 Oct 28 j 10:45	3°♃22'58	-1°-57'-49	opposition	83 Nov 15 j 02:42	21°♃23'49	-1°-43'-52
min. Earth dist.	75 Oct 27 j 19:40	3°♃24'02	28.81275 AU	min. Earth dist.	83 Nov 14 j 18:30	21°♃24'24	28.84330 AU
direct	76 Jan 13 j 23:31	1°♃58'55		direct	84 Jan 31 j 22:48	19°♃59'25	
conjunction	76 Apr 26 j 18:45	4°♃28'58	-1°-49'-41	conjunction	84 May 15 j 14:08	22°♃30'04	-1°-36'00
minimum elong	76 Apr 26 j 18:45	4°♃28'58	1°49'41	minimum elong	84 May 15 j 14:08	22°♃30'05	1°36'00
max. Earth dist.	76 Apr 27 j 10:44	4°♃30'27	30.81416 AU	max. Earth dist.	84 May 15 j 23:37	22°♃30'58	30.84424 AU
retrograde	76 Aug 11 j 22:42	7°♃03'13		retrograde	84 Aug 30 j 03:11	25°♃03'19	
opposition	76 Oct 29 j 21:45	5°♃38'04	-1°-56'-41	opposition	84 Nov 16 j 13:19	23°♃38'31	-1°-41'-23
min. Earth dist.	76 Oct 29 j 07:10	5°♃39'06	28.81801 AU	min. Earth dist.	84 Nov 16 j 05:42	23°♃39'04	28.84718 AU
direct	77 Jan 15 j 10:09	4°♃14'00		direct	85 Feb 02 j 11:50	22°♃14'04	
conjunction	77 Apr 29 j 09:11	6°♃44'09	-1°-48'-32	conjunction	85 May 18 j 04:26	24°♃44'47	-1°-33'-37
minimum elong	77 Apr 29 j 09:11	6°♃44'09	1°48'33	minimum elong	85 May 18 j 04:26	24°♃44'47	1°33'38
max. Earth dist.	77 Apr 30 j 01:12	6°♃45'39	30.81947 AU	max. Earth dist.	85 May 18 j 12:06	24°♃45'30	30.84879 AU
retrograde	77 Aug 14 j 09:41	9°♃18'20		retrograde	85 Sep 01 j 15:45	27°♃17'53	
opposition	77 Nov 01 j 08:56	7°♃53'16	-1°-55'-22	opposition	85 Nov 19 j 00:02	25°♃53'09	-1°-38'-45
min. Earth dist.	77 Oct 31 j 19:42	7°♃54'12	28.82323 AU	min. Earth dist.	85 Nov 18 j 16:44	25°♃53'40	28.85237 AU
direct	78 Jan 17 j 21:38	6°♃29'12		direct	86 Feb 04 j 23:08	24°♃28'38	
conjunction	78 May 01 j 23:28	8°♃59'27	-1°-47'-13	conjunction	86 May 20 j 18:41	26°♃59'26	-1°-31'-5
minimum elong	78 May 01 j 23:28	8°♃59'27	1°47'13	minimum elong	86 May 20 j 18:41	26°♃59'26	1°31'05
max. Earth dist.	78 May 02 j 13:51	9°♃00'48	30.82459 AU	max. Earth dist.	86 May 21 j 02:43	27°♃00'11	30.85459 AU
retrograde	78 Aug 16 j 23:35	11°♃33'32		retrograde	86 Sep 04 j 02:18	29°♃32'24	
opposition	78 Nov 03 j 20:00	10°♃08'32	-1°-53'-52	opposition	86 Nov 21 j 10:45	28°♃07'44	-1°-35'-58
min. Earth dist.	78 Nov 03 j 06:51	10°♃09'28	28.82801 AU	min. Earth dist.	86 Nov 21 j 04:28	28°♃08'11	28.85881 AU
direct	79 Jan 20 j 09:02	8°♃44'26		direct	87 Feb 07 j 10:39	26°♃43'13	
conjunction	79 May 04 j 13:56	11°♃14'46	-1°-45'-44	conjunction	87 May 23 j 08:56	29°♃14'05	-1°-28'-24
minimum elong	79 May 04 j 13:56	11°♃14'46	1°45'45	minimum elong	87 May 23 j 08:56	29°♃14'05	1°28'26
max. Earth dist.	79 May 05 j 03:34	11°♃16'02	30.82891 AU	max. Earth dist.	87 May 23 j 15:28	29°♃14'42	30.86188 AU
retrograde	79 Aug 19 j 10:49	13°♃48'45			87 Jun 13 j 04:27	0°♃	
opposition	79 Nov 06 j 07:08	12°♃23'48	-1°-52'-12	retrograde	87 Sep 06 j 15:56	1°♃46'55	
min. Earth dist.	79 Nov 05 j 19:56	12°♃24'35	28.83191 AU	opposition	87 Nov 23 j 21:15	0°♃22'21	-1°-33'-2
direct	80 Jan 22 j 19:48	10°♃59'39		min. Earth dist.	87 Nov 23 j 14:48	0°♃22'49	28.86667 AU
conjunction	80 May 06 j 04:29	13°♃30'03	-1°-44'-5	direct	87 Dec 07 j 03:42	30°♃	
minimum elong	80 May 06 j 04:29	13°♃30'03	1°44'06		88 Feb 09 j 21:21	28°♃57'49	
max. Earth dist.	80 May 06 j 17:04	13°♃31'14	30.83252 AU		88 Apr 12 j 15:16	0°♃	
retrograde	80 Jun 17 j 21:26	15°♃		conjunction	88 May 24 j 23:21	1°♃28'48	-1°-25'-36
	80 Aug 21 j 00:16	16°♃03'54		minimum elong	88 May 24 j 23:21	1°♃28'48	1°25'36
	80 Oct 26 j 07:04	15°♃		max. Earth dist.	88 May 25 j 05:34	1°♃29'22	30.87025 AU
opposition	80 Nov 07 j 18:06	14°♃38'59	-1°-50'-21	retrograde	88 Sep 08 j 02:06	4°♃01'30	
min. Earth dist.	80 Nov 07 j 06:54	14°♃39'47	28.83499 AU	opposition	88 Nov 25 j 07:56	2°♃37'03	-1°-29'-58
direct	81 Jan 24 j 09:44	13°♃14'47		min. Earth dist.	88 Nov 25 j 03:14	2°♃37'23	28.87538 AU
	81 Apr 18 j 07:31	15°♃		direct	89 Feb 11 j 07:33	1°♃12'31	
conjunction	81 May 08 j 18:57	15°♃45'15	-1°-42'-18	conjunction	89 May 27 j 13:44	3°♃43'35	-1°-22'-39
minimum elong	81 May 08 j 18:57	15°♃45'15	1°42'19	minimum elong	89 May 27 j 13:45	3°♃43'35	1°22'40
max. Earth dist.	81 May 09 j 06:00	15°♃46'17	30.83529 AU	max. Earth dist.	89 May 27 j 18:59	3°♃44'04	30.87931 AU
retrograde	81 Aug 23 j 12:36	18°♃18'58		retrograde	89 Sep 10 j 14:29	6°♃16'10	
opposition	81 Nov 10 j 05:03	16°♃54'04	-1°-48'-21	opposition	89 Nov 27 j 18:25	4°♃51'50	-1°-26'-45
min. Earth dist.	81 Nov 09 j 19:40	16°♃54'44	28.83760 AU	min. Earth dist.	89 Nov 27 j 13:42	4°♃52'10	28.88439 AU

direct	90 Feb 13 j 20:54	3°II27'17		minimum elong	98 Jun 17 j 22:05	23°II53'13	0°51'16
				max. Earth dist.	98 Jun 17 j 17:53	23°II52'50	30.94042 AU
conjunction	90 May 30 j 04:10	5°II58'27	-1°-19'-35	retrograde	98 Oct 01 j 00:03	26°II24'09	
minimum elong	90 May 30 j 04:10	5°II58'27	1°19'35	opposition	98 Dec 17 j 16:33	25°II00'17	0°-52'-43
max. Earth dist.	90 May 30 j 08:01	5°II58'49	30.88822 AU	min. Earth dist.	98 Dec 17 j 19:46	25°II00'03	28.94484 AU
retrograde	90 Sep 13 j 02:16	8°II30'55		direct	99 Mar 06 j 11:49	23°II35'13	
opposition	90 Nov 30 j 05:08	7°II06'40	-1°-23'-24				
min. Earth dist.	90 Nov 30 j 02:18	7°II06'52	28.89312 AU	conjunction	99 Jun 20 j 11:54	26°II06'44	0°-47'-20
direct	91 Feb 16 j 07:50	5°II42'06		minimum elong	99 Jun 20 j 11:55	26°II06'44	0°47'22
				max. Earth dist.	99 Jun 20 j 06:55	26°II06'16	30.94911 AU
conjunction	91 Jun 01 j 18:36	8°II13'21	-1°-16'-24	retrograde	99 Oct 03 j 10:42	28°II37'30	
minimum elong	91 Jun 01 j 18:36	8°II13'21	1°16'25	opposition	99 Dec 20 j 02:56	27°II13'43	0°-48'-29
max. Earth dist.	91 Jun 01 j 21:50	8°II13'39	30.89661 AU	min. Earth dist.	99 Dec 20 j 07:33	27°II13'23	28.95424 AU
retrograde	91 Sep 15 j 14:51	10°II45'40		direct	100 Mar 07 j 22:00	25°II48'37	
opposition	91 Dec 02 j 15:45	9°II21'30	-1°-19'-56				
min. Earth dist.	91 Dec 02 j 13:15	9°II21'40	28.90088 AU	conjunction	100 Jun 22 j 01:51	28°II20'12	0°-43'-20
direct	92 Feb 18 j 21:08	7°II56'53		minimum elong	100 Jun 22 j 01:51	28°II20'12	0°43'21
				max. Earth dist.	100 Jun 21 j 20:39	28°II19'43	30.95923 AU
conjunction	92 Jun 03 j 09:04	10°II28'12	-1°-13'-6		100 Aug 09 j 18:44	0°☾	
minimum elong	92 Jun 03 j 09:05	10°II28'12	1°13'06	retrograde	100 Oct 04 j 22:07	0°☾50'49	
max. Earth dist.	92 Jun 03 j 10:02	10°II28'18	30.90390 AU		100 Dec 01 j 15:45	30°RII	
retrograde	92 Sep 17 j 04:07	13°II00'21		opposition	100 Dec 21 j 13:04	29°II27'08	0°-44'-10
opposition	92 Dec 04 j 02:20	11°II36'13	-1°-16'-20	min. Earth dist.	100 Dec 21 j 17:39	29°II26'49	28.96477 AU
min. Earth dist.	92 Dec 04 j 01:24	11°II36'17	28.90769 AU				
direct	93 Feb 20 j 09:34	10°II11'33					
conjunction	93 Jun 05 j 23:37	12°II42'56	-1°-9'-41				
minimum elong	93 Jun 05 j 23:37	12°II42'56	1°09'43				
max. Earth dist.	93 Jun 06 j 00:26	12°II43'00	30.91025 AU				
retrograde	93 Sep 19 j 15:44	15°II14'52					
opposition	93 Dec 06 j 12:54	13°II50'47	-1°-12'-39				
min. Earth dist.	93 Dec 06 j 12:56	13°II50'47	28.91352 AU				
direct	94 Feb 22 j 23:40	12°II26'04					
conjunction	94 Jun 08 j 13:41	14°II57'27	-1°-6'-11				
minimum elong	94 Jun 08 j 13:42	14°II57'27	1°06'11				
max. Earth dist.	94 Jun 08 j 12:21	14°II57'19	30.91589 AU				
retrograde	94 Sep 22 j 04:12	17°II29'11					
opposition	94 Dec 08 j 23:23	16°II05'08	-1°-8'-51				
min. Earth dist.	94 Dec 09 j 00:05	16°II05'05	28.91897 AU				
direct	95 Feb 25 j 11:42	14°II40'20					
conjunction	95 Jun 11 j 04:01	17°II11'44	-1°-2'-35				
minimum elong	95 Jun 11 j 04:01	17°II11'44	1°02'37				
max. Earth dist.	95 Jun 11 j 02:43	17°II11'37	30.92125 AU				
retrograde	95 Sep 24 j 14:58	19°II43'16					
opposition	95 Dec 11 j 09:44	18°II19'15	-1°-4'-57				
min. Earth dist.	95 Dec 11 j 11:51	18°II19'06	28.92431 AU				
direct	96 Feb 28 j 00:18	16°II54'21					
conjunction	96 Jun 12 j 18:08	19°II25'47	0°-58'-54				
minimum elong	96 Jun 12 j 18:08	19°II25'47	0°58'54				
max. Earth dist.	96 Jun 12 j 14:59	19°II25'29	30.92687 AU				
retrograde	96 Sep 26 j 03:39	21°II57'06					
opposition	96 Dec 12 j 20:00	20°II33'07	-1°00'-58				
min. Earth dist.	96 Dec 12 j 22:03	20°II32'58	28.93016 AU				
direct	97 Mar 01 j 12:14	19°II08'09					
conjunction	97 Jun 15 j 08:11	21°II39'36	0°-55'-7				
minimum elong	97 Jun 15 j 08:11	21°II39'36	0°55'08				
max. Earth dist.	97 Jun 15 j 04:51	21°II39'17	30.93303 AU				
retrograde	97 Sep 28 j 12:45	24°II10'43					
opposition	97 Dec 15 j 06:22	22°II46'47	0°-56'-53				
min. Earth dist.	97 Dec 15 j 10:01	22°II46'31	28.93684 AU				
direct	98 Mar 03 j 23:12	21°II21'45					
conjunction	98 Jun 17 j 22:05	23°II53'13	0°-51'-16				