conjunction	600 Mar 17 j 06:49	29°♓15'08	-16°51'00
minimum elong	600 Mar 17 j 06:52	29°♓15'08	16°51'00
max. Earth dist.	600 Mar 19 j 09:41	29°♓18'09	48.65645 AU
	600 Apr 19 j 00:20	0°♈	
retrograde	600 Jun 28 j 10:07	0°♈48'50	
	600 Sep 09 j 07:03	30°℞♓	
min. Earth dist.	600 Sep 18 j 09:10	29°♓49'33	46.80083 AU
opposition	600 Sep 20 j 09:19	29°♓47'14	-17°33'54
direct	600 Dec 10 j 11:10	28°♓47'02	
	601 Mar 06 j 21:42	0°♈	
conjunction	601 Mar 18 j 13:34	0°♈16'32	-16°51'34
minimum elong	601 Mar 18 j 13:37	0°♈16'32	16°51'33
max. Earth dist.	601 Mar 20 j 14:41	0°♈19'27	48.76386 AU
retrograde	601 Jun 29 j 15:55	1°♈49'59	
min. Earth dist.	601 Sep 19 j 17:34	0°♈50'42	46.90596 AU
opposition	601 Sep 21 j 15:59	0°♈48'28	-17°34'15
	601 Nov 09 j 05:30	30°℞♓	
direct	601 Dec 11 j 18:58	29°♓48'21	
	602 Jan 12 j 21:56	0°♈	
conjunction	602 Mar 19 j 20:30	1°♈17'37	-16°51'50
minimum elong	602 Mar 19 j 20:33	1°♈17'37	16°51'51
max. Earth dist.	602 Mar 21 j 21:26	1°♈20'31	48.86665 AU
retrograde	602 Jun 30 j 20:58	2°♈50'49	
min. Earth dist.	602 Sep 21 j 00:53	1°♈51'34	47.00654 AU
opposition	602 Sep 22 j 22:15	1°♈49'22	-17°34'18
direct	602 Dec 13 j 03:30	0°♈49'20	
conjunction	603 Mar 21 j 03:10	2°♈18'21	-16°51'50
minimum elong	603 Mar 21 j 03:14	2°♈18'21	16°51'49
max. Earth dist.	603 Mar 23 j 02:05	2°♈21'07	48.96530 AU
retrograde	603 Jul 02 j 05:52	3°♈51'18	
min. Earth dist.	603 Sep 22 j 07:35	2°♈52'07	47.10335 AU
opposition	603 Sep 24 j 04:29	2°♈49'57	-17°34'02
direct	603 Dec 14 j 08:06	1°♈49'59	
conjunction	604 Mar 21 j 09:42	3°♈18'47	-16°51'31
minimum elong	604 Mar 21 j 09:45	3°♈18'47	16°51'32
max. Earth dist.	604 Mar 23 j 08:32	3°♈21'33	49.06031 AU
retrograde	604 Jul 02 j 13:33	4°♈51'30	
min. Earth dist.	604 Sep 22 j 15:26	3°♈52'19	47.19670 AU
opposition	604 Sep 24 j 10:36	3°♈50'14	-17°33'28
direct	604 Dec 14 j 12:44	2°♈50'21	
conjunction	605 Mar 22 j 16:09	4°♈18'57	-16°50'55
minimum elong	605 Mar 22 j 16:14	4°♈18'57	16°50'54
max. Earth dist.	605 Mar 24 j 13:59	4°♈21'39	49.15235 AU
retrograde	605 Jul 03 j 18:52	5°♈51'26	
min. Earth dist.	605 Sep 23 j 21:03	4°♈52'22	47.28712 AU
opposition	605 Sep 25 j 16:32	4°♈50'17	-17°32'36
direct	605 Dec 15 j 17:59	3°♈50'29	
conjunction	606 Mar 23 j 22:24	5°♈18'54	-16°50'00
minimum elong	606 Mar 23 j 22:28	5°♈18'54	16°50'00
max. Earth dist.	606 Mar 25 j 19:00	5°♈21'31	49.24147 AU
retrograde	606 Jul 04 j 23:18	6°♈51'11	
min. Earth dist.	606 Sep 25 j 04:37	5°♈52'08	47.37469 AU
opposition	606 Sep 26 j 22:32	5°♈50'07	-17°31'24
direct	606 Dec 17 j 01:59	4°♈50'25	
conjunction	607 Mar 25 j 04:50	6°♈18'40	-16°48'47
minimum elong	607 Mar 25 j 04:56	6°♈18'40	16°48'46
max. Earth dist.	607 Mar 27 j 01:34	6°♈21'17	49.32778 AU
retrograde	607 Jul 06 j 03:41	7°♈50'46	
min. Earth dist.	607 Sep 26 j 10:55	6°♈51'48	47.45917 AU
opposition	607 Sep 28 j 04:11	6°♈49'49	-17°29'54
direct	607 Dec 18 j 10:27	5°♈50'13	
conjunction	608 Mar 25 j 10:59	7°♈18'18	-16°47'16
minimum elong	608 Mar 25 j 11:03	7°♈18'18	16°47'16
max. Earth dist.	608 Mar 27 j 05:44	7°♈20'48	49.41103 AU
retrograde	608 Jul 06 j 12:50	8°♈50'14	
min. Earth dist.	608 Sep 26 j 17:09	7°♈51'21	47.54048 AU
opposition	608 Sep 28 j 09:56	7°♈49'25	-17°28'06
direct	608 Dec 18 j 14:06	6°♈49'55	
conjunction	609 Mar 26 j 17:04	8°♈17'51	-16°45'28
minimum elong	609 Mar 26 j 17:11	8°♈17'51	16°45'28
max. Earth dist.	609 Mar 28 j 11:41	8°♈20'20	49.49075 AU
retrograde	609 Jul 07 j 20:17	9°♈49'38	
min. Earth dist.	609 Sep 28 j 00:52	8°♈50'46	47.61787 AU
opposition	609 Sep 29 j 15:41	8°♈48'55	-17°26'02
direct	609 Dec 19 j 18:35	7°♈49'32	
conjunction	610 Mar 27 j 23:20	9°♈17'19	-16°43'24
minimum elong	610 Mar 27 j 23:25	9°♈17'19	16°43'24
max. Earth dist.	610 Mar 29 j 16:32	9°♈19'43	49.56643 AU
retrograde	610 Jul 09 j 01:59	10°♈48'55	
min. Earth dist.	610 Sep 29 j 06:41	9°♈50'09	47.69077 AU
opposition	610 Sep 30 j 21:07	9°♈48'19	-17°23'41
direct	610 Dec 20 j 23:11	8°♈49'01	
conjunction	611 Mar 29 j 05:32	10°♈16'41	-16°41'06
minimum elong	611 Mar 29 j 05:39	10°♈16'41	16°41'06
max. Earth dist.	611 Mar 30 j 20:53	10°♈18'58	49.63715 AU
retrograde	611 Jul 10 j 06:38	11°♈48'07	
min. Earth dist.	611 Sep 30 j 14:28	10°♈49'19	47.75852 AU
opposition	611 Oct 02 j 02:46	10°♈47'36	-17°21'05
direct	611 Dec 22 j 05:28	9°♈48'23	
conjunction	612 Mar 29 j 11:43	11°♈15'53	-16°38'32
minimum elong	612 Mar 29 j 11:49	11°♈15'54	16°38'32
max. Earth dist.	612 Mar 31 j 02:27	11°♈18'08	49.70258 AU
retrograde	612 Jul 10 j 09:55	12°♈47'09	
min. Earth dist.	612 Sep 30 j 20:54	11°♈48'23	47.82066 AU
opposition	612 Oct 02 j 08:11	11°♈46'43	-17°18'15
direct	612 Dec 22 j 13:56	10°♈47'32	
conjunction	613 Mar 30 j 17:42	12°♈14'53	-16°35'45
minimum elong	613 Mar 30 j 17:49	12°♈14'53	16°35'45
max. Earth dist.	613 Apr 01 j 06:02	12°♈16'59	49.76262 AU
retrograde	613 Jul 11 j 16:59	13°♈45'58	
min. Earth dist.	613 Oct 02 j 03:23	12°♈47'12	47.87762 AU
opposition	613 Oct 03 j 13:33	12°♈45'35	-17°15'10
direct	613 Dec 23 j 19:27	11°♈46'27	
conjunction	614 Mar 31 j 23:40	13°♈13'38	-16°32'43
minimum elong	614 Mar 31 j 23:47	13°♈13'38	16°32'42
max. Earth dist.	614 Apr 02 j 11:29	13°♈15'42	49.81755 AU
retrograde	614 Jul 13 j 00:28	14°♈44'32	
min. Earth dist.	614 Oct 03 j 10:38	13°♈45'42	47.92962 AU
opposition	614 Oct 04 j 18:51	13°♈44'11	-17°11'51
direct	614 Dec 24 j 23:52	12°♈45'05	
conjunction	615 Apr 02 j 05:35	14°♈12'05	-16°29'26
minimum elong	615 Apr 02 j 05:42	14°♈12'06	16°29'26
max. Earth dist.	615 Apr 03 j 15:55	14°♈14'04	49.86800 AU
retrograde	615 Jul 14 j 07:07	15°♈42'48	
opposition	615 Oct 05 j 23:46	14°♈42'30	-17°08'15

min. Earth dist.	615 Oct 04 j 15:43	14°♈44'01	47.97739 AU
direct	615 Dec 26 j 02:54	13°♈43'24	
conjunction	616 Apr 02 j 11:19	15°♈10'17	-16°25'54
minimum elong	616 Apr 02 j 11:27	15°♈10'17	16°25'53
max. Earth dist.	616 Apr 03 j 20:13	15°♈12'10	49.91444 AU
retrograde	616 Jul 14 j 10:49	16°♈40'48	
min. Earth dist.	616 Oct 04 j 22:38	15°♈41'58	48.02150 AU
opposition	616 Oct 06 j 04:54	15°♈40'32	-17°04'24
direct	616 Dec 26 j 09:17	14°♈41'29	
conjunction	617 Apr 03 j 16:57	16°♈08'12	-16°22'05
minimum elong	617 Apr 03 j 17:04	16°♈08'13	16°22'05
max. Earth dist.	617 Apr 05 j 01:53	16°♈10'06	49.95753 AU
retrograde	617 Jul 15 j 12:32	17°♈38'35	
min. Earth dist.	617 Oct 06 j 04:05	16°♈39'46	48.06227 AU
opposition	617 Oct 07 j 09:51	16°♈38'21	-17°00'16
direct	617 Dec 27 j 17:41	15°♈39'19	
conjunction	618 Apr 04 j 22:33	17°♈05'56	-16°18'01
minimum elong	618 Apr 04 j 22:42	17°♈05'56	16°18'00
max. Earth dist.	618 Apr 06 j 05:29	17°♈07'42	49.99752 AU
retrograde	618 Jul 16 j 19:16	18°♈36'10	
min. Earth dist.	618 Oct 07 j 09:32	17°♈37'22	48.10009 AU
opposition	618 Oct 08 j 14:41	17°♈35'59	-16°55'51
direct	618 Dec 28 j 22:16	16°♈37'00	
conjunction	619 Apr 06 j 04:15	18°♈03'30	-16°13'40
minimum elong	619 Apr 06 j 04:23	18°♈03'31	16°13'41
max. Earth dist.	619 Apr 07 j 11:01	18°♈05'16	50.03449 AU
retrograde	619 Jul 18 j 01:46	19°♈33'37	
opposition	619 Oct 09 j 19:36	18°♈33'31	-16°51'10
min. Earth dist.	619 Oct 08 j 16:06	18°♈34'49	48.13475 AU
direct	619 Dec 30 j 02:55	17°♈34'35	
conjunction	620 Apr 06 j 09:43	19°♈00'59	-16°09'04
minimum elong	620 Apr 06 j 09:53	19°♈01'00	16°09'04
max. Earth dist.	620 Apr 07 j 15:23	19°♈02'41	50.06844 AU
retrograde	620 Jul 18 j 07:43	20°♈30'59	
min. Earth dist.	620 Oct 08 j 20:49	19°♈32'15	48.16617 AU
opposition	620 Oct 10 j 00:20	19°♈30'57	-16°46'13
direct	620 Dec 30 j 05:59	18°♈32'05	
conjunction	621 Apr 07 j 15:13	19°♈58'26	-16°04'12
minimum elong	621 Apr 07 j 15:21	19°♈58'26	16°04'12
max. Earth dist.	621 Apr 08 j 19:20	20°♈00'02	50.09888 AU
retrograde	621 Jul 19 j 12:44	21°♈28'21	
min. Earth dist.	621 Oct 10 j 03:36	20°♈29'35	48.19393 AU
opposition	621 Oct 11 j 05:09	20°♈28'23	-16°41'00
direct	621 Dec 31 j 10:30	19°♈29'34	
conjunction	622 Apr 08 j 20:52	20°♈55'52	-15°59'05
minimum elong	622 Apr 08 j 21:02	20°♈55'53	15°59'05
max. Earth dist.	622 Apr 10 j 00:41	20°♈57'28	50.12540 AU
retrograde	622 Jul 20 j 15:45	22°♈25'42	
min. Earth dist.	622 Oct 11 j 09:08	21°♈26'59	48.21719 AU
opposition	622 Oct 12 j 09:49	21°♈25'49	-16°35'33
direct	623 Jan 01 j 17:47	20°♈27'04	
conjunction	623 Apr 10 j 02:28	21°♈53'18	-15°53'44
minimum elong	623 Apr 10 j 02:36	21°♈53'19	15°53'44
max. Earth dist.	623 Apr 11 j 03:46	21°♈54'45	50.14714 AU
retrograde	623 Jul 21 j 22:06	23°♈23'04	
opposition	623 Oct 13 j 14:27	22°♈23'15	-16°29'51
min. Earth dist.	623 Oct 12 j 15:06	22°♈24'21	48.23550 AU
direct	624 Jan 02 j 22:25	21°♈24'32	
conjunction	624 Apr 10 j 08:07	22°♈50'43	-15°48'11
minimum elong	624 Apr 10 j 08:17	22°♈50'44	15°48'11
max. Earth dist.	624 Apr 11 j 08:41	22°♈52'07	50.16363 AU
retrograde	624 Jul 22 j 05:00	24°♈20'24	
opposition	624 Oct 13 j 19:12	23°♈20'38	-16°23'56
min. Earth dist.	624 Oct 12 j 21:50	23°♈21'38	48.24836 AU
direct	625 Jan 03 j 02:29	22°♈21'57	
conjunction	625 Apr 11 j 13:33	23°♈48'04	-15°42'23
minimum elong	625 Apr 11 j 13:42	23°♈48'05	15°42'23
max. Earth dist.	625 Apr 12 j 12:23	23°♈49'22	50.17492 AU
retrograde	625 Jul 23 j 12:37	25°♈17'39	
opposition	625 Oct 14 j 23:47	24°♈17'55	-16°17'48
min. Earth dist.	625 Oct 14 j 02:48	24°♈18'54	48.25603 AU
direct	626 Jan 04 j 04:20	23°♈19'15	
conjunction	626 Apr 12 j 19:03	24°♈45'19	-15°36'23
minimum elong	626 Apr 12 j 19:12	24°♈45'19	15°36'24
max. Earth dist.	626 Apr 13 j 16:08	24°♈46'31	50.18107 AU
retrograde	626 Jul 24 j 16:45	26°♈14'48	
min. Earth dist.	626 Oct 15 j 09:35	25°♈15'58	48.25890 AU
opposition	626 Oct 16 j 04:19	25°♈15'05	-16°11'26
direct	627 Jan 05 j 09:19	24°♈16'24	
conjunction	627 Apr 14 j 00:36	25°♈42'25	-15°30'09
minimum elong	627 Apr 14 j 00:46	25°♈42'25	15°30'09
max. Earth dist.	627 Apr 14 j 21:19	25°♈43'35	50.18281 AU
retrograde	627 Jul 25 j 17:27	27°♈11'48	
opposition	627 Oct 17 j 08:43	26°♈12'06	-16°04'50
min. Earth dist.	627 Oct 16 j 14:33	26°♈12'57	48.25749 AU
direct	628 Jan 06 j 17:49	25°♈13'25	
conjunction	628 Apr 14 j 05:45	26°♈39'22	-15°23'41
minimum elong	628 Apr 14 j 05:55	26°♈39'23	15°23'41
max. Earth dist.	628 Apr 15 j 00:19	26°♈40'25	50.18060 AU
retrograde	628 Jul 25 j 22:40	28°♈08'41	
opposition	628 Oct 17 j 13:09	27°♈08'59	-15°57'58
min. Earth dist.	628 Oct 16 j 19:52	27°♈09'48	48.25254 AU
direct	629 Jan 06 j 23:17	26°♈10'18	
conjunction	629 Apr 15 j 11:06	27°♈36'12	-15°16'57
minimum elong	629 Apr 15 j 11:17	27°♈36'13	15°16'57
max. Earth dist.	629 Apr 16 j 05:33	27°♈37'15	50.17503 AU
retrograde	629 Jul 27 j 04:41	29°♈05'27	
opposition	629 Oct 18 j 17:31	28°♈05'46	-15°50'51
min. Earth dist.	629 Oct 18 j 01:44	28°♈06'31	48.24435 AU
direct	630 Jan 08 j 03:58	27°♈07'05	
conjunction	630 Apr 16 j 16:23	28°♈32'57	-15°09'59
minimum elong	630 Apr 16 j 16:33	28°♈32'57	15°09'59
max. Earth dist.	630 Apr 17 j 09:38	28°♈33'55	50.16658 AU
	630 Jul 14 j 03:28	0°♉	
retrograde	630 Jul 28 j 11:08	0°♉02'07	
	630 Aug 11 j 17:10	30°℞♈	
opposition	630 Oct 19 j 21:47	29°♈02'28	-15°43'28
min. Earth dist.	630 Oct 19 j 05:58	29°♈03'13	48.23330 AU
direct	631 Jan 09 j 06:03	28°♈03'47	
conjunction	631 Apr 17 j 21:39	29°♈29'38	-15°02'45
minimum elong	631 Apr 17 j 21:51	29°♈29'38	15°02'44
max. Earth dist.	631 Apr 18 j 13:28	29°♈30'31	50.15518 AU
	631 May 10 j 16:46	0°♉	
retrograde	631 Jul 29 j 16:34	0°♉58'45	
	631 Oct 20 j 07:30	30°℞♈	
opposition	631 Oct 21 j 02:06	29°♈59'08	-15°35'50
min. Earth dist.	631 Oct 20 j 12:00	29°♈59'47	48.21936 AU
direct	632 Jan 10 j 09:16	29°♈00'27	

	632 Mar 29 j 10:47	0°♉	
evening set	632 Apr 16 j 11:36	0°♉24'04	
conjunction	632 Apr 18 j 03:00	0°♉26'18	-14°55'16
minimum elong	632 Apr 18 j 03:10	0°♉26'19	14°55'16
morning rise	632 Apr 19 j 18:47	0°♉28'33	
max. Earth dist.	632 Apr 18 j 18:46	0°♉27'12	50.14100 AU
retrograde	632 Jul 29 j 18:31	1°♉55'23	
opposition	632 Oct 21 j 06:22	0°♉55'47	-15°27'56
min. Earth dist.	632 Oct 20 j 16:40	0°♉56'26	48.20236 AU
	632 Dec 25 j 09:54	30°℞♈	
direct	633 Jan 10 j 15:56	29°♈57'08	
	633 Jan 26 j 19:42	0°♉	
evening set	633 Apr 16 j 16:14	1°♉19'22	
conjunction	633 Apr 19 j 08:07	1°♉22'59	-14°47'32
minimum elong	633 Apr 19 j 08:19	1°♉23'00	14°47'32
max. Earth dist.	633 Apr 19 j 21:52	1°♉23'46	50.12362 AU
morning rise	633 Apr 22 j 00:29	1°♉26'38	
retrograde	633 Jul 30 j 23:37	2°♉52'03	
opposition	633 Oct 22 j 10:44	1°♉52'30	-15°19'47
min. Earth dist.	633 Oct 21 j 22:09	1°♉53'06	48.18195 AU
direct	634 Jan 11 j 20:41	0°♉53'52	
evening set	634 Apr 17 j 03:51	2°♉15'06	
conjunction	634 Apr 20 j 13:37	2°♉19'43	-14°39'34
minimum elong	634 Apr 20 j 13:47	2°♉19'44	14°39'33
max. Earth dist.	634 Apr 21 j 02:48	2°♉20'28	50.10234 AU
morning rise	634 Apr 23 j 23:50	2°♉24'23	
retrograde	634 Aug 01 j 05:05	3°♉48'48	
opposition	634 Oct 23 j 14:59	2°♉49'16	-15°11'23
min. Earth dist.	634 Oct 23 j 04:17	2°♉49'46	48.15723 AU
direct	635 Jan 13 j 02:03	1°♉50'38	
evening set	635 Apr 17 j 18:40	3°♉11'05	
conjunction	635 Apr 21 j 19:08	3°♉16'31	-14°31'22
minimum elong	635 Apr 21 j 19:20	3°♉16'32	14°31'22
max. Earth dist.	635 Apr 22 j 06:39	3°♉17'11	50.07660 AU
morning rise	635 Apr 25 j 20:11	3°♉22'01	
retrograde	635 Aug 02 j 13:06	4°♉45'35	
opposition	635 Oct 24 j 19:17	3°♉46'05	-15°02'46
min. Earth dist.	635 Oct 24 j 09:05	3°♉46'34	48.12766 AU
direct	636 Jan 14 j 03:50	2°♉47'27	
evening set	636 Apr 17 j 10:55	4°♉07'10	
conjunction	636 Apr 22 j 00:29	4°♉13'21	-14°22'58
minimum elong	636 Apr 22 j 00:40	4°♉13'22	14°22'57
max. Earth dist.	636 Apr 22 j 10:02	4°♉13'54	50.04560 AU
morning rise	636 Apr 26 j 14:41	4°♉19'35	
retrograde	636 Aug 02 j 19:10	5°♉42'24	
opposition	636 Oct 24 j 23:46	4°♉42'54	-14°53'56
min. Earth dist.	636 Oct 24 j 15:56	4°♉43'16	48.09276 AU
direct	637 Jan 14 j 06:50	3°♉44'15	
evening set	637 Apr 18 j 04:42	5°♉03'19	
conjunction	637 Apr 23 j 06:05	5°♉10'11	-14°14'20
minimum elong	637 Apr 23 j 06:16	5°♉10'11	14°14'21
max. Earth dist.	637 Apr 23 j 14:57	5°♉10'41	50.00937 AU
morning rise	637 Apr 28 j 08:05	5°♉17'04	
retrograde	637 Aug 03 j 20:59	6°♉39'12	
opposition	637 Oct 26 j 04:01	5°♉39'42	-14°44'53
min. Earth dist.	637 Oct 25 j 20:58	5°♉40'02	48.05251 AU
direct	638 Jan 15 j 14:17	4°♉41'01	
evening set	638 Apr 18 j 23:15	5°♉59'29	
conjunction	638 Apr 24 j 11:31	6°♉06'58	-14°05'30
minimum elong	638 Apr 24 j 11:42	6°♉06'58	14°05'30
max. Earth dist.	638 Apr 24 j 17:48	6°♉07'19	49.96801 AU
morning rise	638 Apr 30 j 00:31	6°♉14'28	
retrograde	638 Aug 05 j 01:21	7°♉35'58	
opposition	638 Oct 27 j 08:21	6°♉36'27	-14°35'37
min. Earth dist.	638 Oct 27 j 02:39	6°♉36'43	48.00741 AU
direct	639 Jan 16 j 19:58	5°♉37'43	
evening set	639 Apr 19 j 18:28	6°♉55'39	
conjunction	639 Apr 25 j 17:03	7°♉03'42	-13°56'27
minimum elong	639 Apr 25 j 17:14	7°♉03'42	13°56'28
max. Earth dist.	639 Apr 25 j 22:48	7°♉04'01	49.92187 AU
morning rise	639 May 01 j 16:21	7°♉11'47	
retrograde	639 Aug 06 j 06:30	8°♉32'42	
opposition	639 Oct 28 j 12:36	7°♉33'09	-14°26'07
min. Earth dist.	639 Oct 28 j 08:41	7°♉33'20	47.95778 AU
direct	640 Jan 18 j 01:07	6°♉34'23	
evening set	640 Apr 19 j 14:18	7°♉51'48	
conjunction	640 Apr 25 j 22:27	8°♉00'23	-13°47'10
minimum elong	640 Apr 25 j 22:39	8°♉00'24	13°47'09
max. Earth dist.	640 Apr 26 j 02:49	8°♉00'38	49.87175 AU
morning rise	640 May 02 j 07:24	8°♉09'01	
retrograde	640 Aug 06 j 13:04	9°♉29'23	
opposition	640 Oct 28 j 16:48	8°♉29'50	-14°16'22
min. Earth dist.	640 Oct 28 j 12:58	8°♉30'01	47.90444 AU
direct	641 Jan 18 j 03:33	7°♉31'01	
evening set	641 Apr 20 j 10:17	8°♉47'57	
conjunction	641 Apr 27 j 03:44	8°♉57'04	-13°37'39
minimum elong	641 Apr 27 j 03:55	8°♉57'05	13°37'39
max. Earth dist.	641 Apr 27 j 06:32	8°♉57'14	49.81798 AU
morning rise	641 May 03 j 22:03	9°♉06'14	
retrograde	641 Aug 07 j 18:54	10°♉26'05	
opposition	641 Oct 29 j 21:12	9°♉26'31	-14°06'22
min. Earth dist.	641 Oct 29 j 19:15	9°♉26'36	47.84770 AU
direct	642 Jan 19 j 07:02	8°♉27'40	
evening set	642 Apr 21 j 06:59	9°♉44'10	
conjunction	642 Apr 28 j 09:18	9°♉53'47	-13°27'53
minimum elong	642 Apr 28 j 09:31	9°♉53'48	13°27'52
max. Earth dist.	642 Apr 28 j 12:03	9°♉53'56	49.76109 AU
morning rise	642 May 05 j 12:26	10°♉03'27	
retrograde	642 Aug 08 j 21:09	11°♉22'49	
opposition	642 Oct 31 j 01:21	10°♉23'14	-13°56'07
min. Earth dist.	642 Oct 30 j 23:43	10°♉23'19	47.78784 AU
direct	643 Jan 20 j 13:34	9°♉24'21	
evening set	643 Apr 22 j 03:59	10°♉40'29	
conjunction	643 Apr 29 j 14:44	10°♉50'34	-13°17'52
minimum elong	643 Apr 29 j 14:56	10°♉50'35	13°17'52
max. Earth dist.	643 Apr 29 j 15:22	10°♉50'37	49.70122 AU
morning rise	643 May 07 j 02:28	11°♉00'43	
retrograde	643 Aug 10 j 02:25	12°♉19'40	
opposition	643 Nov 01 j 05:43	11°♉20'05	-13°45'37
min. Earth dist.	643 Nov 01 j 05:07	11°♉20'07	47.72513 AU
direct	644 Jan 21 j 18:08	10°♉21'11	
evening set	644 Apr 22 j 01:05	11°♉36'56	
conjunction	644 Apr 29 j 20:09	11°♉47'29	-13°07'36
minimum elong	644 Apr 29 j 20:22	11°♉47'30	13°07'36
max. Earth dist.	644 Apr 29 j 20:33	11°♉47'30	49.63835 AU
morning rise	644 May 07 j 16:09	11°♉58'07	
retrograde	644 Aug 10 j 07:17	13°♉16'40	
opposition	644 Nov 01 j 10:08	12°♉17'05	-13°34'51
min. Earth dist.	644 Nov 01 j 10:53	12°♉17'03	47.65922 AU
direct	645 Jan 21 j 23:50	11°♉18'10	
evening set	645 Apr 22 j 22:46	12°♉33'34	

conjunction	645 May 01 j 01:43	12°♉44'34	-12°57'06
minimum elong	645 May 01 j 01:54	12°♉44'35	12°57'06
max. Earth dist.	645 May 01 j 00:49	12°♉44'31	49.57235 AU
morning rise	645 May 09 j 05:38	12°♉55'40	
retrograde	645 Aug 11 j 15:47	14°♉13'50	
opposition	645 Nov 02 j 14:24	13°♉14'16	-13°23'50
min. Earth dist.	645 Nov 02 j 15:28	13°♉14'13	47.58990 AU
direct	646 Jan 23 j 01:16	12°♉15'19	
evening set	646 Apr 23 j 20:42	13°♉30'24	
conjunction	646 May 02 j 07:24	13°♉41'52	-12°46'21
minimum elong	646 May 02 j 07:37	13°♉41'53	12°46'21
max. Earth dist.	646 May 02 j 04:45	13°♉41'43	49.50241 AU
morning rise	646 May 10 j 19:13	13°♉53'24	
	646 Jul 10 j 22:11	15°♉	
retrograde	646 Aug 12 j 23:57	15°♉11'13	
	646 Sep 14 j 22:35	15°℞♉	
opposition	646 Nov 03 j 18:54	14°♉11'39	-13°12'35
min. Earth dist.	646 Nov 03 j 22:17	14°♉11'30	47.51634 AU
direct	647 Jan 24 j 02:34	13°♉12'41	
evening set	647 Apr 24 j 19:02	14°♉27'28	
conjunction	647 May 03 j 13:16	14°♉39'22	-12°35'23
minimum elong	647 May 03 j 13:28	14°♉39'23	12°35'22
max. Earth dist.	647 May 03 j 09:57	14°♉39'11	49.42794 AU
morning rise	647 May 12 j 08:26	14°♉51'20	
	647 May 18 j 19:34	15°♉	
retrograde	647 Aug 14 j 02:34	16°♉08'48	
opposition	647 Nov 04 j 23:16	15°♉09'14	-13°01'06
min. Earth dist.	647 Nov 05 j 03:21	15°♉09'02	47.43781 AU
	647 Nov 13 j 02:48	15°℞♉	
direct	648 Jan 25 j 09:48	14°♉10'13	
	648 Apr 05 j 18:04	15°♉	
evening set	648 Apr 24 j 17:42	15°♉24'43	
conjunction	648 May 03 j 19:05	15°♉37'02	-12°24'12
minimum elong	648 May 03 j 19:17	15°♉37'03	12°24'12
max. Earth dist.	648 May 03 j 13:06	15°♉36'42	49.34831 AU
morning rise	648 May 12 j 21:39	15°♉49'25	
retrograde	648 Aug 14 j 06:11	17°♉06'33	
opposition	648 Nov 05 j 03:51	16°♉06'57	-12°49'24
min. Earth dist.	648 Nov 05 j 09:33	16°♉06'40	47.35404 AU
direct	649 Jan 25 j 16:21	15°♉07'52	
evening set	649 Apr 25 j 16:24	16°♉22'05	
conjunction	649 May 05 j 00:59	16°♉34'49	-12°12'47
minimum elong	649 May 05 j 01:11	16°♉34'49	12°12'47
max. Earth dist.	649 May 04 j 18:11	16°♉34'25	49.26325 AU
morning rise	649 May 14 j 10:37	16°♉47'36	
retrograde	649 Aug 15 j 10:45	18°♉04'25	
opposition	649 Nov 06 j 08:30	17°♉04'45	-12°37'28
min. Earth dist.	649 Nov 06 j 16:05	17°♉04'23	47.26476 AU
direct	650 Jan 26 j 22:54	16°♉05'36	
evening set	650 Apr 26 j 15:38	17°♉19'32	
conjunction	650 May 06 j 07:00	17°♉32'39	-12°01'10
minimum elong	650 May 06 j 07:12	17°♉32'39	12°01'11
max. Earth dist.	650 May 05 j 22:22	17°♉32'09	49.17301 AU
morning rise	650 May 15 j 23:29	17°♉45'51	
retrograde	650 Aug 16 j 17:58	19°♉02'19	
opposition	650 Nov 07 j 12:56	18°♉02'36	-12°25'19
min. Earth dist.	650 Nov 07 j 21:03	18°♉02'13	47.17050 AU
direct	651 Jan 28 j 02:12	17°♉03'21	
evening set	651 Apr 27 j 14:54	18°♉17'00	
conjunction	651 May 07 j 12:59	18°♉30'30	-11°49'20
minimum elong	651 May 07 j 13:11	18°♉30'31	11°49'19
max. Earth dist.	651 May 07 j 02:27	18°♉29'54	49.07788 AU
morning rise	651 May 17 j 12:18	18°♉44'06	
retrograde	651 Aug 18 j 01:07	20°♉00'15	
opposition	651 Nov 08 j 17:38	19°♉00'28	-12°12'55
min. Earth dist.	651 Nov 09 j 03:54	18°♉59'58	47.07174 AU
direct	652 Jan 29 j 05:22	18°♉01'07	
evening set	652 Apr 27 j 14:13	19°♉14'29	
conjunction	652 May 07 j 18:54	19°♉28'23	-11°37'15
minimum elong	652 May 07 j 19:05	19°♉28'24	11°37'15
max. Earth dist.	652 May 07 j 08:09	19°♉27'47	48.97862 AU
morning rise	652 May 18 j 00:36	19°♉42'22	
retrograde	652 Aug 18 j 05:08	20°♉58'13	
opposition	652 Nov 08 j 22:14	19°♉58'20	-12°00'17
min. Earth dist.	652 Nov 09 j 08:53	19°♉57'50	46.96906 AU
direct	653 Jan 29 j 11:19	18°♉58'52	
evening set	653 Apr 28 j 13:55	20°♉12'02	
max. Earth dist.	653 May 08 j 11:53	20°♉25'33	48.87577 AU
conjunction	653 May 09 j 00:50	20°♉26'18	-11°24'56
minimum elong	653 May 09 j 01:02	20°♉26'19	11°24'55
morning rise	653 May 19 j 13:05	20°♉40'39	
retrograde	653 Aug 19 j 10:22	21°♉56'13	
opposition	653 Nov 10 j 02:50	20°♉56'15	-11°47'23
min. Earth dist.	653 Nov 10 j 14:41	20°♉55'41	46.86316 AU
direct	654 Jan 30 j 16:38	19°♉56'41	
evening set	654 Apr 29 j 13:42	21°♉09'37	
conjunction	654 May 10 j 07:01	21°♉24'16	-11°12'22
minimum elong	654 May 10 j 07:12	21°♉24'16	11°12'22
max. Earth dist.	654 May 09 j 17:42	21°♉23'30	48.76977 AU
morning rise	654 May 21 j 01:26	21°♉38'59	
retrograde	654 Aug 20 j 13:36	22°♉54'18	
opposition	654 Nov 11 j 07:37	21°♉54'16	-11°34'13
min. Earth dist.	654 Nov 11 j 20:41	21°♉53'38	46.75420 AU
direct	655 Jan 31 j 23:53	20°♉54'36	
evening set	655 Apr 30 j 13:49	22°♉07'20	
conjunction	655 May 11 j 13:06	22°♉22'20	-10°59'32
minimum elong	655 May 11 j 13:19	22°♉22'21	10°59'32
max. Earth dist.	655 May 10 j 22:38	22°♉21'30	48.66104 AU
morning rise	655 May 22 j 13:36	22°♉37'25	
retrograde	655 Aug 21 j 20:49	23°♉52'30	
opposition	655 Nov 12 j 12:18	22°♉52'25	-11°20'48
min. Earth dist.	655 Nov 13 j 01:27	22°♉51'47	46.64260 AU
direct	656 Feb 02 j 03:30	21°♉52'39	
evening set	656 Apr 30 j 14:00	23°♉05'13	
conjunction	656 May 11 j 19:16	23°♉20'35	-10°46'28
minimum elong	656 May 11 j 19:27	23°♉20'36	10°46'28
max. Earth dist.	656 May 11 j 03:18	23°♉19'40	48.54956 AU
morning rise	656 May 23 j 01:49	23°♉36'02	
retrograde	656 Aug 22 j 05:42	24°♉50'54	
opposition	656 Nov 12 j 17:15	23°♉50'46	-11°07'06
min. Earth dist.	656 Nov 13 j 08:16	23°♉50'02	46.52829 AU
direct	657 Feb 02 j 05:21	22°♉50'56	
evening set	657 May 01 j 14:23	24°♉03'21	
max. Earth dist.	657 May 12 j 09:28	24°♉18'09	48.43534 AU
conjunction	657 May 13 j 01:34	24°♉19'04	-10°33'08
minimum elong	657 May 13 j 01:46	24°♉19'05	10°33'08
morning rise	657 May 24 j 13:50	24°♉34'53	
retrograde	657 Aug 23 j 10:35	25°♉49'34	
opposition	657 Nov 13 j 22:09	24°♉49'23	-10°53'08
min. Earth dist.	657 Nov 14 j 13:24	24°♉48'39	46.41084 AU
direct	658 Feb 03 j 11:26	23°♉49'28	
evening set	658 May 02 j 15:17	25°♉01'47	

conjunction	658 May 14 j 08:01	25°♉17'52	-10°19'33
minimum elong	658 May 14 j 08:12	25°♉17'52	10°19'32
max. Earth dist.	658 May 13 j 13:36	25°♉16'48	48.31766 AU
morning rise	658 May 26 j 02:07	25°♉34'02	
retrograde	658 Aug 24 j 15:59	26°♉48'33	
opposition	658 Nov 15 j 03:06	25°♉48'19	-10°38'55
min. Earth dist.	658 Nov 15 j 19:59	25°♉47'30	46.28973 AU
direct	659 Feb 04 j 17:19	24°♉48'20	
evening set	659 May 03 j 16:18	26°♉00'33	
conjunction	659 May 15 j 14:44	26°♉16'59	-10°05'43
minimum elong	659 May 15 j 14:56	26°♉16'59	10°05'43
max. Earth dist.	659 May 14 j 19:43	26°♉15'53	48.19581 AU
morning rise	659 May 27 j 14:16	26°♉33'29	
retrograde	659 Aug 25 j 20:45	27°♉47'52	
opposition	659 Nov 16 j 08:20	26°♉47'35	-10°24'28
min. Earth dist.	659 Nov 17 j 02:52	26°♉46'42	46.16407 AU
direct	660 Feb 06 j 00:25	25°♉47'31	
evening set	660 May 03 j 17:35	26°♉59'38	
conjunction	660 May 15 j 21:18	27°♉16'25	-9°51'39
minimum elong	660 May 15 j 21:29	27°♉16'25	9°51'39
max. Earth dist.	660 May 15 j 00:27	27°♉15'12	48.06931 AU
morning rise	660 May 28 j 02:15	27°♉33'16	
retrograde	660 Aug 26 j 04:43	28°♉47'31	
opposition	660 Nov 16 j 13:35	27°♉47'10	-10°09'45
min. Earth dist.	660 Nov 17 j 08:40	27°♉46'15	46.03354 AU
direct	661 Feb 06 j 04:17	26°♉47'00	
evening set	661 May 04 j 19:09	27°♉59'01	
max. Earth dist.	661 May 16 j 05:18	28°♉14'49	47.93766 AU
conjunction	661 May 17 j 04:10	28°♉16'08	-9°37'22
minimum elong	661 May 17 j 04:22	28°♉16'09	9°37'23
morning rise	661 May 29 j 14:29	28°♉33'20	
retrograde	661 Aug 27 j 12:58	29°♉47'27	
opposition	661 Nov 17 j 18:57	28°♉47'01	-9°54'48
min. Earth dist.	661 Nov 18 j 16:25	28°♉45'59	45.89793 AU
direct	662 Feb 07 j 07:54	27°♉46'44	
evening set	662 May 05 j 20:58	28°♉58'41	
max. Earth dist.	662 May 17 j 11:44	29°♉14'45	47.80113 AU
conjunction	662 May 18 j 11:14	29°♉16'07	-9°22'50
minimum elong	662 May 18 j 11:25	29°♉16'08	9°22'50
morning rise	662 May 31 j 02:32	29°♉33'39	
	662 Jun 20 j 05:21	0°♊	
retrograde	662 Aug 28 j 19:29	0°♊47'38	
	662 Nov 07 j 20:25	30°℞♉	
opposition	662 Nov 19 j 00:19	29°♉47'06	-9°39'36
min. Earth dist.	662 Nov 19 j 22:20	29°♉46'02	45.75749 AU
direct	663 Feb 08 j 13:59	28°♉46'40	
evening set	663 May 06 j 23:02	29°♉58'34	
	663 May 08 j 00:15	0°♊	
conjunction	663 May 19 j 18:09	0°♊16'20	-9°08'04
minimum elong	663 May 19 j 18:20	0°♊16'21	9°08'05
max. Earth dist.	663 May 18 j 16:06	0°♊14'49	47.65997 AU
morning rise	663 Jun 01 j 14:37	0°♊34'11	
retrograde	663 Aug 30 j 02:01	1°♊48'03	
opposition	663 Nov 20 j 05:46	0°♊47'24	-9°24'08
min. Earth dist.	663 Nov 21 j 05:23	0°♊46'16	45.61284 AU
	664 Jan 05 j 21:49	30°℞♉	
direct	664 Feb 09 j 20:12	29°♉46'50	
	664 Mar 15 j 14:22	0°♊	
evening set	664 May 07 j 01:08	0°♊58'40	
max. Earth dist.	664 May 18 j 22:50	1°♊15'13	47.51479 AU
conjunction	664 May 20 j 01:18	1°♊16'45	-8°53'03
minimum elong	664 May 20 j 01:29	1°♊16'46	8°53'03
morning rise	664 Jun 02 j 02:29	1°♊34'56	
retrograde	664 Aug 30 j 05:35	2°♊48'41	
opposition	664 Nov 20 j 11:20	1°♊47'56	-9°08'25
min. Earth dist.	664 Nov 21 j 12:08	1°♊46'43	45.46444 AU
direct	665 Feb 10 j 04:20	0°♊47'13	
evening set	665 May 08 j 03:34	1°♊58'59	
max. Earth dist.	665 May 20 j 04:33	2°♊15'46	47.36629 AU
conjunction	665 May 21 j 08:25	2°♊17'24	-8°37'47
minimum elong	665 May 21 j 08:35	2°♊17'25	8°37'47
morning rise	665 Jun 03 j 14:25	2°♊35'54	
retrograde	665 Aug 31 j 12:44	3°♊49'34	
opposition	665 Nov 21 j 16:56	2°♊48'42	-8°52'26
min. Earth dist.	665 Nov 22 j 18:06	2°♊47'28	45.31295 AU
direct	666 Feb 11 j 09:59	1°♊47'49	
evening set	666 May 09 j 06:18	2°♊59'34	
max. Earth dist.	666 May 21 j 10:25	3°♊16'34	47.21467 AU
conjunction	666 May 22 j 15:46	3°♊18'18	-8°22'15
minimum elong	666 May 22 j 15:57	3°♊18'18	8°22'15
morning rise	666 Jun 05 j 02:24	3°♊37'06	
retrograde	666 Sep 01 j 22:49	4°♊50'43	
opposition	666 Nov 22 j 22:43	3°♊49'43	-8°36'09
min. Earth dist.	666 Nov 24 j 01:44	3°♊48'24	45.15868 AU
direct	667 Feb 12 j 12:37	2°♊48'41	
evening set	667 May 10 j 09:13	4°♊00'26	
conjunction	667 May 23 j 23:16	4°♊19'29	-8°06'28
minimum elong	667 May 23 j 23:26	4°♊19'29	8°06'28
max. Earth dist.	667 May 22 j 17:46	4°♊17'45	47.06058 AU
morning rise	667 Jun 06 j 14:15	4°♊38'36	
retrograde	667 Sep 03 j 06:14	5°♊52'09	
opposition	667 Nov 24 j 04:38	4°♊51'03	-8°19'36
min. Earth dist.	667 Nov 25 j 07:31	4°♊49'44	45.00195 AU
direct	668 Feb 13 j 17:58	3°♊49'52	
evening set	668 May 10 j 12:20	5°♊01'38	
max. Earth dist.	668 May 22 j 23:10	5°♊19'08	46.90405 AU
conjunction	668 May 24 j 06:36	5°♊20'59	-7°50'24
minimum elong	668 May 24 j 06:47	5°♊21'00	7°50'24
morning rise	668 Jun 07 j 02:05	5°♊40'25	
retrograde	668 Sep 03 j 13:38	6°♊53'56	
opposition	668 Nov 24 j 10:46	5°♊52'44	-8°02'46
min. Earth dist.	668 Nov 25 j 15:01	5°♊51'20	44.84288 AU
direct	669 Feb 14 j 00:29	4°♊51'25	
evening set	669 May 11 j 15:46	6°♊03'14	
max. Earth dist.	669 May 24 j 06:49	6°♊21'01	46.74495 AU
conjunction	669 May 25 j 14:27	6°♊22'53	-7°34'04
minimum elong	669 May 25 j 14:37	6°♊22'54	7°34'04
morning rise	669 Jun 08 j 14:00	6°♊42'37	
retrograde	669 Sep 04 j 17:59	7°♊56'08	
opposition	669 Nov 25 j 16:54	6°♊54'49	-7°45'39
min. Earth dist.	669 Nov 26 j 22:18	6°♊53'22	44.68096 AU
direct	670 Feb 15 j 09:52	5°♊53'23	
evening set	670 May 12 j 19:44	7°♊05'15	
conjunction	670 May 26 j 22:25	7°♊25'13	-7°17'28
minimum elong	670 May 26 j 22:35	7°♊25'14	7°17'28
max. Earth dist.	670 May 25 j 13:08	7°♊23'14	46.58288 AU
morning rise	670 Jun 10 j 02:07	7°♊45'15	
retrograde	670 Sep 06 j 01:49	8°♊58'47	
opposition	670 Nov 26 j 23:12	7°♊57'23	-7°28'15
min. Earth dist.	670 Nov 28 j 05:10	7°♊55'54	44.51576 AU
direct	671 Feb 16 j 16:05	6°♊55'47	
evening set	671 May 13 j 23:55	8°♊07'45	

max. Earth dist.	671 May 26 j 19:37	8°♊25'55	46.41686 AU
conjunction	671 May 28 j 06:33	8°♊28'00	-7°00'36
minimum elong	671 May 28 j 06:42	8°♊28'01	7°00'36
morning rise	671 Jun 11 j 14:09	8°♊48'21	
retrograde	671 Sep 07 j 10:50	10°♊01'55	
opposition	671 Nov 28 j 05:48	9°♊00'23	-7°10'35
min. Earth dist.	671 Nov 29 j 14:02	8°♊58'48	44.34636 AU
direct	672 Feb 17 j 21:09	7°♊58'39	
evening set	672 May 14 j 04:27	9°♊10'42	
max. Earth dist.	672 May 27 j 03:20	9°♊29'07	46.24651 AU
conjunction	672 May 28 j 14:59	9°♊31'15	-6°43'30
minimum elong	672 May 28 j 15:09	9°♊31'15	6°43'30
morning rise	672 Jun 12 j 02:16	9°♊51'53	
retrograde	672 Sep 07 j 20:33	11°♊05'29	
opposition	672 Nov 28 j 12:27	10°♊03'50	-6°52'39
min. Earth dist.	672 Nov 29 j 21:11	10°♊02'12	44.17233 AU
direct	673 Feb 18 j 02:56	9°♊01'55	
evening set	673 May 15 j 09:23	10°♊14'05	
max. Earth dist.	673 May 28 j 09:03	10°♊32'37	46.07129 AU
conjunction	673 May 29 j 23:29	10°♊34'55	-6°26'08
minimum elong	673 May 29 j 23:37	10°♊34'56	6°26'07
morning rise	673 Jun 13 j 14:34	10°♊55'50	
retrograde	673 Sep 09 j 06:44	12°♊09'29	
opposition	673 Nov 29 j 19:25	11°♊07'41	-6°34'26
min. Earth dist.	673 Dec 01 j 06:08	11°♊05'57	43.99346 AU
direct	674 Feb 19 j 08:59	10°♊05'34	
evening set	674 May 16 j 14:34	11°♊17'51	
max. Earth dist.	674 May 29 j 17:17	11°♊36'37	45.89116 AU
conjunction	674 May 31 j 08:23	11°♊38'59	-6°08'31
minimum elong	674 May 31 j 08:31	11°♊38'59	6°08'31
morning rise	674 Jun 15 j 02:46	12°♊00'10	
retrograde	674 Sep 10 j 12:50	13°♊13'53	
opposition	674 Dec 01 j 02:25	12°♊11'55	-6°15'58
min. Earth dist.	674 Dec 02 j 14:22	12°♊10'07	43.80979 AU
direct	675 Feb 20 j 18:15	11°♊09'36	
evening set	675 May 17 j 20:10	12°♊22'00	
max. Earth dist.	675 May 31 j 00:14	12°♊40'55	45.70660 AU
conjunction	675 Jun 01 j 17:15	12°♊43'24	-5°50'38
minimum elong	675 Jun 01 j 17:23	12°♊43'25	5°50'37
morning rise	675 Jun 16 j 15:06	13°♊04'53	
retrograde	675 Sep 11 j 20:05	14°♊18'39	
opposition	675 Dec 02 j 09:35	13°♊16'31	-5°57'12
min. Earth dist.	675 Dec 03 j 22:20	13°♊14'40	43.62202 AU
direct	676 Feb 22 j 02:29	12°♊13'59	
evening set	676 May 18 j 01:47	13°♊26'32	
max. Earth dist.	676 May 31 j 07:41	13°♊45'38	45.51794 AU
conjunction	676 Jun 02 j 02:09	13°♊48'13	-5°32'30
minimum elong	676 Jun 02 j 02:17	13°♊48'13	5°32'30
morning rise	676 Jun 17 j 03:09	14°♊09'57	
retrograde	676 Sep 12 j 05:12	15°♊23'50	
opposition	676 Dec 02 j 17:01	14°♊21'31	-5°38'10
min. Earth dist.	676 Dec 04 j 07:44	14°♊19'34	43.43051 AU
direct	677 Feb 22 j 08:51	13°♊18'46	
evening set	677 May 19 j 07:53	14°♊31'28	
max. Earth dist.	677 Jun 01 j 16:28	14°♊50'48	45.32593 AU
conjunction	677 Jun 03 j 11:25	14°♊53'25	-5°14'05
minimum elong	677 Jun 03 j 11:32	14°♊53'25	5°14'05
morning rise	677 Jun 18 j 15:24	15°♊15'26	
retrograde	677 Sep 13 j 15:10	16°♊29'25	
opposition	677 Dec 04 j 00:23	15°♊26'55	-5°18'51
min. Earth dist.	677 Dec 05 j 15:07	15°♊24'58	43.23591 AU
direct	678 Feb 23 j 14:54	14°♊23'56	
evening set	678 May 20 j 14:28	15°♊36'51	
max. Earth dist.	678 Jun 02 j 23:44	15°♊56'19	45.13096 AU
conjunction	678 Jun 04 j 20:48	15°♊59'04	-4°55'25
minimum elong	678 Jun 04 j 20:55	15°♊59'04	4°55'25
morning rise	678 Jun 20 j 03:47	16°♊21'20	
retrograde	678 Sep 15 j 01:44	17°♊35'28	
opposition	678 Dec 05 j 08:09	16°♊32'47	-4°59'14
min. Earth dist.	678 Dec 07 j 00:34	16°♊30'44	43.03874 AU
direct	679 Feb 24 j 21:57	15°♊29'35	
evening set	679 May 21 j 21:09	16°♊42'44	
max. Earth dist.	679 Jun 04 j 09:21	17°♊02'26	44.93351 AU
conjunction	679 Jun 06 j 06:23	17°♊05'12	-4°36'28
minimum elong	679 Jun 06 j 06:30	17°♊05'13	4°36'27
morning rise	679 Jun 21 j 15:52	17°♊27'44	
retrograde	679 Sep 16 j 09:04	18°♊42'02	
opposition	679 Dec 06 j 16:05	17°♊39'11	-4°39'19
min. Earth dist.	679 Dec 08 j 09:01	17°♊37'06	42.83925 AU
direct	680 Feb 26 j 08:36	16°♊35'46	
evening set	680 May 22 j 04:24	17°♊49'10	
max. Earth dist.	680 Jun 04 j 17:25	18°♊09'01	44.73404 AU
conjunction	680 Jun 06 j 16:06	18°♊11'54	-4°17'14
minimum elong	680 Jun 06 j 16:13	18°♊11'54	4°17'15
morning rise	680 Jun 22 j 04:18	18°♊34'41	
retrograde	680 Sep 16 j 18:38	19°♊49'11	
opposition	680 Dec 07 j 00:08	18°♊46'10	-4°19'06
min. Earth dist.	680 Dec 08 j 17:33	18°♊44'03	42.63786 AU
direct	681 Feb 26 j 16:59	17°♊42'33	
evening set	681 May 23 j 11:57	18°♊56'13	
max. Earth dist.	681 Jun 06 j 02:35	19°♊16'16	44.53233 AU
conjunction	681 Jun 08 j 02:12	19°♊19'13	-3°57'44
minimum elong	681 Jun 08 j 02:19	19°♊19'14	3°57'43
morning rise	681 Jun 23 j 16:42	19°♊42'16	
retrograde	681 Sep 18 j 03:36	20°♊57'00	
opposition	681 Dec 08 j 08:34	19°♊53'49	-3°58'36
min. Earth dist.	681 Dec 10 j 03:43	19°♊51'36	42.43409 AU
direct	682 Feb 28 j 01:03	18°♊50'00	
evening set	682 May 24 j 20:05	20°♊03'59	
max. Earth dist.	682 Jun 07 j 12:25	20°♊24'14	44.32814 AU
conjunction	682 Jun 09 j 12:38	20°♊27'14	-3°37'57
minimum elong	682 Jun 09 j 12:43	20°♊27'14	3°37'57
morning rise	682 Jun 25 j 05:18	20°♊50'32	
retrograde	682 Sep 19 j 15:16	22°♊05'31	
opposition	682 Dec 09 j 17:01	21°♊02'11	-3°37'48
min. Earth dist.	682 Dec 11 j 12:24	20°♊59'57	42.22755 AU
direct	683 Mar 01 j 07:54	19°♊58'09	
evening set	683 May 26 j 04:45	21°♊12'29	
max. Earth dist.	683 Jun 08 j 20:42	21°♊32'49	44.12067 AU
conjunction	683 Jun 10 j 23:16	21°♊35'59	-3°17'54
minimum elong	683 Jun 10 j 23:21	21°♊35'59	3°17'53
morning rise	683 Jun 26 j 18:01	21°♊59'30	
retrograde	683 Sep 21 j 05:40	23°♊14'47	
opposition	683 Dec 11 j 01:59	22°♊11'16	-3°16'42
min. Earth dist.	683 Dec 12 j 23:25	22°♊08'56	42.01762 AU
direct	684 Mar 01 j 13:25	21°♊07'01	
evening set	684 May 26 j 13:35	22°♊21'43	
max. Earth dist.	684 Jun 09 j 07:17	22°♊42'15	43.90943 AU
conjunction	684 Jun 11 j 10:11	22°♊45'27	-2°57'34
minimum elong	684 Jun 11 j 10:15	22°♊45'27	2°57'34

morning rise	684 Jun 27 j 06:37	23°♊09'12		
retrograde	684 Sep 21 j 15:51	24°♊24'46		
opposition	684 Dec 11 j 11:11	23°♊21'04	-2°55'19	
min. Earth dist.	684 Dec 13 j 09:23	23°♊18'41	41.80358	AU
direct	685 Mar 02 j 23:41	22°♊16'34		
evening set	685 May 27 j 23:15	23°♊31'39		
max. Earth dist.	685 Jun 10 j 16:11	23°♊52'14	43.69401	AU
conjunction	685 Jun 12 j 21:25	23°♊55'36	-2°36'59	
minimum elong	685 Jun 12 j 21:29	23°♊55'36	2°36'59	
morning rise	685 Jun 28 j 19:40	24°♊19'36		
retrograde	685 Sep 23 j 02:13	25°♊35'27		
opposition	685 Dec 12 j 20:29	24°♊31'32	-2°33'39	
min. Earth dist.	685 Dec 14 j 20:03	24°♊29'04	41.58545	AU
direct	686 Mar 04 j 10:34	23°♊26'46		
evening set	686 May 29 j 09:16	24°♊42'13		
max. Earth dist.	686 Jun 12 j 02:34	25°♊02'56	43.47426	AU
conjunction	686 Jun 14 j 09:05	25°♊06'25	-2°16'08	
minimum elong	686 Jun 14 j 09:09	25°♊06'25	2°16'08	
morning rise	686 Jun 30 j 08:38	25°♊30'37		
retrograde	686 Sep 24 j 10:59	26°♊46'48		
opposition	686 Dec 14 j 06:15	25°♊42'39	-2°11'41	
min. Earth dist.	686 Dec 16 j 07:39	25°♊40'04	41.36318	AU
direct	687 Mar 05 j 22:04	24°♊37'36		
evening set	687 May 30 j 19:39	25°♊53'26		
max. Earth dist.	687 Jun 13 j 13:12	26°♊14'17	43.25071	AU
conjunction	687 Jun 15 j 20:45	26°♊17'50	-1°55'01	
minimum elong	687 Jun 15 j 20:48	26°♊17'51	1°55'01	
morning rise	687 Jul 01 j 21:36	26°♊42'16		
retrograde	687 Sep 25 j 22:08	27°♊58'46		
opposition	687 Dec 15 j 16:05	26°♊54'22	-1°49'27	
min. Earth dist.	687 Dec 17 j 17:40	26°♊51'46	41.13738	AU
direct	688 Mar 06 j 07:14	25°♊49'01		
evening set	688 May 31 j 06:35	27°♊05'16		
max. Earth dist.	688 Jun 13 j 23:09	27°♊26'10	43.02371	AU
conjunction	688 Jun 16 j 08:45	27°♊29'52	-1°33'37	
minimum elong	688 Jun 16 j 08:47	27°♊29'53	1°33'37	
morning rise	688 Jul 02 j 10:40	27°♊54'30		
retrograde	688 Sep 26 j 11:16	29°♊11'22		
opposition	688 Dec 16 j 02:15	28°♊06'42	-1°26'54	
min. Earth dist.	688 Dec 18 j 05:51	28°♊03'58	40.90861	AU
direct	689 Mar 07 j 15:25	27°♊01'01		
evening set	689 Jun 01 j 17:51	28°♊17'44		
max. Earth dist.	689 Jun 15 j 11:30	28°♊38'48	42.79399	AU
conjunction	689 Jun 17 j 21:07	28°♊42'32	-1°11'58	
minimum elong	689 Jun 17 j 21:09	28°♊42'32	1°11'58	
morning rise	689 Jul 03 j 23:46	29°♊07'20		
	689 Aug 13 j 05:04	0°♋		
retrograde	689 Sep 28 j 00:30	0°♋24'35		
	689 Nov 13 j 06:14	30°℞♊		
opposition	689 Dec 17 j 12:40	29°♊19'39	-1°04'04	
min. Earth dist.	689 Dec 19 j 16:30	29°♊16'54	40.67739	AU
direct	690 Mar 09 j 02:13	28°♊13'39		
evening set	690 Jun 03 j 05:52	29°♊30'50		
max. Earth dist.	690 Jun 16 j 21:59	29°♊51'57	42.56206	AU
conjunction	690 Jun 19 j 09:38	29°♊55'50	-0°50'03	
minimum elong	690 Jun 19 j 09:40	29°♊55'50	0°50'02	
	690 Jun 22 j 01:46	0°♋		
morning rise	690 Jul 05 j 13:02	0°♋20'49		
retrograde	690 Sep 29 j 14:46	1°♋38'29		
opposition	690 Dec 18 j 23:20	0°♋33'16	-0°40'57	
min. Earth dist.	690 Dec 21 j 04:12	0°♋30'27	40.44446	AU
	691 Jan 15 j 04:31	30°℞♊		
direct	691 Mar 10 j 12:40	29°♊26'56		
	691 May 03 j 03:46	0°♋		
evening set	691 Jun 04 j 18:13	0°♋44'39		
max. Earth dist.	691 Jun 18 j 10:42	1°♋05'55	42.32847	AU
conjunction	691 Jun 20 j 22:35	1°♋09'50	-0°27'52	
minimum elong	691 Jun 20 j 22:36	1°♋09'50	0°27'53	
morning rise	691 Jul 07 j 02:10	1°♋35'00		
retrograde	691 Oct 01 j 01:18	2°♋53'06		
opposition	691 Dec 20 j 10:30	1°♋47'37	-0°17'33	
min. Earth dist.	691 Dec 22 j 16:15	1°♋44'44	40.21017	AU
direct	692 Mar 11 j 01:11	0°♋40'59		
evening set	692 Jun 05 j 07:03	1°♋59'15		
max. Earth dist.	692 Jun 18 j 23:00	2°♋20'36	42.09383	AU
conjunction	692 Jun 21 j 11:36	2°♋24'36	-0°05'29	
minimum elong	692 Jun 21 j 11:36	2°♋24'36	0°05'28	
behind sun begin	692 Jun 21 j 05:19	2°♋24'13		
behind sun end	692 Jun 21 j 17:53	2°♋24'59		
morning rise	692 Jul 07 j 15:28	2°♋49'56		
asc. node	692 Sep 17 j 06:16	4°♋05'59		
retrograde	692 Oct 01 j 13:14	4°♋08'32		
opposition	692 Dec 20 j 21:53	3°♋02'48	0°06'09	
min. Earth dist.	692 Dec 23 j 03:35	2°♋59'54	39.97495	AU
direct	693 Mar 12 j 12:56	1°♋55'51		
evening set	693 Jun 06 j 20:41	3°♋14'43		
max. Earth dist.	693 Jun 20 j 11:09	3°♋36'07	41.85799	AU
conjunction	693 Jun 23 j 01:14	3°♋40'14	0°17'19	
minimum elong	693 Jun 23 j 01:13	3°♋40'14	0°17'18	
morning rise	693 Jul 09 j 04:57	4°♋05'44		
retrograde	693 Oct 03 j 03:18	5°♋24'52		
opposition	693 Dec 22 j 09:37	4°♋18'53	0°30'07	
min. Earth dist.	693 Dec 24 j 17:04	4°♋15'53	39.73859	AU
direct	694 Mar 13 j 21:58	3°♋11'39		
evening set	694 Jun 08 j 10:55	4°♋31'10		
max. Earth dist.	694 Jun 22 j 01:16	4°♋52'42	41.62087	AU
conjunction	694 Jun 24 j 15:18	4°♋56'50	0°40'15	
minimum elong	694 Jun 24 j 15:16	4°♋56'50	0°40'15	
morning rise	694 Jul 10 j 18:36	5°♋22'29		
retrograde	694 Oct 04 j 17:53	6°♋42'13		
opposition	694 Dec 23 j 21:43	5°♋35'59	0°54'22	
min. Earth dist.	694 Dec 26 j 05:08	5°♋32'59	39.50070	AU
direct	695 Mar 15 j 09:12	4°♋28'27		
evening set	695 Jun 10 j 01:52	5°♋48'41		
max. Earth dist.	695 Jun 23 j 13:27	6°♋10'11	41.38177	AU
conjunction	695 Jun 26 j 05:32	6°♋14'29	1°03'27	
minimum elong	695 Jun 26 j 05:30	6°♋14'29	1°03'27	
morning rise	695 Jul 12 j 08:19	6°♋40'16		
retrograde	695 Oct 06 j 10:52	8°♋00'37		
opposition	695 Dec 25 j 10:16	6°♋54'09	1°18'53	
min. Earth dist.	695 Dec 27 j 19:18	6°♋51'02	39.26073	AU
direct	696 Mar 15 j 20:20	5°♋46'18		
evening set	696 Jun 10 j 17:26	7°♋07'16		
max. Earth dist.	696 Jun 24 j 04:04	7°♋28'51	41.14011	AU
conjunction	696 Jun 26 j 20:29	7°♋33'13	1°26'54	
minimum elong	696 Jun 26 j 20:26	7°♋33'13	1°26'54	
morning rise	696 Jul 12 j 22:13	7°♋59'07		
retrograde	696 Oct 07 j 01:26	9°♋20'07		
opposition	696 Dec 25 j 23:12	8°♋13'23	1°43'41	
min. Earth dist.	696 Dec 28 j 09:19	8°♋10'12	39.01800	AU
direct	697 Mar 17 j 11:07	7°♋05'13		
evening set	697 Jun 12 j 09:55	8°♋26'57		

max. Earth dist.	697 Jun	25 j 17:31	8°♋48'30	40.89559 AU
conjunction	697 Jun	28 j 11:46	8°♋53'01	1°50'34
minimum elong	697 Jun	28 j 11:43	8°♋53'01	1°50'34
morning rise	697 Jul	14 j 12:30	9°♋19'02	
retrograde	697 Oct	08 j 17:42	10°♋40'43	
opposition	697 Dec	27 j 12:33	9°♋33'42	2°08'44
min. Earth dist.	697 Dec	29 j 23:20	9°♋30'27	38.77239 AU
direct	698 Mar	19 j 00:40	8°♋25'11	
evening set	698 Jun	14 j 03:03	9°♋47'44	
max. Earth dist.	698 Jun	27 j 07:52	10°♋09'14	40.64787 AU
conjunction	698 Jun	30 j 03:35	10°♋13'53	2°14'29
minimum elong	698 Jun	30 j 03:31	10°♋13'53	2°14'29
morning rise	698 Jul	16 j 02:44	10°♋40'00	
retrograde	698 Oct	10 j 07:07	12°♋02'24	
opposition	698 Dec	29 j 02:23	10°♋55'05	2°34'02
min. Earth dist.	698 Dec	31 j 15:05	10°♋51'43	38.52383 AU
direct	699 Mar	20 j 13:55	9°♋46'13	
evening set	699 Jun	15 j 20:51	11°♋09'34	
max. Earth dist.	699 Jun	28 j 23:36	11°♋31'06	40.39748 AU
conjunction	699 Jul	01 j 19:46	11°♋35'49	2°38'37
minimum elong	699 Jul	01 j 19:41	11°♋35'49	2°38'37
morning rise	699 Jul	17 j 17:11	12°♋02'00	
retrograde	699 Oct	11 j 23:09	13°♋25'09	
opposition	699 Dec	30 j 16:32	12°♋17'31	2°59'35
min. Earth dist.	700 Jan	02 j 05:16	12°♋14'08	38.27287 AU
direct	700 Mar	21 j 02:51	11°♋08'16	
evening set	700 Jun	16 j 15:19	12°♋32'30	
max. Earth dist.	700 Jun	29 j 13:54	12°♋53'54	40.14474 AU
conjunction	700 Jul	02 j 12:11	12°♋58'48	3°02'58
minimum elong	700 Jul	02 j 12:05	12°♋58'48	3°02'58
morning rise	700 Jul	18 j 07:38	13°♋25'03	
retrograde	700 Oct	12 j 17:46	14°♋48'59	
opposition	700 Dec	31 j 07:11	13°♋41'01	3°25'23
min. Earth dist.	701 Jan	02 j 21:43	13°♋37'31	38.02002 AU
direct	701 Mar	22 j 14:02	12°♋31'22	
evening set	701 Jun	18 j 10:34	13°♋56'30	
max. Earth dist.	701 Jul	01 j 07:08	14°♋17'56	39.89025 AU
conjunction	701 Jul	04 j 05:18	14°♋22'52	3°27'32
minimum elong	701 Jul	04 j 05:12	14°♋22'51	3°27'32
morning rise	701 Jul	19 j 22:14	14°♋49'09	
retrograde	701 Oct	14 j 10:38	16°♋13'54	
opposition	702 Jan	01 j 22:09	15°♋05'35	3°51'24
min. Earth dist.	702 Jan	04 j 12:54	15°♋02'03	37.76579 AU
direct	702 Mar	24 j 05:53	13°♋55'32	
evening set	702 Jun	20 j 06:46	15°♋21'38	
max. Earth dist.	702 Jul	02 j 22:57	15°♋42'56	39.63469 AU
conjunction	702 Jul	05 j 22:41	15°♋48'01	3°52'16
minimum elong	702 Jul	05 j 22:34	15°♋48'00	3°52'16
morning rise	702 Jul	21 j 13:04	16°♋14'19	
retrograde	702 Oct	16 j 06:07	17°♋39'56	
opposition	703 Jan	03 j 13:40	16°♋31'17	4°17'37
min. Earth dist.	703 Jan	06 j 05:04	16°♋27'41	37.51103 AU
direct	703 Mar	25 j 22:18	15°♋20'49	
evening set	703 Jun	22 j 03:27	16°♋47'56	
max. Earth dist.	703 Jul	04 j 16:37	17°♋09'11	39.37860 AU
conjunction	703 Jul	07 j 16:30	17°♋14'19	4°17'11
minimum elong	703 Jul	07 j 16:22	17°♋14'18	4°17'11
morning rise	703 Jul	23 j 03:38	17°♋40'37	
retrograde	703 Oct	17 j 23:33	19°♋07'09	
opposition	704 Jan	05 j 05:47	17°♋58'09	4°44'02
min. Earth dist.	704 Jan	07 j 22:09	17°♋54'28	37.25615 AU
direct	704 Mar	26 j 15:29	16°♋47'17	
evening set	704 Jun	23 j 01:12	18°♋15'27	
max. Earth dist.	704 Jul	05 j 10:31	18°♋36'37	39.12274 AU
conjunction	704 Jul	08 j 10:49	18°♋41'50	4°42'16
minimum elong	704 Jul	08 j 10:40	18°♋41'49	4°42'15
morning rise	704 Jul	23 j 18:39	19°♋08'06	
retrograde	704 Oct	18 j 17:05	20°♋35'36	
opposition	705 Jan	05 j 22:09	19°♋26'16	5°10'38
min. Earth dist.	705 Jan	08 j 14:06	19°♋22'35	37.00175 AU
direct	705 Mar	28 j 07:49	18°♋15'00	
evening set	705 Jun	24 j 23:52	19°♋44'18	
max. Earth dist.	705 Jul	07 j 04:14	20°♋05'18	38.86717 AU
conjunction	705 Jul	10 j 05:48	20°♋10'38	5°07'29
minimum elong	705 Jul	10 j 05:38	20°♋10'38	5°07'29
morning rise	705 Jul	25 j 09:49	20°♋36'52	
retrograde	705 Oct	20 j 11:12	22°♋05'25	
opposition	706 Jan	07 j 15:18	20°♋55'45	5°37'23
min. Earth dist.	706 Jan	10 j 08:42	20°♋51'58	36.74777 AU
direct	706 Mar	29 j 22:24	19°♋44'05	
evening set	706 Jun	26 j 23:27	21°♋14'35	
max. Earth dist.	706 Jul	09 j 00:16	21°♋35'30	38.61188 AU
conjunction	706 Jul	12 j 01:19	21°♋40'51	5°32'49
minimum elong	706 Jul	12 j 01:08	21°♋40'50	5°32'49
morning rise	706 Jul	27 j 01:03	22°♋07'00	
retrograde	706 Oct	22 j 07:13	23°♋36'40	
opposition	707 Jan	09 j 08:53	22°♋26'40	6°04'17
min. Earth dist.	707 Jan	12 j 02:00	22°♋22'52	36.49394 AU
direct	707 Mar	31 j 14:08	21°♋14'36	
evening set	707 Jun	29 j 00:09	22°♋46'22	
max. Earth dist.	707 Jul	10 j 18:30	23°♋07'01	38.35641 AU
conjunction	707 Jul	13 j 21:21	23°♋12'32	5°58'16
minimum elong	707 Jul	13 j 21:09	23°♋12'31	5°58'17
morning rise	707 Jul	28 j 16:38	23°♋38'36	
retrograde	707 Oct	24 j 05:34	25°♋09'25	
opposition	708 Jan	11 j 03:06	23°♋59'04	6°31'18
min. Earth dist.	708 Jan	13 j 21:33	23°♋55'11	36.23993 AU
direct	708 Apr	01 j 05:24	22°♋46'37	
evening set	708 Jun	30 j 01:39	24°♋19'42	
max. Earth dist.	708 Jul	11 j 15:18	24°♋40'10	38.10021 AU
conjunction	708 Jul	14 j 18:04	24°♋45'44	6°23'49
minimum elong	708 Jul	14 j 17:51	24°♋45'43	6°23'49
morning rise	708 Jul	29 j 08:11	25°♋11'40	
retrograde	708 Oct	25 j 03:15	26°♋43'42	
opposition	709 Jan	11 j 22:01	25°♋33'00	6°58'27
min. Earth dist.	709 Jan	14 j 17:07	25°♋29'03	35.98494 AU
direct	709 Apr	03 j 01:22	24°♋20'08	
evening set	709 Jul	02 j 04:34	25°♋54'35	
max. Earth dist.	709 Jul	13 j 11:09	26°♋14'44	37.84293 AU
conjunction	709 Jul	16 j 15:24	26°♋20'28	6°49'26
minimum elong	709 Jul	16 j 15:11	26°♋20'27	6°49'27
morning rise	709 Jul	31 j 00:14	26°♋46'14	
retrograde	709 Oct	27 j 03:02	28°♋19'31	
opposition	710 Jan	13 j 17:24	27°♋08'27	7°25'41
min. Earth dist.	710 Jan	16 j 12:58	27°♋04'27	35.72895 AU
direct	710 Apr	04 j 21:29	25°♋55'08	
evening set	710 Jul	04 j 08:26	27°♋31'02	
max. Earth dist.	710 Jul	15 j 08:26	27°♋50'52	37.58432 AU
conjunction	710 Jul	18 j 13:31	27°♋56'43	7°15'07
minimum elong	710 Jul	18 j 13:17	27°♋56'42	7°15'07

morning rise	710 Aug 01 j 16:19	28°♋22'16		
retrograde	710 Oct 29 j 00:35	29°♋56'53		
opposition	711 Jan 15 j 13:40	28°♋45'25	7°52'59	
min. Earth dist.	711 Jan 18 j 10:46	28°♋41'18	35.47186 AU	
direct	711 Apr 06 j 17:16	27°♋31'39		
evening set	711 Jul 06 j 13:18	29°♋09'02		
max. Earth dist.	711 Jul 17 j 06:36	29°♋28'33	37.32486 AU	
conjunction	711 Jul 20 j 11:58	29°♋34'28	7°40'50	
minimum elong	711 Jul 20 j 11:43	29°♋34'27	7°40'50	
morning rise	711 Aug 03 j 08:26	29°♋59'47		
	711 Aug 03 j 11:17	0°♌		
retrograde	711 Oct 30 j 22:10	1°♌35'46		
opposition	712 Jan 17 j 10:21	0°♌23'55	8°20'19	
min. Earth dist.	712 Jan 20 j 07:10	0°♌19'46	35.21416 AU	
	712 Feb 03 j 07:26	30°℞♋		
direct	712 Apr 07 j 13:55	29°♋09'40		
	712 Jun 08 j 21:17	0°♌		
evening set	712 Jul 07 j 19:23	0°♌48'35		
max. Earth dist.	712 Jul 18 j 04:13	1°♌07'39	37.06480 AU	
conjunction	712 Jul 21 j 11:11	1°♌13'45	8°06'33	
minimum elong	712 Jul 21 j 10:55	1°♌13'44	8°06'32	
morning rise	712 Aug 04 j 00:49	1°♌38'46		
retrograde	712 Oct 31 j 21:15	3°♌16'12		
opposition	713 Jan 18 j 07:39	2°♌03'55	8°47'41	
min. Earth dist.	713 Jan 21 j 06:00	1°♌59'40	34.95640 AU	
direct	713 Apr 09 j 08:23	0°♌49'11		
evening set	713 Jul 10 j 02:37	2°♌29'43		
max. Earth dist.	713 Jul 20 j 04:46	2°♌48'27	36.80490 AU	
conjunction	713 Jul 23 j 11:08	2°♌54'34	8°32'14	
minimum elong	713 Jul 23 j 10:51	2°♌54'33	8°32'15	
morning rise	713 Aug 05 j 17:16	3°♌19'15		
retrograde	713 Nov 02 j 20:56	4°♌58'11		
opposition	714 Jan 20 j 05:40	3°♌45'29	9°15'00	
min. Earth dist.	714 Jan 23 j 03:41	3°♌41'13	34.69915 AU	
direct	714 Apr 11 j 05:40	2°♌30'15		
evening set	714 Jul 12 j 11:04	4°♌12'30		
max. Earth dist.	714 Jul 22 j 03:48	4°♌30'41	36.54581 AU	
conjunction	714 Jul 25 j 11:28	4°♌36'57	8°57'51	
minimum elong	714 Jul 25 j 11:10	4°♌36'56	8°57'51	
morning rise	714 Aug 07 j 09:48	5°♌01'16		
retrograde	714 Nov 04 j 23:27	6°♌41'47		
opposition	715 Jan 22 j 04:21	5°♌28'39	9°42'14	
min. Earth dist.	715 Jan 25 j 03:00	5°♌24'19	34.44336 AU	
direct	715 Apr 13 j 02:39	4°♌12'55		
evening set	715 Jul 14 j 20:35	5°♌56'57		
max. Earth dist.	715 Jul 24 j 05:43	6°♌14'43	36.28836 AU	
conjunction	715 Jul 27 j 12:38	6°♌20'59	9°23'21	
minimum elong	715 Jul 27 j 12:19	6°♌20'58	9°23'21	
morning rise	715 Aug 09 j 02:16	6°♌44'52		
retrograde	715 Nov 07 j 01:28	8°♌27'03		
opposition	716 Jan 24 j 03:48	7°♌13'29	10°09'21	
min. Earth dist.	716 Jan 27 j 02:33	7°♌09'07	34.18968 AU	
direct	716 Apr 14 j 03:10	5°♌57'16		
evening set	716 Jul 16 j 07:30	7°♌43'11		
max. Earth dist.	716 Jul 25 j 06:56	8°♌00'22	36.03345 AU	
conjunction	716 Jul 28 j 14:15	8°♌06'44	9°48'41	
minimum elong	716 Jul 28 j 13:56	8°♌06'43	9°48'40	
morning rise	716 Aug 09 j 18:56	8°♌30'08		
retrograde	716 Nov 08 j 05:53	10°♌14'05		
opposition	717 Jan 25 j 03:54	9°♌00'06	10°36'18	
min. Earth dist.	717 Jan 28 j 01:59	8°♌55'45	33.93890 AU	
direct	717 Apr 16 j 03:17	7°♌43'24		
evening set	717 Jul 18 j 19:43	9°♌31'18		
max. Earth dist.	717 Jul 27 j 09:39	9°♌47'53	35.78137 AU	
conjunction	717 Jul 30 j 16:51	9°♌54'19	10°13'48	
minimum elong	717 Jul 30 j 16:31	9°♌54'17	10°13'48	
morning rise	717 Aug 11 j 11:43	10°♌17'10		
retrograde	717 Nov 10 j 07:33	12°♌02'58		
opposition	718 Jan 27 j 04:50	10°♌48'35	11°03'01	
min. Earth dist.	718 Jan 30 j 03:40	10°♌44'09	33.69122 AU	
direct	718 Apr 18 j 02:58	9°♌31'27		
evening set	718 Jul 21 j 09:32	11°♌21'26		
max. Earth dist.	718 Jul 29 j 13:39	11°♌37'23	35.53258 AU	
conjunction	718 Aug 01 j 20:06	11°♌43'50	10°38'40	
minimum elong	718 Aug 01 j 19:46	11°♌43'48	10°38'39	
morning rise	718 Aug 13 j 04:34	12°♌06'04		
retrograde	718 Nov 12 j 11:11	13°♌53'49		
opposition	719 Jan 29 j 06:30	12°♌39'04	11°29'27	
min. Earth dist.	719 Feb 01 j 04:16	12°♌34'40	33.44681 AU	
direct	719 Apr 20 j 03:51	11°♌21'29		
evening set	719 Jul 24 j 00:30	13°♌13'39		
max. Earth dist.	719 Jul 31 j 16:49	13°♌28'49	35.28673 AU	
conjunction	719 Aug 03 j 23:58	13°♌35'22	11°03'14	
minimum elong	719 Aug 03 j 23:37	13°♌35'20	11°03'14	
morning rise	719 Aug 14 j 21:25	13°♌56'55		
	719 Sep 19 j 01:15	15°♌		
retrograde	719 Nov 14 j 15:51	15°♌46'45		
	720 Jan 12 j 04:53	15°℞♌		
opposition	720 Jan 31 j 09:03	14°♌31'36	11°55'34	
min. Earth dist.	720 Feb 03 j 07:50	14°♌27'07	33.20534 AU	
direct	720 Apr 21 j 02:07	13°♌13'35		
	720 Jul 21 j 15:28	15°♌		
evening set	720 Jul 25 j 17:20	15°♌08'02		
max. Earth dist.	720 Aug 01 j 22:51	15°♌22'27	35.04358 AU	
conjunction	720 Aug 05 j 04:52	15°♌28'59	11°27'27	
minimum elong	720 Aug 05 j 04:30	15°♌28'57	11°27'26	
morning rise	720 Aug 15 j 14:19	15°♌49'47		
retrograde	720 Nov 15 j 20:40	17°♌41'45		
opposition	721 Feb 01 j 12:17	16°♌26'14	12°21'20	
min. Earth dist.	721 Feb 04 j 10:21	16°♌21'46	32.96635 AU	
direct	721 Apr 23 j 04:45	15°♌07'46		
evening set	721 Jul 28 j 11:50	17°♌04'36		
max. Earth dist.	721 Aug 04 j 03:21	17°♌18'00	34.80275 AU	
conjunction	721 Aug 07 j 10:31	17°♌24'41	11°51'17	
minimum elong	721 Aug 07 j 10:08	17°♌24'40	11°51'18	
morning rise	721 Aug 17 j 07:25	17°♌44'39		
retrograde	721 Nov 18 j 04:33	19°♌38'52		
opposition	722 Feb 03 j 16:32	18°♌22'56	12°46'40	
min. Earth dist.	722 Feb 06 j 15:07	18°♌18'24	32.72977 AU	
direct	722 Apr 25 j 06:47	17°♌04'00		
evening set	722 Jul 31 j 07:59	19°♌03'20		
max. Earth dist.	722 Aug 06 j 10:59	19°♌15'49	34.56416 AU	
conjunction	722 Aug 09 j 17:02	19°♌22'28	12°14'42	
minimum elong	722 Aug 09 j 16:39	19°♌22'26	12°14'41	
morning rise	722 Aug 19 j 00:08	19°♌41'28		
retrograde	722 Nov 20 j 11:21	21°♌38'02		
opposition	723 Feb 05 j 21:43	20°♌21'41	13°11'33	
min. Earth dist.	723 Feb 08 j 20:15	20°♌17'08	32.49547 AU	
direct	723 Apr 27 j 11:39	19°♌02'17		
evening set	723 Aug 03 j 06:01	21°♌04'12		
max. Earth dist.	723 Aug 08 j 17:34	21°♌15'30	34.32818 AU	

conjunction	723 Aug 12 j 00:11	21°♌22'16	12°37'37
minimum elong	723 Aug 11 j 23:48	21°♌22'14	12°37'37
morning rise	723 Aug 20 j 16:46	21°♌40'13	
retrograde	723 Nov 22 j 21:04	23°♌39'14	
opposition	724 Feb 08 j 03:31	22°♌22'27	13°35'53
min. Earth dist.	724 Feb 11 j 01:36	22°♌17'54	32.26405 AU
direct	724 Apr 28 j 16:38	21°♌02'33	
evening set	724 Aug 05 j 05:55	23°♌07'12	
max. Earth dist.	724 Aug 10 j 02:15	23°♌17'17	34.09507 AU
conjunction	724 Aug 13 j 08:17	23°♌24'04	12°59'58
minimum elong	724 Aug 13 j 07:54	23°♌24'02	12°59'58
morning rise	724 Aug 21 j 08:58	23°♌40'50	
retrograde	724 Nov 24 j 06:01	25°♌42'25	
opposition	725 Feb 09 j 10:24	24°♌25'11	13°59'37
min. Earth dist.	725 Feb 12 j 08:55	24°♌20'35	32.03574 AU
direct	725 Apr 30 j 23:52	23°♌04'48	
evening set	725 Aug 08 j 08:10	25°♌12'18	
max. Earth dist.	725 Aug 12 j 11:33	25°♌21'01	33.86558 AU
conjunction	725 Aug 15 j 17:02	25°♌27'50	13°21'42
minimum elong	725 Aug 15 j 16:38	25°♌27'47	13°21'42
morning rise	725 Aug 23 j 00:27	25°♌43'14	
retrograde	725 Nov 26 j 17:05	27°♌47'32	
opposition	726 Feb 11 j 17:54	26°♌29'52	14°22'40
min. Earth dist.	726 Feb 14 j 15:03	26°♌25'19	31.81139 AU
direct	726 May 03 j 08:07	25°♌08'59	
evening set	726 Aug 11 j 12:46	27°♌19'32	
max. Earth dist.	726 Aug 14 j 21:27	27°♌26'40	33.64032 AU
conjunction	726 Aug 18 j 02:36	27°♌33'31	13°42'43
minimum elong	726 Aug 18 j 02:13	27°♌33'29	13°42'43
morning rise	726 Aug 24 j 15:06	27°♌47'23	
retrograde	726 Nov 29 j 01:51	29°♌54'36	
opposition	727 Feb 14 j 02:30	28°♌36'28	14°44'56
min. Earth dist.	727 Feb 17 j 00:01	28°♌31'52	31.59179 AU
direct	727 May 05 j 14:36	27°♌15'06	
evening set	727 Aug 14 j 20:25	29°♌28'54	
max. Earth dist.	727 Aug 17 j 09:28	29°♌34'22	33.42039 AU
conjunction	727 Aug 20 j 12:42	29°♌41'07	14°02'57
minimum elong	727 Aug 20 j 12:19	29°♌41'05	14°02'58
morning rise	727 Aug 26 j 03:48	29°♌53'13	
	727 Aug 29 j 07:49	0°♍	
retrograde	727 Dec 01 j 12:02	2°♍03'34	
opposition	728 Feb 16 j 11:49	0°♍45'01	15°06'20
min. Earth dist.	728 Feb 19 j 07:31	0°♍40'30	31.37781 AU
	728 Mar 17 j 06:14	30°℞♌	
direct	728 May 06 j 23:45	29°♌23'10	
	728 Jun 25 j 05:46	0°♍	
evening set	728 Aug 17 j 08:16	1°♍40'35	
max. Earth dist.	728 Aug 18 j 20:38	1°♍43'53	33.20650 AU
conjunction	728 Aug 21 j 23:42	1°♍50'40	14°22'19
minimum elong	728 Aug 21 j 23:19	1°♍50'38	14°22'18
morning rise	728 Aug 26 j 14:08	2°♍00'39	
retrograde	728 Dec 02 j 23:51	4°♍14'30	
opposition	729 Feb 17 j 21:57	2°♍55'31	15°26'45
min. Earth dist.	729 Feb 20 j 17:19	2°♍51'00	31.17035 AU
direct	729 May 09 j 06:34	1°♍33'12	
evening set	729 Aug 21 j 03:28	3°♍54'53	
max. Earth dist.	729 Aug 21 j 11:01	3°♍55'34	32.99956 AU
conjunction	729 Aug 24 j 11:37	4°♍02'12	14°40'42
minimum elong	729 Aug 24 j 11:14	4°♍02'10	14°40'42
morning rise	729 Aug 27 j 18:52	4°♍09'27	
retrograde	729 Dec 05 j 11:21	6°♍27'24	
opposition	730 Feb 20 j 09:09	5°♍08'02	15°46'07
min. Earth dist.	730 Feb 23 j 02:48	5°♍03'36	30.96988 AU
direct	730 May 11 j 16:55	3°♍45'20	
max. Earth dist.	730 Aug 23 j 23:58	6°♍09'09	32.80001 AU
evening set	730 Aug 25 j 22:08	6°♍13'25	
conjunction	730 Aug 27 j 00:02	6°♍15'48	14°58'03
minimum elong	730 Aug 26 j 23:41	6°♍15'46	14°58'02
morning rise	730 Aug 28 j 01:13	6°♍18'07	
retrograde	730 Dec 08 j 01:46	8°♍42'23	
opposition	731 Feb 22 j 21:10	7°♍22'39	16°04'19
min. Earth dist.	731 Feb 25 j 13:34	7°♍18'17	30.77688 AU
direct	731 May 14 j 03:05	5°♍59'34	
max. Earth dist.	731 Aug 26 j 15:58	8°♍25'03	32.60792 AU
conjunction	731 Aug 29 j 13:29	8°♍31'31	15°14'16
minimum elong	731 Aug 29 j 13:08	8°♍31'29	15°14'16
retrograde	731 Dec 10 j 15:25	10°♍59'28	
opposition	732 Feb 25 j 10:04	9°♍39'24	16°21'18
min. Earth dist.	732 Feb 28 j 01:35	9°♍35'05	30.59106 AU
direct	732 May 15 j 14:57	8°♍15'59	
max. Earth dist.	732 Aug 28 j 06:54	10°♍42'56	32.42320 AU
conjunction	732 Aug 31 j 03:34	10°♍49'23	15°29'18
minimum elong	732 Aug 31 j 03:15	10°♍49'21	15°29'17
retrograde	732 Dec 12 j 08:25	13°♍18'40	
opposition	733 Feb 26 j 23:50	11°♍58'18	16°36'59
min. Earth dist.	733 Mar 01 j 13:31	11°♍54'05	30.41232 AU
direct	733 May 18 j 03:43	10°♍34'32	
max. Earth dist.	733 Aug 30 j 23:50	13°♍03'02	32.24537 AU
conjunction	733 Sep 02 j 18:37	13°♍09'21	15°43'04
minimum elong	733 Sep 02 j 18:18	13°♍09'19	15°43'05
retrograde	733 Dec 15 j 00:34	15°♍39'57	
opposition	734 Mar 01 j 14:40	14°♍19'16	16°51'19
min. Earth dist.	734 Mar 04 j 03:57	14°♍15'03	30.24025 AU
direct	734 May 20 j 17:49	12°♍55'12	
max. Earth dist.	734 Sep 02 j 17:01	15°♍25'08	32.07460 AU
conjunction	734 Sep 05 j 10:17	15°♍31'22	15°55'32
minimum elong	734 Sep 05 j 09:59	15°♍31'20	15°55'31
retrograde	734 Dec 17 j 18:55	18°♍03'12	
opposition	735 Mar 04 j 06:16	16°♍42'14	17°04'11
min. Earth dist.	735 Mar 06 j 17:08	16°♍38'10	30.07501 AU
direct	735 May 23 j 09:46	15°♍17'52	
max. Earth dist.	735 Sep 05 j 10:46	17°♍49'10	31.91076 AU
conjunction	735 Sep 08 j 02:36	17°♍55'18	16°06'36
minimum elong	735 Sep 08 j 02:20	17°♍55'17	16°06'36
retrograde	735 Dec 20 j 11:31	20°♍28'20	
opposition	736 Mar 05 j 22:47	19°♍07'04	17°15'33
min. Earth dist.	736 Mar 08 j 09:19	19°♍03'01	29.91664 AU
direct	736 May 25 j 00:14	17°♍42'24	
max. Earth dist.	736 Sep 07 j 06:12	20°♍15'06	31.75428 AU
conjunction	736 Sep 09 j 19:41	20°♍21'03	16°16'13
minimum elong	736 Sep 09 j 19:27	20°♍21'02	16°16'12
retrograde	736 Dec 22 j 06:04	22°♍55'12	
opposition	737 Mar 08 j 15:50	21°♍33'38	17°25'20
min. Earth dist.	737 Mar 10 j 23:54	21°♍29'44	29.76543 AU
direct	737 May 27 j 17:43	20°♍08'42	
max. Earth dist.	737 Sep 10 j 00:58	22°♍42'35	31.60539 AU
conjunction	737 Sep 12 j 13:21	22°♍48'28	16°24'18
minimum elong	737 Sep 12 j 13:09	22°♍48'26	16°24'18
retrograde	737 Dec 25 j 00:37	25°♍23'39	
opposition	738 Mar 11 j 09:50	24°♍01'48	17°33'25

min. Earth dist.	738 Mar 13 j 17:00	23°♑57'57	29.62200 AU
direct	738 May 30 j 08:58	22°♑36'35	
max. Earth dist.	738 Sep 12 j 22:13	25°♑11'45	31.46488 AU
conjunction	738 Sep 15 j 07:24	25°♑17'22	16°30'46
minimum elong	738 Sep 15 j 07:13	25°♑17'21	16°30'46
retrograde	738 Dec 27 j 17:51	27°♑53'32	
opposition	739 Mar 14 j 04:28	26°♑31'25	17°39'45
min. Earth dist.	739 Mar 16 j 09:01	26°♑27'44	29.48687 AU
direct	739 Jun 02 j 04:11	25°♑05'56	
max. Earth dist.	739 Sep 15 j 18:04	27°♑42'08	31.33339 AU
conjunction	739 Sep 18 j 01:54	27°♑47'38	16°35'34
minimum elong	739 Sep 18 j 01:46	27°♑47'38	16°35'34
	739 Nov 23 j 03:40	0°♎	
retrograde	739 Dec 30 j 12:55	0°♎24'41	
	740 Feb 07 j 01:11	30℞♑	
opposition	740 Mar 15 j 23:34	29°♑02'18	17°44'14
min. Earth dist.	740 Mar 18 j 02:14	28°♑58'44	29.36104 AU
direct	740 Jun 03 j 21:13	27°♑36'34	
	740 Sep 11 j 19:40	0°♎	
max. Earth dist.	740 Sep 17 j 16:54	0°♎13'58	31.21182 AU
conjunction	740 Sep 19 j 20:55	0°♎19'08	16°38'36
minimum elong	740 Sep 19 j 20:49	0°♎19'07	16°38'36
retrograde	741 Jan 01 j 07:28	2°♎56'59	
opposition	741 Mar 18 j 19:27	1°♎34'21	17°46'48
min. Earth dist.	741 Mar 20 j 19:42	1°♎30'58	29.24507 AU
direct	741 Jun 06 j 16:02	0°♎08'26	
max. Earth dist.	741 Sep 20 j 14:00	2°♎46'44	31.10094 AU
conjunction	741 Sep 22 j 16:06	2°♎51'44	16°39'49
minimum elong	741 Sep 22 j 16:03	2°♎51'43	16°39'50
retrograde	742 Jan 04 j 03:37	5°♎30'20	
opposition	742 Mar 21 j 15:50	4°♎07'29	17°47'22
min. Earth dist.	742 Mar 23 j 13:04	4°♎04'18	29.13991 AU
direct	742 Jun 09 j 11:31	2°♎41'25	
max. Earth dist.	742 Sep 23 j 13:47	5°♎20'45	31.00136 AU
conjunction	742 Sep 25 j 11:52	5°♎25'22	16°39'10
minimum elong	742 Sep 25 j 11:50	5°♎25'22	16°39'09
retrograde	743 Jan 06 j 22:36	8°♎04'37	
opposition	743 Mar 24 j 12:48	6°♎41'37	17°45'54
min. Earth dist.	743 Mar 26 j 07:48	6°♎38'35	29.04582 AU
direct	743 Jun 12 j 08:14	5°♎15'27	
max. Earth dist.	743 Sep 26 j 11:52	7°♎55'33	30.91340 AU
conjunction	743 Sep 28 j 07:38	7°♎59'57	16°36'36
minimum elong	743 Sep 28 j 07:39	7°♎59'57	16°36'36
retrograde	744 Jan 09 j 20:27	10°♎39'47	
opposition	744 Mar 26 j 10:02	9°♎16'40	17°42'22
min. Earth dist.	744 Mar 28 j 01:26	9°♎13'53	28.96289 AU
direct	744 Jun 14 j 04:49	7°♎50'26	
max. Earth dist.	744 Sep 28 j 11:45	10°♎31'21	30.83667 AU
conjunction	744 Sep 30 j 03:55	10°♎35'24	16°32'07
minimum elong	744 Sep 30 j 03:58	10°♎35'24	16°32'06
retrograde	745 Jan 11 j 16:36	13°♎15'43	
opposition	745 Mar 29 j 07:46	11°♎52'30	17°36'45
min. Earth dist.	745 Mar 30 j 21:25	11°♎49'51	28.89075 AU
direct	745 Jun 17 j 01:56	10°♎26'15	
max. Earth dist.	745 Oct 01 j 10:53	13°♎07'46	30.77105 AU
conjunction	745 Oct 03 j 00:18	13°♎11'33	16°25'43
minimum elong	745 Oct 03 j 00:25	13°♎11'34	16°25'43
retrograde	746 Jan 14 j 14:59	15°♎52'15	
opposition	746 Apr 01 j 05:51	14°♎28'59	17°29'03
min. Earth dist.	746 Apr 02 j 15:47	14°♎26'35	28.82917 AU
direct	746 Jun 20 j 01:24	13°♎02'44	
max. Earth dist.	746 Oct 04 j 10:31	15°♎44'48	30.71603 AU
conjunction	746 Oct 05 j 20:47	15°♎48'16	16°17'24
minimum elong	746 Oct 05 j 20:54	15°♎48'16	16°17'23
retrograde	747 Jan 17 j 11:35	18°♎29'15	
opposition	747 Apr 04 j 04:22	17°♎05'55	17°19'18
min. Earth dist.	747 Apr 05 j 12:34	17°♎03'39	28.77785 AU
direct	747 Jun 22 j 22:47	15°♎39'42	
max. Earth dist.	747 Oct 07 j 10:23	18°♎22'10	30.67157 AU
conjunction	747 Oct 08 j 17:25	18°♎25'19	16°07'11
minimum elong	747 Oct 08 j 17:36	18°♎25'20	16°07'11
retrograde	748 Jan 20 j 09:32	21°♎06'27	
opposition	748 Apr 06 j 02:45	19°♎43'06	17°07'31
min. Earth dist.	748 Apr 07 j 07:21	19°♎41'05	28.73652 AU
direct	748 Jun 24 j 22:37	18°♎16'55	
max. Earth dist.	748 Oct 09 j 09:29	20°♎59'37	30.63730 AU
conjunction	748 Oct 10 j 14:06	21°♎02'31	15°55'05
minimum elong	748 Oct 10 j 14:17	21°♎02'32	15°55'05
retrograde	749 Jan 22 j 07:13	23°♎43'42	
opposition	749 Apr 09 j 01:32	22°♎20'19	16°53'43
min. Earth dist.	749 Apr 10 j 04:01	22°♎18'27	28.70521 AU
direct	749 Jun 27 j 20:50	20°♎54'12	
max. Earth dist.	749 Oct 12 j 09:44	23°♎37'06	30.61339 AU
conjunction	749 Oct 13 j 10:37	23°♎39'38	15°41'09
minimum elong	749 Oct 13 j 10:52	23°♎39'39	15°41'09
retrograde	750 Jan 25 j 03:06	26°♎20'44	
opposition	750 Apr 12 j 00:18	24°♎57'21	16°37'56
min. Earth dist.	750 Apr 12 j 23:21	24°♎55'44	28.68385 AU
direct	750 Jun 30 j 21:08	23°♎31'20	
max. Earth dist.	750 Oct 15 j 08:16	26°♎14'10	30.59987 AU
conjunction	750 Oct 16 j 06:55	26°♎16'28	15°25'24
minimum elong	750 Oct 16 j 07:10	26°♎16'29	15°25'24
retrograde	751 Jan 27 j 23:51	28°♎57'24	
opposition	751 Apr 14 j 22:55	27°♎34'01	16°20'12
min. Earth dist.	751 Apr 15 j 19:14	27°♎32'35	28.67296 AU
direct	751 Jul 03 j 19:01	26°♎08'04	
max. Earth dist.	751 Oct 18 j 08:38	28°♎50'57	30.59719 AU
conjunction	751 Oct 19 j 02:58	28°♎52'48	15°07'52
minimum elong	751 Oct 19 j 03:17	28°♎52'50	15°07'52
	751 Nov 16 j 14:01	0°♏	
retrograde	752 Jan 30 j 19:00	1°♏33'27	
opposition	752 Apr 16 j 21:25	0°♏10'05	16°00'34
min. Earth dist.	752 Apr 17 j 14:43	0°♏08'52	28.67268 AU
	752 Apr 22 j 21:23	30℞♎	
direct	752 Jul 05 j 18:24	28°♎44'16	
	752 Sep 12 j 09:30	0°♏	
evening set	752 Oct 18 j 11:09	1°♏22'27	
conjunction	752 Oct 20 j 22:33	1°♏28'28	14°48'35
minimum elong	752 Oct 20 j 22:51	1°♏28'30	14°48'35
max. Earth dist.	752 Oct 20 j 06:34	1°♏26'51	30.60568 AU
morning rise	752 Oct 23 j 10:31	1°♏34'32	
retrograde	753 Feb 01 j 14:42	4°♏08'45	
opposition	753 Apr 19 j 19:35	2°♏45'25	15°39'04
min. Earth dist.	753 Apr 20 j 09:12	2°♏44'28	28.68383 AU
direct	753 Jul 08 j 16:24	1°♏19'44	
evening set	753 Oct 19 j 14:24	3°♏53'17	
conjunction	753 Oct 23 j 17:54	4°♏03'20	14°27'37
minimum elong	753 Oct 23 j 18:15	4°♏03'22	14°27'37

max. Earth dist.	753 Oct 23 j 06:38	4°♏02'12	30.62604 AU
morning rise	753 Oct 27 j 21:54	4°♏13'25	
retrograde	754 Feb 04 j 07:48	6°♏43'09	
opposition	754 Apr 22 j 17:44	5°♏19'54	15°15'45
min. Earth dist.	754 Apr 23 j 04:24	5°♏19'10	28.70684 AU
direct	754 Jul 11 j 15:03	3°♏54'24	
evening set	754 Oct 21 j 03:53	6°♏24'21	
conjunction	754 Oct 26 j 12:34	6°♏37'18	14°05'01
minimum elong	754 Oct 26 j 12:55	6°♏37'20	14°05'01
max. Earth dist.	754 Oct 26 j 03:54	6°♏36'25	30.65876 AU
morning rise	754 Oct 31 j 21:42	6°♏50'17	
retrograde	755 Feb 07 j 03:41	9°♏16'35	
opposition	755 Apr 25 j 15:22	7°♏53'28	14°50'43
min. Earth dist.	755 Apr 25 j 21:35	7°♏53'02	28.74220 AU
direct	755 Jul 14 j 12:03	6°♏28'11	
evening set	755 Oct 22 j 21:50	8°♏54'58	
conjunction	755 Oct 29 j 07:03	9°♏10'19	13°40'51
minimum elong	755 Oct 29 j 07:26	9°♏10'21	13°40'50
max. Earth dist.	755 Oct 29 j 02:52	9°♏09'53	30.70387 AU
morning rise	755 Nov 04 j 16:35	9°♏25'42	
retrograde	756 Feb 09 j 20:19	11°♏49'01	
opposition	756 Apr 27 j 12:36	10°♏26'03	14°24'01
min. Earth dist.	756 Apr 27 j 16:23	10°♏25'47	28.78970 AU
direct	756 Jul 16 j 08:55	9°♏01'03	
evening set	756 Oct 23 j 18:19	11°♏24'54	
conjunction	756 Oct 31 j 00:57	11°♏42'19	13°15'12
minimum elong	756 Oct 31 j 01:20	11°♏42'22	13°15'12
max. Earth dist.	756 Oct 30 j 23:33	11°♏42'11	30.76123 AU
morning rise	756 Nov 07 j 07:54	11°♏59'47	
retrograde	757 Feb 11 j 15:04	14°♏20'21	
opposition	757 Apr 30 j 09:28	12°♏57'35	13°55'47
min. Earth dist.	757 Apr 30 j 08:49	12°♏57'38	28.84905 AU
direct	757 Jul 19 j 07:14	11°♏32'53	
evening set	757 Oct 25 j 16:11	13°♏53'59	
conjunction	757 Nov 02 j 18:18	14°♏13'15	12°48'11
minimum elong	757 Nov 02 j 18:43	14°♏13'18	12°48'11
max. Earth dist.	757 Nov 02 j 20:56	14°♏13'31	30.83010 AU
morning rise	757 Nov 10 j 20:37	14°♏32'34	
	757 Nov 22 j 14:33	15°♏	
retrograde	758 Feb 14 j 07:51	16°♏50'35	
opposition	758 May 03 j 06:07	15°♏28'01	13°26'07
min. Earth dist.	758 May 03 j 03:09	15°♏28'13	28.91967 AU
	758 May 20 j 13:00	15°℞♏	
direct	758 Jul 22 j 02:43	14°♏03'39	
	758 Sep 19 j 06:03	15°♏	
evening set	758 Oct 27 j 15:28	16°♏22'06	
conjunction	758 Nov 05 j 11:10	16°♏43'01	12°19'53
minimum elong	758 Nov 05 j 11:34	16°♏43'03	12°19'54
max. Earth dist.	758 Nov 05 j 16:52	16°♏43'35	30.91006 AU
morning rise	758 Nov 14 j 07:02	17°♏03'58	
retrograde	759 Feb 17 j 01:34	19°♏19'32	
opposition	759 May 06 j 02:00	17°♏57'13	12°55'08
min. Earth dist.	759 May 05 j 18:59	17°♏57'42	29.00089 AU
direct	759 Jul 25 j 00:22	16°♏33'11	
evening set	759 Oct 29 j 15:28	18°♏49'06	
conjunction	759 Nov 08 j 03:29	19°♏11'30	11°50'27
minimum elong	759 Nov 08 j 03:53	19°♏11'32	11°50'26
max. Earth dist.	759 Nov 08 j 12:10	19°♏12'21	31.00021 AU
morning rise	759 Nov 17 j 15:38	19°♏33'56	
retrograde	760 Feb 19 j 18:59	21°♏47'10	
opposition	760 May 07 j 21:34	20°♏25'04	12°22'58
min. Earth dist.	760 May 07 j 12:12	20°♏25'43	29.09213 AU
direct	760 Jul 26 j 20:22	19°♏01'23	
evening set	760 Oct 30 j 16:16	21°♏14'50	
conjunction	760 Nov 09 j 19:14	21°♏38'34	11°19'56
minimum elong	760 Nov 09 j 19:37	21°♏38'37	11°19'56
max. Earth dist.	760 Nov 10 j 07:13	21°♏39'45	31.10008 AU
morning rise	760 Nov 19 j 22:10	22°♏02'19	
retrograde	761 Feb 21 j 10:27	24°♏13'18	
opposition	761 May 10 j 16:29	22°♏51'28	11°49'44
min. Earth dist.	761 May 10 j 03:48	22°♏52'19	29.19266 AU
direct	761 Jul 29 j 17:43	21°♏28'07	
evening set	761 Nov 01 j 17:36	23°♏39'11	
conjunction	761 Nov 12 j 10:20	24°♏04'07	10°48'30
minimum elong	761 Nov 12 j 10:44	24°♏04'09	10°48'29
max. Earth dist.	761 Nov 13 j 00:33	24°♏05'30	31.20899 AU
morning rise	761 Nov 23 j 03:11	24°♏29'03	
retrograde	762 Feb 24 j 01:55	26°♏37'52	
opposition	762 May 13 j 10:54	25°♏16'15	11°15'32
min. Earth dist.	762 May 12 j 19:24	25°♏17'18	29.30232 AU
direct	762 Aug 01 j 11:49	23°♏53'16	
evening set	762 Nov 03 j 19:10	26°♏02'00	
conjunction	762 Nov 15 j 00:48	26°♏28'00	10°16'12
minimum elong	762 Nov 15 j 01:10	26°♏28'02	10°16'12
max. Earth dist.	762 Nov 15 j 18:42	26°♏29'44	31.32674 AU
morning rise	762 Nov 26 j 06:14	26°♏54'00	
retrograde	763 Feb 26 j 15:36	29°♏00'41	
min. Earth dist.	763 May 15 j 10:32	27°♏40'32	29.42056 AU
opposition	763 May 16 j 04:35	27°♏39'19	10°40'29
direct	763 Aug 04 j 08:32	26°♏16'40	
evening set	763 Nov 05 j 21:14	28°♏23'10	
conjunction	763 Nov 17 j 14:29	28°♏50'06	9°43'10
minimum elong	763 Nov 17 j 14:51	28°♏50'08	9°43'09
max. Earth dist.	763 Nov 18 j 10:07	28°♏51'59	31.45297 AU
morning rise	763 Nov 29 j 07:50	29°♏17'02	
	763 Dec 19 j 00:59	0°♐	
retrograde	764 Feb 29 j 05:38	1°♐21'41	
opposition	764 May 17 j 21:21	0°♐00'33	10°04'42
min. Earth dist.	764 May 16 j 23:53	0°♐01'59	29.54755 AU
	764 May 18 j 05:34	30°℞♏	
direct	764 Aug 06 j 02:00	28°♏38'13	
	764 Oct 18 j 06:05	0°♐	
evening set	764 Nov 06 j 23:18	0°♐42'33	
conjunction	764 Nov 19 j 03:33	1°♐10'19	9°09'28
minimum elong	764 Nov 19 j 03:54	1°♐10'21	9°09'28
max. Earth dist.	764 Nov 20 j 03:03	1°♐12'34	31.58785 AU
morning rise	764 Dec 01 j 07:35	1°♐38'05	
retrograde	765 Mar 02 j 15:42	3°♐40'46	
opposition	765 May 20 j 13:40	2°♐19'52	9°28'15
min. Earth dist.	765 May 19 j 14:09	2°♐21'26	29.68340 AU
direct	765 Aug 08 j 19:55	0°♐57'53	
evening set	765 Nov 09 j 01:30	3°♐00'06	
conjunction	765 Nov 21 j 15:32	3°♐28'36	8°35'12
minimum elong	765 Nov 21 j 15:52	3°♐28'38	8°35'11
max. Earth dist.	765 Nov 22 j 16:59	3°♐31'01	31.73170 AU
morning rise	765 Dec 04 j 05:37	3°♐57'06	
retrograde	766 Mar 05 j 03:34	5°♐57'54	
min. Earth dist.	766 May 22 j 01:35	4°♐39'05	29.82860 AU
opposition	766 May 23 j 05:07	4°♐37'15	8°51'16
direct	766 Aug 11 j 11:52	3°♐15'37	
evening set	766 Nov 11 j 03:46	5°♐15'49	

conjunction	766 Nov 24 j 03:01	5°♐44'57	8°00'27
minimum elong	766 Nov 24 j 03:20	5°♐44'59	8°00'28
max. Earth dist.	766 Nov 25 j 08:19	5°♐47'43	31.88477 AU
morning rise	766 Dec 07 j 02:08	6°♐14'05	
retrograde	767 Mar 07 j 13:15	8°♐13'06	
opposition	767 May 25 j 19:48	6°♐52'44	8°13'49
min. Earth dist.	767 May 24 j 14:20	6°♐54'40	29.98335 AU
direct	767 Aug 14 j 02:19	5°♐31'28	
evening set	767 Nov 13 j 06:14	7°♐29'46	
conjunction	767 Nov 26 j 13:41	7°♐59'26	7°25'18
minimum elong	767 Nov 26 j 13:59	7°♐59'28	7°25'18
max. Earth dist.	767 Nov 27 j 21:15	8°♐02'23	32.04730 AU
morning rise	767 Dec 09 j 21:07	8°♐29'07	
retrograde	768 Mar 08 j 23:40	10°♐26'25	
min. Earth dist.	768 May 26 j 00:11	9°♐08'33	30.14750 AU
opposition	768 May 27 j 09:39	9°♐06'21	7°36'00
direct	768 Aug 15 j 17:24	7°♐45'30	
evening set	768 Nov 14 j 08:36	9°♐41'58	
conjunction	768 Nov 27 j 23:33	10°♐12'07	6°49'51
minimum elong	768 Nov 27 j 23:49	10°♐12'08	6°49'52
max. Earth dist.	768 Nov 29 j 10:16	10°♐15'20	32.21878 AU
morning rise	768 Dec 11 j 14:32	10°♐42'15	
retrograde	769 Mar 11 j 09:46	12°♐37'57	
min. Earth dist.	769 May 28 j 11:22	11°♐20'32	30.32073 AU
opposition	769 May 29 j 22:57	11°♐18'13	6°57'55
direct	769 Aug 18 j 05:43	9°♐57'48	
evening set	769 Nov 16 j 11:06	11°♐52'32	
conjunction	769 Nov 30 j 08:50	12°♐23'03	6°14'12
minimum elong	769 Nov 30 j 09:05	12°♐23'05	6°14'11
max. Earth dist.	769 Dec 01 j 22:13	12°♐26'30	32.39893 AU
morning rise	769 Dec 14 j 06:29	12°♐53'34	
retrograde	770 Mar 13 j 19:02	14°♐47'45	
min. Earth dist.	770 May 30 j 20:41	13°♐30'52	30.50229 AU
opposition	770 Jun 01 j 11:24	13°♐28'22	6°19'41
direct	770 Aug 20 j 19:09	12°♐08'24	
evening set	770 Nov 18 j 13:36	14°♐01'30	
conjunction	770 Dec 02 j 17:14	14°♐32'19	5°38'24
minimum elong	770 Dec 02 j 17:28	14°♐32'20	5°38'25
max. Earth dist.	770 Dec 04 j 08:42	14°♐35'55	32.58671 AU
morning rise	770 Dec 16 j 21:06	15°♐03'09	
retrograde	771 Mar 16 j 04:50	16°♐55'52	
min. Earth dist.	771 Jun 02 j 06:10	15°♐39'29	30.69149 AU
opposition	771 Jun 03 j 23:12	15°♐36'51	5°41'23
direct	771 Aug 23 j 06:47	14°♐17'21	
evening set	771 Nov 20 j 16:10	16°♐08'53	
conjunction	771 Dec 05 j 01:13	16°♐39'56	5°02'34
minimum elong	771 Dec 05 j 01:26	16°♐39'57	5°02'33
max. Earth dist.	771 Dec 06 j 19:41	16°♐43'46	32.78142 AU
morning rise	771 Dec 19 j 10:14	17°♐10'59	
retrograde	772 Mar 17 j 12:40	19°♐02'19	
min. Earth dist.	772 Jun 03 j 15:13	17°♐46'25	30.88722 AU
opposition	772 Jun 05 j 10:07	17°♐43'41	5°03'05
direct	772 Aug 24 j 20:22	16°♐24'38	
evening set	772 Nov 21 j 18:54	18°♐14'41	
conjunction	772 Dec 06 j 08:23	18°♐45'53	4°26'46
minimum elong	772 Dec 06 j 08:34	18°♐45'54	4°26'46
max. Earth dist.	772 Dec 08 j 03:59	18°♐49'49	32.98208 AU
morning rise	772 Dec 20 j 22:13	19°♐17'07	
retrograde	773 Mar 19 j 21:13	21°♐07'09	
min. Earth dist.	773 Jun 05 j 22:47	19°♐51'46	31.08894 AU
opposition	773 Jun 07 j 20:31	19°♐48'52	4°24'54
direct	773 Aug 27 j 06:36	18°♐30'16	
evening set	773 Nov 23 j 21:23	20°♐18'54	
conjunction	773 Dec 08 j 14:58	20°♐50'12	3°51'03
minimum elong	773 Dec 08 j 15:08	20°♐50'13	3°51'03
max. Earth dist.	773 Dec 10 j 13:32	20°♐54'21	33.18800 AU
morning rise	773 Dec 23 j 08:40	21°♐21'32	
retrograde	774 Mar 22 j 01:26	23°♐10'19	
min. Earth dist.	774 Jun 08 j 07:35	21°♐55'21	31.29569 AU
opposition	774 Jun 10 j 06:18	21°♐52'23	3°46'52
direct	774 Aug 29 j 18:14	20°♐34'13	
evening set	774 Nov 26 j 00:06	22°♐21'29	
conjunction	774 Dec 10 j 20:54	22°♐52'49	3°15'31
minimum elong	774 Dec 10 j 21:02	22°♐52'50	3°15'32
max. Earth dist.	774 Dec 12 j 20:07	22°♐57'01	33.39848 AU
morning rise	774 Dec 25 j 18:06	23°♐24'12	
retrograde	775 Mar 24 j 07:02	25°♐11'47	
min. Earth dist.	775 Jun 10 j 13:33	23°♐57'18	31.50698 AU
opposition	775 Jun 12 j 15:01	23°♐54'12	3°09'05
direct	775 Sep 01 j 03:49	22°♐36'26	
evening set	775 Nov 28 j 02:38	24°♐22'23	
conjunction	775 Dec 13 j 02:13	24°♐53'43	2°40'11
minimum elong	775 Dec 13 j 02:19	24°♐53'44	2°40'11
max. Earth dist.	775 Dec 15 j 03:53	24°♐58'05	33.61296 AU
morning rise	775 Dec 28 j 02:09	25°♐25'05	
retrograde	776 Mar 25 j 10:48	27°♐11'31	
min. Earth dist.	776 Jun 11 j 21:08	25°♐57'23	31.72242 AU
opposition	776 Jun 13 j 23:17	25°♐54'15	2°31'35
direct	776 Sep 02 j 12:11	24°♐36'53	
evening set	776 Nov 29 j 04:56	26°♐21'34	
conjunction	776 Dec 14 j 06:40	26°♐52'49	2°05'08
minimum elong	776 Dec 14 j 06:45	26°♐52'50	2°05'09
max. Earth dist.	776 Dec 16 j 09:34	26°♐57'16	33.83143 AU
morning rise	776 Dec 29 j 08:48	27°♐24'08	
retrograde	777 Mar 27 j 14:36	29°♐09'28	
min. Earth dist.	777 Jun 14 j 01:51	27°♐55'48	31.94203 AU
opposition	777 Jun 16 j 06:41	27°♐52'31	1°54'26
direct	777 Sep 04 j 20:40	26°♐35'31	
evening set	777 Dec 01 j 07:11	28°♐19'00	
conjunction	777 Dec 16 j 10:25	28°♐50'08	1°30'25
minimum elong	777 Dec 16 j 10:29	28°♐50'09	1°30'24
max. Earth dist.	777 Dec 18 j 15:12	28°♐54'42	34.05394 AU
morning rise	777 Dec 31 j 14:16	29°♐21'19	
	778 Jan 20 j 19:37	0°♑	
retrograde	778 Mar 29 j 19:19	1°♑05'38	
	778 Jun 11 j 02:04	30°℞♐	
min. Earth dist.	778 Jun 16 j 07:14	29°♐52'19	32.16631 AU
opposition	778 Jun 18 j 13:26	29°♐48'58	1°17'40
direct	778 Sep 07 j 01:49	28°♐32'21	
	778 Nov 25 j 22:03	0°♑	
evening set	778 Dec 03 j 09:08	0°♑14'42	
conjunction	778 Dec 18 j 13:32	0°♑45'40	0°56'02
minimum elong	778 Dec 18 j 13:34	0°♑45'40	0°56'02
max. Earth dist.	778 Dec 20 j 20:27	0°♑50'23	34.28106 AU
morning rise	779 Jan 02 j 18:24	1°♑16'41	
retrograde	779 Mar 31 j 21:51	3°♑00'02	
min. Earth dist.	779 Jun 18 j 11:13	1°♑47'07	32.39532 AU
opposition	779 Jun 20 j 19:20	1°♑43'40	0°41'20
direct	779 Sep 09 j 08:32	0°♑27'25	
evening set	779 Dec 05 j 11:10	2°♑08'43	
conjunction	779 Dec 20 j 15:54	2°♑39'28	0°22'05

minimum elong	779 Dec 20 j 15:55	2°♑39'28	0°22'04
max. Earth dist.	779 Dec 22 j 23:54	2°♑44'14	34.51278 AU
morning rise	780 Jan 04 j 21:28	3°♑10'18	
retrograde	780 Apr 02 j 01:33	4°♑52'43	
min. Earth dist.	780 Jun 19 j 14:09	3°♑40'14	32.62937 AU
opposition	780 Jun 22 j 00:31	3°♑36'41	0°05'28
desc. node	780 Aug 17 j 11:32	2°♑29'14	
direct	780 Sep 10 j 13:48	2°♑20'49	
evening set	780 Dec 06 j 12:54	4°♑01'08	
conjunction	780 Dec 21 j 17:49	4°♑31'39	-0°11'31
minimum elong	780 Dec 21 j 17:49	4°♑31'39	0°11'31
behind sun begin	780 Dec 21 j 13:10	4°♑31'16	
behind sun end	780 Dec 21 j 22:28	4°♑32'01	
max. Earth dist.	780 Dec 24 j 04:36	4°♑36'36	34.74928 AU
morning rise	781 Jan 05 j 23:19	5°♑02'13	
retrograde	781 Apr 04 j 02:45	6°♑43'48	
min. Earth dist.	781 Jun 21 j 17:42	5°♑31'42	32.86811 AU
opposition	781 Jun 24 j 05:10	5°♑28'05	-0°29'53
direct	781 Sep 12 j 20:53	4°♑12'38	
evening set	781 Dec 08 j 14:32	5°♑52'01	
conjunction	781 Dec 23 j 18:54	6°♑22'16	-0°44'34
minimum elong	781 Dec 23 j 18:52	6°♑22'15	0°44'34
max. Earth dist.	781 Dec 26 j 06:19	6°♑27'14	34.99012 AU
morning rise	782 Jan 08 j 00:10	6°♑52'34	
retrograde	782 Apr 06 j 05:17	8°♑33'22	
min. Earth dist.	782 Jun 23 j 18:56	7°♑21'44	33.11117 AU
opposition	782 Jun 26 j 09:05	7°♑17'59	-1°04'41
direct	782 Sep 15 j 00:56	6°♑02'56	
evening set	782 Dec 10 j 16:05	7°♑41'27	
conjunction	782 Dec 25 j 19:38	8°♑11'24	-1°17'08
minimum elong	782 Dec 25 j 19:35	8°♑11'23	1°17'07
max. Earth dist.	782 Dec 28 j 09:27	8°♑16'32	35.23466 AU
morning rise	783 Jan 09 j 24:00	8°♑41'24	
retrograde	783 Apr 08 j 03:20	10°♑21'28	
min. Earth dist.	783 Jun 25 j 21:53	9°♑10'11	33.35778 AU
opposition	783 Jun 28 j 12:18	9°♑06'26	-1°38'54
direct	783 Sep 17 j 05:36	7°♑51'48	
evening set	783 Dec 12 j 17:34	9°♑29'30	
conjunction	783 Dec 27 j 19:46	9°♑59'06	-1°49'10
minimum elong	783 Dec 27 j 19:42	9°♑59'06	1°49'10
max. Earth dist.	783 Dec 30 j 10:11	10°♑04'15	35.48226 AU
morning rise	784 Jan 11 j 22:52	10°♑28'47	
retrograde	784 Apr 09 j 02:39	12°♑08'09	
min. Earth dist.	784 Jun 26 j 22:21	10°♑57'20	33.60715 AU
opposition	784 Jun 29 j 14:56	10°♑53'29	-2°12'32
direct	784 Sep 18 j 09:00	9°♑39'15	
evening set	784 Dec 13 j 18:53	11°♑16'12	
conjunction	784 Dec 28 j 19:15	11°♑45'26	-2°20'39
minimum elong	784 Dec 28 j 19:10	11°♑45'26	2°20'39
max. Earth dist.	784 Dec 31 j 11:10	11°♑50'40	35.73196 AU
morning rise	785 Jan 12 j 20:41	12°♑14'45	
retrograde	785 Apr 11 j 02:44	13°♑53'31	
min. Earth dist.	785 Jun 29 j 00:05	12°♑43'02	33.85861 AU
opposition	785 Jul 01 j 17:11	12°♑39'10	-2°45'32
direct	785 Sep 20 j 09:46	11°♑25'20	
evening set	785 Dec 15 j 20:08	13°♑01'35	
conjunction	785 Dec 30 j 18:27	13°♑30'25	-2°51'35
minimum elong	785 Dec 30 j 18:21	13°♑30'24	2°51'35
max. Earth dist.	786 Jan 02 j 11:32	13°♑35'42	35.98324 AU
morning rise	786 Jan 14 j 17:39	13°♑59'20	
retrograde	786 Apr 13 j 01:40	15°♑37'31	
min. Earth dist.	786 Jul 01 j 00:28	14°♑27'25	34.11122 AU
opposition	786 Jul 03 j 18:37	14°♑23'30	-3°17'55
direct	786 Sep 22 j 12:14	13°♑10'02	
evening set	786 Dec 17 j 21:23	14°♑45'38	
conjunction	787 Jan 01 j 17:02	15°♑14'03	-3°21'56
minimum elong	787 Jan 01 j 16:55	15°♑14'03	3°21'56
max. Earth dist.	787 Jan 04 j 10:10	15°♑19'18	36.23515 AU
morning rise	787 Jan 16 j 13:55	15°♑42'34	
retrograde	787 Apr 15 j 02:39	17°♑20'11	
min. Earth dist.	787 Jul 03 j 00:24	16°♑10'26	34.36450 AU
opposition	787 Jul 05 j 19:35	16°♑06'29	-3°49'38
direct	787 Sep 24 j 11:46	14°♑53'23	
evening set	787 Dec 19 j 22:20	16°♑28'21	
conjunction	788 Jan 03 j 15:13	16°♑56'20	-3°51'41
minimum elong	788 Jan 03 j 15:06	16°♑56'19	3°51'42
max. Earth dist.	788 Jan 06 j 09:57	17°♑01'40	36.48729 AU
morning rise	788 Jan 18 j 09:03	17°♑24'24	
retrograde	788 Apr 16 j 00:15	19°♑01'30	
min. Earth dist.	788 Jul 04 j 00:48	17°♑52'01	34.61782 AU
opposition	788 Jul 06 j 19:54	17°♑48'06	-4°20'43
direct	788 Sep 25 j 13:30	16°♑35'20	
evening set	788 Dec 20 j 23:15	18°♑09'43	
conjunction	789 Jan 04 j 12:47	18°♑37'14	-4°20'51
minimum elong	789 Jan 04 j 12:39	18°♑37'13	4°20'51
max. Earth dist.	789 Jan 07 j 07:12	18°♑42'30	36.73948 AU
morning rise	789 Jan 19 j 03:32	19°♑04'51	
retrograde	789 Apr 17 j 21:57	20°♑41'27	
min. Earth dist.	789 Jul 05 j 22:48	19°♑32'20	34.87148 AU
opposition	789 Jul 08 j 19:42	19°♑28'20	-4°51'07
direct	789 Sep 27 j 13:35	18°♑15'53	
evening set	789 Dec 22 j 23:44	19°♑49'42	
conjunction	790 Jan 06 j 09:46	20°♑16'45	-4°49'23
minimum elong	790 Jan 06 j 09:36	20°♑16'44	4°49'23
max. Earth dist.	790 Jan 09 j 05:57	20°♑22'07	36.99190 AU
morning rise	790 Jan 20 j 20:55	20°♑43'53	
retrograde	790 Apr 19 j 16:26	22°♑20'02	
min. Earth dist.	790 Jul 07 j 22:20	21°♑11'09	35.12571 AU
opposition	790 Jul 10 j 18:58	21°♑07'10	-5°20'50
direct	790 Sep 29 j 15:17	19°♑55'02	
evening set	790 Dec 25 j 00:10	21°♑28'20	
conjunction	791 Jan 08 j 06:17	21°♑54'53	-5°17'18
minimum elong	791 Jan 08 j 06:08	21°♑54'52	5°17'18
max. Earth dist.	791 Jan 11 j 02:41	22°♑00'14	37.24510 AU
morning rise	791 Jan 22 j 13:32	22°♑21'31	
retrograde	791 Apr 21 j 11:42	23°♑57'15	
min. Earth dist.	791 Jul 09 j 19:00	22°♑48'43	35.38097 AU
opposition	791 Jul 12 j 17:20	22°♑44'40	-5°49'52
direct	791 Oct 01 j 14:53	21°♑32'51	
evening set	791 Dec 27 j 00:27	23°♑05'40	
conjunction	792 Jan 10 j 02:15	23°♑31'43	-5°44'35
minimum elong	792 Jan 10 j 02:04	23°♑31'42	5°44'35
max. Earth dist.	792 Jan 12 j 23:43	23°♑37'07	37.49937 AU
morning rise	792 Jan 24 j 05:22	23°♑57'50	
retrograde	792 Apr 22 j 08:07	25°♑33'12	
min. Earth dist.	792 Jul 10 j 16:43	24°♑24'57	35.63774 AU
opposition	792 Jul 13 j 15:29	24°♑20'54	-6°18'12
direct	792 Oct 02 j 12:09	23°♑09'25	
evening set	792 Dec 28 j 00:19	24°♑41'48	
conjunction	793 Jan 10 j 21:43	25°♑07'19	-6°11'13
minimum elong	793 Jan 10 j 21:32	25°♑07'18	6°11'14

max. Earth dist.	793 Jan 13 j 20:35	25°♑12'47	37.75517 AU	
morning rise	793 Jan 24 j 20:09	25°♑32'55		
retrograde	793 Apr 24 j 04:00	27°♑07'57		
min. Earth dist.	793 Jul 12 j 13:12	26°♑00'02	35.89590 AU	
opposition	793 Jul 15 j 13:01	25°♑55'56	-6°45'50	
direct	793 Oct 04 j 09:42	24°♑44'47		
evening set	793 Dec 30 j 00:17	26°♑16'48		
conjunction	794 Jan 12 j 16:43	26°♑41'46	-6°37'13	
minimum elong	794 Jan 12 j 16:31	26°♑41'46	6°37'12	
max. Earth dist.	794 Jan 15 j 15:39	26°♑47'12	38.01225 AU	
morning rise	794 Jan 26 j 10:31	27°♑06'51		
retrograde	794 Apr 26 j 02:11	28°♑41'35		
min. Earth dist.	794 Jul 14 j 08:53	27°♑34'00	36.15548 AU	
opposition	794 Jul 17 j 09:59	27°♑29'52	-7°12'45	
direct	794 Oct 06 j 03:58	26°♑19'03		
evening set	794 Dec 31 j 23:54	27°♑50'44		
conjunction	795 Jan 14 j 11:25	28°♑15'10	-7°02'33	
minimum elong	795 Jan 14 j 11:14	28°♑15'09	7°02'33	
max. Earth dist.	795 Jan 17 j 12:07	28°♑20'41	38.27040 AU	
morning rise	795 Jan 28 j 00:01	28°♑39'41		
	795 Mar 26 j 00:41	0°♒		
retrograde	795 Apr 27 j 20:22	0°♒14'10		
	795 May 31 j 07:29	30°℞♑		
min. Earth dist.	795 Jul 16 j 05:41	29°♑06'52	36.41577 AU	
opposition	795 Jul 19 j 06:32	29°♑02'46	-7°38'58	
direct	795 Oct 08 j 01:03	27°♑52'17		
evening set	796 Jan 02 j 23:32	29°♑23'41		
conjunction	796 Jan 16 j 05:33	29°♑47'33	-7°27'15	
minimum elong	796 Jan 16 j 05:21	29°♑47'32	7°27'15	
max. Earth dist.	796 Jan 19 j 05:54	29°♑53'01	38.52900 AU	
	796 Jan 23 j 02:44	0°♒		
morning rise	796 Jan 29 j 12:50	0°♒11'30		
retrograde	796 Apr 28 j 13:53	1°♒45'46		
min. Earth dist.	796 Jul 17 j 00:06	0°♒38'51	36.67634 AU	
opposition	796 Jul 20 j 02:34	0°♒34'40	-8°04'30	
	796 Aug 15 j 21:58	30°℞♑		
direct	796 Oct 08 j 22:20	29°♑24'32		
	796 Nov 29 j 15:26	0°♒		
evening set	797 Jan 03 j 23:00	0°♒55'39		
conjunction	797 Jan 16 j 23:27	1°♒18'57	-7°51'18	
minimum elong	797 Jan 16 j 23:15	1°♒18'56	7°51'19	
max. Earth dist.	797 Jan 20 j 01:07	1°♒24'29	38.78743 AU	
morning rise	797 Jan 30 j 01:07	1°♒42'20		
retrograde	797 Apr 30 j 06:19	3°♒16'25		
min. Earth dist.	797 Jul 18 j 20:30	2°♒09'44	36.93656 AU	
opposition	797 Jul 21 j 22:21	2°♒05'36	-8°29'20	
direct	797 Oct 10 j 19:40	0°♒55'49		
evening set	798 Jan 05 j 22:21	2°♒26'42		
conjunction	798 Jan 18 j 16:59	2°♒49'25	-8°14'43	
minimum elong	798 Jan 18 j 16:46	2°♒49'24	8°14'43	
max. Earth dist.	798 Jan 21 j 18:36	2°♒54'54	39.04516 AU	
morning rise	798 Jan 31 j 12:40	3°♒12'12		
retrograde	798 May 01 j 22:57	4°♒46'07		
min. Earth dist.	798 Jul 20 j 14:50	3°♒39'46	37.19558 AU	
opposition	798 Jul 23 j 17:32	3°♒35'36	-8°53'29	
direct	798 Oct 12 j 16:00	2°♒26'08		
evening set	799 Jan 07 j 21:48	3°♒56'47		
conjunction	799 Jan 20 j 10:12	4°♒18'55	-8°37'31	
minimum elong	799 Jan 20 j 10:00	4°♒18'54	8°37'32	
max. Earth dist.	799 Jan 23 j 11:40	4°♒24'21	39.30122 AU	
morning rise	799 Feb 01 j 23:54	4°♒41'07		
retrograde	799 May 03 j 17:20	6°♒14'53		
min. Earth dist.	799 Jul 22 j 09:54	5°♒08'46	37.45289 AU	
opposition	799 Jul 25 j 12:18	5°♒04'38	-9°16'59	
direct	799 Oct 14 j 09:44	3°♒55'28		
evening set	800 Jan 09 j 21:01	5°♒25'55		
conjunction	800 Jan 22 j 03:12	5°♒47'26	-8°59'42	
minimum elong	800 Jan 22 j 02:59	5°♒47'25	8°59'41	
max. Earth dist.	800 Jan 25 j 05:22	5°♒52'54	39.55532 AU	
morning rise	800 Feb 03 j 10:20	6°♒09'03		
retrograde	800 May 04 j 10:59	7°♒42'40		
min. Earth dist.	800 Jul 23 j 04:35	6°♒36'46	37.70787 AU	
opposition	800 Jul 26 j 06:43	6°♒32'40	-9°39'49	
direct	800 Oct 15 j 03:40	5°♒23'46		
evening set	801 Jan 10 j 20:05	6°♒54'02		
conjunction	801 Jan 22 j 19:31	7°♒14'56	-9°21'17	
minimum elong	801 Jan 22 j 19:18	7°♒14'56	9°21'17	
max. Earth dist.	801 Jan 25 j 20:45	7°♒20'18	39.80707 AU	
morning rise	801 Feb 03 j 20:10	7°♒35'56		
retrograde	801 May 06 j 05:41	9°♒09'25		
min. Earth dist.	801 Jul 24 j 21:51	8°♒03'46	37.96072 AU	
opposition	801 Jul 28 j 00:45	7°♒59'39	-10°02'00	
direct	801 Oct 16 j 19:45	6°♒51'00		
evening set	802 Jan 12 j 18:56	8°♒21'06		
conjunction	802 Jan 24 j 11:41	8°♒41'23	-9°42'15	
minimum elong	802 Jan 24 j 11:28	8°♒41'22	9°42'14	
max. Earth dist.	802 Jan 27 j 13:59	8°♒46'47	40.05672 AU	
morning rise	802 Feb 05 j 05:25	9°♒01'45		
retrograde	802 May 07 j 19:58	10°♒35'07		
min. Earth dist.	802 Jul 26 j 16:20	9°♒29'37	38.21165 AU	
opposition	802 Jul 29 j 18:12	9°♒25'34	-10°23'32	
direct	802 Oct 18 j 14:58	8°♒17'10		
evening set	803 Jan 14 j 17:44	9°♒47'07		
conjunction	803 Jan 26 j 03:21	10°♒06'46	-10°02'37	
minimum elong	803 Jan 26 j 03:08	10°♒06'45	10°02'38	
max. Earth dist.	803 Jan 29 j 05:03	10°♒12'06	40.30480 AU	
morning rise	803 Feb 06 j 13:57	10°♒26'30		
retrograde	803 May 09 j 09:54	11°♒59'46		
min. Earth dist.	803 Jul 28 j 08:11	10°♒54'32	38.46124 AU	
opposition	803 Jul 31 j 11:11	10°♒50'26	-10°44'25	
direct	803 Oct 20 j 09:49	9°♒42'16		
evening set	804 Jan 16 j 16:17	11°♒12'07		
conjunction	804 Jan 27 j 18:33	11°♒31'08	-10°22'22	
minimum elong	804 Jan 27 j 18:21	11°♒31'07	10°22'22	
max. Earth dist.	804 Jan 30 j 20:57	11°♒36'28	40.55166 AU	
morning rise	804 Feb 07 j 21:53	11°♒50'13		
retrograde	804 May 10 j 00:14	13°♒23'26		
min. Earth dist.	804 Jul 29 j 01:22	12°♒18'22	38.71000 AU	
opposition	804 Aug 01 j 03:56	12°♒14'19	-11°04'39	
direct	804 Oct 21 j 03:26	11°♒06'24		
evening set	805 Jan 17 j 14:45	12°♒36'09		
conjunction	805 Jan 28 j 09:35	12°♒54'32	-10°41'31	
minimum elong	805 Jan 28 j 09:22	12°♒54'31	10°41'31	
max. Earth dist.	805 Jan 31 j 12:30	12°♒59'53	40.79797 AU	
morning rise	805 Feb 08 j 05:12	13°♒12'58		
retrograde	805 May 11 j 14:18	14°♒46'10		
min. Earth dist.	805 Jul 30 j 16:59	13°♒41'22	38.95809 AU	
opposition	805 Aug 02 j 20:09	13°♒37'17	-11°24'14	
direct	805 Oct 22 j 20:36	12°♒29'38		
evening set	806 Jan 19 j 13:08	13°♒59'20		
conjunction	806 Jan 30 j 00:07	14°♒17'03	-11°00'03	

minimum elong	806 Jan 29 j 23:55	14°♒17'03	11°00'03
max. Earth dist.	806 Feb 02 j 02:36	14°♒22'20	41.04362 AU
morning rise	806 Feb 09 j 12:06	14°♒34'51	
	806 Feb 24 j 22:14	15°♒	
retrograde	806 May 13 j 07:29	16°♒08'03	
min. Earth dist.	806 Aug 01 j 08:33	15°♒03'30	39.20561 AU
opposition	806 Aug 04 j 12:08	14°♒59'25	-11°43'10
	806 Aug 04 j 01:22	15°℞♒	
direct	806 Oct 24 j 10:21	13°♒52'02	
	807 Jan 08 j 03:40	15°♒	
evening set	807 Jan 21 j 11:25	15°♒21'44	
conjunction	807 Jan 31 j 14:34	15°♒38'48	-11°17'59
minimum elong	807 Jan 31 j 14:21	15°♒38'47	11°18'00
max. Earth dist.	807 Feb 03 j 18:16	15°♒44'08	41.28852 AU
morning rise	807 Feb 10 j 18:26	15°♒55'56	
retrograde	807 May 14 j 22:29	17°♒29'11	
min. Earth dist.	807 Aug 03 j 00:39	16°♒24'49	39.45205 AU
opposition	807 Aug 06 j 03:34	16°♒20'48	-12°01'29
direct	807 Oct 26 j 01:14	15°♒13'42	
evening set	808 Jan 23 j 09:46	16°♒43'25	
conjunction	808 Feb 02 j 04:34	16°♒59'50	-11°35'21
minimum elong	808 Feb 02 j 04:23	16°♒59'49	11°35'20
max. Earth dist.	808 Feb 05 j 07:25	17°♒05'04	41.53229 AU
morning rise	808 Feb 12 j 00:11	17°♒16'17	
retrograde	808 May 15 j 13:45	18°♒49'36	
min. Earth dist.	808 Aug 03 j 14:51	17°♒45'33	39.69717 AU
opposition	808 Aug 06 j 18:49	17°♒41'30	-12°19'10
direct	808 Oct 26 j 15:04	16°♒34'40	
evening set	809 Jan 24 j 07:49	18°♒04'28	
conjunction	809 Feb 02 j 18:16	18°♒20'12	-11°52'07
minimum elong	809 Feb 02 j 18:03	18°♒20'11	11°52'07
max. Earth dist.	809 Feb 05 j 21:51	18°♒25'28	41.77433 AU
morning rise	809 Feb 12 j 05:26	18°♒35'58	
retrograde	809 May 17 j 01:31	20°♒09'24	
min. Earth dist.	809 Aug 05 j 07:09	19°♒05'32	39.94030 AU
opposition	809 Aug 08 j 09:54	19°♒01'33	-12°36'15
direct	809 Oct 28 j 08:06	17°♒55'01	
evening set	810 Jan 26 j 06:13	19°♒24'53	
conjunction	810 Feb 04 j 07:55	19°♒39'56	-12°08'21
minimum elong	810 Feb 04 j 07:44	19°♒39'55	12°08'20
max. Earth dist.	810 Feb 07 j 11:04	19°♒45'09	42.01417 AU
morning rise	810 Feb 13 j 10:13	19°♒55'02	
retrograde	810 May 18 j 13:42	21°♒28'35	
min. Earth dist.	810 Aug 06 j 21:20	20°♒24'59	40.18073 AU
opposition	810 Aug 10 j 00:20	20°♒20'59	-12°52'46
direct	810 Oct 30 j 00:14	19°♒14'44	
evening set	811 Jan 28 j 04:36	20°♒44'43	
conjunction	811 Feb 05 j 21:16	20°♒59'04	-12°24'02
minimum elong	811 Feb 05 j 21:04	20°♒59'03	12°24'02
max. Earth dist.	811 Feb 08 j 23:41	21°♒04'12	42.25089 AU
morning rise	811 Feb 14 j 14:37	21°♒13'28	
retrograde	811 May 20 j 04:38	22°♒47'10	
min. Earth dist.	811 Aug 08 j 12:31	21°♒43'45	40.41788 AU
opposition	811 Aug 11 j 14:45	21°♒39'49	-13°08'43
direct	811 Oct 31 j 13:35	20°♒33'49	
evening set	812 Jan 30 j 02:59	22°♒03'55	
conjunction	812 Feb 07 j 10:25	22°♒17'33	-12°39'11
minimum elong	812 Feb 07 j 10:14	22°♒17'33	12°39'12
max. Earth dist.	812 Feb 10 j 13:07	22°♒22'41	42.48408 AU
morning rise	812 Feb 15 j 18:17	22°♒31'15	
retrograde	812 May 20 j 17:58	24°♒05'07	
min. Earth dist.	812 Aug 09 j 03:23	23°♒01'51	40.65108 AU
opposition	812 Aug 12 j 04:49	22°♒57'59	-13°24'07
direct	812 Nov 01 j 03:56	21°♒52'13	
evening set	813 Jan 31 j 01:35	23°♒22'27	
conjunction	813 Feb 07 j 23:16	23°♒35'22	-12°53'50
minimum elong	813 Feb 07 j 23:04	23°♒35'22	12°53'50
max. Earth dist.	813 Feb 11 j 00:18	23°♒40'21	42.71340 AU
morning rise	813 Feb 15 j 21:27	23°♒48'20	
retrograde	813 May 22 j 09:30	25°♒22'21	
min. Earth dist.	813 Aug 10 j 17:00	24°♒19'18	40.88052 AU
opposition	813 Aug 13 j 18:34	24°♒15'26	-13°38'59
direct	813 Nov 02 j 14:57	23°♒09'53	
evening set	814 Feb 02 j 00:05	24°♒40'17	
conjunction	814 Feb 09 j 11:52	24°♒52'28	-13°07'59
minimum elong	814 Feb 09 j 11:42	24°♒52'27	13°08'00
max. Earth dist.	814 Feb 12 j 13:28	24°♒57'27	42.93897 AU
morning rise	814 Feb 17 j 00:01	25°♒04'40	
retrograde	814 May 23 j 22:10	26°♒38'53	
min. Earth dist.	814 Aug 12 j 08:03	25°♒35'54	41.10630 AU
opposition	814 Aug 15 j 08:02	25°♒32'09	-13°53'20
direct	814 Nov 04 j 04:19	24°♒26'47	
evening set	815 Feb 03 j 22:55	25°♒57'22	
conjunction	815 Feb 11 j 00:10	26°♒08'47	-13°21'38
minimum elong	815 Feb 10 j 23:59	26°♒08'46	13°21'37
max. Earth dist.	815 Feb 14 j 00:47	26°♒13'41	43.16129 AU
morning rise	815 Feb 18 j 01:41	26°♒20'12	
retrograde	815 May 25 j 07:29	27°♒54'38	
min. Earth dist.	815 Aug 13 j 20:17	26°♒51'52	41.32906 AU
opposition	815 Aug 16 j 20:53	26°♒48'05	-14°07'08
direct	815 Nov 05 j 19:17	25°♒42'54	
evening set	816 Feb 05 j 21:47	27°♒13'43	
conjunction	816 Feb 12 j 12:05	27°♒24'20	-13°34'46
minimum elong	816 Feb 12 j 11:55	27°♒24'20	13°34'46
max. Earth dist.	816 Feb 15 j 12:31	27°♒29'12	43.38086 AU
morning rise	816 Feb 19 j 02:43	27°♒34'59	
retrograde	816 May 25 j 17:49	29°♒09'40	
min. Earth dist.	816 Aug 14 j 10:05	28°♒07'00	41.54948 AU
opposition	816 Aug 17 j 09:46	28°♒03'16	-14°20'24
direct	816 Nov 06 j 10:06	26°♒58'17	
evening set	817 Feb 06 j 20:56	28°♒29'22	
conjunction	817 Feb 12 j 23:47	28°♒39'10	-13°47'23
minimum elong	817 Feb 12 j 23:37	28°♒39'10	13°47'22
max. Earth dist.	817 Feb 16 j 00:36	28°♒44'03	43.59839 AU
morning rise	817 Feb 19 j 02:45	28°♒49'00	
	817 Apr 11 j 15:46	0°♓	
retrograde	817 May 27 j 04:56	0°♓23'58	
	817 Jul 13 j 02:23	30°℞♒	
min. Earth dist.	817 Aug 15 j 22:35	29°♒21'29	41.76775 AU
opposition	817 Aug 18 j 22:12	29°♒17'46	-14°33'08
direct	817 Nov 07 j 23:48	28°♒12'59	
evening set	818 Feb 08 j 20:38	29°♒44'23	
conjunction	818 Feb 14 j 11:13	29°♒53'19	-13°59'30
minimum elong	818 Feb 14 j 11:04	29°♒53'19	13°59'30
max. Earth dist.	818 Feb 17 j 11:00	29°♒58'06	43.81394 AU
	818 Feb 18 j 15:36	0°♓	
morning rise	818 Feb 20 j 01:58	0°♓02'17	
retrograde	818 May 28 j 18:30	1°♓37'37	
min. Earth dist.	818 Aug 17 j 10:31	0°♓35'19	41.98420 AU
opposition	818 Aug 20 j 10:17	0°♓31'36	-14°45'20
	818 Sep 15 j 23:15	30°℞♒	
direct	818 Nov 09 j 10:02	29°♒27'01	

	818 Dec 31 j 21:53	0°♓	
evening set	819 Feb 10 j 20:58	0°♓58'49	
conjunction	819 Feb 15 j 22:33	1°♓06'51	-14°11'06
minimum elong	819 Feb 15 j 22:24	1°♓06'51	14°11'06
max. Earth dist.	819 Feb 18 j 23:07	1°♓11'39	44.02759 AU
morning rise	819 Feb 21 j 00:11	1°♓14'54	
retrograde	819 May 30 j 06:14	2°♓50'39	
min. Earth dist.	819 Aug 18 j 23:32	1°♓48'29	42.19849 AU
opposition	819 Aug 21 j 22:12	1°♓44'50	-14°57'01
direct	819 Nov 10 j 21:13	0°♓40'28	
evening set	820 Feb 12 j 22:12	2°♓12'44	
conjunction	820 Feb 17 j 09:26	2°♓19'49	-14°22'14
minimum elong	820 Feb 17 j 09:17	2°♓19'48	14°22'14
max. Earth dist.	820 Feb 20 j 08:54	2°♓24'31	44.23915 AU
morning rise	820 Feb 21 j 20:40	2°♓26'52	
retrograde	820 May 30 j 17:40	4°♓03'08	
min. Earth dist.	820 Aug 19 j 10:35	3°♓01'10	42.41047 AU
opposition	820 Aug 22 j 09:50	2°♓57'31	-15°08'12
direct	820 Nov 11 j 07:53	1°♓53'21	
evening set	821 Feb 14 j 00:59	3°♓26'14	
conjunction	821 Feb 17 j 20:17	3°♓32'14	-14°32'52
minimum elong	821 Feb 17 j 20:10	3°♓32'13	14°32'52
morning rise	821 Feb 21 j 15:34	3°♓38'13	
max. Earth dist.	821 Feb 20 j 19:48	3°♓36'55	44.44814 AU
retrograde	821 Jun 01 j 03:34	5°♓15'06	
min. Earth dist.	821 Aug 20 j 23:33	4°♓13'16	42.61970 AU
opposition	821 Aug 23 j 21:21	4°♓09'41	-15°18'53
direct	821 Nov 12 j 19:54	3°♓05'44	
evening set	822 Feb 16 j 06:38	4°♓39'25	
conjunction	822 Feb 19 j 07:04	4°♓44'09	-14°43'04
minimum elong	822 Feb 19 j 06:55	4°♓44'08	14°43'04
morning rise	822 Feb 22 j 07:21	4°♓48'52	
max. Earth dist.	822 Feb 22 j 06:17	4°♓48'48	44.65419 AU
retrograde	822 Jun 02 j 12:11	6°♓26'35	
min. Earth dist.	822 Aug 22 j 10:55	5°♓24'55	42.82541 AU
opposition	822 Aug 25 j 08:29	5°♓21'22	-15°29'06
direct	822 Nov 14 j 09:25	4°♓17'37	
evening set	823 Feb 18 j 18:10	5°♓52'30	
conjunction	823 Feb 20 j 17:34	5°♓55'35	-14°52'48
minimum elong	823 Feb 20 j 17:28	5°♓55'35	14°52'48
morning rise	823 Feb 22 j 16:51	5°♓58'40	
max. Earth dist.	823 Feb 23 j 15:13	6°♓00'07	44.85638 AU
retrograde	823 Jun 04 j 00:40	7°♓37'35	
min. Earth dist.	823 Aug 23 j 22:41	6°♓36'04	43.02714 AU
opposition	823 Aug 26 j 19:26	6°♓32'34	-15°38'51
direct	823 Nov 15 j 19:23	5°♓29'00	
conjunction	824 Feb 22 j 04:05	7°♓06'32	-15°02'08
minimum elong	824 Feb 22 j 03:57	7°♓06'31	15°02'08
max. Earth dist.	824 Feb 25 j 01:54	7°♓11'03	45.05436 AU
retrograde	824 Jun 04 j 11:48	8°♓48'06	
min. Earth dist.	824 Aug 24 j 11:05	7°♓46'40	43.22426 AU
opposition	824 Aug 27 j 06:17	7°♓43'15	-15°48'11
direct	824 Nov 16 j 05:48	6°♓39'52	
conjunction	825 Feb 22 j 14:11	8°♓16'57	-15°11'02
minimum elong	825 Feb 22 j 14:06	8°♓16'57	15°11'02
max. Earth dist.	825 Feb 25 j 10:13	8°♓21'20	45.24779 AU
retrograde	825 Jun 05 j 22:53	9°♓58'05	
min. Earth dist.	825 Aug 25 j 21:35	8°♓56'48	43.41677 AU
opposition	825 Aug 28 j 16:52	8°♓53'24	-15°57'06
direct	825 Nov 17 j 14:58	7°♓50'10	
conjunction	826 Feb 24 j 00:14	9°♓26'49	-15°19'33
minimum elong	826 Feb 24 j 00:07	9°♓26'49	15°19'32
max. Earth dist.	826 Feb 26 j 19:56	9°♓31'10	45.43664 AU
retrograde	826 Jun 07 j 06:56	11°♓07'30	
min. Earth dist.	826 Aug 27 j 09:44	10°♓06'16	43.60491 AU
opposition	826 Aug 30 j 03:06	10°♓02'58	-16°05'35
direct	826 Nov 19 j 02:46	8°♓59'53	
conjunction	827 Feb 25 j 10:03	10°♓36'06	-15°27'39
minimum elong	827 Feb 25 j 09:58	10°♓36'06	15°27'39
max. Earth dist.	827 Feb 28 j 05:03	10°♓40'23	45.62155 AU
retrograde	827 Jun 08 j 14:00	12°♓16'21	
min. Earth dist.	827 Aug 28 j 19:41	11°♓15'15	43.78924 AU
opposition	827 Aug 31 j 13:03	11°♓11'57	-16°13'39
direct	827 Nov 20 j 14:57	10°♓09'02	
conjunction	828 Feb 26 j 19:21	11°♓44'49	-15°35'20
minimum elong	828 Feb 26 j 19:15	11°♓44'49	15°35'20
max. Earth dist.	828 Feb 29 j 13:18	11°♓49'01	45.80297 AU
retrograde	828 Jun 09 j 00:11	13°♓24'40	
min. Earth dist.	828 Aug 29 j 06:22	12°♓23'39	43.97056 AU
opposition	828 Aug 31 j 22:58	12°♓20'24	-16°21'16
direct	828 Nov 21 j 00:53	11°♓17'38	
conjunction	829 Feb 27 j 04:46	12°♓53'00	-15°42'36
minimum elong	829 Feb 27 j 04:41	12°♓53'00	15°42'36
max. Earth dist.	829 Mar 01 j 23:16	12°♓57'13	45.98171 AU
retrograde	829 Jun 10 j 09:49	14°♓32'27	
min. Earth dist.	829 Aug 30 j 16:40	13°♓31'33	44.14917 AU
opposition	829 Sep 02 j 08:29	13°♓28'20	-16°28'27
direct	829 Nov 22 j 10:47	12°♓25'43	
conjunction	830 Feb 28 j 13:51	14°♓00'42	-15°49'26
minimum elong	830 Feb 28 j 13:47	14°♓00'42	15°49'26
max. Earth dist.	830 Mar 03 j 06:49	14°♓04'48	46.15804 AU
retrograde	830 Jun 11 j 21:47	15°♓39'46	
min. Earth dist.	830 Sep 01 j 01:41	14°♓39'01	44.32546 AU
opposition	830 Sep 03 j 17:49	14°♓35'49	-16°35'12
direct	830 Nov 23 j 16:53	13°♓33'22	
conjunction	831 Mar 01 j 22:49	15°♓07'59	-15°55'52
minimum elong	831 Mar 01 j 22:46	15°♓07'59	15°55'53
max. Earth dist.	831 Mar 04 j 16:08	15°♓12'05	46.33198 AU
retrograde	831 Jun 13 j 06:55	16°♓46'41	
min. Earth dist.	831 Sep 02 j 12:25	15°♓46'01	44.49930 AU
opposition	831 Sep 05 j 02:59	15°♓42'54	-16°41'32
direct	831 Nov 25 j 00:58	14°♓40'37	
conjunction	832 Mar 02 j 07:38	16°♓14'53	-16°01'53
minimum elong	832 Mar 02 j 07:35	16°♓14'53	16°01'53
max. Earth dist.	832 Mar 05 j 00:18	16°♓18'56	46.50366 AU
retrograde	832 Jun 13 j 12:29	17°♓53'13	
min. Earth dist.	832 Sep 02 j 20:55	16°♓52'45	44.67058 AU
opposition	832 Sep 05 j 11:55	16°♓49'37	-16°47'26
direct	832 Nov 25 j 12:16	15°♓47'30	
conjunction	833 Mar 03 j 16:09	17°♓21'26	-16°07'31
minimum elong	833 Mar 03 j 16:06	17°♓21'26	16°07'31
max. Earth dist.	833 Mar 06 j 07:49	17°♓25'25	46.67256 AU
retrograde	833 Jun 14 j 20:31	18°♓59'27	
min. Earth dist.	833 Sep 04 j 07:05	17°♓59'05	44.83894 AU
opposition	833 Sep 06 j 20:51	17°♓56'01	-16°52'56
direct	833 Nov 26 j 22:33	16°♓54'05	
conjunction	834 Mar 05 j 00:51	18°♓27'41	-16°12'45
minimum elong	834 Mar 05 j 00:49	18°♓27'41	16°12'45
max. Earth dist.	834 Mar 07 j 16:40	18°♓31'40	46.83831 AU

retrograde	834 Jun 16 j 05:03	20°♓05'23	
min. Earth dist.	834 Sep 05 j 16:37	19°♓05'08	45.00361 AU
opposition	834 Sep 08 j 05:19	19°♓02'07	-16°58'03
direct	834 Nov 28 j 08:09	18°♓00'21	
conjunction	835 Mar 06 j 09:17	19°♓33'38	-16°17'38
minimum elong	835 Mar 06 j 09:15	19°♓33'38	16°17'39
max. Earth dist.	835 Mar 08 j 23:10	19°♓37'28	47.00016 AU
retrograde	835 Jun 17 j 16:11	21°♓11'00	
min. Earth dist.	835 Sep 07 j 01:33	20°♓10'53	45.16415 AU
opposition	835 Sep 09 j 13:49	20°♓07'54	-17°02'48
direct	835 Nov 29 j 14:27	19°♓06'18	
conjunction	836 Mar 06 j 17:37	20°♓39'15	-16°22'11
minimum elong	836 Mar 06 j 17:36	20°♓39'15	16°22'10
max. Earth dist.	836 Mar 09 j 07:17	20°♓43'03	47.15746 AU
retrograde	836 Jun 18 j 01:01	22°♓16'17	
min. Earth dist.	836 Sep 07 j 12:01	21°♓16'13	45.31981 AU
opposition	836 Sep 09 j 22:18	21°♓13'21	-17°07'12
direct	836 Nov 29 j 21:48	20°♓11'53	
conjunction	837 Mar 08 j 01:58	21°♓44'31	-16°26'23
minimum elong	837 Mar 08 j 01:55	21°♓44'30	16°26'23
max. Earth dist.	837 Mar 10 j 14:05	21°♓48'12	47.30997 AU
retrograde	837 Jun 19 j 08:03	23°♓21'11	
min. Earth dist.	837 Sep 08 j 20:21	22°♓21'14	45.47046 AU
opposition	837 Sep 11 j 06:23	22°♓18'23	-17°11'16
direct	837 Dec 01 j 05:49	21°♓17'01	
conjunction	838 Mar 09 j 10:04	22°♓49'20	-16°30'15
minimum elong	838 Mar 09 j 10:04	22°♓49'20	16°30'15
max. Earth dist.	838 Mar 11 j 20:51	22°♓52'56	47.45746 AU
retrograde	838 Jun 20 j 14:50	24°♓25'40	
min. Earth dist.	838 Sep 10 j 06:14	23°♓25'43	45.61630 AU
opposition	838 Sep 12 j 14:29	23°♓22'58	-17°15'00
direct	838 Dec 02 j 15:20	22°♓21'43	
conjunction	839 Mar 10 j 18:04	23°♓53'41	-16°33'48
minimum elong	839 Mar 10 j 18:03	23°♓53'40	16°33'48
max. Earth dist.	839 Mar 13 j 04:39	23°♓57'15	47.60045 AU
retrograde	839 Jun 21 j 20:05	25°♓29'41	
min. Earth dist.	839 Sep 11 j 14:42	24°♓29'48	45.75774 AU
opposition	839 Sep 13 j 22:11	24°♓27'04	-17°18'23
direct	839 Dec 04 j 02:10	23°♓25'55	
conjunction	840 Mar 11 j 01:45	24°♓57'33	-16°37'01
minimum elong	840 Mar 11 j 01:46	24°♓57'33	16°37'01
max. Earth dist.	840 Mar 13 j 10:28	25°♓01'00	47.73951 AU
retrograde	840 Jun 22 j 06:07	26°♓33'13	
min. Earth dist.	840 Sep 11 j 22:43	25°♓33'25	45.89567 AU
opposition	840 Sep 14 j 05:50	25°♓30'43	-17°21'25
direct	840 Dec 04 j 08:23	24°♓29'40	
conjunction	841 Mar 12 j 09:20	26°♓00'59	-16°39'53
minimum elong	841 Mar 12 j 09:19	26°♓00'59	16°39'53
max. Earth dist.	841 Mar 14 j 18:18	26°♓04'26	47.87523 AU
retrograde	841 Jun 23 j 14:53	27°♓36'20	
min. Earth dist.	841 Sep 13 j 07:53	26°♓36'32	46.03034 AU
opposition	841 Sep 15 j 13:22	26°♓33'56	-17°24'06
direct	841 Dec 05 j 15:05	25°♓32'59	
conjunction	842 Mar 13 j 16:53	27°♓04'00	-16°42'24
minimum elong	842 Mar 13 j 16:54	27°♓04'00	16°42'24
max. Earth dist.	842 Mar 16 j 00:43	27°♓07'23	48.00807 AU
retrograde	842 Jun 24 j 21:06	28°♓39'02	
min. Earth dist.	842 Sep 14 j 14:41	27°♓39'23	46.16215 AU
opposition	842 Sep 16 j 20:29	27°♓36'45	-17°26'25
direct	842 Dec 06 j 21:52	26°♓35'55	
conjunction	843 Mar 15 j 00:11	28°♓06'40	-16°44'35
minimum elong	843 Mar 15 j 00:11	28°♓06'40	16°44'34
max. Earth dist.	843 Mar 17 j 07:05	28°♓09'59	48.13806 AU
retrograde	843 Jun 26 j 02:52	29°♓41'26	
min. Earth dist.	843 Sep 15 j 23:23	28°♓41'49	46.29121 AU
opposition	843 Sep 18 j 03:46	28°♓39'16	-17°28'23
direct	843 Dec 08 j 06:13	27°♓38'34	
conjunction	844 Mar 15 j 07:21	29°♓09'03	-16°46'25
minimum elong	844 Mar 15 j 07:22	29°♓09'03	16°46'26
max. Earth dist.	844 Mar 17 j 14:25	29°♓12'22	48.26538 AU
	844 Apr 21 j 14:29	0°♈	
retrograde	844 Jun 26 j 08:17	0°♈43'33	
	844 Sep 02 j 08:29	30°℞♓	
min. Earth dist.	844 Sep 16 j 06:54	29°♓44'03	46.41726 AU
opposition	844 Sep 18 j 10:50	29°♓41'32	-17°30'00
direct	844 Dec 08 j 15:30	28°♓40'58	
	845 Mar 08 j 19:00	0°♈	
conjunction	845 Mar 16 j 14:26	0°♈11'12	-16°47'55
minimum elong	845 Mar 16 j 14:28	0°♈11'12	16°47'55
max. Earth dist.	845 Mar 18 j 19:44	0°♈14'24	48.38967 AU
retrograde	845 Jun 27 j 17:31	1°♈45'28	
min. Earth dist.	845 Sep 17 j 14:24	0°♈46'05	46.54016 AU
opposition	845 Sep 19 j 17:44	0°♈43'35	-17°31'17
	845 Oct 31 j 11:30	30°℞♓	
direct	845 Dec 09 j 21:01	29°♓43'10	
	846 Jan 17 j 12:48	0°♈	
conjunction	846 Mar 17 j 21:37	1°♈13'11	-16°49'07
minimum elong	846 Mar 17 j 21:39	1°♈13'11	16°49'08
max. Earth dist.	846 Mar 20 j 02:55	1°♈16'22	48.51046 AU
retrograde	846 Jun 29 j 01:52	2°♈47'13	
min. Earth dist.	846 Sep 18 j 23:05	1°♈47'53	46.65912 AU
opposition	846 Sep 21 j 00:35	1°♈45'29	-17°32'15
direct	846 Dec 11 j 02:45	0°♈45'12	
conjunction	847 Mar 19 j 04:38	2°♈15'01	-16°50'00
minimum elong	847 Mar 19 j 04:41	2°♈15'01	16°49'59
max. Earth dist.	847 Mar 21 j 08:16	2°♈18'05	48.62716 AU
retrograde	847 Jun 30 j 09:47	3°♈48'48	
min. Earth dist.	847 Sep 20 j 05:55	2°♈49'36	46.77360 AU
opposition	847 Sep 22 j 07:12	2°♈47'13	-17°32'54
direct	847 Dec 12 j 07:28	1°♈47'04	
conjunction	848 Mar 19 j 11:36	3°♈16'40	-16°50'36
minimum elong	848 Mar 19 j 11:39	3°♈16'40	16°50'36
max. Earth dist.	848 Mar 21 j 13:56	3°♈19'40	48.73899 AU
retrograde	848 Jun 30 j 15:54	4°♈50'15	
min. Earth dist.	848 Sep 20 j 14:53	3°♈51'03	46.88303 AU
opposition	848 Sep 22 j 13:57	3°♈48'47	-17°33'17
direct	848 Dec 12 j 14:18	2°♈48'44	
conjunction	849 Mar 20 j 18:36	4°♈18'08	-16°50'55
minimum elong	849 Mar 20 j 18:40	4°♈18'08	16°50'55
max. Earth dist.	849 Mar 22 j 20:14	4°♈21'05	48.84570 AU
retrograde	849 Jul 01 j 19:31	5°♈51'28	
min. Earth dist.	849 Sep 21 j 22:09	4°♈52'21	46.98695 AU
opposition	849 Sep 23 j 20:26	4°♈50'07	-17°33'23
direct	849 Dec 14 j 00:20	3°♈50'10	
conjunction	850 Mar 22 j 01:24	5°♈19'20	-16°50'59
minimum elong	850 Mar 22 j 01:27	5°♈19'20	16°50'59
max. Earth dist.	850 Mar 24 j 00:35	5°♈22'07	48.94698 AU
retrograde	850 Jul 03 j 03:35	6°♈52'26	

min. Earth dist.	850 Sep 23 j 05:40	5°♈53'20	47.08570 AU
opposition	850 Sep 25 j 02:43	5°♈51'10	-17°33'13
direct	850 Dec 15 j 06:51	4°♈51'17	
conjunction	851 Mar 23 j 08:09	6°♈20'14	-16°50'46
minimum elong	851 Mar 23 j 08:14	6°♈20'14	16°50'46
max. Earth dist.	851 Mar 25 j 07:12	6°♈23'00	49.04327 AU
retrograde	851 Jul 04 j 11:43	7°♈53'05	
min. Earth dist.	851 Sep 24 j 13:43	6°♈53'59	47.17961 AU
opposition	851 Sep 26 j 08:58	6°♈51'54	-17°32'46
direct	851 Dec 16 j 12:30	5°♈52'06	
conjunction	852 Mar 23 j 14:31	7°♈20'48	-16°50'16
minimum elong	852 Mar 23 j 14:34	7°♈20'48	16°50'16
max. Earth dist.	852 Mar 25 j 11:58	7°♈23'28	49.13525 AU
retrograde	852 Jul 04 j 18:45	8°♈53'25	
min. Earth dist.	852 Sep 24 j 19:44	7°♈54'22	47.26950 AU
opposition	852 Sep 26 j 15:01	7°♈52'18	-17°32'01
direct	852 Dec 16 j 16:42	6°♈52'33	
conjunction	853 Mar 24 j 20:56	8°♈21'02	-16°49'30
minimum elong	853 Mar 24 j 21:02	8°♈21'02	16°49'30
max. Earth dist.	853 Mar 26 j 17:26	8°♈23'39	49.22337 AU
retrograde	853 Jul 05 j 23:17	9°♈53'25	
min. Earth dist.	853 Sep 26 j 03:32	8°♈54'21	47.35584 AU
opposition	853 Sep 27 j 20:58	8°♈52'22	-17°30'59
direct	853 Dec 17 j 23:31	7°♈52'41	
conjunction	854 Mar 26 j 03:23	9°♈20'58	-16°48'25
minimum elong	854 Mar 26 j 03:27	9°♈20'58	16°48'25
max. Earth dist.	854 Mar 27 j 23:38	9°♈23'34	49.30832 AU
retrograde	854 Jul 07 j 01:39	10°♈53'07	
min. Earth dist.	854 Sep 27 j 09:34	9°♈54'06	47.43896 AU
opposition	854 Sep 29 j 02:45	9°♈52'08	-17°29'38
direct	854 Dec 19 j 08:19	8°♈52'31	
conjunction	855 Mar 27 j 09:28	10°♈20'37	-16°47'03
minimum elong	855 Mar 27 j 09:33	10°♈20'37	16°47'04
max. Earth dist.	855 Mar 29 j 03:58	10°♈23'06	49.39018 AU
retrograde	855 Jul 08 j 08:17	11°♈52'33	
min. Earth dist.	855 Sep 28 j 16:05	10°♈53'36	47.51918 AU
opposition	855 Sep 30 j 08:31	10°♈51'40	-17°27'59
direct	855 Dec 20 j 14:20	9°♈52'07	
conjunction	856 Mar 27 j 15:39	11°♈20'01	-16°45'23
minimum elong	856 Mar 27 j 15:45	11°♈20'02	16°45'23
max. Earth dist.	856 Mar 29 j 10:17	11°♈22'30	49.46921 AU
retrograde	856 Jul 08 j 14:56	12°♈51'47	
min. Earth dist.	856 Sep 28 j 23:04	11°♈52'50	47.59639 AU
opposition	856 Sep 30 j 14:11	11°♈50'58	-17°26'02
direct	856 Dec 20 j 20:42	10°♈51'30	
conjunction	857 Mar 28 j 21:42	12°♈19'14	-16°43'26
minimum elong	857 Mar 28 j 21:48	12°♈19'15	16°43'27
max. Earth dist.	857 Mar 30 j 14:53	12°♈21'38	49.54533 AU
retrograde	857 Jul 09 j 23:28	13°♈50'48	
min. Earth dist.	857 Sep 30 j 04:40	12°♈51'58	47.67043 AU
opposition	857 Oct 01 j 19:43	12°♈50'06	-17°23'47
direct	857 Dec 21 j 23:23	11°♈50'43	
conjunction	858 Mar 30 j 03:46	13°♈18'19	-16°41'12
minimum elong	858 Mar 30 j 03:52	13°♈18'19	16°41'11
max. Earth dist.	858 Mar 31 j 19:58	13°♈20'38	49.61791 AU
retrograde	858 Jul 11 j 06:09	14°♈49'42	
min. Earth dist.	858 Oct 01 j 12:12	13°♈50'51	47.74075 AU
opposition	858 Oct 03 j 01:09	13°♈49'06	-17°21'15
direct	858 Dec 23 j 03:12	12°♈49'48	
conjunction	859 Mar 31 j 09:53	14°♈17'15	-16°38'42
minimum elong	859 Mar 31 j 09:59	14°♈17'15	16°38'42
max. Earth dist.	859 Apr 02 j 01:31	14°♈19'32	49.68662 AU
retrograde	859 Jul 12 j 08:50	15°♈48'28	
min. Earth dist.	859 Oct 02 j 18:06	14°♈49'41	47.80668 AU
opposition	859 Oct 04 j 06:31	14°♈47'57	-17°18'27
direct	859 Dec 24 j 11:19	13°♈48'44	
conjunction	860 Mar 31 j 15:43	15°♈16'03	-16°35'57
minimum elong	860 Mar 31 j 15:50	15°♈16'03	16°35'56
max. Earth dist.	860 Apr 02 j 05:03	15°♈18'12	49.75064 AU
retrograde	860 Jul 12 j 14:21	16°♈47'07	
min. Earth dist.	860 Oct 03 j 01:00	15°♈48'21	47.86774 AU
opposition	860 Oct 04 j 12:00	15°♈46'41	-17°15'25
direct	860 Dec 24 j 17:51	14°♈47'32	
conjunction	861 Apr 01 j 21:51	16°♈14'42	-16°32'57
minimum elong	861 Apr 01 j 21:57	16°♈14'42	16°32'57
max. Earth dist.	861 Apr 03 j 10:47	16°♈16'50	49.80952 AU
retrograde	861 Jul 13 j 20:41	17°♈45'37	
min. Earth dist.	861 Oct 04 j 08:11	16°♈46'49	47.92340 AU
opposition	861 Oct 05 j 17:16	16°♈45'15	-17°12'08
direct	861 Dec 25 j 23:51	15°♈46'09	
conjunction	862 Apr 03 j 03:49	17°♈13'10	-16°29'43
minimum elong	862 Apr 03 j 03:57	17°♈13'11	16°29'43
max. Earth dist.	862 Apr 04 j 14:39	17°♈15'11	49.86321 AU
retrograde	862 Jul 15 j 04:17	18°♈43'55	
opposition	862 Oct 06 j 22:27	17°♈43'36	-17°08'36
min. Earth dist.	862 Oct 05 j 13:44	17°♈45'09	47.97389 AU
direct	862 Dec 27 j 03:06	16°♈44'33	
conjunction	863 Apr 04 j 09:32	18°♈11'26	-16°26'16
minimum elong	863 Apr 04 j 09:38	18°♈11'26	16°26'16
max. Earth dist.	863 Apr 05 j 19:03	18°♈13'21	49.91178 AU
retrograde	863 Jul 16 j 09:10	19°♈42'00	
min. Earth dist.	863 Oct 06 j 21:04	18°♈43'11	48.01961 AU
opposition	863 Oct 08 j 03:38	18°♈41'44	-17°04'50
direct	863 Dec 28 j 08:16	17°♈42'43	
conjunction	864 Apr 04 j 15:19	19°♈09'28	-16°22'33
minimum elong	864 Apr 04 j 15:27	19°♈09'28	16°22'33
max. Earth dist.	864 Apr 06 j 00:24	19°♈11'22	49.95608 AU
retrograde	864 Jul 16 j 11:21	20°♈39'52	
min. Earth dist.	864 Oct 07 j 02:20	19°♈41'05	48.06121 AU
opposition	864 Oct 08 j 08:32	19°♈39'39	-17°00'48
direct	864 Dec 28 j 15:33	18°♈40'39	
conjunction	865 Apr 05 j 20:51	20°♈07'17	-16°18'35
minimum elong	865 Apr 05 j 20:58	20°♈07'17	16°18'34
max. Earth dist.	865 Apr 07 j 03:55	20°♈09'04	49.99655 AU
retrograde	865 Jul 17 j 16:53	21°♈37'33	
min. Earth dist.	865 Oct 08 j 08:26	20°♈38'45	48.09933 AU
opposition	865 Oct 09 j 13:30	20°♈37'23	-16°56'30
direct	865 Dec 29 j 21:14	19°♈38'25	
conjunction	866 Apr 07 j 02:32	21°♈04'55	-16°14'21
minimum elong	866 Apr 07 j 02:41	21°♈04'56	16°14'21
max. Earth dist.	866 Apr 08 j 09:37	21°♈06'42	50.03368 AU
retrograde	866 Jul 18 j 21:54	22°♈35'04	
opposition	866 Oct 10 j 18:12	21°♈34'57	-16°51'56
min. Earth dist.	866 Oct 09 j 14:23	21°♈36'16	48.13417 AU
direct	866 Dec 31 j 03:28	20°♈36'02	
conjunction	867 Apr 08 j 07:59	22°♈02'26	-16°09'51
minimum elong	867 Apr 08 j 08:07	22°♈02'27	16°09'50
max. Earth dist.	867 Apr 09 j 13:34	22°♈04'08	50.06793 AU

retrograde	867 Jul 20 j 05:52	23°♈32'27		
opposition	867 Oct 11 j 22:57	22°♈32'24	-16°47'05	
min. Earth dist.	867 Oct 10 j 19:06	22°♈33'43	48.16620	AU
direct	868 Jan 01 j 05:21	21°♈33'32		
conjunction	868 Apr 08 j 13:19	22°♈59'52	-16°05'05	
minimum elong	868 Apr 08 j 13:28	22°♈59'52	16°05'05	
max. Earth dist.	868 Apr 09 j 18:08	23°♈01'30	50.09928	AU
retrograde	868 Jul 20 j 12:58	24°♈29'47		
min. Earth dist.	868 Oct 11 j 01:47	23°♈31'01	48.19533	AU
opposition	868 Oct 12 j 03:49	23°♈29'48	-16°41'58	
direct	869 Jan 01 j 07:32	22°♈30'59		
conjunction	869 Apr 09 j 18:52	23°♈57'15	-16°00'03	
minimum elong	869 Apr 09 j 19:01	23°♈57'15	16°00'02	
max. Earth dist.	869 Apr 10 j 23:18	23°♈58'52	50.12782	AU
retrograde	869 Jul 21 j 15:25	25°♈27'04		
min. Earth dist.	869 Oct 12 j 06:27	24°♈28'23	48.22132	AU
opposition	869 Oct 13 j 08:20	24°♈27'10	-16°36'35	
direct	870 Jan 02 j 14:12	23°♈28'24		
conjunction	870 Apr 11 j 00:18	24°♈54'37	-15°54'46	
minimum elong	870 Apr 11 j 00:27	24°♈54'37	15°54'46	
max. Earth dist.	870 Apr 12 j 02:42	24°♈56'07	50.15300	AU
retrograde	870 Jul 22 j 19:19	26°♈24'21		
opposition	870 Oct 14 j 13:02	25°♈24'32	-16°30'56	
min. Earth dist.	870 Oct 13 j 12:37	25°♈25'41	48.24378	AU
direct	871 Jan 03 j 20:37	24°♈25'50		
conjunction	871 Apr 12 j 05:46	25°♈52'00	-15°49'14	
minimum elong	871 Apr 12 j 05:55	25°♈52'00	15°49'13	
max. Earth dist.	871 Apr 13 j 08:02	25°♈53'29	50.17426	AU
retrograde	871 Jul 24 j 00:34	27°♈21'40		
opposition	871 Oct 15 j 17:41	26°♈21'55	-16°25'02	
min. Earth dist.	871 Oct 14 j 18:49	26°♈22'59	48.26185	AU
direct	872 Jan 05 j 02:54	25°♈23'16		
conjunction	872 Apr 12 j 11:16	26°♈49'23	-15°43'28	
minimum elong	872 Apr 12 j 11:25	26°♈49'23	15°43'28	
max. Earth dist.	872 Apr 13 j 11:26	26°♈50'45	50.19100	AU
retrograde	872 Jul 24 j 08:54	28°♈18'59		
opposition	872 Oct 15 j 22:14	27°♈19'17	-16°18'55	
min. Earth dist.	872 Oct 14 j 23:57	27°♈20'20	48.27510	AU
direct	873 Jan 05 j 05:12	26°♈20'41		
conjunction	873 Apr 13 j 16:49	27°♈46'44	-15°37'29	
minimum elong	873 Apr 13 j 17:00	27°♈46'45	15°37'28	
max. Earth dist.	873 Apr 14 j 15:28	27°♈48'01	50.20249	AU
retrograde	873 Jul 25 j 14:53	29°♈16'15		
min. Earth dist.	873 Oct 16 j 07:03	28°♈17'32	48.28289	AU
opposition	873 Oct 17 j 02:58	28°♈16'36	-16°12'34	
direct	874 Jan 06 j 08:35	27°♈18'00		
conjunction	874 Apr 14 j 22:27	28°♈44'00	-15°31'17	
minimum elong	874 Apr 14 j 22:36	28°♈44'01	15°31'17	
max. Earth dist.	874 Apr 15 j 20:09	28°♈45'14	50.20863	AU
	874 Jun 20 j 10:57	0°♉		
retrograde	874 Jul 26 j 17:38	0°♉13'25		
	874 Sep 01 j 06:51	30°℞♈		
opposition	874 Oct 18 j 07:21	29°♈13'47	-16°06'01	
min. Earth dist.	874 Oct 17 j 12:07	29°♈14'41	48.28525	AU
direct	875 Jan 07 j 14:30	28°♈15'11		
conjunction	875 Apr 16 j 03:49	29°♈41'08	-15°24'52	
minimum elong	875 Apr 16 j 04:00	29°♈41'09	15°24'52	
max. Earth dist.	875 Apr 16 j 23:05	29°♈42'14	50.20955	AU
	875 Apr 30 j 02:51	0°♉		
retrograde	875 Jul 27 j 21:38	1°♉10'27		
opposition	875 Oct 19 j 11:54	0°♉10'49	-15°59'13	
min. Earth dist.	875 Oct 18 j 18:12	0°♉11'39	48.28276	AU
	875 Oct 29 j 03:20	30°℞♈		
direct	876 Jan 08 j 20:20	29°♈12'13		
	876 Mar 18 j 09:23	0°♉		
conjunction	876 Apr 16 j 09:09	0°♉38'05	-15°18'13	
minimum elong	876 Apr 16 j 09:19	0°♉38'06	15°18'13	
max. Earth dist.	876 Apr 17 j 04:09	0°♉39'10	50.20581	AU
retrograde	876 Jul 28 j 00:51	2°♉07'19		
opposition	876 Oct 19 j 16:22	1°♉07'41	-15°52'12	
min. Earth dist.	876 Oct 19 j 00:05	1°♉08'27	48.27574	AU
direct	877 Jan 09 j 03:20	0°♉09'04		
conjunction	877 Apr 17 j 14:31	1°♉34'52	-15°11'21	
minimum elong	877 Apr 17 j 14:42	1°♉34'53	15°11'21	
max. Earth dist.	877 Apr 18 j 07:49	1°♉35'51	50.19802	AU
retrograde	877 Jul 29 j 07:45	3°♉04'02		
opposition	877 Oct 20 j 20:36	2°♉04'24	-15°44'56	
min. Earth dist.	877 Oct 20 j 04:41	2°♉05'09	48.26496	AU
direct	878 Jan 10 j 06:37	1°♉05'45		
conjunction	878 Apr 18 j 19:52	2°♉31'32	-15°04'14	
minimum elong	878 Apr 18 j 20:02	2°♉31'32	15°04'14	
max. Earth dist.	878 Apr 19 j 12:01	2°♉32'26	50.18651	AU
retrograde	878 Jul 30 j 15:01	4°♉00'36		
min. Earth dist.	878 Oct 21 j 11:01	3°♉01'38	48.25072	AU
opposition	878 Oct 22 j 01:03	3°♉00'59	-15°37'25	
direct	879 Jan 11 j 08:53	2°♉02'20		
evening set	879 Apr 18 j 17:09	3°♉26'16		
conjunction	879 Apr 20 j 01:04	3°♉28'04	-14°56'52	
minimum elong	879 Apr 20 j 01:16	3°♉28'05	14°56'53	
morning rise	879 Apr 21 j 09:26	3°♉29'54		
max. Earth dist.	879 Apr 20 j 16:54	3°♉28'58	50.17187	AU
retrograde	879 Jul 31 j 18:18	4°♉57'05		
opposition	879 Oct 23 j 05:19	3°♉57'29	-15°29'39	
min. Earth dist.	879 Oct 22 j 15:17	3°♉58'08	48.23332	AU
direct	880 Jan 12 j 13:51	2°♉58'49		
evening set	880 Apr 17 j 18:58	4°♉21'12		
conjunction	880 Apr 20 j 06:16	4°♉24'34	-14°49'16	
minimum elong	880 Apr 20 j 06:26	4°♉24'34	14°49'15	
max. Earth dist.	880 Apr 20 j 20:09	4°♉25'21	50.15420	AU
morning rise	880 Apr 22 j 18:01	4°♉27'56		
retrograde	880 Jul 31 j 22:10	5°♉53'33		
opposition	880 Oct 23 j 09:40	4°♉53'57	-15°21'37	
min. Earth dist.	880 Oct 22 j 20:57	4°♉54'33	48.21301	AU
direct	881 Jan 12 j 19:18	3°♉55'19		
evening set	881 Apr 18 j 05:41	5°♉16'39		
conjunction	881 Apr 21 j 11:38	5°♉21'03	-14°41'24	
minimum elong	881 Apr 21 j 11:49	5°♉21'04	14°41'25	
max. Earth dist.	881 Apr 22 j 01:31	5°♉21'51	50.13349	AU
morning rise	881 Apr 24 j 18:04	5°♉25'30		
retrograde	881 Aug 02 j 01:56	6°♉50'02		
opposition	881 Oct 24 j 14:00	5°♉50'29	-15°13'19	
min. Earth dist.	881 Oct 24 j 02:29	5°♉51'01	48.18936	AU
direct	882 Jan 14 j 01:51	4°♉51'51		
evening set	882 Apr 18 j 19:44	6°♉12'22		
conjunction	882 Apr 22 j 16:55	6°♉17'37	-14°33'18	
minimum elong	882 Apr 22 j 17:06	6°♉17'38	14°33'17	
max. Earth dist.	882 Apr 23 j 04:59	6°♉18'18	50.10946	AU
morning rise	882 Apr 26 j 14:40	6°♉22'55		
retrograde	882 Aug 03 j 09:39	7°♉46'36		

opposition	882 Oct 25 j 18:10	6°♉47'06	-15°04'47
min. Earth dist.	882 Oct 25 j 07:01	6°♉47'37	48.16216 AU
direct	883 Jan 15 j 04:01	5°♉48'29	
evening set	883 Apr 19 j 11:42	7°♉08'17	
conjunction	883 Apr 23 j 22:16	7°♉14'18	-14°24'57
minimum elong	883 Apr 23 j 22:27	7°♉14'19	14°24'58
max. Earth dist.	883 Apr 24 j 09:06	7°♉14'55	50.08142 AU
morning rise	883 Apr 28 j 09:28	7°♉20'21	
retrograde	883 Aug 04 j 16:12	8°♉43'18	
opposition	883 Oct 26 j 22:33	7°♉43'50	-14°56'01
min. Earth dist.	883 Oct 26 j 13:42	7°♉44'14	48.13067 AU
direct	884 Jan 16 j 06:28	6°♉45'14	
evening set	884 Apr 19 j 05:03	8°♉04'24	
conjunction	884 Apr 24 j 03:40	8°♉11'06	-14°16'23
minimum elong	884 Apr 24 j 03:52	8°♉11'07	14°16'22
max. Earth dist.	884 Apr 24 j 13:45	8°♉11'40	50.04889 AU
morning rise	884 Apr 29 j 02:54	8°♉17'50	
retrograde	884 Aug 04 j 20:00	9°♉40'06	
opposition	884 Oct 27 j 02:50	8°♉40'40	-14°47'01
min. Earth dist.	884 Oct 26 j 18:34	8°♉41'03	48.09421 AU
direct	885 Jan 16 j 11:47	7°♉42'04	
evening set	885 Apr 19 j 23:29	9°♉00'40	
conjunction	885 Apr 25 j 09:11	9°♉08'00	-14°07'37
minimum elong	885 Apr 25 j 09:22	9°♉08'00	14°07'37
max. Earth dist.	885 Apr 25 j 16:32	9°♉08'25	50.01108 AU
morning rise	885 Apr 30 j 19:37	9°♉15'21	
retrograde	885 Aug 06 j 00:09	10°♉37'00	
opposition	885 Oct 28 j 07:09	9°♉37'35	-14°37'49
min. Earth dist.	885 Oct 28 j 00:48	9°♉37'53	48.05240 AU
direct	886 Jan 17 j 17:22	8°♉38'58	
evening set	886 Apr 20 j 18:45	9°♉57'02	
conjunction	886 Apr 26 j 14:51	10°♉04'56	-13°58'38
minimum elong	886 Apr 26 j 15:03	10°♉04'57	13°58'37
max. Earth dist.	886 Apr 26 j 21:35	10°♉05'19	49.96781 AU
morning rise	886 May 02 j 11:40	10°♉12'54	
retrograde	886 Aug 07 j 03:28	11°♉33'58	
opposition	886 Oct 29 j 11:33	10°♉34'32	-14°28'23
min. Earth dist.	886 Oct 29 j 06:44	10°♉34'46	48.00504 AU
direct	887 Jan 19 j 00:09	9°♉35'54	
evening set	887 Apr 21 j 14:24	10°♉53'26	
conjunction	887 Apr 27 j 20:10	11°♉01'53	-13°49'26
minimum elong	887 Apr 27 j 20:21	11°♉01'54	13°49'26
max. Earth dist.	887 Apr 28 j 00:51	11°♉02'09	49.91934 AU
morning rise	887 May 04 j 02:43	11°♉10'24	
retrograde	887 Aug 08 j 10:17	12°♉30'55	
opposition	887 Oct 30 j 15:51	11°♉31'28	-14°18'45
min. Earth dist.	887 Oct 30 j 11:42	11°♉31'40	47.95273 AU
direct	888 Jan 20 j 03:44	10°♉32'47	
evening set	888 Apr 21 j 10:32	11°♉49'50	
conjunction	888 Apr 28 j 01:38	11°♉58'49	-13°40'01
minimum elong	888 Apr 28 j 01:51	11°♉58'50	13°40'01
max. Earth dist.	888 Apr 28 j 04:55	11°♉59'00	49.86603 AU
morning rise	888 May 04 j 17:38	12°♉07'51	
retrograde	888 Aug 08 j 18:06	13°♉27'51	
opposition	888 Oct 30 j 20:09	12°♉28'22	-14°08'52
min. Earth dist.	888 Oct 30 j 18:08	12°♉28'28	47.89595 AU
direct	889 Jan 20 j 05:41	11°♉29'38	
evening set	889 Apr 22 j 07:10	12°♉46'13	
conjunction	889 Apr 29 j 07:11	12°♉55'42	-13°30'22
minimum elong	889 Apr 29 j 07:21	12°♉55'43	13°30'22
max. Earth dist.	889 Apr 29 j 09:51	12°♉55'52	49.80870 AU
morning rise	889 May 06 j 07:58	13°♉05'14	
retrograde	889 Aug 09 j 22:50	14°♉24'44	
opposition	889 Nov 01 j 00:21	13°♉25'14	-13°58'45
min. Earth dist.	889 Oct 31 j 22:31	13°♉25'19	47.83526 AU
direct	890 Jan 21 j 09:29	12°♉26'25	
evening set	890 Apr 23 j 04:05	13°♉42'36	
conjunction	890 Apr 30 j 12:33	13°♉52'34	-13°20'29
minimum elong	890 Apr 30 j 12:45	13°♉52'34	13°20'29
max. Earth dist.	890 Apr 30 j 13:10	13°♉52'36	49.74765 AU
morning rise	890 May 07 j 22:00	14°♉02'34	
	890 Jun 25 j 17:50	15°♉	
retrograde	890 Aug 11 j 02:22	15°♉21'36	
	890 Sep 26 j 19:12	15°℞♉	
opposition	890 Nov 02 j 04:36	14°♉22'03	-13°48'23
min. Earth dist.	890 Nov 02 j 04:16	14°♉22'04	47.77128 AU
direct	891 Jan 22 j 15:11	13°♉23'12	
evening set	891 Apr 24 j 01:14	14°♉38'58	
conjunction	891 May 01 j 18:03	14°♉49'24	-13°10'22
minimum elong	891 May 01 j 18:14	14°♉49'25	13°10'21
max. Earth dist.	891 May 01 j 18:38	14°♉49'26	49.68352 AU
morning rise	891 May 09 j 11:44	14°♉59'53	
	891 May 09 j 13:45	15°♉	
retrograde	891 Aug 12 j 03:52	16°♉18'29	
opposition	891 Nov 03 j 08:54	15°♉18'54	-13°37'46
min. Earth dist.	891 Nov 03 j 09:27	15°♉18'52	47.70427 AU
	891 Nov 20 j 07:50	15°℞♉	
direct	892 Jan 23 j 23:20	14°♉19'59	
	892 Mar 27 j 01:36	15°♉	
evening set	892 Apr 23 j 22:41	15°♉35'23	
conjunction	892 May 01 j 23:22	15°♉46'16	-13°00'00
minimum elong	892 May 01 j 23:34	15°♉46'17	13°00'00
max. Earth dist.	892 May 01 j 22:24	15°♉46'13	49.61666 AU
morning rise	892 May 10 j 01:04	15°♉57'13	
retrograde	892 Aug 12 j 10:43	17°♉15'24	
opposition	892 Nov 03 j 13:13	16°♉15'48	-13°26'53
min. Earth dist.	892 Nov 03 j 13:58	16°♉15'46	47.63457 AU
direct	893 Jan 24 j 02:55	15°♉16'50	
evening set	893 Apr 24 j 20:27	16°♉31'53	
conjunction	893 May 03 j 04:57	16°♉43'12	-12°49'22
minimum elong	893 May 03 j 05:09	16°♉43'13	12°49'21
max. Earth dist.	893 May 03 j 02:58	16°♉43'06	49.54691 AU
morning rise	893 May 11 j 14:31	16°♉54'36	
retrograde	893 Aug 13 j 18:05	18°♉12'24	
opposition	893 Nov 04 j 17:33	17°♉12'47	-13°15'45
min. Earth dist.	893 Nov 04 j 20:15	17°♉12'39	47.56193 AU
direct	894 Jan 25 j 05:14	16°♉13'47	
evening set	894 Apr 25 j 18:36	17°♉28'30	
conjunction	894 May 04 j 10:38	17°♉40'16	-12°38'30
minimum elong	894 May 04 j 10:50	17°♉40'17	12°38'31
max. Earth dist.	894 May 04 j 08:12	17°♉40'08	49.47426 AU
morning rise	894 May 13 j 03:37	17°♉52'06	
retrograde	894 Aug 14 j 23:19	19°♉09'32	
opposition	894 Nov 05 j 21:54	18°♉09'54	-13°04'21
min. Earth dist.	894 Nov 06 j 00:46	18°♉09'46	47.48604 AU
direct	895 Jan 26 j 09:23	17°♉10'52	
evening set	895 Apr 26 j 16:50	18°♉25'18	
conjunction	895 May 05 j 16:05	18°♉37'29	-12°27'23
minimum elong	895 May 05 j 16:17	18°♉37'29	12°27'23
max. Earth dist.	895 May 05 j 11:26	18°♉37'13	49.39802 AU
morning rise	895 May 14 j 16:32	18°♉49'43	

retrograde	895 Aug 16 j 04:22	20°♉06'50	
opposition	895 Nov 07 j 02:24	19°♉07'11	-12°52'43
min. Earth dist.	895 Nov 07 j 06:57	19°♉06'58	47.40636 AU
direct	896 Jan 27 j 13:58	18°♉08'07	
evening set	896 Apr 26 j 15:28	19°♉22'16	
conjunction	896 May 05 j 21:58	19°♉34'52	-12°16'03
minimum elong	896 May 05 j 22:10	19°♉34'53	12°16'03
max. Earth dist.	896 May 05 j 16:57	19°♉34'35	49.31756 AU
morning rise	896 May 15 j 05:29	19°♉47'31	
retrograde	896 Aug 16 j 07:38	21°♉04'19	
opposition	896 Nov 07 j 06:52	20°♉04'39	-12°40'51
min. Earth dist.	896 Nov 07 j 12:53	20°♉04'22	47.32201 AU
direct	897 Jan 27 j 20:53	19°♉05'32	
evening set	897 Apr 27 j 14:35	20°♉19'25	
conjunction	897 May 07 j 03:53	20°♉32'24	-12°04'29
minimum elong	897 May 07 j 04:05	20°♉32'25	12°04'28
max. Earth dist.	897 May 06 j 20:39	20°♉32'00	49.23228 AU
morning rise	897 May 16 j 18:21	20°♉45'28	
retrograde	897 Aug 17 j 13:48	22°♉01'58	
opposition	897 Nov 08 j 11:26	21°♉02'15	-12°28'45
min. Earth dist.	897 Nov 08 j 18:18	21°♉01'56	47.23261 AU
direct	898 Jan 29 j 01:29	20°♉03'04	
evening set	898 Apr 28 j 13:43	21°♉16'42	
conjunction	898 May 08 j 09:50	21°♉30'05	-11°52'42
minimum elong	898 May 08 j 10:01	21°♉30'05	11°52'42
max. Earth dist.	898 May 08 j 00:51	21°♉29'34	49.14163 AU
morning rise	898 May 18 j 07:07	21°♉43'33	
retrograde	898 Aug 18 j 21:11	22°♉59'44	
opposition	898 Nov 09 j 16:04	21°♉59'59	-12°16'25
min. Earth dist.	898 Nov 10 j 01:13	21°♉59'33	47.13789 AU
direct	899 Jan 30 j 04:49	21°♉00'42	
evening set	899 Apr 29 j 13:10	22°♉14'05	
conjunction	899 May 09 j 15:50	22°♉27'51	-11°40'42
minimum elong	899 May 09 j 16:03	22°♉27'52	11°40'42
max. Earth dist.	899 May 09 j 06:03	22°♉27'18	49.04602 AU
morning rise	899 May 19 j 19:35	22°♉41'42	
retrograde	899 Aug 20 j 03:31	23°♉57'35	
opposition	899 Nov 10 j 20:37	22°♉57'47	-12°03'52
min. Earth dist.	899 Nov 11 j 06:08	22°♉57'20	47.03830 AU
direct	900 Jan 31 j 08:29	21°♉58'25	
evening set	900 Apr 29 j 12:42	23°♉11'33	
conjunction	900 May 09 j 21:43	23°♉25'43	-11°28'28
minimum elong	900 May 09 j 21:54	23°♉25'43	11°28'28
max. Earth dist.	900 May 09 j 09:33	23°♉25'01	48.94569 AU
morning rise	900 May 20 j 08:03	23°♉39'56	
retrograde	900 Aug 20 j 09:03	24°♉55'33	
opposition	900 Nov 11 j 01:20	23°♉55'40	-11°51'04
min. Earth dist.	900 Nov 11 j 12:43	23°♉55'07	46.93436 AU
direct	901 Jan 31 j 13:28	22°♉56'12	
evening set	901 Apr 30 j 12:30	24°♉09'08	
conjunction	901 May 11 j 03:54	24°♉23'39	-11°16'00
minimum elong	901 May 11 j 04:07	24°♉23'40	11°16'00
max. Earth dist.	901 May 10 j 15:25	24°♉22'56	48.84120 AU
morning rise	901 May 21 j 20:25	24°♉38'15	
retrograde	901 Aug 21 j 11:05	25°♉53'36	
opposition	901 Nov 12 j 05:55	24°♉53'39	-11°38'02
min. Earth dist.	901 Nov 12 j 18:21	24°♉53'03	46.82646 AU
direct	902 Feb 01 j 21:44	23°♉54'05	
evening set	902 May 01 j 12:37	25°♉06'49	
conjunction	902 May 12 j 10:00	25°♉21'42	-11°03'18
minimum elong	902 May 12 j 10:11	25°♉21'43	11°03'18
max. Earth dist.	902 May 11 j 19:45	25°♉20'53	48.73318 AU
morning rise	902 May 23 j 08:39	25°♉36'40	
retrograde	902 Aug 22 j 17:36	26°♉51'47	
opposition	902 Nov 13 j 10:38	25°♉51'46	-11°24'44
min. Earth dist.	902 Nov 13 j 23:29	25°♉51'09	46.71534 AU
direct	903 Feb 03 j 02:15	24°♉52'07	
evening set	903 May 02 j 12:35	26°♉04'40	
conjunction	903 May 13 j 16:00	26°♉19'54	-10°50'21
minimum elong	903 May 13 j 16:12	26°♉19'55	10°50'21
max. Earth dist.	903 May 13 j 00:48	26°♉19'02	48.62195 AU
morning rise	903 May 24 j 20:41	26°♉35'14	
retrograde	903 Aug 24 j 01:30	27°♉50'09	
opposition	903 Nov 14 j 15:34	26°♉50'04	-11°11'10
min. Earth dist.	903 Nov 15 j 06:13	26°♉49'21	46.60124 AU
direct	904 Feb 04 j 05:01	25°♉50'19	
evening set	904 May 02 j 13:01	27°♉02'42	
conjunction	904 May 13 j 22:17	27°♉18'18	-10°37'09
minimum elong	904 May 13 j 22:28	27°♉18'19	10°37'08
max. Earth dist.	904 May 13 j 06:41	27°♉17'25	48.50806 AU
morning rise	904 May 25 j 08:41	27°♉34'00	
retrograde	904 Aug 24 j 07:41	28°♉48'42	
opposition	904 Nov 14 j 20:18	27°♉48'34	-10°57'21
min. Earth dist.	904 Nov 15 j 10:53	27°♉47'52	46.48447 AU
direct	905 Feb 04 j 09:28	26°♉48'44	
evening set	905 May 03 j 13:42	28°♉01'00	
max. Earth dist.	905 May 14 j 10:53	28°♉15'56	48.39145 AU
conjunction	905 May 15 j 04:35	28°♉16'57	-10°23'41
minimum elong	905 May 15 j 04:47	28°♉16'58	10°23'42
morning rise	905 May 26 j 20:53	28°♉33'00	
retrograde	905 Aug 25 j 14:08	29°♉47'31	
opposition	905 Nov 16 j 01:21	28°♉47'20	-10°43'15
min. Earth dist.	905 Nov 16 j 17:29	28°♉46'34	46.36499 AU
direct	906 Feb 05 j 14:11	27°♉47'26	
evening set	906 May 04 j 14:28	28°♉59'35	
conjunction	906 May 16 j 11:05	29°♉15'54	-10°09'58
minimum elong	906 May 16 j 11:16	29°♉15'55	10°09'57
max. Earth dist.	906 May 15 j 17:23	29°♉14'53	48.27192 AU
morning rise	906 May 28 j 08:48	29°♉32'17	
	906 Jun 18 j 16:38	0°♊	
retrograde	906 Aug 26 j 17:44	0°♊46'40	
	906 Nov 05 j 09:58	30°℞♉	
opposition	906 Nov 17 j 06:23	29°♉46'26	-10°28'53
min. Earth dist.	906 Nov 17 j 23:28	29°♉45'37	46.24231 AU
direct	907 Feb 06 j 21:56	28°♉46'27	
evening set	907 May 05 j 15:40	29°♉58'32	
	907 May 06 j 17:31	0°♊	
conjunction	907 May 17 j 17:35	0°♊15'11	-9°55'59
minimum elong	907 May 17 j 17:46	0°♊15'11	9°56'00
max. Earth dist.	907 May 16 j 22:00	0°♊14'03	48.14912 AU
morning rise	907 May 29 j 20:50	0°♊31'55	
retrograde	907 Aug 28 j 00:05	1°♊46'10	
opposition	907 Nov 18 j 11:28	0°♊45'53	-10°14'16
min. Earth dist.	907 Nov 19 j 05:20	0°♊45'02	46.11608 AU
	908 Jan 02 j 14:19	30°℞♉	
direct	908 Feb 08 j 03:05	29°♉45'50	
	908 Mar 15 j 06:00	0°♊	
evening set	908 May 05 j 16:59	0°♊57'49	
max. Earth dist.	908 May 17 j 03:17	1°♊13'35	48.02214 AU
conjunction	908 May 18 j 00:19	1°♊14'48	-9°41'47
minimum elong	908 May 18 j 00:30	1°♊14'49	9°41'46

morning rise	908 May 30 j 08:53	1°♊31'53	
retrograde	908 Aug 28 j 08:06	2°♊46'01	
opposition	908 Nov 18 j 16:52	1°♊45'41	-9°59'23
min. Earth dist.	908 Nov 19 j 12:55	1°♊44'43	45.98530 AU
direct	909 Feb 08 j 07:21	0°♊45'32	
evening set	909 May 06 j 18:49	1°♊57'27	
max. Earth dist.	909 May 18 j 09:18	2°♊13'30	47.89041 AU
conjunction	909 May 19 j 07:21	2°♊14'46	-9°27'20
minimum elong	909 May 19 j 07:31	2°♊14'47	9°27'19
morning rise	909 May 31 j 20:59	2°♊32'11	
retrograde	909 Aug 29 j 17:26	3°♊46'12	
opposition	909 Nov 19 j 22:08	2°♊45'47	-9°44'16
min. Earth dist.	909 Nov 20 j 18:45	2°♊44'48	45.84946 AU
direct	910 Feb 09 j 10:20	1°♊45'31	
evening set	910 May 07 j 20:54	2°♊57'22	
conjunction	910 May 20 j 14:22	3°♊15'02	-9°12'39
minimum elong	910 May 20 j 14:33	3°♊15'02	9°12'38
max. Earth dist.	910 May 19 j 13:39	3°♊13'36	47.75342 AU
morning rise	910 Jun 02 j 09:11	3°♊32'46	
retrograde	910 Aug 31 j 01:24	4°♊46'39	
opposition	910 Nov 21 j 03:46	3°♊46'09	-9°28'55
min. Earth dist.	910 Nov 22 j 02:31	3°♊45'03	45.70845 AU
direct	911 Feb 10 j 14:46	2°♊45'45	
evening set	911 May 08 j 22:53	3°♊57'32	
conjunction	911 May 21 j 21:26	4°♊15'31	-8°57'44
minimum elong	911 May 21 j 21:36	4°♊15'31	8°57'44
max. Earth dist.	911 May 20 j 20:09	4°♊14'02	47.61129 AU
morning rise	911 Jun 03 j 21:00	4°♊33'35	
retrograde	911 Sep 01 j 04:31	5°♊47'21	
opposition	911 Nov 22 j 09:24	4°♊46'43	-9°13'18
min. Earth dist.	911 Nov 23 j 09:14	4°♊45'34	45.56236 AU
direct	912 Feb 12 j 00:01	3°♊46'10	
evening set	912 May 09 j 01:26	4°♊57'54	
max. Earth dist.	912 May 21 j 01:13	5°♊14'35	47.46443 AU
conjunction	912 May 22 j 04:37	5°♊16'11	-8°42'34
minimum elong	912 May 22 j 04:48	5°♊16'12	8°42'35
morning rise	912 Jun 04 j 09:05	5°♊34'34	
retrograde	912 Sep 01 j 09:54	6°♊48'14	
opposition	912 Nov 22 j 14:57	5°♊47'29	-8°57'26
min. Earth dist.	912 Nov 23 j 15:43	5°♊46'16	45.41186 AU
direct	913 Feb 12 j 07:23	4°♊46'45	
evening set	913 May 10 j 04:04	5°♊58'26	
max. Earth dist.	913 May 22 j 07:18	6°♊15'22	47.31319 AU
conjunction	913 May 23 j 12:01	6°♊17'03	-8°27'10
minimum elong	913 May 23 j 12:11	6°♊17'03	8°27'10
morning rise	913 Jun 05 j 21:05	6°♊35'44	
retrograde	913 Sep 02 j 17:01	7°♊49'19	
opposition	913 Nov 23 j 20:48	6°♊48'26	-8°41'18
min. Earth dist.	913 Nov 24 j 23:34	6°♊47'07	45.25731 AU
direct	914 Feb 13 j 13:03	5°♊47'32	
evening set	914 May 11 j 06:54	6°♊59'11	
conjunction	914 May 24 j 19:22	7°♊18'06	-8°11'31
minimum elong	914 May 24 j 19:33	7°♊18'06	8°11'31
max. Earth dist.	914 May 23 j 14:01	7°♊16'22	47.15830 AU
morning rise	914 Jun 07 j 08:51	7°♊37'06	
retrograde	914 Sep 04 j 00:44	8°♊50'36	
opposition	914 Nov 25 j 02:33	7°♊49'34	-8°24'55
min. Earth dist.	914 Nov 26 j 05:20	7°♊48'16	45.09936 AU
direct	915 Feb 14 j 18:07	6°♊48'30	
evening set	915 May 12 j 10:03	8°♊00'09	
max. Earth dist.	915 May 24 j 19:21	8°♊17'31	47.00021 AU
conjunction	915 May 26 j 02:47	8°♊19'22	-7°55'36
minimum elong	915 May 26 j 02:57	8°♊19'22	7°55'36
morning rise	915 Jun 08 j 20:46	8°♊38'40	
retrograde	915 Sep 05 j 09:51	9°♊52'07	
opposition	915 Nov 26 j 08:34	8°♊50'57	-8°08'14
min. Earth dist.	915 Nov 27 j 13:00	8°♊49'33	44.93860 AU
direct	916 Feb 15 j 22:38	7°♊49'43	
evening set	916 May 12 j 13:16	9°♊01'22	
max. Earth dist.	916 May 25 j 03:07	9°♊19'03	46.83943 AU
conjunction	916 May 26 j 10:27	9°♊20'54	-7°39'25
minimum elong	916 May 26 j 10:38	9°♊20'55	7°39'25
morning rise	916 Jun 09 j 08:32	9°♊40'31	
retrograde	916 Sep 05 j 15:24	10°♊53'55	
opposition	916 Nov 26 j 14:42	9°♊52'38	-7°51'17
min. Earth dist.	916 Nov 27 j 19:43	9°♊51'12	44.77515 AU
direct	917 Feb 16 j 07:01	8°♊51'14	
evening set	917 May 13 j 17:05	10°♊02'57	
max. Earth dist.	917 May 26 j 09:03	10°♊20'48	46.67615 AU
conjunction	917 May 27 j 18:15	10°♊22'46	-7°22'58
minimum elong	917 May 27 j 18:24	10°♊22'47	7°22'58
morning rise	917 Jun 10 j 20:33	10°♊42'41	
retrograde	917 Sep 06 j 22:41	11°♊56'05	
opposition	917 Nov 27 j 20:52	10°♊54'41	-7°34'02
min. Earth dist.	917 Nov 29 j 02:32	10°♊53'13	44.60930 AU
direct	918 Feb 17 j 13:20	9°♊53'08	
evening set	918 May 14 j 21:01	11°♊04'55	
max. Earth dist.	918 May 27 j 16:10	11°♊23'01	46.51020 AU
conjunction	918 May 29 j 02:16	11°♊25'02	-7°06'15
minimum elong	918 May 29 j 02:26	11°♊25'03	7°06'16
morning rise	918 Jun 12 j 08:28	11°♊45'15	
retrograde	918 Sep 08 j 05:41	12°♊58'41	
opposition	918 Nov 29 j 03:23	11°♊57'11	-7°16'31
min. Earth dist.	918 Nov 30 j 10:43	11°♊55'38	44.44067 AU
direct	919 Feb 18 j 20:05	10°♊55'30	
evening set	919 May 16 j 01:10	12°♊07'22	
max. Earth dist.	919 May 28 j 23:37	12°♊25'43	46.34141 AU
conjunction	919 May 30 j 10:18	12°♊27'47	-6°49'16
minimum elong	919 May 30 j 10:27	12°♊27'48	6°49'16
morning rise	919 Jun 13 j 20:17	12°♊48'18	
retrograde	919 Sep 09 j 15:42	14°♊01'47	
opposition	919 Nov 30 j 09:55	13°♊00'11	-6°58'42
min. Earth dist.	919 Dec 01 j 17:27	12°♊58'37	44.26884 AU
direct	920 Feb 20 j 00:37	11°♊58'21	
evening set	920 May 16 j 05:57	13°♊10'21	
max. Earth dist.	920 May 29 j 05:40	13°♊28'51	46.16888 AU
conjunction	920 May 30 j 18:42	13°♊31'04	-6°32'02
minimum elong	920 May 30 j 18:51	13°♊31'04	6°32'02
morning rise	920 Jun 14 j 08:29	13°♊51'51	
retrograde	920 Sep 10 j 02:32	15°♊05'26	
opposition	920 Nov 30 j 16:38	14°♊03'42	-6°40'37
min. Earth dist.	920 Dec 02 j 02:27	14°♊02'01	44.09308 AU
direct	921 Feb 20 j 04:41	13°♊01'43	
evening set	921 May 17 j 11:00	14°♊13'52	
max. Earth dist.	921 May 30 j 13:54	14°♊32'36	45.99205 AU
conjunction	921 Jun 01 j 03:30	14°♊34'52	-6°14'32
minimum elong	921 Jun 01 j 03:39	14°♊34'52	6°14'31
morning rise	921 Jun 15 j 20:38	14°♊55'57	
retrograde	921 Sep 11 j 09:22	16°♊09'36	
opposition	921 Dec 01 j 23:37	15°♊07'44	-6°22'16
min. Earth dist.	921 Dec 03 j 10:16	15°♊06'01	43.91269 AU
direct	922 Feb 21 j 13:52	14°♊05'35	

evening set	922 May 18 j 16:27	15°♊17'53	
max. Earth dist.	922 May 31 j 20:13	15°♊36'45	45.81053 AU
conjunction	922 Jun 02 j 12:11	15°♊39'10	-5°56'46
minimum elong	922 Jun 02 j 12:19	15°♊39'10	5°56'46
morning rise	922 Jun 17 j 08:51	16°♊00'32	
retrograde	922 Sep 12 j 16:38	17°♊14'15	
opposition	922 Dec 03 j 06:44	16°♊12'16	-6°03'39
min. Earth dist.	922 Dec 04 j 18:38	16°♊10'28	43.72766 AU
direct	923 Feb 22 j 22:37	15°♊09'54	
evening set	923 May 19 j 22:05	16°♊22'22	
max. Earth dist.	923 Jun 02 j 04:02	16°♊41'26	45.62424 AU
conjunction	923 Jun 03 j 21:14	16°♊43'56	-5°38'45
minimum elong	923 Jun 03 j 21:22	16°♊43'56	5°38'45
morning rise	923 Jun 18 j 21:01	17°♊05'34	
retrograde	923 Sep 13 j 23:57	18°♊19'24	
opposition	923 Dec 04 j 14:03	17°♊17'14	-5°44'45
min. Earth dist.	923 Dec 06 j 03:54	17°♊15'20	43.53804 AU
direct	924 Feb 24 j 06:43	16°♊14'41	
evening set	924 May 20 j 04:04	17°♊27'17	
max. Earth dist.	924 Jun 02 j 12:01	17°♊46'33	45.43373 AU
conjunction	924 Jun 04 j 06:23	17°♊49'08	-5°20'29
minimum elong	924 Jun 04 j 06:30	17°♊49'08	5°20'29
morning rise	924 Jun 19 j 09:18	18°♊11'02	
retrograde	924 Sep 14 j 09:32	19°♊24'59	
opposition	924 Dec 04 j 21:25	18°♊22'39	-5°25'34
min. Earth dist.	924 Dec 06 j 11:33	18°♊20'43	43.34438 AU
direct	925 Feb 24 j 13:07	17°♊19'51	
evening set	925 May 21 j 10:30	18°♊32'39	
max. Earth dist.	925 Jun 03 j 19:10	18°♊52'02	45.23920 AU
conjunction	925 Jun 05 j 15:43	18°♊54'45	-5°01'57
minimum elong	925 Jun 05 j 15:51	18°♊54'46	5°01'57
morning rise	925 Jun 20 j 21:37	19°♊16'55	
retrograde	925 Sep 15 j 21:04	20°♊31'00	
opposition	925 Dec 06 j 05:00	19°♊28'28	-5°06'06
min. Earth dist.	925 Dec 07 j 21:10	19°♊26'26	43.14719 AU
direct	926 Feb 25 j 18:35	18°♊25'27	
evening set	926 May 22 j 17:07	19°♊38'27	
max. Earth dist.	926 Jun 05 j 04:44	19°♊58'05	45.04145 AU
conjunction	926 Jun 07 j 01:18	20°♊00'48	-4°43'09
minimum elong	926 Jun 07 j 01:24	20°♊00'49	4°43'08
morning rise	926 Jun 22 j 09:48	20°♊23'14	
retrograde	926 Sep 17 j 06:41	21°♊37'27	
opposition	926 Dec 07 j 12:48	20°♊34'43	-4°46'21
min. Earth dist.	926 Dec 09 j 05:18	20°♊32'40	42.94704 AU
direct	927 Feb 27 j 03:17	19°♊31'27	
evening set	927 May 24 j 00:02	20°♊44'41	
max. Earth dist.	927 Jun 06 j 12:14	21°♊04'27	44.84105 AU
conjunction	927 Jun 08 j 10:44	21°♊07'18	-4°24'04
minimum elong	927 Jun 08 j 10:50	21°♊07'19	4°24'04
morning rise	927 Jun 23 j 22:01	21°♊29'59	
retrograde	927 Sep 18 j 16:48	22°♊44'22	
opposition	927 Dec 08 j 20:48	21°♊41'26	-4°26'19
min. Earth dist.	927 Dec 10 j 14:14	21°♊39'20	42.74462 AU
direct	928 Feb 28 j 11:12	20°♊37'56	
evening set	928 May 24 j 07:23	21°♊51'24	
max. Earth dist.	928 Jun 06 j 21:41	22°♊11'22	44.63835 AU
conjunction	928 Jun 08 j 20:42	22°♊14'17	-4°04'43
minimum elong	928 Jun 08 j 20:48	22°♊14'17	4°04'43
morning rise	928 Jun 24 j 10:17	22°♊37'13	
retrograde	928 Sep 18 j 22:40	23°♊51'47	
opposition	928 Dec 09 j 04:59	22°♊48'40	-4°05'58
min. Earth dist.	928 Dec 10 j 23:38	22°♊46'29	42.54012 AU
direct	929 Feb 28 j 22:00	21°♊44'56	
evening set	929 May 25 j 15:15	22°♊58'40	
max. Earth dist.	929 Jun 08 j 07:06	23°♊18'50	44.43388 AU
conjunction	929 Jun 10 j 06:51	23°♊21'48	-3°45'06
minimum elong	929 Jun 10 j 06:57	23°♊21'48	3°45'06
morning rise	929 Jun 25 j 22:45	23°♊44'59	
retrograde	929 Sep 20 j 08:23	24°♊59'46	
opposition	929 Dec 10 j 13:24	23°♊56'28	-3°45'20
min. Earth dist.	929 Dec 12 j 07:59	23°♊54'16	42.33390 AU
direct	930 Mar 02 j 06:00	22°♊52'30	
evening set	930 May 26 j 23:25	24°♊06'33	
max. Earth dist.	930 Jun 09 j 15:42	24°♊26'50	44.22741 AU
conjunction	930 Jun 11 j 17:07	24°♊29'55	-3°25'11
minimum elong	930 Jun 11 j 17:12	24°♊29'55	3°25'11
morning rise	930 Jun 27 j 11:05	24°♊53'20	
retrograde	930 Sep 21 j 20:49	26°♊08'24	
opposition	930 Dec 11 j 22:08	25°♊04'54	-3°24'23
min. Earth dist.	930 Dec 13 j 18:34	25°♊02'37	42.12571 AU
direct	931 Mar 03 j 10:56	24°♊00'43	
evening set	931 May 28 j 08:00	25°♊15'06	
max. Earth dist.	931 Jun 11 j 02:23	25°♊35'37	44.01884 AU
conjunction	931 Jun 13 j 03:49	25°♊38'43	-3°05'01
minimum elong	931 Jun 13 j 03:54	25°♊38'43	3°05'02
morning rise	931 Jun 28 j 23:35	26°♊02'22	
retrograde	931 Sep 23 j 07:43	27°♊17'42	
opposition	931 Dec 13 j 06:58	26°♊14'02	-3°03'10
min. Earth dist.	931 Dec 15 j 03:37	26°♊11'43	41.91511 AU
direct	932 Mar 03 j 20:15	25°♊09'37	
evening set	932 May 28 j 17:18	26°♊24'23	
max. Earth dist.	932 Jun 11 j 11:03	26°♊44'58	43.80746 AU
conjunction	932 Jun 13 j 14:45	26°♊48'13	-2°44'34
minimum elong	932 Jun 13 j 14:49	26°♊48'14	2°44'33
morning rise	932 Jun 29 j 12:24	27°♊12'06	
retrograde	932 Sep 23 j 20:31	28°♊27'44	
opposition	932 Dec 13 j 16:11	27°♊23'53	-2°41'38
min. Earth dist.	932 Dec 15 j 14:22	27°♊21'29	41.70144 AU
direct	933 Mar 05 j 05:11	26°♊19'14	
evening set	933 May 30 j 03:02	27°♊34'24	
max. Earth dist.	933 Jun 12 j 21:47	27°♊55'09	43.59241 AU
conjunction	933 Jun 15 j 02:13	27°♊58'28	-2°23'51
minimum elong	933 Jun 15 j 02:17	27°♊58'28	2°23'51
morning rise	933 Jul 01 j 01:12	28°♊22'34	
retrograde	933 Sep 25 j 06:20	29°♊38'32	
opposition	933 Dec 15 j 01:43	28°♊34'28	-2°19'49
min. Earth dist.	933 Dec 17 j 01:28	28°♊31'59	41.48389 AU
direct	934 Mar 06 j 16:40	27°♊29'34	
evening set	934 May 31 j 13:21	28°♊45'08	
max. Earth dist.	934 Jun 14 j 07:46	29°♊05'58	43.37350 AU
conjunction	934 Jun 16 j 13:51	29°♊09'25	-2°02'52
minimum elong	934 Jun 16 j 13:55	29°♊09'26	2°02'51
morning rise	934 Jul 02 j 14:15	29°♊33'44	
	934 Jul 21 j 02:05	0°♋	
retrograde	934 Sep 26 j 17:06	0°♋50'02	
	934 Dec 05 j 01:29	30°℞♊	
opposition	934 Dec 16 j 11:30	29°♊45'46	-1°57'43
min. Earth dist.	934 Dec 18 j 11:46	29°♊43'14	41.26247 AU
direct	935 Mar 08 j 02:40	28°♊40'35	
evening set	935 Jun 01 j 23:58	29°♊56'35	
	935 Jun 04 j 06:43	0°♋	

max. Earth dist.	935 Jun 15 j 17:38	0°♋17'29	43.15046 AU	
conjunction	935 Jun 18 j 01:41	0°♋21'05	-1°41'37	
minimum elong	935 Jun 18 j 01:44	0°♋21'05	1°41'37	
morning rise	935 Jul 04 j 03:11	0°♋45'36		
retrograde	935 Sep 28 j 04:46	2°♋02'16		
opposition	935 Dec 17 j 21:42	0°♋57'45	-1°35'20	
min. Earth dist.	935 Dec 20 j 00:07	0°♋55'06	41.03708 AU	
	936 Feb 11 j 22:25	30°℞♊		
direct	936 Mar 08 j 11:25	29°♊52'17		
	936 Apr 02 j 21:23	0°♋		
evening set	936 Jun 02 j 11:12	1°♋08'43		
max. Earth dist.	936 Jun 16 j 05:35	1°♋29'47	42.92367 AU	
conjunction	936 Jun 18 j 14:01	1°♋33'25	-1°20'06	
minimum elong	936 Jun 18 j 14:04	1°♋33'26	1°20'06	
morning rise	936 Jul 04 j 16:22	1°♋58'08		
retrograde	936 Sep 28 j 18:00	3°♋15'12		
opposition	936 Dec 18 j 07:55	2°♋10'26	-1°12'40	
min. Earth dist.	936 Dec 20 j 10:40	2°♋07'45	40.80815 AU	
direct	937 Mar 09 j 20:48	1°♋04'39		
evening set	937 Jun 03 j 23:05	2°♋21'34		
max. Earth dist.	937 Jun 17 j 15:41	2°♋42'39	42.69346 AU	
conjunction	937 Jun 20 j 02:32	2°♋46'28	-0°58'20	
minimum elong	937 Jun 20 j 02:34	2°♋46'28	0°58'20	
morning rise	937 Jul 06 j 05:42	3°♋11'22		
retrograde	937 Sep 30 j 08:16	4°♋28'50		
opposition	937 Dec 19 j 18:34	3°♋23'48	-0°49'42	
min. Earth dist.	937 Dec 21 j 23:01	3°♋21'01	40.57629 AU	
direct	938 Mar 11 j 05:51	2°♋17'42		
evening set	938 Jun 05 j 11:08	3°♋35'09		
max. Earth dist.	938 Jun 19 j 04:14	3°♋56'22	42.46041 AU	
conjunction	938 Jun 21 j 15:18	4°♋00'14	-0°36'18	
minimum elong	938 Jun 21 j 15:19	4°♋00'14	0°36'17	
morning rise	938 Jul 07 j 18:45	4°♋25'18		
retrograde	938 Oct 01 j 19:19	5°♋43'12		
opposition	938 Dec 21 j 05:32	4°♋37'55	-0°26'27	
min. Earth dist.	938 Dec 23 j 10:43	4°♋35'04	40.34192 AU	
direct	939 Mar 12 j 19:02	3°♋31'30		
evening set	939 Jun 06 j 23:56	4°♋49'29		
max. Earth dist.	939 Jun 20 j 15:55	5°♋10'46	42.22528 AU	
conjunction	939 Jun 23 j 04:19	5°♋14'45	-0°14'01	
minimum elong	939 Jun 23 j 04:19	5°♋14'45	0°14'01	
behind sun begin	939 Jun 23 j 01:15	5°♋14'33		
behind sun end	939 Jun 23 j 07:23	5°♋14'56		
morning rise	939 Jul 09 j 08:09	5°♋39'59		
retrograde	939 Oct 03 j 07:34	6°♋58'22		
opposition	939 Dec 22 j 16:39	5°♋52'48	-0°02'55	
min. Earth dist.	939 Dec 24 j 22:12	5°♋49'56	40.10590 AU	
asc. node	940 Feb 05 j 21:47	5°♋01'42		
direct	940 Mar 13 j 07:13	4°♋46'04		
evening set	940 Jun 07 j 13:15	6°♋04'38		
max. Earth dist.	940 Jun 21 j 04:18	6°♋26'00	41.98841 AU	
conjunction	940 Jun 23 j 17:47	6°♋30'04	0°08'37	
minimum elong	940 Jun 23 j 17:47	6°♋30'04	0°08'38	
behind sun begin	940 Jun 23 j 12:08	6°♋29'43		
behind sun end	940 Jun 23 j 23:26	6°♋30'25		
morning rise	940 Jul 09 j 21:32	6°♋55'29		
retrograde	940 Oct 03 j 19:56	8°♋14'22		
opposition	940 Dec 23 j 04:21	7°♋08'33	0°20'53	
min. Earth dist.	940 Dec 25 j 11:29	7°♋05'34	39.86843 AU	
direct	941 Mar 14 j 17:42	6°♋01'30		
evening set	941 Jun 09 j 03:12	7°♋20'41		
max. Earth dist.	941 Jun 22 j 17:58	7°♋42'10	41.75036 AU	
conjunction	941 Jun 25 j 07:36	7°♋46'16	0°31'24	
minimum elong	941 Jun 25 j 07:35	7°♋46'16	0°31'24	
morning rise	941 Jul 11 j 11:04	8°♋11'50		
retrograde	941 Oct 05 j 09:55	9°♋31'17		
opposition	941 Dec 24 j 16:13	8°♋25'13	0°44'59	
min. Earth dist.	941 Dec 26 j 23:01	8°♋22'14	39.62994 AU	
direct	942 Mar 16 j 04:42	7°♋17'52		
evening set	942 Jun 10 j 17:51	8°♋37'43		
max. Earth dist.	942 Jun 24 j 06:13	8°♋59'12	41.51120 AU	
conjunction	942 Jun 26 j 21:43	9°♋03'27	0°54'27	
minimum elong	942 Jun 26 j 21:41	9°♋03'27	0°54'26	
morning rise	942 Jul 13 j 00:46	9°♋29'09		
retrograde	942 Oct 07 j 03:13	10°♋49'13		
opposition	942 Dec 26 j 04:37	9°♋42'53	1°09'21	
min. Earth dist.	942 Dec 28 j 12:55	9°♋39'49	39.39048 AU	
direct	943 Mar 17 j 13:59	8°♋35'14		
evening set	943 Jun 12 j 08:52	9°♋55'49		
max. Earth dist.	943 Jun 25 j 21:02	10°♋17'25	41.27079 AU	
conjunction	943 Jun 28 j 12:15	10°♋21'41	1°17'44	
minimum elong	943 Jun 28 j 12:12	10°♋21'40	1°17'45	
morning rise	943 Jul 14 j 14:24	10°♋47'30		
retrograde	943 Oct 08 j 19:01	12°♋08'13		
opposition	943 Dec 27 j 17:22	11°♋01'38	1°33'58	
min. Earth dist.	943 Dec 30 j 02:10	10°♋58'32	39.14949 AU	
direct	944 Mar 18 j 03:14	9°♋53'41		
evening set	944 Jun 13 j 01:00	11°♋15'02		
max. Earth dist.	944 Jun 26 j 10:10	11°♋36'36	41.02855 AU	
conjunction	944 Jun 29 j 03:16	11°♋41'01	1°41'17	
minimum elong	944 Jun 29 j 03:12	11°♋41'01	1°41'16	
morning rise	944 Jul 15 j 04:32	12°♋06'58		
retrograde	944 Oct 09 j 11:27	13°♋28'21		
opposition	944 Dec 28 j 06:23	12°♋21'31	1°58'52	
min. Earth dist.	944 Dec 30 j 16:12	12°♋18'20	38.90654 AU	
direct	945 Mar 19 j 15:42	11°♋13'14		
evening set	945 Jun 14 j 17:46	12°♋35'23		
max. Earth dist.	945 Jun 28 j 00:46	12°♋56'57	40.78372 AU	
conjunction	945 Jun 30 j 18:54	13°♋01'29	2°05'03	
minimum elong	945 Jun 30 j 18:50	13°♋01'29	2°05'03	
morning rise	945 Jul 16 j 18:40	13°♋27'32		
retrograde	945 Oct 11 j 00:30	14°♋49'38		
opposition	945 Dec 29 j 20:05	13°♋42'31	2°24'00	
min. Earth dist.	946 Jan 01 j 07:34	13°♋39'14	38.66085 AU	
direct	946 Mar 21 j 06:59	12°♋33'54		
evening set	946 Jun 16 j 11:11	13°♋56'52		
max. Earth dist.	946 Jun 29 j 15:43	14°♋18'26	40.53607 AU	
conjunction	946 Jul 02 j 10:42	14°♋23'04	2°29'02	
minimum elong	946 Jul 02 j 10:38	14°♋23'04	2°29'02	
morning rise	946 Jul 18 j 08:55	14°♋49'12		
retrograde	946 Oct 12 j 15:37	16°♋12'02		
opposition	946 Dec 31 j 10:06	15°♋04'37	2°49'24	
min. Earth dist.	947 Jan 02 j 21:46	15°♋01'18	38.41231 AU	
direct	947 Mar 22 j 20:38	13°♋55'39		
evening set	947 Jun 18 j 05:29	15°♋19'27		
max. Earth dist.	947 Jul 01 j 06:00	15°♋40'56	40.28535 AU	
conjunction	947 Jul 04 j 03:08	15°♋45'44	2°53'15	
minimum elong	947 Jul 04 j 03:02	15°♋45'43	2°53'15	
morning rise	947 Jul 19 j 23:25	16°♋11'56		
retrograde	947 Oct 14 j 08:22	17°♋35'32		
opposition	948 Jan 02 j 00:33	16°♋27'48	3°15'03	

min. Earth dist.	948 Jan 04 j 14:22	16°♋24'21	38.16096 AU	
direct	948 Mar 23 j 07:55	15°♋18'26		
evening set	948 Jun 19 j 00:27	16°♋43'08		
max. Earth dist.	948 Jul 01 j 22:45	17°♋04'36	40.03191 AU	
conjunction	948 Jul 04 j 20:06	17°♋09'27	3°17'40	
minimum elong	948 Jul 04 j 20:00	17°♋09'27	3°17'40	
morning rise	948 Jul 20 j 14:04	17°♋35'43		
retrograde	948 Oct 15 j 01:36	19°♋00'07		
opposition	949 Jan 02 j 15:26	17°♋52'02	3°40'55	
min. Earth dist.	949 Jan 05 j 05:28	17°♋48'33	37.90708 AU	
direct	949 Mar 24 j 23:18	16°♋42'16		
evening set	949 Jun 20 j 20:22	18°♋07'53		
max. Earth dist.	949 Jul 03 j 13:51	18°♋29'12	39.77610 AU	
conjunction	949 Jul 06 j 13:20	18°♋34'14	3°42'18	
minimum elong	949 Jul 06 j 13:13	18°♋34'14	3°42'18	
morning rise	949 Jul 22 j 04:51	19°♋00'31		
retrograde	949 Oct 16 j 21:50	20°♋25'45		
opposition	950 Jan 04 j 06:44	19°♋17'19	4°07'01	
min. Earth dist.	950 Jan 06 j 22:02	19°♋13'44	37.65136 AU	
direct	950 Mar 26 j 13:36	18°♋07'07		
evening set	950 Jun 22 j 16:51	19°♋33'43		
max. Earth dist.	950 Jul 05 j 07:34	19°♋55'00	39.51855 AU	
conjunction	950 Jul 08 j 07:09	20°♋00'05	4°07'06	
minimum elong	950 Jul 08 j 07:02	20°♋00'04	4°07'06	
morning rise	950 Jul 23 j 19:35	20°♋26'22		
retrograde	950 Oct 18 j 15:12	21°♋52'29		
opposition	951 Jan 05 j 22:35	20°♋43'40	4°33'19	
min. Earth dist.	951 Jan 08 j 14:44	20°♋40'01	37.39436 AU	
direct	951 Mar 28 j 06:19	19°♋33'02		
evening set	951 Jun 24 j 14:10	21°♋00'40		
max. Earth dist.	951 Jul 07 j 00:38	21°♋21'49	39.26013 AU	
conjunction	951 Jul 10 j 01:10	21°♋27'01	4°32'05	
minimum elong	951 Jul 10 j 01:02	21°♋27'00	4°32'06	
morning rise	951 Jul 25 j 10:31	21°♋53'16		
retrograde	951 Oct 20 j 09:05	23°♋20'19		
opposition	952 Jan 07 j 14:48	22°♋11'08	4°59'48	
min. Earth dist.	952 Jan 10 j 07:00	22°♋07'27	37.13691 AU	
direct	952 Mar 28 j 23:25	21°♋00'03		
evening set	952 Jun 25 j 12:25	22°♋28'46		
max. Earth dist.	952 Jul 07 j 18:21	22°♋49'46	39.00123 AU	
conjunction	952 Jul 10 j 19:56	22°♋55'05	4°57'13	
minimum elong	952 Jul 10 j 19:46	22°♋55'04	4°57'12	
morning rise	952 Jul 26 j 01:33	23°♋21'18		
retrograde	952 Oct 21 j 02:13	24°♋49'20		
opposition	953 Jan 08 j 07:35	23°♋39'47	5°26'28	
min. Earth dist.	953 Jan 11 j 01:09	23°♋35'59	36.87951 AU	
direct	953 Mar 30 j 15:34	22°♋28'16		
evening set	953 Jun 27 j 11:35	23°♋58'07		
max. Earth dist.	953 Jul 09 j 13:56	24°♋19'02	38.74271 AU	
conjunction	953 Jul 12 j 15:09	24°♋24'23	5°22'28	
minimum elong	953 Jul 12 j 14:59	24°♋24'22	5°22'29	
morning rise	953 Jul 27 j 16:44	24°♋50'32		
retrograde	953 Oct 22 j 20:59	26°♋19'37		
opposition	954 Jan 10 j 00:56	25°♋09'42	5°53'16	
min. Earth dist.	954 Jan 12 j 17:50	25°♋05'56	36.62276 AU	
direct	954 Apr 01 j 07:36	23°♋57'47		
evening set	954 Jun 29 j 11:35	25°♋28'49		
max. Earth dist.	954 Jul 11 j 08:04	25°♋49'31	38.48482 AU	
conjunction	954 Jul 14 j 10:42	25°♋55'00	5°47'51	
minimum elong	954 Jul 14 j 10:31	25°♋54'59	5°47'50	
morning rise	954 Jul 29 j 07:57	26°♋21'04		
retrograde	954 Oct 24 j 18:11	27°♋51'17		
opposition	955 Jan 11 j 18:52	26°♋41'01	6°20'12	
min. Earth dist.	955 Jan 14 j 12:59	26°♋37'09	36.36691 AU	
direct	955 Apr 02 j 22:45	25°♋28'41		
evening set	955 Jul 01 j 12:35	27°♋01'01		
max. Earth dist.	955 Jul 13 j 05:03	27°♋21'36	38.22766 AU	
conjunction	955 Jul 16 j 07:05	27°♋27'05	6°13'18	
minimum elong	955 Jul 16 j 06:53	27°♋27'04	6°13'18	
morning rise	955 Jul 30 j 23:24	27°♋53'02		
retrograde	955 Oct 26 j 15:40	29°♋24'26		
opposition	956 Jan 13 j 13:14	28°♋13'50	6°47'15	
min. Earth dist.	956 Jan 16 j 07:27	28°♋09'56	36.11168 AU	
direct	956 Apr 03 j 17:16	27°♋01'06		
evening set	956 Jul 02 j 14:52	28°♋34'48		
max. Earth dist.	956 Jul 14 j 00:29	28°♋55'05	37.97089 AU	
conjunction	956 Jul 17 j 04:00	29°♋00'44	6°38'51	
minimum elong	956 Jul 17 j 03:48	29°♋00'43	6°38'50	
morning rise	956 Jul 31 j 15:14	29°♋26'32		
	956 Aug 20 j 14:42	0°♌		
retrograde	956 Oct 27 j 15:47	0°♌59'11		
	957 Jan 06 j 00:26	30°℞♋		
opposition	957 Jan 14 j 08:16	29°♋48'14	7°14'22	
min. Earth dist.	957 Jan 17 j 03:03	29°♋44'18	35.85675 AU	
direct	957 Apr 05 j 11:37	28°♋35'06		
	957 Jun 28 j 21:44	0°♌		
evening set	957 Jul 04 j 18:03	0°♌10'15		
max. Earth dist.	957 Jul 15 j 21:54	0°♌30'16	37.71381 AU	
conjunction	957 Jul 19 j 01:41	0°♌36'00	7°04'27	
minimum elong	957 Jul 19 j 01:26	0°♌35'59	7°04'27	
morning rise	957 Aug 02 j 07:02	1°♌01'37		
retrograde	957 Oct 29 j 13:02	2°♌35'36		
opposition	958 Jan 16 j 04:05	1°♌24'18	7°41'35	
min. Earth dist.	958 Jan 19 j 00:05	1°♌20'15	35.60142 AU	
direct	958 Apr 07 j 07:19	0°♌10'45		
evening set	958 Jul 06 j 22:31	1°♌47'23		
max. Earth dist.	958 Jul 17 j 19:31	2°♌07'05	37.45631 AU	
conjunction	958 Jul 20 j 23:53	2°♌12'54	7°30'04	
minimum elong	958 Jul 20 j 23:39	2°♌12'53	7°30'04	
morning rise	958 Aug 03 j 23:10	2°♌38'19		
retrograde	958 Oct 31 j 11:24	4°♌13'39		
opposition	959 Jan 18 j 00:25	3°♌02'00	8°08'50	
min. Earth dist.	959 Jan 20 j 20:17	2°♌57'56	35.34569 AU	
direct	959 Apr 09 j 03:41	1°♌48'01		
evening set	959 Jul 09 j 03:56	3°♌26'12		
max. Earth dist.	959 Jul 19 j 16:55	3°♌45'29	37.19807 AU	
conjunction	959 Jul 22 j 22:46	3°♌51'28	7°55'43	
minimum elong	959 Jul 22 j 22:29	3°♌51'27	7°55'44	
morning rise	959 Aug 05 j 15:25	4°♌16'37		
retrograde	959 Nov 02 j 10:00	5°♌53'24		
opposition	960 Jan 19 j 21:35	4°♌41'21	8°36'06	
min. Earth dist.	960 Jan 22 j 19:07	4°♌37'10	35.08940 AU	
direct	960 Apr 09 j 21:58	3°♌26'55		
evening set	960 Jul 10 j 10:41	5°♌06'42		
max. Earth dist.	960 Jul 20 j 16:48	5°♌25'38	36.93939 AU	
conjunction	960 Jul 23 j 22:24	5°♌31'40	8°21'21	
minimum elong	960 Jul 23 j 22:07	5°♌31'39	8°21'21	
morning rise	960 Aug 06 j 07:49	5°♌56'30		
retrograde	960 Nov 03 j 09:11	7°♌34'47		
opposition	961 Jan 20 j 19:11	6°♌22'20	9°03'22	
min. Earth dist.	961 Jan 23 j 16:21	6°♌18'08	34.83290 AU	

direct	961 Apr 11 j 18:47	5°♌07'26	
evening set	961 Jul 12 j 18:38	6°♌48'53	
max. Earth dist.	961 Jul 22 j 15:20	7°♌07'18	36.68064 AU
conjunction	961 Jul 25 j 22:34	7°♌13'30	8°46'56
minimum elong	961 Jul 25 j 22:16	7°♌13'29	8°46'56
morning rise	961 Aug 08 j 00:25	7°♌37'59	
retrograde	961 Nov 05 j 11:01	9°♌17'50	
opposition	962 Jan 22 j 17:38	8°♌04'58	9°30'35
min. Earth dist.	962 Jan 25 j 15:56	8°♌00'40	34.57684 AU
direct	962 Apr 13 j 14:58	6°♌49'34	
evening set	962 Jul 15 j 03:29	8°♌32'46	
max. Earth dist.	962 Jul 24 j 16:52	8°♌50'47	36.42246 AU
conjunction	962 Jul 27 j 23:19	8°♌56'59	9°12'26
minimum elong	962 Jul 27 j 23:01	8°♌56'58	9°12'26
morning rise	962 Aug 09 j 16:46	9°♌21'03	
retrograde	962 Nov 07 j 12:42	11°♌02'32	
opposition	963 Jan 24 j 16:43	9°♌49'13	9°57'43
min. Earth dist.	963 Jan 27 j 15:05	9°♌44'54	34.32175 AU
direct	963 Apr 15 j 14:27	8°♌33'20	
evening set	963 Jul 17 j 13:52	10°♌18'22	
max. Earth dist.	963 Jul 26 j 17:15	10°♌35'46	36.16566 AU
conjunction	963 Jul 30 j 00:41	10°♌42'07	9°37'48
minimum elong	963 Jul 30 j 00:21	10°♌42'06	9°37'48
morning rise	963 Aug 11 j 09:29	11°♌05'44	
retrograde	963 Nov 09 j 16:08	12°♌48'55	
opposition	964 Jan 26 j 16:17	11°♌35'09	10°24'41
min. Earth dist.	964 Jan 29 j 14:38	11°♌30'49	34.06859 AU
direct	964 Apr 16 j 13:12	10°♌18'45	
evening set	964 Jul 19 j 01:27	12°♌05'42	
max. Earth dist.	964 Jul 27 j 19:50	12°♌22'34	35.91086 AU
conjunction	964 Jul 31 j 02:57	12°♌28'57	10°02'59
minimum elong	964 Jul 31 j 02:38	12°♌28'55	10°02'59
morning rise	964 Aug 12 j 02:10	12°♌52'03	
retrograde	964 Nov 10 j 18:25	14°♌37'00	
opposition	965 Jan 27 j 16:54	13°♌22'49	10°51'28
min. Earth dist.	965 Jan 30 j 15:46	13°♌18'24	33.81792 AU
direct	965 Apr 18 j 14:21	12°♌05'55	
evening set	965 Jul 21 j 14:28	13°♌54'52	
max. Earth dist.	965 Jul 29 j 22:58	14°♌11'06	35.65902 AU
conjunction	965 Aug 02 j 05:41	14°♌17'32	10°27'56
minimum elong	965 Aug 02 j 05:20	14°♌17'30	10°27'56
morning rise	965 Aug 13 j 18:50	14°♌40'02	
	965 Aug 24 j 07:29	15°♌	
retrograde	965 Nov 12 j 23:00	16°♌26'52	
opposition	966 Jan 29 j 18:07	15°♌12'15	11°18'00
min. Earth dist.	966 Feb 01 j 15:51	15°♌07'53	33.57060 AU
	966 Feb 06 j 22:14	15°℞♌	
direct	966 Apr 20 j 16:04	13°♌54'53	
	966 Jun 29 j 06:45	15°♌	
evening set	966 Jul 24 j 04:48	15°♌45'56	
max. Earth dist.	966 Aug 01 j 02:18	16°♌01'26	35.41059 AU
conjunction	966 Aug 04 j 09:17	16°♌07'56	10°52'36
minimum elong	966 Aug 04 j 08:56	16°♌07'55	10°52'36
morning rise	966 Aug 15 j 11:42	16°♌29'48	
retrograde	966 Nov 15 j 02:26	18°♌18'37	
opposition	967 Jan 31 j 20:12	17°♌03'36	11°44'14
min. Earth dist.	967 Feb 03 j 18:43	16°♌59'08	33.32705 AU
direct	967 Apr 22 j 15:21	15°♌45'45	
evening set	967 Jul 26 j 20:43	17°♌39'01	
max. Earth dist.	967 Aug 03 j 07:53	17°♌53'49	35.16606 AU

conjunction	967 Aug 06 j 13:37	18°♌00'18	11°16'55
minimum elong	967 Aug 06 j 13:15	18°♌00'16	11°16'55
morning rise	967 Aug 17 j 04:27	18°♌21'25	
retrograde	967 Nov 17 j 06:04	20°♌12'20	
opposition	968 Feb 02 j 23:02	18°♌56'55	12°10'05
min. Earth dist.	968 Feb 05 j 20:24	18°♌52'30	33.08724 AU
direct	968 Apr 23 j 17:45	17°♌38'37	
evening set	968 Jul 28 j 14:17	19°♌34'13	
max. Earth dist.	968 Aug 04 j 12:12	19°♌48'05	34.92505 AU
conjunction	968 Aug 07 j 18:47	19°♌54'41	11°40'52
minimum elong	968 Aug 07 j 18:25	19°♌54'39	11°40'52
morning rise	968 Aug 17 j 21:27	20°♌15'00	
retrograde	968 Nov 18 j 12:21	22°♌08'06	
opposition	969 Feb 04 j 02:41	20°♌52'18	12°35'32
min. Earth dist.	969 Feb 07 j 00:38	20°♌47'50	32.85100 AU
direct	969 Apr 25 j 17:47	19°♌33'34	
evening set	969 Jul 31 j 09:34	21°♌31'37	
max. Earth dist.	969 Aug 06 j 19:41	21°♌44'37	34.68733 AU
conjunction	969 Aug 10 j 00:53	21°♌51'10	12°04'23
minimum elong	969 Aug 10 j 00:30	21°♌51'08	12°04'23
morning rise	969 Aug 19 j 14:15	22°♌10'35	
retrograde	969 Nov 20 j 18:40	24°♌06'00	
opposition	970 Feb 06 j 07:23	22°♌49'48	13°00'31
min. Earth dist.	970 Feb 09 j 04:53	22°♌45'20	32.61784 AU
direct	970 Apr 27 j 21:01	21°♌30'37	
evening set	970 Aug 03 j 06:30	23°♌31'13	
max. Earth dist.	970 Aug 09 j 01:40	23°♌43'05	34.45261 AU
conjunction	970 Aug 12 j 07:30	23°♌49'45	12°27'25
minimum elong	970 Aug 12 j 07:08	23°♌49'43	12°27'25
morning rise	970 Aug 21 j 06:53	24°♌08'11	
retrograde	970 Nov 23 j 04:14	26°♌06'00	
opposition	971 Feb 08 j 12:51	24°♌49'25	13°24'59
min. Earth dist.	971 Feb 11 j 10:14	24°♌44'55	32.38768 AU
direct	971 Apr 30 j 01:11	23°♌29'46	
evening set	971 Aug 06 j 05:28	25°♌33'02	
max. Earth dist.	971 Aug 11 j 10:14	25°♌43'47	34.22066 AU
conjunction	971 Aug 14 j 15:18	25°♌50'27	12°49'55
minimum elong	971 Aug 14 j 14:54	25°♌50'25	12°49'55
morning rise	971 Aug 22 j 23:22	26°♌07'45	
retrograde	971 Nov 25 j 12:56	28°♌08'06	
opposition	972 Feb 10 j 19:12	26°♌51'06	13°48'52
min. Earth dist.	972 Feb 13 j 17:00	26°♌46'33	32.16030 AU
direct	972 May 01 j 07:49	25°♌31'00	
evening set	972 Aug 08 j 06:45	27°♌37'05	
max. Earth dist.	972 Aug 12 j 18:43	27°♌46'29	33.99177 AU
conjunction	972 Aug 15 j 23:48	27°♌53'14	13°11'50
minimum elong	972 Aug 15 j 23:25	27°♌53'12	13°11'50
morning rise	972 Aug 23 j 15:25	28°♌09'16	
	972 Oct 30 j 08:17	0°♍	
retrograde	972 Nov 26 j 23:45	0°♍12'17	
	972 Dec 24 j 21:53	30°℞♌	
opposition	973 Feb 12 j 02:25	28°♌54'51	14°12'07
min. Earth dist.	973 Feb 14 j 23:10	28°♌50'21	31.93611 AU
direct	973 May 03 j 15:15	27°♌34'17	
evening set	973 Aug 11 j 10:05	29°♌43'20	
max. Earth dist.	973 Aug 15 j 04:14	29°♌51'16	33.76611 AU
conjunction	973 Aug 18 j 09:04	29°♌58'03	13°33'06
minimum elong	973 Aug 18 j 08:40	29°♌58'01	13°33'05
	973 Aug 19 j 07:11	0°♍	
morning rise	973 Aug 25 j 06:37	0°♍12'39	
retrograde	973 Nov 29 j 09:01	2°♍18'30	

opposition	974 Feb 14 j 10:40	1°♍00'39	14°34'39
min. Earth dist.	974 Feb 17 j 08:01	0°♍56'04	31.71547 AU
	974 Mar 29 j 16:54	30°℞♌	
direct	974 May 05 j 21:52	29°♌39'37	
	974 Jun 11 j 10:24	0°♍	
evening set	974 Aug 14 j 16:26	1°♍51'49	
max. Earth dist.	974 Aug 17 j 15:33	1°♍58'09	33.54451 AU
conjunction	974 Aug 20 j 19:06	2°♍04'53	13°53'37
minimum elong	974 Aug 20 j 18:44	2°♍04'51	13°53'37
morning rise	974 Aug 26 j 20:33	2°♍17'51	
retrograde	974 Dec 01 j 20:15	4°♍26'42	
opposition	975 Feb 16 j 19:31	3°♍08'27	14°56'23
min. Earth dist.	975 Feb 19 j 15:22	3°♍03'56	31.49912 AU
direct	975 May 08 j 06:41	1°♍46'57	
evening set	975 Aug 18 j 02:08	4°♍02'35	
max. Earth dist.	975 Aug 20 j 02:15	4°♍06'55	33.32751 AU
conjunction	975 Aug 23 j 05:53	4°♍13'43	14°13'20
minimum elong	975 Aug 23 j 05:29	4°♍13'41	14°13'20
morning rise	975 Aug 28 j 08:31	4°♍24'45	
retrograde	975 Dec 04 j 07:27	6°♍36'56	
opposition	976 Feb 19 j 05:23	5°♍18'14	15°17'13
min. Earth dist.	976 Feb 22 j 01:29	5°♍13'41	31.28779 AU
direct	976 May 09 j 13:23	3°♍56'16	
evening set	976 Aug 20 j 17:25	6°♍15'48	
max. Earth dist.	976 Aug 21 j 16:00	6°♍17'51	33.11601 AU
conjunction	976 Aug 24 j 17:28	6°♍24'32	14°32'08
minimum elong	976 Aug 24 j 17:06	6°♍24'30	14°32'09
morning rise	976 Aug 28 j 16:35	6°♍33'11	
retrograde	976 Dec 05 j 18:14	8°♍49'06	
opposition	977 Feb 20 j 16:05	7°♍30'00	15°37'03
min. Earth dist.	977 Feb 23 j 10:28	7°♍25'32	31.08225 AU
direct	977 May 12 j 00:08	6°♍07'36	
evening set	977 Aug 24 j 19:35	8°♍32'00	
max. Earth dist.	977 Aug 24 j 04:25	8°♍30'36	32.91091 AU
conjunction	977 Aug 27 j 05:39	8°♍37'20	14°49'58
minimum elong	977 Aug 27 j 05:16	8°♍37'18	14°49'58
morning rise	977 Aug 29 j 14:55	8°♍42'35	
retrograde	977 Dec 08 j 07:39	11°♍03'16	
opposition	978 Feb 23 j 03:43	9°♍43'46	15°55'48
min. Earth dist.	978 Feb 25 j 21:11	9°♍39'21	30.88361 AU
direct	978 May 14 j 09:06	8°♍20'56	
max. Earth dist.	978 Aug 26 j 20:05	10°♍45'36	32.71308 AU
conjunction	978 Aug 29 j 18:35	10°♍52'08	15°06'42
minimum elong	978 Aug 29 j 18:15	10°♍52'06	15°06'42
retrograde	978 Dec 10 j 20:34	13°♍19'26	
opposition	979 Feb 25 j 16:17	11°♍59'34	16°13'21
min. Earth dist.	979 Feb 28 j 08:22	11°♍55'12	30.69226 AU
direct	979 May 16 j 20:06	10°♍36'21	
max. Earth dist.	979 Aug 29 j 10:34	13°♍02'29	32.52310 AU
conjunction	979 Sep 01 j 08:18	13°♍08'59	15°22'16
minimum elong	979 Sep 01 j 07:57	13°♍08'57	15°22'16
retrograde	979 Dec 13 j 12:47	15°♍37'38	
opposition	980 Feb 28 j 05:27	14°♍17'25	16°29'37
min. Earth dist.	980 Mar 01 j 19:50	14°♍13'10	30.50878 AU
direct	980 May 18 j 08:16	12°♍53'51	
max. Earth dist.	980 Aug 31 j 03:38	15°♍21'36	32.34098 AU
conjunction	980 Sep 02 j 22:58	15°♍27'56	15°36'36
minimum elong	980 Sep 02 j 22:40	15°♍27'54	15°36'36
retrograde	980 Dec 15 j 04:16	17°♍57'53	
opposition	981 Mar 01 j 19:49	16°♍37'22	16°44'32
min. Earth dist.	981 Mar 04 j 09:25	16°♍33'09	30.33293 AU
direct	981 May 20 j 22:23	15°♍13'30	
max. Earth dist.	981 Sep 02 j 20:08	17°♍42'41	32.16678 AU
conjunction	981 Sep 05 j 14:04	17°♍48'56	15°49'37
minimum elong	981 Sep 05 j 13:46	17°♍48'54	15°49'37
retrograde	981 Dec 17 j 21:53	20°♍20'11	
opposition	982 Mar 04 j 10:53	18°♍59'22	16°58'01
min. Earth dist.	982 Mar 06 j 22:08	18°♍55'17	30.16468 AU
direct	982 May 23 j 13:27	17°♍35'11	
max. Earth dist.	982 Sep 05 j 14:00	20°♍05'50	32.00007 AU
conjunction	982 Sep 08 j 06:09	20°♍11'58	16°01'16
minimum elong	982 Sep 08 j 05:53	20°♍11'56	16°01'16
retrograde	982 Dec 20 j 14:54	22°♍44'26	
opposition	983 Mar 07 j 02:51	21°♍23'19	17°10'00
min. Earth dist.	983 Mar 09 j 13:43	21°♍19'15	30.00373 AU
direct	983 May 26 j 03:40	19°♍58'52	
max. Earth dist.	983 Sep 08 j 08:45	22°♍30'54	31.84097 AU
conjunction	983 Sep 10 j 22:52	22°♍36'53	16°11'29
minimum elong	983 Sep 10 j 22:37	22°♍36'52	16°11'29
retrograde	983 Dec 23 j 10:22	25°♍10'30	
opposition	984 Mar 08 j 19:37	23°♍49'07	17°20'26
min. Earth dist.	984 Mar 11 j 04:01	23°♍45'13	29.84997 AU
direct	984 May 27 j 21:11	22°♍24'23	
max. Earth dist.	984 Sep 10 j 03:25	24°♍57'40	31.68923 AU
conjunction	984 Sep 12 j 16:15	25°♍03'35	16°20'12
minimum elong	984 Sep 12 j 16:03	25°♍03'33	16°20'11
retrograde	984 Dec 25 j 03:52	27°♍38'17	
opposition	985 Mar 11 j 13:16	26°♍16'37	17°29'13
min. Earth dist.	985 Mar 13 j 21:03	26°♍12'44	29.70357 AU
direct	985 May 30 j 12:47	24°♍51'37	
max. Earth dist.	985 Sep 13 j 00:10	27°♍26'12	31.54534 AU
conjunction	985 Sep 15 j 10:15	27°♍31'52	16°27'21
minimum elong	985 Sep 15 j 10:03	27°♍31'51	16°27'21
	985 Dec 07 j 05:53	0°♎	
retrograde	985 Dec 27 j 22:00	0°♎07'35	
	986 Jan 17 j 19:54	30°℞♍	
opposition	986 Mar 14 j 07:35	28°♍45'39	17°36'18
min. Earth dist.	986 Mar 16 j 12:48	28°♍41'55	29.56480 AU
direct	986 Jun 02 j 07:34	27°♍20'22	
max. Earth dist.	986 Sep 15 j 19:37	29°♍56'00	31.40957 AU
	986 Sep 17 j 12:13	0°♎	
conjunction	986 Sep 18 j 04:34	0°♎01'36	16°32'52
minimum elong	986 Sep 18 j 04:26	0°♎01'36	16°32'52
retrograde	986 Dec 30 j 17:33	2°♎38'14	
opposition	987 Mar 17 j 02:31	1°♎16'01	17°41'36
min. Earth dist.	987 Mar 19 j 06:21	1°♎12'24	29.43420 AU
	987 May 11 j 19:58	30°℞♍	
direct	987 Jun 05 j 00:12	29°♍50'30	
	987 Jun 28 j 20:17	0°♎	
max. Earth dist.	987 Sep 18 j 17:56	2°♎27'18	31.28250 AU
conjunction	987 Sep 20 j 23:33	2°♎32'37	16°36'42
minimum elong	987 Sep 20 j 23:25	2°♎32'36	16°36'42
retrograde	988 Jan 02 j 11:22	5°♎10'04	
opposition	988 Mar 18 j 21:59	3°♎47'36	17°45'03
min. Earth dist.	988 Mar 20 j 23:32	3°♎44'06	29.31219 AU
direct	988 Jun 06 j 19:37	2°♎21'50	
max. Earth dist.	988 Sep 20 j 14:41	4°♎59'32	31.16483 AU
conjunction	988 Sep 22 j 18:44	5°♎04'42	16°38'46
minimum elong	988 Sep 22 j 18:40	5°♎04'42	16°38'45

retrograde	989 Jan 04 j 06:55	7°♎42'55		
opposition	989 Mar 21 j 18:05	6°♎20'11	17°46'34	
min. Earth dist.	989 Mar 23 j 17:12	6°♎16'52	29.19982 AU	
direct	989 Jun 09 j 14:45	4°♎54'12		
max. Earth dist.	989 Sep 23 j 14:09	7°♎32'57	31.05738 AU	
conjunction	989 Sep 25 j 14:14	7°♎37'46	16°39'00	
minimum elong	989 Sep 25 j 14:11	7°♎37'45	16°39'01	
retrograde	990 Jan 07 j 01:27	10°♎16'38		
opposition	990 Mar 24 j 14:46	8°♎53'41	17°46'06	
min. Earth dist.	990 Mar 26 j 11:40	8°♎50'31	29.09770 AU	
direct	990 Jun 12 j 10:53	7°♎27'32		
max. Earth dist.	990 Sep 26 j 12:01	10°♎07'03	30.96108 AU	
conjunction	990 Sep 28 j 09:56	10°♎11'39	16°37'22	
minimum elong	990 Sep 28 j 09:56	10°♎11'39	16°37'22	
retrograde	991 Jan 09 j 22:33	12°♎51'06		
opposition	991 Mar 27 j 11:36	11°♎27'59	17°43'34	
min. Earth dist.	991 Mar 29 j 05:00	11°♎25'03	29.00679 AU	
direct	991 Jun 15 j 06:53	10°♎01'42		
max. Earth dist.	991 Sep 29 j 12:03	12°♎42'05	30.87644 AU	
conjunction	991 Oct 01 j 06:07	12°♎46'19	16°33'49	
minimum elong	991 Oct 01 j 06:09	12°♎46'19	16°33'50	
retrograde	992 Jan 12 j 17:59	15°♎26'16		
opposition	992 Mar 29 j 09:08	14°♎03'01	17°38'57	
min. Earth dist.	992 Mar 31 j 00:27	14°♎00'14	28.92732 AU	
direct	992 Jun 17 j 04:20	12°♎36'41		
max. Earth dist.	992 Oct 01 j 10:53	15°♎17'42	30.80386 AU	
conjunction	992 Oct 03 j 02:13	15°♎21'40	16°28'19	
minimum elong	992 Oct 03 j 02:17	15°♎21'41	16°28'19	
retrograde	993 Jan 14 j 15:50	18°♎02'03		
opposition	993 Apr 01 j 06:51	16°♎38'42	17°32'14	
min. Earth dist.	993 Apr 02 j 18:09	16°♎36'13	28.85950 AU	
direct	993 Jun 20 j 02:43	15°♎12'22		
max. Earth dist.	993 Oct 04 j 10:53	17°♎54'02	30.74307 AU	
conjunction	993 Oct 05 j 22:38	17°♎57'39	16°20'53	
minimum elong	993 Oct 05 j 22:45	17°♎57'40	16°20'54	
retrograde	994 Jan 17 j 12:18	20°♎38'22		
opposition	994 Apr 04 j 05:00	19°♎14'59	17°23'24	
min. Earth dist.	994 Apr 05 j 14:28	19°♎12'37	28.80311 AU	
direct	994 Jun 22 j 23:23	17°♎48'41		
max. Earth dist.	994 Oct 07 j 10:28	20°♎30'50	30.69396 AU	
conjunction	994 Oct 08 j 18:59	20°♎34'08	16°11'30	
minimum elong	994 Oct 08 j 19:08	20°♎34'09	16°11'30	
retrograde	995 Jan 20 j 10:43	23°♎15'05		
opposition	995 Apr 07 j 03:13	21°♎51'41	17°12'31	
min. Earth dist.	995 Apr 08 j 08:48	21°♎49'36	28.75770 AU	
direct	995 Jun 25 j 23:06	20°♎25'27		
max. Earth dist.	995 Oct 10 j 09:53	23°♎07'58	30.65583 AU	
conjunction	995 Oct 11 j 15:30	23°♎10'58	16°00'14	
minimum elong	995 Oct 11 j 15:41	23°♎10'59	16°00'14	
retrograde	996 Jan 23 j 07:51	25°♎52'03		
opposition	996 Apr 09 j 01:44	24°♎28'39	16°59'34	
min. Earth dist.	996 Apr 10 j 05:22	24°♎26'43	28.72298 AU	
direct	996 Jun 27 j 20:57	23°♎02'30		
max. Earth dist.	996 Oct 12 j 09:59	25°♎45'19	30.62865 AU	
conjunction	996 Oct 13 j 12:01	25°♎47'58	15°47'04	
minimum elong	996 Oct 13 j 12:14	25°♎47'59	15°47'04	
retrograde	997 Jan 25 j 04:38	28°♎29'03		
opposition	997 Apr 12 j 00:22	27°♎05'42	16°44'38	
min. Earth dist.	997 Apr 13 j 00:18	27°♎04'00	28.69864 AU	
direct	997 Jun 30 j 20:44	25°♎39'39		
max. Earth dist.	997 Oct 15 j 08:38	28°♎22'31	30.61201 AU	
conjunction	997 Oct 16 j 08:15	28°♎24'54	15°32'05	
minimum elong	997 Oct 16 j 08:31	28°♎24'56	15°32'06	
	997 Nov 27 j 00:32	0°♏		
retrograde	998 Jan 28 j 02:19	1°♏05'55		
	998 Apr 04 j 13:28	30°℞♎		
opposition	998 Apr 14 j 23:02	29°♎42'34	16°27'43	
min. Earth dist.	998 Apr 15 j 20:33	29°♎41'04	28.68467 AU	
direct	998 Jul 03 j 18:39	28°♎16'38		
	998 Sep 23 j 05:22	0°♏		
max. Earth dist.	998 Oct 18 j 08:52	0°♏59'36	30.60596 AU	
conjunction	998 Oct 19 j 04:33	1°♏01'35	15°15'19	
minimum elong	998 Oct 19 j 04:49	1°♏01'37	15°15'18	
retrograde	999 Jan 30 j 21:52	3°♏42'22		
opposition	999 Apr 17 j 21:26	2°♏19'05	16°08'54	
min. Earth dist.	999 Apr 18 j 15:51	2°♏17'47	28.68083 AU	
direct	999 Jul 06 j 18:23	0°♏53'17		
evening set	999 Oct 20 j 17:06	3°♏34'36		
max. Earth dist.	999 Oct 21 j 06:55	3°♏36'00	30.61039 AU	
conjunction	999 Oct 22 j 00:27	3°♏37'47	14°56'48	
minimum elong	999 Oct 22 j 00:46	3°♏37'49	14°56'48	
morning rise	999 Oct 23 j 08:28	3°♏41'01		
retrograde	1000 Feb 02 j 17:37	6°♏18'15		
opposition	1000 Apr 19 j 19:48	4°♏55'00	15°48'13	
min. Earth dist.	1000 Apr 20 j 11:07	4°♏53'56	28.68751 AU	
direct	1000 Jul 08 j 16:32	3°♏29'20		
evening set	1000 Oct 20 j 07:08	6°♏04'42		
conjunction	1000 Oct 23 j 20:01	6°♏13'17	14°36'35	
minimum elong	1000 Oct 23 j 20:21	6°♏13'18	14°36'35	
max. Earth dist.	1000 Oct 23 j 06:53	6°♏11'57	30.62561 AU	
morning rise	1000 Oct 27 j 09:25	6°♏21'54		
retrograde	1001 Feb 04 j 11:26	8°♏53'19		
opposition	1001 Apr 22 j 18:01	7°♏30'08	15°25'44	
min. Earth dist.	1001 Apr 23 j 06:31	7°♏29'15	28.70482 AU	
direct	1001 Jul 11 j 15:27	6°♏04'37		
evening set	1001 Oct 21 j 17:53	8°♏36'04		
conjunction	1001 Oct 26 j 15:03	8°♏47'52	14°14'44	
minimum elong	1001 Oct 26 j 15:24	8°♏47'55	14°14'45	
max. Earth dist.	1001 Oct 26 j 04:17	8°♏46'47	30.65201 AU	
morning rise	1001 Oct 31 j 12:45	8°♏59'43		
retrograde	1002 Feb 07 j 07:23	11°♏27'24		
opposition	1002 Apr 25 j 15:43	10°♏04'17	15°01'31	
min. Earth dist.	1002 Apr 26 j 00:12	10°♏03'41	28.73355 AU	
direct	1002 Jul 14 j 12:45	8°♏38'56		
evening set	1002 Oct 23 j 10:23	11°♏07'03		
conjunction	1002 Oct 29 j 09:43	11°♏21'26	13°51'19	
minimum elong	1002 Oct 29 j 10:04	11°♏21'28	13°51'18	
max. Earth dist.	1002 Oct 29 j 03:26	11°♏20'48	30.69011 AU	
morning rise	1002 Nov 04 j 09:22	11°♏35'51		
retrograde	1003 Feb 09 j 23:17	14°♏00'21		
opposition	1003 Apr 28 j 13:13	12°♏37'21	14°35'37	
min. Earth dist.	1003 Apr 28 j 19:05	12°♏36'56	28.77397 AU	
direct	1003 Jul 17 j 11:01	11°♏12'13		
evening set	1003 Oct 25 j 05:58	13°♏37'17		
conjunction	1003 Nov 01 j 03:45	13°♏53'51	13°26'23	
minimum elong	1003 Nov 01 j 04:08	13°♏53'53	13°26'23	
max. Earth dist.	1003 Nov 01 j 00:10	13°♏53'30	30.74033 AU	
morning rise	1003 Nov 08 j 01:54	14°♏10'27		
	1003 Nov 29 j 12:45	15°♏		

retrograde	1004 Feb 12 j 17:41	16°♏32'06	
opposition	1004 Apr 30 j 10:10	15°♏09'14	14°08'07
min. Earth dist.	1004 Apr 30 j 11:31	15°♏09'09	28.82653 AU
	1004 May 05 j 23:42	15°℞♏	
direct	1004 Jul 19 j 08:25	13°♏44'21	
	1004 Sep 26 j 08:24	15°♏	
evening set	1004 Oct 26 j 03:21	16°♏06'35	
conjunction	1004 Nov 02 j 21:26	16°♏25'05	13°00'01
minimum elong	1004 Nov 02 j 21:49	16°♏25'07	13°00'01
max. Earth dist.	1004 Nov 02 j 22:09	16°♏25'09	30.80279 AU
morning rise	1004 Nov 10 j 15:42	16°♏43'37	
retrograde	1005 Feb 14 j 10:07	19°♏02'37	
opposition	1005 May 03 j 06:54	17°♏39'56	13°39'08
min. Earth dist.	1005 May 03 j 05:45	17°♏40'01	28.89124 AU
direct	1005 Jul 22 j 03:48	16°♏15'21	
evening set	1005 Oct 28 j 02:03	18°♏34'52	
conjunction	1005 Nov 05 j 14:23	18°♏55'05	12°32'19
minimum elong	1005 Nov 05 j 14:47	18°♏55'07	12°32'19
max. Earth dist.	1005 Nov 05 j 18:14	18°♏55'28	30.87738 AU
morning rise	1005 Nov 14 j 02:54	19°♏15'20	
retrograde	1006 Feb 17 j 03:45	21°♏31'50	
opposition	1006 May 06 j 02:58	20°♏09'22	13°08'46
min. Earth dist.	1006 May 05 j 21:24	20°♏09'45	28.96764 AU
direct	1006 Jul 25 j 02:04	18°♏45'07	
evening set	1006 Oct 30 j 01:41	21°♏02'03	
conjunction	1006 Nov 08 j 06:57	21°♏23'49	12°03'24
minimum elong	1006 Nov 08 j 07:20	21°♏23'51	12°03'24
max. Earth dist.	1006 Nov 08 j 14:17	21°♏24'32	30.96328 AU
morning rise	1006 Nov 17 j 12:18	21°♏45'37	
retrograde	1007 Feb 19 j 20:20	23°♏59'43	
opposition	1007 May 08 j 22:30	22°♏37'30	12°37'07
min. Earth dist.	1007 May 08 j 14:34	22°♏38'02	29.05516 AU
direct	1007 Jul 27 j 21:21	21°♏13'35	
evening set	1007 Nov 01 j 02:14	23°♏28'03	
conjunction	1007 Nov 10 j 22:56	23°♏51'12	11°33'21
minimum elong	1007 Nov 10 j 23:21	23°♏51'15	11°33'22
max. Earth dist.	1007 Nov 11 j 09:35	23°♏52'15	31.06002 AU
morning rise	1007 Nov 20 j 19:38	24°♏14'24	
retrograde	1008 Feb 22 j 12:25	26°♏26'13	
opposition	1008 May 10 j 17:36	25°♏04'15	12°04'21
min. Earth dist.	1008 May 10 j 05:58	25°♏05'03	29.15299 AU
direct	1008 Jul 29 j 18:09	23°♏40'43	
evening set	1008 Nov 02 j 03:11	25°♏52'46	
conjunction	1008 Nov 12 j 14:11	26°♏17'11	11°02'19
minimum elong	1008 Nov 12 j 14:34	26°♏17'13	11°02'19
max. Earth dist.	1008 Nov 13 j 03:26	26°♏18'28	31.16662 AU
morning rise	1008 Nov 23 j 01:15	26°♏41'37	
retrograde	1009 Feb 24 j 04:45	28°♏51'15	
opposition	1009 May 13 j 12:16	27°♏29'33	11°30'33
min. Earth dist.	1009 May 12 j 21:59	27°♏30'31	29.26062 AU
direct	1009 Aug 01 j 12:52	26°♏06'23	
evening set	1009 Nov 04 j 04:44	28°♏16'07	
conjunction	1009 Nov 15 j 05:01	28°♏41'40	10°30'22
minimum elong	1009 Nov 15 j 05:25	28°♏41'42	10°30'23
max. Earth dist.	1009 Nov 15 j 21:51	28°♏43'18	31.28260 AU
morning rise	1009 Nov 26 j 05:08	29°♏07'12	
	1009 Dec 20 j 11:14	0°♐	
retrograde	1010 Feb 26 j 19:26	1°♐14'44	
	1010 May 12 j 02:37	30°℞♏	
opposition	1010 May 16 j 06:07	29°♏53'18	10°55'51
min. Earth dist.	1010 May 15 j 13:05	29°♏54'27	29.37720 AU
direct	1010 Aug 04 j 09:25	28°♏30'31	
	1010 Oct 20 j 00:15	0°♐	
evening set	1010 Nov 06 j 06:41	0°♐38'00	
conjunction	1010 Nov 17 j 19:03	1°♐04'33	9°57'39
minimum elong	1010 Nov 17 j 19:25	1°♐04'35	9°57'39
max. Earth dist.	1010 Nov 18 j 13:41	1°♐06'20	31.40717 AU
morning rise	1010 Nov 29 j 07:30	1°♐31'05	
retrograde	1011 Mar 01 j 09:50	3°♐36'35	
opposition	1011 May 18 j 23:25	2°♐15'25	10°20'22
min. Earth dist.	1011 May 18 j 03:15	2°♐16'46	29.50235 AU
direct	1011 Aug 07 j 02:42	0°♐53'00	
evening set	1011 Nov 08 j 08:48	2°♐58'19	
conjunction	1011 Nov 20 j 08:32	3°♐25'45	9°24'14
minimum elong	1011 Nov 20 j 08:55	3°♐25'47	9°24'14
max. Earth dist.	1011 Nov 21 j 06:50	3°♐27'53	31.53990 AU
morning rise	1011 Dec 02 j 08:02	3°♐53'10	
retrograde	1012 Mar 02 j 21:14	5°♐56'41	
opposition	1012 May 20 j 16:05	4°♐35'48	9°44'13
min. Earth dist.	1012 May 19 j 17:53	4°♐37'17	29.63548 AU
direct	1012 Aug 08 j 21:28	3°♐13'46	
evening set	1012 Nov 09 j 11:16	5°♐16'58	
conjunction	1012 Nov 21 j 21:10	5°♐45'10	8°50'13
minimum elong	1012 Nov 21 j 21:30	5°♐45'12	8°50'13
max. Earth dist.	1012 Nov 22 j 20:57	5°♐47'26	31.68052 AU
morning rise	1012 Dec 04 j 07:07	6°♐13'22	
retrograde	1013 Mar 05 j 10:28	8°♐14'59	
min. Earth dist.	1013 May 22 j 06:09	6°♐56'05	29.77673 AU
opposition	1013 May 23 j 07:57	6°♐54'22	9°07'29
direct	1013 Aug 11 j 13:46	5°♐32'41	
evening set	1013 Nov 11 j 13:33	7°♐33'52	
conjunction	1013 Nov 24 j 09:05	8°♐02'44	8°15'42
minimum elong	1013 Nov 24 j 09:25	8°♐02'46	8°15'42
max. Earth dist.	1013 Nov 25 j 12:31	8°♐05'20	31.82902 AU
morning rise	1013 Dec 07 j 04:24	8°♐31'37	
retrograde	1014 Mar 07 j 20:00	10°♐31'25	
opposition	1014 May 25 j 23:09	9°♐11'04	8°30'16
min. Earth dist.	1014 May 24 j 19:45	9°♐12'52	29.92607 AU
direct	1014 Aug 14 j 05:49	7°♐49'44	
evening set	1014 Nov 13 j 16:07	9°♐48'57	
conjunction	1014 Nov 26 j 20:09	10°♐18'24	7°40'47
minimum elong	1014 Nov 26 j 20:27	10°♐18'26	7°40'46
max. Earth dist.	1014 Nov 28 j 01:27	10°♐21'09	31.98565 AU
morning rise	1014 Dec 10 j 00:10	10°♐47'52	
retrograde	1015 Mar 10 j 06:20	12°♐45'54	
min. Earth dist.	1015 May 27 j 06:04	11°♐27'53	30.08387 AU
opposition	1015 May 28 j 13:17	11°♐25'50	7°52'40
direct	1015 Aug 16 j 20:57	10°♐04'53	
evening set	1015 Nov 15 j 18:39	12°♐02'13	
conjunction	1015 Nov 29 j 06:32	12°♐32'10	7°05'31
minimum elong	1015 Nov 29 j 06:50	12°♐32'12	7°05'30
max. Earth dist.	1015 Nov 30 j 15:14	12°♐35'13	32.15063 AU
morning rise	1015 Dec 12 j 18:22	13°♐02'08	
retrograde	1016 Mar 11 j 15:42	14°♐58'31	
min. Earth dist.	1016 May 28 j 17:50	13°♐40'54	30.25047 AU
opposition	1016 May 30 j 03:02	13°♐38'44	7°14'45
direct	1016 Aug 18 j 09:22	12°♐18'10	
evening set	1016 Nov 16 j 21:07	14°♐13'43	
conjunction	1016 Nov 30 j 16:03	14°♐44'05	6°29'59
minimum elong	1016 Nov 30 j 16:19	14°♐44'06	6°29'59
max. Earth dist.	1016 Dec 02 j 03:16	14°♐47'20	32.32432 AU

morning rise	1016 Dec 14 j 10:54	15°♐14'27	
retrograde	1017 Mar 14 j 01:13	17°♐09'16	
min. Earth dist.	1017 May 31 j 03:03	15°♐52'11	30.42577 AU
opposition	1017 Jun 01 j 15:50	15°♐49'48	6°36'39
direct	1017 Aug 20 j 23:23	14°♐29'39	
evening set	1017 Nov 18 j 23:44	16°♐23'30	
conjunction	1017 Dec 03 j 00:55	16°♐54'12	5°54'18
minimum elong	1017 Dec 03 j 01:10	16°♐54'14	5°54'18
max. Earth dist.	1017 Dec 04 j 14:36	16°♐57'40	32.50632 AU
morning rise	1017 Dec 17 j 02:13	17°♐24'55	
retrograde	1018 Mar 16 j 11:18	19°♐18'14	
min. Earth dist.	1018 Jun 02 j 12:49	18°♐01'37	30.60958 AU
opposition	1018 Jun 04 j 03:50	17°♐59'06	5°58'24
direct	1018 Aug 23 j 11:22	16°♐39'23	
evening set	1018 Nov 21 j 02:15	18°♐31'38	
conjunction	1018 Dec 05 j 09:10	19°♐02'36	5°18'30
minimum elong	1018 Dec 05 j 09:22	19°♐02'37	5°18'31
max. Earth dist.	1018 Dec 07 j 01:47	19°♐06'18	32.69631 AU
morning rise	1018 Dec 19 j 15:58	19°♐33'34	
retrograde	1019 Mar 18 j 19:56	21°♐25'28	
min. Earth dist.	1019 Jun 04 j 21:40	20°♐09'20	30.80100 AU
opposition	1019 Jun 06 j 15:09	20°♐06'41	5°20'08
direct	1019 Aug 26 j 00:34	18°♐47'25	
evening set	1019 Nov 23 j 04:50	20°♐38'09	
conjunction	1019 Dec 07 j 16:28	21°♐09'18	4°42'43
minimum elong	1019 Dec 07 j 16:40	21°♐09'19	4°42'43
max. Earth dist.	1019 Dec 09 j 10:43	21°♐13'06	32.89332 AU
morning rise	1019 Dec 22 j 04:23	21°♐40'28	
retrograde	1020 Mar 20 j 04:07	23°♐31'01	
min. Earth dist.	1020 Jun 06 j 05:33	22°♐15'25	30.99951 AU
opposition	1020 Jun 08 j 01:49	22°♐12'36	4°41'55
direct	1020 Aug 27 j 10:32	20°♐53'46	
evening set	1020 Nov 24 j 07:21	22°♐43'03	
conjunction	1020 Dec 08 j 23:22	23°♐14'20	4°06'58
minimum elong	1020 Dec 08 j 23:32	23°♐14'20	4°06'59
max. Earth dist.	1020 Dec 10 j 20:47	23°♐18'23	33.09673 AU
morning rise	1020 Dec 23 j 15:24	23°♐45'37	
retrograde	1021 Mar 22 j 09:45	25°♐34'54	
min. Earth dist.	1021 Jun 08 j 14:07	24°♐19'44	31.20413 AU
opposition	1021 Jun 10 j 11:46	24°♐16'50	4°03'50
direct	1021 Aug 29 j 23:20	22°♐58'27	
evening set	1021 Nov 26 j 09:57	24°♐46'21	
conjunction	1021 Dec 11 j 05:26	25°♐17'41	3°31'22
minimum elong	1021 Dec 11 j 05:34	25°♐17'42	3°31'22
max. Earth dist.	1021 Dec 13 j 03:41	25°♐21'48	33.30563 AU
morning rise	1021 Dec 26 j 01:17	25°♐49'03	
retrograde	1022 Mar 24 j 17:04	27°♐37'06	
min. Earth dist.	1022 Jun 10 j 20:23	26°♐22'27	31.41411 AU
opposition	1022 Jun 12 j 20:55	26°♐19'24	3°25'57
direct	1022 Sep 01 j 09:28	25°♐01'27	
evening set	1022 Nov 28 j 12:30	26°♐48'01	
conjunction	1022 Dec 13 j 11:02	27°♐19'22	2°55'58
minimum elong	1022 Dec 13 j 11:09	27°♐19'22	2°55'57
max. Earth dist.	1022 Dec 15 j 11:56	27°♐23'40	33.51913 AU
morning rise	1022 Dec 28 j 09:47	27°♐50'44	
retrograde	1023 Mar 26 j 20:17	29°♐37'38	
min. Earth dist.	1023 Jun 13 j 04:15	28°♐23'21	31.62858 AU
opposition	1023 Jun 15 j 05:24	28°♐20'16	2°48'20
direct	1023 Sep 03 j 19:01	27°♐02'44	
evening set	1023 Nov 30 j 15:06	28°♐48'02	
conjunction	1023 Dec 15 j 15:58	29°♐19'19	2°20'48
minimum elong	1023 Dec 15 j 16:03	29°♐19'20	2°20'48
max. Earth dist.	1023 Dec 17 j 17:44	29°♐23'41	33.73671 AU
morning rise	1023 Dec 30 j 17:12	29°♐50'40	
	1024 Jan 04 j 07:58	0°♑	
retrograde	1024 Mar 28 j 00:01	1°♑36'27	
min. Earth dist.	1024 Jun 14 j 09:21	0°♑22'38	31.84702 AU
opposition	1024 Jun 16 j 13:11	0°♑19'25	2°11'02
	1024 Jun 29 j 16:27	30°℞♐	
direct	1024 Sep 05 j 03:35	29°♐02'16	
	1024 Nov 07 j 04:14	0°♑	
evening set	1024 Dec 01 j 17:26	0°♑46'20	
conjunction	1024 Dec 16 j 20:06	1°♑17'32	1°45'56
minimum elong	1024 Dec 16 j 20:10	1°♑17'32	1°45'56
max. Earth dist.	1024 Dec 18 j 23:51	1°♑22'02	33.95773 AU
morning rise	1024 Dec 31 j 23:15	1°♑48'46	
retrograde	1025 Mar 30 j 03:41	3°♑33'31	
min. Earth dist.	1025 Jun 16 j 15:39	2°♑20'02	32.06914 AU
opposition	1025 Jun 18 j 20:22	2°♑16'47	1°34'06
direct	1025 Sep 07 j 09:40	1°♑00'00	
evening set	1025 Dec 03 j 19:40	2°♑42'54	
conjunction	1025 Dec 18 j 23:44	3°♑13'57	1°11'25
minimum elong	1025 Dec 18 j 23:46	3°♑13'58	1°11'25
max. Earth dist.	1025 Dec 21 j 04:59	3°♑18'33	34.18221 AU
morning rise	1026 Jan 03 j 04:10	3°♑45'03	
retrograde	1026 Apr 01 j 06:26	5°♑28'47	
min. Earth dist.	1026 Jun 18 j 19:50	4°♑15'42	32.29478 AU
opposition	1026 Jun 21 j 02:29	4°♑12'20	0°57'35
direct	1026 Sep 09 j 17:19	2°♑55'55	
evening set	1026 Dec 05 j 21:49	4°♑37'43	
conjunction	1026 Dec 21 j 02:29	5°♑08'35	0°37'16
minimum elong	1026 Dec 21 j 02:30	5°♑08'35	0°37'16
max. Earth dist.	1026 Dec 23 j 08:50	5°♑13'13	34.41010 AU
morning rise	1027 Jan 05 j 07:53	5°♑39'30	
retrograde	1027 Apr 03 j 10:35	7°♑22'16	
min. Earth dist.	1027 Jun 20 j 23:46	6°♑09'33	32.52445 AU
opposition	1027 Jun 23 j 08:07	6°♑06'06	0°21'32
direct	1027 Sep 11 j 22:32	4°♑50'02	
evening set	1027 Dec 07 j 23:31	6°♑30'47	
conjunction	1027 Dec 23 j 04:35	7°♑01'25	0°03'37
minimum elong	1027 Dec 23 j 04:35	7°♑01'25	0°03'37
behind sun begin	1027 Dec 22 j 22:16	7°♑00'55	
behind sun end	1027 Dec 23 j 10:53	7°♑01'56	
max. Earth dist.	1027 Dec 25 j 13:30	7°♑06'14	34.64196 AU
morning rise	1028 Jan 07 j 10:06	7°♑32'06	
desc. node	1028 Jan 31 j 00:20	8°♑15'43	
retrograde	1028 Apr 04 j 12:15	9°♑13'59	
min. Earth dist.	1028 Jun 22 j 03:24	8°♑01'37	32.75832 AU
opposition	1028 Jun 24 j 13:03	7°♑58'07	-0°14'02
direct	1028 Sep 13 j 05:17	6°♑42'24	
evening set	1028 Dec 09 j 01:21	8°♑22'12	
conjunction	1028 Dec 24 j 06:00	8°♑52'34	-0°29'45
minimum elong	1028 Dec 24 j 05:59	8°♑52'34	0°29'45
max. Earth dist.	1028 Dec 26 j 15:41	8°♑57'24	34.87807 AU
morning rise	1029 Jan 08 j 11:31	9°♑23'00	
retrograde	1029 Apr 06 j 14:36	11°♑04'03	
min. Earth dist.	1029 Jun 24 j 04:51	9°♑52'08	32.99687 AU
opposition	1029 Jun 26 j 17:12	9°♑48'29	-0°49'04
direct	1029 Sep 15 j 09:05	8°♑33'08	
evening set	1029 Dec 11 j 02:50	10°♑12'02	
conjunction	1029 Dec 26 j 06:55	10°♑42'07	-1°02'31

minimum elong	1029 Dec 26 j 06:53	10°♑42'07	1°02'31
max. Earth dist.	1029 Dec 28 j 19:17	10°♑47'08	35.11852 AU
morning rise	1030 Jan 10 j 11:40	11°♑12'15	
retrograde	1030 Apr 08 j 13:13	12°♑52'32	
min. Earth dist.	1030 Jun 26 j 07:46	11°♑40'58	33.23973 AU
opposition	1030 Jun 28 j 20:46	11°♑37'18	-1°23'33
direct	1030 Sep 17 j 14:59	10°♑22'22	
evening set	1030 Dec 13 j 04:18	12°♑00'25	
conjunction	1030 Dec 28 j 07:09	12°♑30'10	-1°34'47
minimum elong	1030 Dec 28 j 07:06	12°♑30'10	1°34'47
max. Earth dist.	1030 Dec 30 j 20:08	12°♑35'13	35.36301 AU
morning rise	1031 Jan 12 j 10:53	12°♑59'59	
retrograde	1031 Apr 10 j 13:03	14°♑39'34	
min. Earth dist.	1031 Jun 28 j 07:58	13°♑28'29	33.48654 AU
opposition	1031 Jun 30 j 23:31	13°♑24'41	-1°57'26
direct	1031 Sep 19 j 18:40	12°♑10'09	
evening set	1031 Dec 15 j 05:38	13°♑47'26	
conjunction	1031 Dec 30 j 06:54	14°♑16'50	-2°06'30
minimum elong	1031 Dec 30 j 06:50	14°♑16'50	2°06'30
max. Earth dist.	1032 Jan 01 j 21:56	14°♑22'01	35.61096 AU
morning rise	1032 Jan 14 j 09:07	14°♑46'19	
retrograde	1032 Apr 11 j 12:26	16°♑25'16	
min. Earth dist.	1032 Jun 29 j 09:50	15°♑14'32	33.73683 AU
opposition	1032 Jul 02 j 01:58	15°♑10'43	-2°30'42
direct	1032 Sep 20 j 20:33	13°♑56'36	
evening set	1032 Dec 16 j 06:41	15°♑33'10	
conjunction	1032 Dec 31 j 06:05	16°♑02'11	-2°37'40
minimum elong	1032 Dec 31 j 06:00	16°♑02'11	2°37'41
max. Earth dist.	1033 Jan 02 j 22:21	16°♑07'26	35.86190 AU
morning rise	1033 Jan 15 j 06:19	16°♑31'17	
retrograde	1033 Apr 13 j 11:42	18°♑09'39	
min. Earth dist.	1033 Jul 01 j 09:47	16°♑59'22	33.98967 AU
opposition	1033 Jul 04 j 03:38	16°♑55'28	-3°03'20
direct	1033 Sep 22 j 22:33	15°♑41'45	
evening set	1033 Dec 18 j 07:55	17°♑17'40	
conjunction	1034 Jan 02 j 04:48	17°♑46'17	-3°08'15
minimum elong	1034 Jan 02 j 04:41	17°♑46'16	3°08'15
max. Earth dist.	1034 Jan 04 j 21:46	17°♑51'32	36.11478 AU
morning rise	1034 Jan 17 j 02:50	18°♑14'58	
retrograde	1034 Apr 15 j 13:10	19°♑52'48	
min. Earth dist.	1034 Jul 03 j 09:54	18°♑42'53	34.24447 AU
opposition	1034 Jul 06 j 04:40	18°♑38'58	-3°35'20
direct	1034 Sep 24 j 21:01	17°♑25'39	
evening set	1034 Dec 20 j 08:52	19°♑00'57	
conjunction	1035 Jan 04 j 03:10	19°♑29'08	-3°38'15
minimum elong	1035 Jan 04 j 03:03	19°♑29'08	3°38'16
max. Earth dist.	1035 Jan 06 j 21:44	19°♑34'29	36.36905 AU
morning rise	1035 Jan 18 j 22:19	19°♑57'24	
retrograde	1035 Apr 17 j 11:10	21°♑34'44	
min. Earth dist.	1035 Jul 05 j 10:11	20°♑25'09	34.50022 AU
opposition	1035 Jul 08 j 05:16	20°♑21'14	-4°06'40
direct	1035 Sep 26 j 22:05	19°♑08'18	
evening set	1035 Dec 22 j 09:47	20°♑43'01	
conjunction	1036 Jan 06 j 00:49	21°♑10'46	-4°07'39
minimum elong	1036 Jan 06 j 00:40	21°♑10'45	4°07'38
max. Earth dist.	1036 Jan 08 j 19:09	21°♑16'02	36.62383 AU
morning rise	1036 Jan 20 j 17:03	21°♑38'35	
retrograde	1036 Apr 18 j 10:14	23°♑15'25	
min. Earth dist.	1036 Jul 06 j 08:42	22°♑06'14	34.75646 AU
opposition	1036 Jul 09 j 05:23	22°♑02'15	-4°37'20
direct	1036 Sep 27 j 22:16	20°♑49'41	
evening set	1036 Dec 23 j 10:32	22°♑23'51	
conjunction	1037 Jan 06 j 22:14	22°♑51'08	-4°36'26
minimum elong	1037 Jan 06 j 22:06	22°♑51'07	4°36'26
max. Earth dist.	1037 Jan 09 j 18:16	22°♑56'30	36.87865 AU
morning rise	1037 Jan 21 j 10:58	23°♑18'29	
retrograde	1037 Apr 20 j 05:56	24°♑54'52	
min. Earth dist.	1037 Jul 08 j 08:36	23°♑45'56	35.01261 AU
opposition	1037 Jul 11 j 04:53	23°♑41'59	-5°07'20
direct	1037 Sep 30 j 00:19	22°♑29'46	
evening set	1037 Dec 25 j 11:08	24°♑03'25	
conjunction	1038 Jan 08 j 19:03	24°♑30'12	-5°04'37
minimum elong	1038 Jan 08 j 18:54	24°♑30'11	5°04'36
max. Earth dist.	1038 Jan 11 j 14:46	24°♑35'31	37.13328 AU
morning rise	1038 Jan 23 j 04:06	24°♑57'04	
retrograde	1038 Apr 22 j 02:08	26°♑33'01	
min. Earth dist.	1038 Jul 10 j 05:49	25°♑24'27	35.26860 AU
opposition	1038 Jul 13 j 03:43	25°♑20'25	-5°36'39
direct	1038 Oct 02 j 00:24	24°♑08'31	
evening set	1038 Dec 27 j 11:30	25°♑41'39	
conjunction	1039 Jan 10 j 15:17	26°♑07'56	-5°32'10
minimum elong	1039 Jan 10 j 15:07	26°♑07'55	5°32'11
max. Earth dist.	1039 Jan 13 j 12:06	26°♑13'18	37.38765 AU
morning rise	1039 Jan 24 j 20:17	26°♑34'18	
retrograde	1039 Apr 23 j 20:40	28°♑09'51	
min. Earth dist.	1039 Jul 12 j 04:22	27°♑01'31	35.52480 AU
opposition	1039 Jul 15 j 02:06	26°♑57'30	-6°05'17
direct	1039 Oct 03 j 23:37	25°♑45'55	
evening set	1039 Dec 29 j 11:37	27°♑18'35	
conjunction	1040 Jan 12 j 11:06	27°♑44'20	-5°59'05
minimum elong	1040 Jan 12 j 10:55	27°♑44'19	5°59'05
max. Earth dist.	1040 Jan 15 j 08:47	27°♑49'44	37.64249 AU
morning rise	1040 Jan 26 j 11:36	28°♑10'11	
retrograde	1040 Apr 24 j 15:50	29°♑45'21	
min. Earth dist.	1040 Jul 13 j 00:55	28°♑37'20	35.78165 AU
opposition	1040 Jul 15 j 23:52	28°♑33'16	-6°33'14
direct	1040 Oct 04 j 21:56	27°♑21'59	
evening set	1040 Dec 30 j 11:37	28°♑54'13	
conjunction	1041 Jan 13 j 06:16	29°♑19'27	-6°25'22
minimum elong	1041 Jan 13 j 06:05	29°♑19'26	6°25'22
max. Earth dist.	1041 Jan 16 j 04:21	29°♑24'50	37.89805 AU
morning rise	1041 Jan 27 j 02:16	29°♑44'45	
	1041 Feb 04 j 16:45	0°♒	
retrograde	1041 Apr 26 j 13:10	1°♒19'36	
min. Earth dist.	1041 Jul 14 j 21:14	0°♒11'52	36.03964 AU
opposition	1041 Jul 17 j 21:12	0°♒07'47	-7°00'28
	1041 Jul 23 j 14:04	30°℞♑	
direct	1041 Oct 06 j 16:42	28°♑56'48	
	1041 Dec 15 j 19:24	0°♒	
evening set	1042 Jan 01 j 11:23	0°♒28'40	
conjunction	1042 Jan 15 j 01:14	0°♒53'20	-6°50'59
minimum elong	1042 Jan 15 j 01:03	0°♒53'19	6°50'59
max. Earth dist.	1042 Jan 18 j 00:57	0°♒58'48	38.15472 AU
morning rise	1042 Jan 28 j 16:06	1°♒18'06	
retrograde	1042 Apr 28 j 07:24	2°♒52'39	
min. Earth dist.	1042 Jul 16 j 17:41	1°♒45'11	36.29864 AU
opposition	1042 Jul 19 j 17:47	1°♒41'06	-7°27'00
direct	1042 Oct 08 j 14:34	0°♒30'26	
evening set	1043 Jan 03 j 11:07	2°♒01'57	
conjunction	1043 Jan 16 j 19:36	2°♒26'04	-7°15'58
minimum elong	1043 Jan 16 j 19:24	2°♒26'04	7°15'58

max. Earth dist.	1043 Jan 19 j 19:01	2°♒31'29	38.41238 AU
morning rise	1043 Jan 30 j 05:20	2°♒50'17	
retrograde	1043 Apr 30 j 03:11	4°♒24'34	
min. Earth dist.	1043 Jul 18 j 12:19	3°♒17'27	36.55865 AU
opposition	1043 Jul 21 j 14:04	3°♒13'18	-7°52'50
direct	1043 Oct 10 j 10:16	2°♒02'57	
evening set	1044 Jan 05 j 10:28	3°♒34'11	
conjunction	1044 Jan 18 j 13:31	3°♒57'44	-7°40'18
minimum elong	1044 Jan 18 j 13:20	3°♒57'44	7°40'17
max. Earth dist.	1044 Jan 21 j 14:42	4°♒03'14	38.67073 AU
morning rise	1044 Jan 31 j 17:43	4°♒21'23	
retrograde	1044 Apr 30 j 20:40	5°♒55'26	
min. Earth dist.	1044 Jul 19 j 08:41	4°♒48'35	36.81918 AU
opposition	1044 Jul 22 j 10:03	4°♒44'28	-8°17'58
direct	1044 Oct 11 j 07:09	3°♒34'28	
evening set	1045 Jan 06 j 09:52	5°♒05'25	
conjunction	1045 Jan 19 j 07:11	5°♒28'24	-8°03'59
minimum elong	1045 Jan 19 j 06:58	5°♒28'23	8°03'59
max. Earth dist.	1045 Jan 22 j 08:18	5°♒33'52	38.92936 AU
morning rise	1045 Feb 01 j 05:35	5°♒51'27	
retrograde	1045 May 02 j 12:58	7°♒25'20	
min. Earth dist.	1045 Jul 21 j 02:36	6°♒18'50	37.07965 AU
opposition	1045 Jul 24 j 05:18	6°♒14'40	-8°42'24
direct	1045 Oct 13 j 03:34	5°♒04'58	
evening set	1046 Jan 08 j 09:11	6°♒35'43	
conjunction	1046 Jan 21 j 00:26	6°♒58'06	-8°27'02
minimum elong	1046 Jan 21 j 00:14	6°♒58'05	8°27'02
max. Earth dist.	1046 Jan 24 j 02:02	7°♒03'34	39.18745 AU
morning rise	1046 Feb 02 j 16:57	7°♒20'34	
retrograde	1046 May 04 j 06:12	8°♒54'18	
min. Earth dist.	1046 Jul 22 j 22:01	7°♒48'03	37.33944 AU
opposition	1046 Jul 26 j 00:23	7°♒43'55	-9°06'09
direct	1046 Oct 14 j 22:40	6°♒34'34	
evening set	1047 Jan 10 j 08:18	8°♒05'06	
conjunction	1047 Jan 22 j 17:25	8°♒26'53	-8°49'28
minimum elong	1047 Jan 22 j 17:12	8°♒26'52	8°49'29
max. Earth dist.	1047 Jan 25 j 19:37	8°♒32'22	39.44447 AU
morning rise	1047 Feb 04 j 03:28	8°♒48'46	
retrograde	1047 May 05 j 23:22	10°♒22'22	
min. Earth dist.	1047 Jul 24 j 16:28	9°♒16'24	37.59764 AU
opposition	1047 Jul 27 j 18:55	9°♒12'17	-9°29'15
direct	1047 Oct 16 j 17:07	8°♒03'14	
evening set	1048 Jan 12 j 07:34	9°♒33'36	
conjunction	1048 Jan 24 j 10:02	9°♒54'47	-9°11'17
minimum elong	1048 Jan 24 j 09:49	9°♒54'46	9°11'16
max. Earth dist.	1048 Jan 27 j 11:30	10°♒00'10	39.69959 AU
morning rise	1048 Feb 05 j 13:44	10°♒16'03	
retrograde	1048 May 06 j 18:12	11°♒49'34	
min. Earth dist.	1048 Jul 25 j 10:17	10°♒43'52	37.85389 AU
opposition	1048 Jul 28 j 13:13	10°♒39'44	-9°51'41
direct	1048 Oct 17 j 09:23	9°♒31'00	
evening set	1049 Jan 13 j 06:30	11°♒01'12	
conjunction	1049 Jan 25 j 02:26	11°♒21'47	-9°32'29
minimum elong	1049 Jan 25 j 02:13	11°♒21'46	9°32'29
max. Earth dist.	1049 Jan 28 j 04:50	11°♒27'12	39.95236 AU
morning rise	1049 Feb 05 j 23:18	11°♒42'26	
retrograde	1049 May 08 j 10:11	13°♒15'51	
min. Earth dist.	1049 Jul 27 j 05:10	12°♒10'20	38.10741 AU
opposition	1049 Jul 30 j 07:04	12°♒06'17	-10°13'28
direct	1049 Oct 19 j 04:07	10°♒57'49	
evening set	1050 Jan 15 j 05:35	12°♒27'54	
conjunction	1050 Jan 26 j 18:27	12°♒47'51	-9°53'06
minimum elong	1050 Jan 26 j 18:15	12°♒47'50	9°53'05
max. Earth dist.	1050 Jan 29 j 19:38	12°♒53'09	40.20240 AU
morning rise	1050 Feb 07 j 08:22	13°♒07'52	
retrograde	1050 May 10 j 02:08	14°♒41'11	
min. Earth dist.	1050 Jul 28 j 21:35	13°♒35'57	38.35824 AU
opposition	1050 Aug 01 j 00:17	13°♒31'52	-10°34'38
direct	1050 Oct 20 j 21:54	12°♒23'40	
evening set	1051 Jan 17 j 04:19	13°♒53'38	
conjunction	1051 Jan 28 j 10:04	14°♒12'57	-10°13'07
minimum elong	1051 Jan 28 j 09:50	14°♒12'56	10°13'07
max. Earth dist.	1051 Jan 31 j 11:53	14°♒18'16	40.44977 AU
morning rise	1051 Feb 08 j 16:49	14°♒32'20	
	1051 Feb 25 j 12:44	15°♒	
retrograde	1051 May 11 j 16:18	16°♒05'36	
min. Earth dist.	1051 Jul 30 j 15:42	15°♒00'30	38.60671 AU
	1051 Jul 31 j 00:58	15°℞♒	
opposition	1051 Aug 02 j 17:22	14°♒56'30	-10°55'10
direct	1051 Oct 22 j 16:06	13°♒48'33	
	1052 Jan 08 j 00:24	15°♒	
evening set	1052 Jan 19 j 02:50	15°♒18'25	
conjunction	1052 Jan 30 j 01:11	15°♒37'05	-10°32'33
minimum elong	1052 Jan 30 j 00:59	15°♒37'04	10°32'33
max. Earth dist.	1052 Feb 02 j 03:02	15°♒42'22	40.69514 AU
morning rise	1052 Feb 10 j 00:21	15°♒55'50	
retrograde	1052 May 12 j 05:40	17°♒29'03	
min. Earth dist.	1052 Jul 31 j 07:28	16°♒24'12	38.85332 AU
opposition	1052 Aug 03 j 09:52	16°♒20'10	-11°15'03
direct	1052 Oct 23 j 10:30	15°♒12'27	
evening set	1053 Jan 20 j 01:21	16°♒42'15	
conjunction	1053 Jan 30 j 15:59	17°♒00'17	-10°51'23
minimum elong	1053 Jan 30 j 15:46	17°♒00'16	10°51'22
max. Earth dist.	1053 Feb 02 j 17:35	17°♒05'31	40.93886 AU
morning rise	1053 Feb 10 j 07:37	17°♒18'23	
retrograde	1053 May 13 j 22:20	18°♒51'35	
min. Earth dist.	1053 Aug 01 j 23:36	17°♒46'56	39.09874 AU
opposition	1053 Aug 05 j 01:58	17°♒42'55	-11°34'18
direct	1053 Oct 25 j 01:13	16°♒35'28	
evening set	1054 Jan 21 j 23:42	18°♒05'13	
conjunction	1054 Feb 01 j 06:35	18°♒22'36	-11°09'37
minimum elong	1054 Feb 01 j 06:23	18°♒22'35	11°09'37
max. Earth dist.	1054 Feb 04 j 09:12	18°♒27'52	41.18156 AU
morning rise	1054 Feb 11 j 14:10	18°♒40'02	
retrograde	1054 May 15 j 13:13	20°♒13'16	
min. Earth dist.	1054 Aug 03 j 15:37	19°♒08'48	39.34303 AU
opposition	1054 Aug 06 j 17:41	19°♒04'49	-11°52'56
direct	1054 Oct 26 j 16:21	17°♒57'37	
evening set	1055 Jan 23 j 21:59	19°♒27'22	
conjunction	1055 Feb 02 j 20:36	19°♒44'05	-11°27'15
minimum elong	1055 Feb 02 j 20:23	19°♒44'04	11°27'15
max. Earth dist.	1055 Feb 05 j 22:26	19°♒49'16	41.42327 AU
morning rise	1055 Feb 12 j 20:03	20°♒00'51	
retrograde	1055 May 17 j 05:04	21°♒34'07	
min. Earth dist.	1055 Aug 05 j 05:57	20°♒29'57	39.58642 AU
opposition	1055 Aug 08 j 09:05	20°♒25'56	-12°10'55
direct	1055 Oct 28 j 06:07	19°♒18'59	
evening set	1056 Jan 25 j 20:09	20°♒48'45	
conjunction	1056 Feb 04 j 10:32	21°♒04'48	-11°44'19
minimum elong	1056 Feb 04 j 10:20	21°♒04'48	11°44'19
max. Earth dist.	1056 Feb 07 j 13:32	21°♒10'02	41.66397 AU
morning rise	1056 Feb 14 j 01:37	21°♒20'54	

retrograde	1056 May 17 j 17:40	22°♒54'15	
min. Earth dist.	1056 Aug 05 j 22:01	21°♒50'15	39.82865 AU
opposition	1056 Aug 09 j 00:12	21°♒46'17	-12°28'18
direct	1056 Oct 28 j 22:22	20°♒39'37	
evening set	1057 Jan 26 j 18:21	22°♒09'27	
conjunction	1057 Feb 05 j 00:07	22°♒24'49	-12°00'48
minimum elong	1057 Feb 04 j 23:54	22°♒24'48	12°00'47
max. Earth dist.	1057 Feb 08 j 02:31	22°♒29'59	41.90347 AU
morning rise	1057 Feb 14 j 06:28	22°♒40'13	
retrograde	1057 May 19 j 05:55	24°♒13'40	
min. Earth dist.	1057 Aug 07 j 11:50	23°♒09'57	40.06930 AU
opposition	1057 Aug 10 j 14:51	23°♒05'58	-12°45'05
direct	1057 Oct 30 j 14:02	21°♒59'33	
evening set	1058 Jan 28 j 16:34	23°♒29'29	
conjunction	1058 Feb 06 j 13:27	23°♒44'09	-12°16'43
minimum elong	1058 Feb 06 j 13:16	23°♒44'08	12°16'44
max. Earth dist.	1058 Feb 09 j 15:51	23°♒49'18	42.14104 AU
morning rise	1058 Feb 15 j 11:02	23°♒58'52	
retrograde	1058 May 20 j 19:01	25°♒32'27	
min. Earth dist.	1058 Aug 09 j 03:09	24°♒28'55	40.30792 AU
opposition	1058 Aug 12 j 05:14	24°♒24'59	-13°01'16
direct	1058 Nov 01 j 05:08	23°♒18'50	
evening set	1059 Jan 30 j 14:52	24°♒48'52	
conjunction	1059 Feb 08 j 02:40	25°♒02'50	-12°32'06
minimum elong	1059 Feb 08 j 02:29	25°♒02'50	12°32'05
max. Earth dist.	1059 Feb 11 j 05:23	25°♒07'59	42.37636 AU
morning rise	1059 Feb 16 j 14:55	25°♒16'52	
retrograde	1059 May 22 j 07:42	26°♒50'36	
min. Earth dist.	1059 Aug 10 j 17:29	25°♒47'16	40.54375 AU
opposition	1059 Aug 13 j 19:21	25°♒43'22	-13°16'53
direct	1059 Nov 02 j 20:17	24°♒37'27	
evening set	1060 Feb 01 j 13:11	26°♒07'38	
conjunction	1060 Feb 09 j 15:25	26°♒20'53	-12°46'57
minimum elong	1060 Feb 09 j 15:14	26°♒20'52	12°46'57
max. Earth dist.	1060 Feb 12 j 16:50	26°♒25'55	42.60862 AU
morning rise	1060 Feb 17 j 18:14	26°♒34'11	
retrograde	1060 May 22 j 24:00	28°♒08'05	
min. Earth dist.	1060 Aug 11 j 07:30	27°♒04'57	40.77638 AU
opposition	1060 Aug 14 j 09:17	27°♒01'05	-13°31'58
direct	1060 Nov 03 j 07:10	25°♒55'24	
evening set	1061 Feb 02 j 11:43	27°♒25'44	
conjunction	1061 Feb 10 j 04:16	27°♒38'16	-13°01'17
minimum elong	1061 Feb 10 j 04:06	27°♒38'15	13°01'16
max. Earth dist.	1061 Feb 13 j 06:09	27°♒43'17	42.83733 AU
morning rise	1061 Feb 17 j 21:12	27°♒50'49	
retrograde	1061 May 24 j 12:58	29°♒24'55	
min. Earth dist.	1061 Aug 12 j 22:34	28°♒21'53	41.00510 AU
opposition	1061 Aug 15 j 22:46	28°♒18'06	-13°46'30
direct	1061 Nov 04 j 20:40	27°♒12'39	
evening set	1062 Feb 04 j 10:31	28°♒43'08	
conjunction	1062 Feb 11 j 16:46	28°♒54'55	-13°15'07
minimum elong	1062 Feb 11 j 16:35	28°♒54'54	13°15'08
max. Earth dist.	1062 Feb 14 j 17:10	28°♒59'49	43.06218 AU
morning rise	1062 Feb 18 j 23:21	29°♒06'43	
	1062 Mar 26 j 21:07	0°♓	
retrograde	1062 May 26 j 00:33	0°♓41'00	
	1062 Jul 27 j 12:42	30°℞♒	
min. Earth dist.	1062 Aug 14 j 11:22	29°♒38'10	41.22988 AU
opposition	1062 Aug 17 j 11:59	29°♒34'23	-14°00'32
direct	1062 Nov 06 j 10:11	28°♒29'07	
evening set	1063 Feb 06 j 09:11	29°♒59'49	
	1063 Feb 06 j 12:02	0°♓	
conjunction	1063 Feb 13 j 04:48	0°♓10'49	-13°28'28
minimum elong	1063 Feb 13 j 04:38	0°♓10'48	13°28'28
max. Earth dist.	1063 Feb 16 j 05:09	0°♓15'41	43.28311 AU
morning rise	1063 Feb 20 j 00:45	0°♓21'50	
retrograde	1063 May 27 j 10:46	1°♓56'21	
min. Earth dist.	1063 Aug 16 j 01:46	0°♓53'36	41.45103 AU
opposition	1063 Aug 19 j 01:02	0°♓49'53	-14°14'02
	1063 Oct 03 j 07:28	30°℞♒	
direct	1063 Nov 08 j 00:56	29°♒44'48	
	1063 Dec 12 j 23:13	0°♓	
evening set	1064 Feb 08 j 08:18	1°♓15'44	
conjunction	1064 Feb 14 j 16:44	1°♓25'56	-13°41'20
minimum elong	1064 Feb 14 j 16:33	1°♓25'55	13°41'20
max. Earth dist.	1064 Feb 17 j 16:50	1°♓30'46	43.50086 AU
morning rise	1064 Feb 21 j 01:18	1°♓36'08	
retrograde	1064 May 27 j 20:31	3°♓10'55	
min. Earth dist.	1064 Aug 16 j 14:16	2°♓08'19	41.66910 AU
opposition	1064 Aug 19 j 13:34	2°♓04'37	-14°27'02
direct	1064 Nov 08 j 15:38	0°♓59'42	
evening set	1065 Feb 09 j 07:42	2°♓30'55	
conjunction	1065 Feb 15 j 04:13	2°♓40'16	-13°53'41
minimum elong	1065 Feb 15 j 04:04	2°♓40'16	13°53'41
max. Earth dist.	1065 Feb 18 j 03:26	2°♓45'01	43.71584 AU
morning rise	1065 Feb 21 j 00:58	2°♓49'39	
retrograde	1065 May 29 j 09:21	4°♓24'44	
min. Earth dist.	1065 Aug 18 j 02:53	3°♓22'17	41.88482 AU
opposition	1065 Aug 21 j 01:56	3°♓18'36	-14°39'29
direct	1065 Nov 10 j 03:19	2°♓13'52	
evening set	1066 Feb 11 j 07:39	3°♓45'26	
conjunction	1066 Feb 16 j 15:39	3°♓53'54	-14°05'33
minimum elong	1066 Feb 16 j 15:29	3°♓53'53	14°05'33
max. Earth dist.	1066 Feb 19 j 15:41	3°♓58'41	43.92866 AU
morning rise	1066 Feb 21 j 23:40	4°♓02'23	
retrograde	1066 May 30 j 21:08	5°♓37'51	
min. Earth dist.	1066 Aug 19 j 15:36	4°♓35'31	42.09838 AU
opposition	1066 Aug 22 j 13:50	4°♓31'54	-14°51'26
direct	1066 Nov 11 j 14:56	3°♓27'21	
evening set	1067 Feb 13 j 08:26	4°♓59'21	
conjunction	1067 Feb 18 j 02:41	5°♓06'53	-14°16'54
minimum elong	1067 Feb 18 j 02:33	5°♓06'53	14°16'54
max. Earth dist.	1067 Feb 21 j 01:32	5°♓11'34	44.13967 AU
morning rise	1067 Feb 22 j 21:00	5°♓14'25	
retrograde	1067 Jun 01 j 10:19	6°♓50'20	
min. Earth dist.	1067 Aug 21 j 02:33	5°♓48'14	42.31020 AU
opposition	1067 Aug 24 j 01:35	5°♓44'35	-15°02'51
direct	1067 Nov 13 j 00:16	4°♓40'14	
evening set	1068 Feb 15 j 10:09	6°♓12'46	
conjunction	1068 Feb 19 j 13:27	6°♓19'17	-14°27'47
minimum elong	1068 Feb 19 j 13:18	6°♓19'17	14°27'46
morning rise	1068 Feb 23 j 16:43	6°♓25'48	
max. Earth dist.	1068 Feb 22 j 12:51	6°♓23'59	44.34886 AU
retrograde	1068 Jun 01 j 19:49	8°♓02'17	
min. Earth dist.	1068 Aug 21 j 15:31	7°♓00'18	42.52010 AU
opposition	1068 Aug 24 j 13:12	6°♓56'43	-15°13'45
direct	1068 Nov 13 j 12:28	5°♓52'36	
evening set	1069 Feb 16 j 14:11	7°♓25'49	
conjunction	1069 Feb 20 j 00:12	7°♓31'11	-14°38'10
minimum elong	1069 Feb 20 j 00:05	7°♓31'11	14°38'10
morning rise	1069 Feb 23 j 10:10	7°♓36'33	

max. Earth dist.	1069 Feb 22 j 23:16	7°♓35'50	44.55616 AU
retrograde	1069 Jun 03 j 04:03	9°♓13'44	
min. Earth dist.	1069 Aug 23 j 02:12	8°♓11'58	42.72775 AU
opposition	1069 Aug 26 j 00:15	8°♓08'23	-15°24'10
direct	1069 Nov 15 j 01:50	7°♓04'29	
evening set	1070 Feb 18 j 21:44	8°♓38'40	
conjunction	1070 Feb 21 j 10:38	8°♓42'38	-14°48'05
minimum elong	1070 Feb 21 j 10:30	8°♓42'38	14°48'05
morning rise	1070 Feb 23 j 23:22	8°♓46'36	
max. Earth dist.	1070 Feb 24 j 08:49	8°♓47'13	44.76099 AU
retrograde	1070 Jun 04 j 15:51	10°♓24'46	
min. Earth dist.	1070 Aug 24 j 14:06	9°♓23'10	42.93280 AU
opposition	1070 Aug 27 j 11:23	9°♓19'38	-15°34'05
direct	1070 Nov 16 j 12:41	8°♓15'58	
evening set	1071 Feb 21 j 17:15	9°♓51'53	
conjunction	1071 Feb 22 j 20:56	9°♓53'41	-14°57'33
minimum elong	1071 Feb 22 j 20:49	9°♓53'40	14°57'34
morning rise	1071 Feb 24 j 00:26	9°♓55'28	
max. Earth dist.	1071 Feb 25 j 19:32	9°♓58'16	44.96297 AU
retrograde	1071 Jun 06 j 02:16	11°♓35'25	
min. Earth dist.	1071 Aug 26 j 01:56	10°♓33'58	43.13448 AU
opposition	1071 Aug 28 j 22:12	10°♓30'29	-15°43'34
direct	1071 Nov 17 j 23:50	9°♓27'02	
conjunction	1072 Feb 24 j 07:06	11°♓04'20	-15°06'35
minimum elong	1072 Feb 24 j 06:59	11°♓04'20	15°06'35
max. Earth dist.	1072 Feb 27 j 03:58	11°♓08'47	45.16139 AU
retrograde	1072 Jun 06 j 15:14	12°♓45'40	
min. Earth dist.	1072 Aug 26 j 12:38	11°♓44'24	43.33236 AU
opposition	1072 Aug 29 j 08:48	11°♓40'57	-15°52'35
direct	1072 Nov 18 j 07:35	10°♓37'42	
conjunction	1073 Feb 24 j 17:16	12°♓14'35	-15°15'13
minimum elong	1073 Feb 24 j 17:10	12°♓14'35	15°15'13
max. Earth dist.	1073 Feb 27 j 14:09	12°♓19'01	45.35559 AU
retrograde	1073 Jun 08 j 01:29	13°♓55'31	
min. Earth dist.	1073 Aug 28 j 01:05	12°♓54'19	43.52567 AU
opposition	1073 Aug 30 j 19:18	12°♓50'59	-16°01'12
direct	1073 Nov 19 j 17:36	11°♓47'55	
conjunction	1074 Feb 26 j 03:13	13°♓24'24	-15°23'26
minimum elong	1074 Feb 26 j 03:07	13°♓24'23	15°23'25
max. Earth dist.	1074 Feb 28 j 22:39	13°♓28'43	45.54523 AU
retrograde	1074 Jun 09 j 09:32	15°♓04'53	
min. Earth dist.	1074 Aug 29 j 11:08	14°♓03'52	43.71419 AU
opposition	1074 Sep 01 j 05:22	14°♓00'32	-16°09'23
direct	1074 Nov 21 j 04:17	12°♓57'37	
conjunction	1075 Feb 27 j 12:52	14°♓33'41	-15°31'16
minimum elong	1075 Feb 27 j 12:47	14°♓33'41	15°31'16
max. Earth dist.	1075 Mar 02 j 07:13	14°♓37'55	45.73018 AU
retrograde	1075 Jun 10 j 17:49	16°♓13'46	
min. Earth dist.	1075 Aug 30 j 22:47	15°♓12'48	43.89830 AU
opposition	1075 Sep 02 j 15:28	15°♓09'33	-16°17'11
direct	1075 Nov 22 j 16:24	14°♓06'48	
conjunction	1076 Feb 28 j 22:21	15°♓42'25	-15°38'42
minimum elong	1076 Feb 28 j 22:16	15°♓42'25	15°38'41
max. Earth dist.	1076 Mar 02 j 16:47	15°♓46'39	45.91102 AU
retrograde	1076 Jun 11 j 02:03	17°♓22'06	
min. Earth dist.	1076 Aug 31 j 09:11	16°♓21'13	44.07835 AU
opposition	1076 Sep 03 j 01:11	16°♓18'01	-16°24'33
direct	1076 Nov 23 j 04:25	15°♓15'24	
conjunction	1077 Mar 01 j 07:36	16°♓50'36	-15°45'44
minimum elong	1077 Mar 01 j 07:30	16°♓50'36	15°45'44
max. Earth dist.	1077 Mar 04 j 00:20	16°♓54'42	46.08820 AU
retrograde	1077 Jun 12 j 14:09	18°♓29'52	
min. Earth dist.	1077 Sep 01 j 18:44	17°♓29'06	44.25514 AU
opposition	1077 Sep 04 j 10:33	17°♓25'55	-16°31'31
direct	1077 Nov 24 j 11:29	16°♓23'26	
conjunction	1078 Mar 02 j 16:43	17°♓58'14	-15°52'22
minimum elong	1078 Mar 02 j 16:40	17°♓58'14	15°52'22
max. Earth dist.	1078 Mar 05 j 09:52	18°♓02'20	46.26231 AU
retrograde	1078 Jun 13 j 23:31	19°♓37'06	
min. Earth dist.	1078 Sep 03 j 05:32	18°♓36'23	44.42897 AU
opposition	1078 Sep 05 j 19:53	18°♓33'17	-16°38'03
direct	1078 Nov 25 j 20:25	17°♓30'57	
conjunction	1079 Mar 04 j 01:29	19°♓05'21	-15°58'36
minimum elong	1079 Mar 04 j 01:24	19°♓05'21	15°58'36
max. Earth dist.	1079 Mar 06 j 17:39	19°♓09'23	46.43384 AU
retrograde	1079 Jun 15 j 07:01	20°♓43'49	
min. Earth dist.	1079 Sep 04 j 14:06	19°♓43'17	44.60022 AU
opposition	1079 Sep 07 j 04:57	19°♓40'09	-16°44'10
direct	1079 Nov 27 j 05:20	18°♓37'57	
conjunction	1080 Mar 04 j 10:10	20°♓12'00	-16°04'25
minimum elong	1080 Mar 04 j 10:08	20°♓12'00	16°04'25
max. Earth dist.	1080 Mar 07 j 01:51	20°♓15'59	46.60280 AU
retrograde	1080 Jun 15 j 14:12	21°♓50'06	
min. Earth dist.	1080 Sep 05 j 00:21	20°♓49'38	44.76896 AU
opposition	1080 Sep 07 j 13:55	20°♓46'35	-16°49'52
direct	1080 Nov 27 j 15:08	19°♓44'32	
conjunction	1081 Mar 05 j 18:51	21°♓18'14	-16°09'51
minimum elong	1081 Mar 05 j 18:48	21°♓18'14	16°09'51
max. Earth dist.	1081 Mar 08 j 10:32	21°♓22'12	46.76929 AU
retrograde	1081 Jun 16 j 20:54	22°♓55'59	
min. Earth dist.	1081 Sep 06 j 09:24	21°♓55'39	44.93482 AU
opposition	1081 Sep 08 j 22:36	21°♓52'37	-16°55'10
direct	1081 Nov 29 j 02:02	20°♓50'44	
conjunction	1082 Mar 07 j 03:12	22°♓24'05	-16°14'53
minimum elong	1082 Mar 07 j 03:10	22°♓24'05	16°14'53
max. Earth dist.	1082 Mar 09 j 17:19	22°♓27'57	46.93280 AU
retrograde	1082 Jun 18 j 07:14	24°♓01'31	
min. Earth dist.	1082 Sep 07 j 18:26	23°♓01'18	45.09760 AU
opposition	1082 Sep 10 j 07:08	22°♓58'18	-17°00'04
direct	1082 Nov 30 j 09:38	21°♓56'35	
conjunction	1083 Mar 08 j 11:35	23°♓29'37	-16°19'34
minimum elong	1083 Mar 08 j 11:32	23°♓29'37	16°19'34
max. Earth dist.	1083 Mar 11 j 01:59	23°♓33'28	47.09298 AU
retrograde	1083 Jun 19 j 17:03	25°♓06'43	
min. Earth dist.	1083 Sep 09 j 04:33	24°♓06'35	45.25664 AU
opposition	1083 Sep 11 j 15:37	24°♓03'41	-17°04'36
direct	1083 Dec 01 j 16:59	23°♓02'08	
conjunction	1084 Mar 08 j 19:47	24°♓34'50	-16°23'53
minimum elong	1084 Mar 08 j 19:46	24°♓34'50	16°23'53
max. Earth dist.	1084 Mar 11 j 08:33	24°♓38'35	47.24926 AU
retrograde	1084 Jun 20 j 02:50	26°♓11'37	
min. Earth dist.	1084 Sep 09 j 12:53	25°♓11'38	45.41136 AU
opposition	1084 Sep 11 j 23:51	25°♓08'44	-17°08'47
direct	1084 Dec 01 j 23:03	24°♓07'20	
conjunction	1085 Mar 10 j 04:02	25°♓39'45	-16°27'52
minimum elong	1085 Mar 10 j 04:00	25°♓39'45	16°27'51
max. Earth dist.	1085 Mar 12 j 15:43	25°♓43'25	47.40079 AU
retrograde	1085 Jun 21 j 09:23	27°♓16'13	

min. Earth dist.	1085 Sep 10 j 23:10	26°♓16'16	45.56112 AU
opposition	1085 Sep 13 j 07:57	26°♓13'29	-17°12'37
direct	1085 Dec 03 j 08:22	25°♓12'13	
conjunction	1086 Mar 11 j 12:13	26°♓44'20	-16°31'32
minimum elong	1086 Mar 11 j 12:13	26°♓44'20	16°31'32
max. Earth dist.	1086 Mar 13 j 23:15	26°♓47'57	47.54733 AU
retrograde	1086 Jun 22 j 14:30	28°♓20'29	
min. Earth dist.	1086 Sep 12 j 07:46	27°♓20'38	45.70557 AU
opposition	1086 Sep 14 j 15:53	27°♓17'52	-17°16'08
direct	1086 Dec 04 j 19:12	26°♓16'44	
conjunction	1087 Mar 12 j 19:56	27°♓48'32	-16°34'53
minimum elong	1087 Mar 12 j 19:55	27°♓48'32	16°34'53
max. Earth dist.	1087 Mar 15 j 04:50	27°♓52'00	47.68866 AU
retrograde	1087 Jun 23 j 23:55	29°♓24'22	
min. Earth dist.	1087 Sep 13 j 16:38	28°♓24'35	45.84506 AU
opposition	1087 Sep 15 j 23:47	28°♓21'53	-17°19'20
direct	1087 Dec 06 j 02:36	27°♓20'51	
conjunction	1088 Mar 13 j 03:46	28°♓52'20	-16°37'55
minimum elong	1088 Mar 13 j 03:46	28°♓52'20	16°37'56
max. Earth dist.	1088 Mar 15 j 12:42	28°♓55'47	47.82524 AU
	1088 May 03 j 17:35	0°♈	
retrograde	1088 Jun 24 j 07:53	0°♈27'51	
	1088 Aug 16 j 00:45	30°℞♓	
min. Earth dist.	1088 Sep 14 j 01:54	29°♓28'05	45.97996 AU
opposition	1088 Sep 16 j 07:19	29°♓25'28	-17°22'12
direct	1088 Dec 06 j 10:38	28°♓24'33	
conjunction	1089 Mar 14 j 11:21	29°♓55'43	-16°40'38
minimum elong	1089 Mar 14 j 11:22	29°♓55'43	16°40'38
max. Earth dist.	1089 Mar 16 j 18:38	29°♓59'04	47.95774 AU
	1089 Mar 17 j 10:02	0°♈	
retrograde	1089 Jun 25 j 16:07	1°♈30'55	
min. Earth dist.	1089 Sep 15 j 09:10	0°♈31'15	46.11102 AU
opposition	1089 Sep 17 j 14:40	0°♈28'39	-17°24'43
	1089 Oct 13 j 01:23	30°℞♓	
direct	1089 Dec 07 j 16:02	29°♓27'49	
	1090 Jan 30 j 19:58	0°♈	
conjunction	1090 Mar 15 j 18:42	0°♈58'43	-16°43'01
minimum elong	1090 Mar 15 j 18:42	0°♈58'43	16°43'01
max. Earth dist.	1090 Mar 18 j 01:27	1°♈02'01	48.08655 AU
retrograde	1090 Jun 26 j 22:17	2°♈33'37	
min. Earth dist.	1090 Sep 16 j 18:08	1°♈33'58	46.23873 AU
opposition	1090 Sep 18 j 21:57	1°♈31'26	-17°26'54
direct	1090 Dec 08 j 23:25	0°♈30'43	
conjunction	1091 Mar 17 j 02:02	2°♈01'21	-16°45'03
minimum elong	1091 Mar 17 j 02:04	2°♈01'21	16°45'03
max. Earth dist.	1091 Mar 19 j 08:28	2°♈04'37	48.21248 AU
retrograde	1091 Jun 28 j 02:33	3°♈35'58	
min. Earth dist.	1091 Sep 18 j 01:08	2°♈36'25	46.36351 AU
opposition	1091 Sep 20 j 04:59	2°♈33'54	-17°28'44
direct	1091 Dec 10 j 08:45	1°♈33'17	
conjunction	1092 Mar 17 j 09:03	3°♈03'39	-16°46'45
minimum elong	1092 Mar 17 j 09:04	3°♈03'39	16°46'45
max. Earth dist.	1092 Mar 19 j 13:59	3°♈06'50	48.33560 AU
retrograde	1092 Jun 28 j 10:07	4°♈38'01	
min. Earth dist.	1092 Sep 18 j 09:02	3°♈38'32	46.48561 AU
opposition	1092 Sep 20 j 12:01	3°♈36'04	-17°30'13
direct	1092 Dec 10 j 16:25	2°♈35'34	
conjunction	1093 Mar 18 j 16:13	4°♈05'41	-16°48'07
minimum elong	1093 Mar 18 j 16:16	4°♈05'41	16°48'07
max. Earth dist.	1093 Mar 20 j 21:31	4°♈08'52	48.45600 AU
retrograde	1093 Jun 29 j 18:09	5°♈39'48	
min. Earth dist.	1093 Sep 19 j 16:56	4°♈40'23	46.60474 AU
opposition	1093 Sep 21 j 18:43	4°♈37'59	-17°31'21
direct	1093 Dec 11 j 23:26	3°♈37'36	
conjunction	1094 Mar 19 j 23:08	5°♈07'29	-16°49'10
minimum elong	1094 Mar 19 j 23:09	5°♈07'29	16°49'10
max. Earth dist.	1094 Mar 22 j 02:46	5°♈10'34	48.57355 AU
retrograde	1094 Jul 01 j 04:34	6°♈41'21	
min. Earth dist.	1094 Sep 20 j 23:32	5°♈42'05	46.72084 AU
opposition	1094 Sep 23 j 01:24	5°♈39'40	-17°32'09
direct	1094 Dec 13 j 02:32	4°♈39'26	
conjunction	1095 Mar 21 j 05:51	6°♈09'05	-16°49'53
minimum elong	1095 Mar 21 j 05:54	6°♈09'05	16°49'53
max. Earth dist.	1095 Mar 23 j 09:03	6°♈12'08	48.68775 AU
retrograde	1095 Jul 02 j 10:55	7°♈42'43	
min. Earth dist.	1095 Sep 22 j 08:17	6°♈43'28	46.83333 AU
opposition	1095 Sep 24 j 08:08	6°♈41'10	-17°32'39
direct	1095 Dec 14 j 08:28	5°♈41'03	
conjunction	1096 Mar 21 j 12:47	7°♈10'29	-16°50'19
minimum elong	1096 Mar 21 j 12:49	7°♈10'30	16°50'18
max. Earth dist.	1096 Mar 23 j 15:18	7°♈13'30	48.79818 AU
retrograde	1096 Jul 02 j 14:09	8°♈43'53	
min. Earth dist.	1096 Sep 22 j 15:04	7°♈44'45	46.94156 AU
opposition	1096 Sep 24 j 14:29	7°♈42'28	-17°32'50
direct	1096 Dec 14 j 17:30	6°♈42'28	
conjunction	1097 Mar 22 j 19:34	8°♈11'42	-16°50'27
minimum elong	1097 Mar 22 j 19:39	8°♈11'42	16°50'27
max. Earth dist.	1097 Mar 24 j 19:58	8°♈14'34	48.90400 AU
retrograde	1097 Jul 03 j 20:22	9°♈44'52	
min. Earth dist.	1097 Sep 23 j 23:03	8°♈45'46	47.04498 AU
opposition	1097 Sep 25 j 20:59	8°♈43'33	-17°32'44
direct	1097 Dec 16 j 01:20	7°♈43'39	
conjunction	1098 Mar 24 j 02:21	9°♈12'40	-16°50'19
minimum elong	1098 Mar 24 j 02:24	9°♈12'40	16°50'18
max. Earth dist.	1098 Mar 26 j 02:25	9°♈15'30	49.00477 AU
retrograde	1098 Jul 05 j 02:18	10°♈45'37	
min. Earth dist.	1098 Sep 25 j 06:58	9°♈46'31	47.14304 AU
opposition	1098 Sep 27 j 03:17	9°♈44'23	-17°32'23
direct	1098 Dec 17 j 09:20	8°♈44'33	
conjunction	1099 Mar 25 j 08:57	10°♈13'20	-16°49'55
minimum elong	1099 Mar 25 j 09:01	10°♈13'20	16°49'56
max. Earth dist.	1099 Mar 27 j 06:55	10°♈16'03	49.10045 AU
retrograde	1099 Jul 06 j 11:02	11°♈46'02	
min. Earth dist.	1099 Sep 26 j 13:34	10°♈47'00	47.23612 AU
opposition	1099 Sep 28 j 09:27	10°♈44'54	-17°31'44
direct	1099 Dec 18 j 13:36	9°♈45'07	
conjunction	1100 Mar 25 j 15:24	11°♈13'41	-16°49'15
minimum elong	1100 Mar 25 j 15:28	11°♈13'41	16°49'15
max. Earth dist.	1100 Mar 27 j 12:32	11°♈16'20	49.19120 AU
retrograde	1100 Jul 06 j 18:10	12°♈46'08	
min. Earth dist.	1100 Sep 26 j 21:46	11°♈47'03	47.32451 AU
opposition	1100 Sep 28 j 15:35	11°♈45'03	-17°30'50
direct	1100 Dec 18 j 18:34	10°♈45'20	
conjunction	1101 Mar 26 j 21:52	12°♈13'40	-16°48'19
minimum elong	1101 Mar 26 j 21:57	12°♈13'40	16°48'20
max. Earth dist.	1101 Mar 28 j 18:12	12°♈16'16	49.27770 AU
retrograde	1101 Jul 07 j 21:54	13°♈45'52	
min. Earth dist.	1101 Sep 28 j 03:40	12°♈46'50	47.40880 AU

opposition	1101 Sep 29 j 21:16	12°♈44'51	-17°29'38
direct	1101 Dec 20 j 01:14	11°♈45'11	