

opposition	10600 Jan 30 21:26	15°Ω57'52 -0°57'36	min. Earth dist.	10606 Feb 13 12:27	29°Ω28'53 28.80438 AU
min. Earth dist.	10600 Jan 30 07:32	15°Ω58'50 28.84267 AU	direct	10606 May 03 11:51	28°Ω04'09
	10600 Mar 10 08:23	15°κΩ	evening set	10606 Jul 29 11:20	29°Ω58'16
direct	10600 Apr 19 09:58	14°Ω34'21		10606 Jul 30 06:05	0°η
	10600 May 28 08:26	15°Ω			
evening set	10600 Jul 15 12:57	16°Ω28'35	conjunction	10606 Aug 14 02:56	0°η33'37 -0°52'32
			minimum elong	10606 Aug 14 02:56	0°η33'37 0°52'51
conjunction	10600 Jul 31 02:26	17°Ω03'49 -0°53'52	max. Earth dist.	10606 Aug 14 19:45	0°η35'13 30.80247 AU
minimum elong	10600 Jul 31 02:26	17°Ω03'49 0°54'17	morning rise	10606 Aug 29 20:56	1°η09'14
max. Earth dist.	10600 Jul 31 15:58	17°Ω05'06 30.83894 AU	retrograde	10606 Nov 28 14:10	3°η07'44
morning rise	10600 Aug 15 18:23	17°Ω39'16	opposition	10607 Feb 16 16:22	1°η42'48 -0°55'56
retrograde	10600 Nov 14 05:31	19°Ω37'37	min. Earth dist.	10607 Feb 15 23:44	1°η43'57 28.80165 AU
opposition	10601 Feb 02 10:41	18°Ω12'59 -0°57'37	direct	10607 May 06 00:39	0°η19'08
min. Earth dist.	10601 Feb 01 20:55	18°Ω13'56 28.83574 AU	evening set	10607 Jul 31 23:10	2°η13'14
direct	10601 Apr 21 20:41	16°Ω49'26			
evening set	10601 Jul 18 00:37	18°Ω43'39	conjunction	10607 Aug 16 14:58	2°η48'37 -0°52'02
			minimum elong	10607 Aug 16 14:59	2°η48'37 0°52'19
conjunction	10601 Aug 02 14:35	19°Ω18'54 -0°53'51	max. Earth dist.	10607 Aug 17 07:31	2°η50'11 30.80040 AU
minimum elong	10601 Aug 02 14:35	19°Ω18'54 0°54'14	morning rise	10607 Sep 01 09:29	3°η24'15
max. Earth dist.	10601 Aug 03 05:18	19°Ω20'17 30.83160 AU	retrograde	10607 Dec 01 02:58	5°η22'48
morning rise	10601 Aug 18 06:44	19°Ω54'22	opposition	10608 Feb 19 05:21	3°η57'51 -0°55'21
retrograde	10601 Nov 16 18:25	21°Ω52'45	min. Earth dist.	10608 Feb 18 13:06	3°η58'59 28.80026 AU
opposition	10602 Feb 04 23:49	20°Ω28'03 -0°57'33	direct	10608 May 07 11:11	2°η34'13
min. Earth dist.	10602 Feb 04 10:00	20°Ω29'00 28.82812 AU	evening set	10608 Aug 02 11:03	4°η28'18
direct	10602 Apr 24 10:11	19°Ω04'28			
evening set	10602 Jul 20 12:22	20°Ω58'39	conjunction	10608 Aug 18 03:24	5°η03'43 -0°51'27
			minimum elong	10608 Aug 18 03:24	5°η03'43 0°51'44
conjunction	10602 Aug 05 02:31	21°Ω33'55 -0°53'45	max. Earth dist.	10608 Aug 18 21:21	5°η05'25 30.79957 AU
minimum elong	10602 Aug 05 02:31	21°Ω33'55 0°54'07	morning rise	10608 Sep 02 22:09	5°η39'22
max. Earth dist.	10602 Aug 05 16:38	21°Ω35'15 30.82402 AU	retrograde	10608 Dec 02 15:37	7°η37'57
morning rise	10602 Aug 20 19:09	22°Ω09'25	opposition	10609 Feb 20 18:01	6°η13'01 -0°54'41
retrograde	10602 Nov 19 09:08	24°Ω07'49	min. Earth dist.	10609 Feb 20 01:00	6°η14'12 28.79980 AU
opposition	10603 Feb 07 12:50	22°Ω43'03 -0°57'24	direct	10609 May 09 22:56	4°η49'24
min. Earth dist.	10603 Feb 06 22:10	22°Ω44'04 28.82071 AU	evening set	10609 Aug 04 23:13	6°η43'30
direct	10603 Apr 26 22:12	21°Ω19'25			
evening set	10603 Jul 23 00:05	23°Ω13'35	conjunction	10609 Aug 20 15:47	7°η18'56 -0°50'47
			minimum elong	10609 Aug 20 15:47	7°η18'56 0°51'02
conjunction	10603 Aug 07 14:36	23°Ω48'53 -0°53'34	max. Earth dist.	10609 Aug 21 08:54	7°η20'33 30.79947 AU
minimum elong	10603 Aug 07 14:36	23°Ω48'53 0°53'55	morning rise	10609 Sep 05 11:06	7°η54'37
max. Earth dist.	10603 Aug 08 05:49	23°Ω50'19 30.81683 AU	retrograde	10609 Dec 05 05:10	9°η53'14
morning rise	10603 Aug 23 07:30	24°Ω24'24	opposition	10610 Feb 23 06:51	8°η28'18 -0°53'56
retrograde	10603 Nov 21 21:29	26°Ω22'50	min. Earth dist.	10610 Feb 22 14:05	8°η29'28 28.79992 AU
min. Earth dist.	10604 Feb 09 11:33	24°Ω59'00 28.81401 AU	direct	10610 May 12 09:32	7°η04'42
opposition	10604 Feb 10 01:54	24°Ω58'00 -0°57'10	evening set	10610 Aug 07 11:19	8°η58'49
direct	10604 Apr 28 10:24	23°Ω34'21			
evening set	10604 Jul 24 11:43	25°Ω28'29	conjunction	10610 Aug 23 04:22	9°η34'16 -0°50'03
			minimum elong	10610 Aug 23 04:22	9°η34'16 0°50'17
conjunction	10604 Aug 09 02:35	26°Ω03'47 -0°53'18	max. Earth dist.	10610 Aug 23 22:37	9°η36'00 30.79952 AU
minimum elong	10604 Aug 09 02:35	26°Ω03'47 0°53'39	morning rise	10610 Sep 07 23:52	10°η09'59
max. Earth dist.	10604 Aug 09 18:06	26°Ω05'16 30.81076 AU	retrograde	10610 Dec 07 17:09	12°η08'37
morning rise	10604 Aug 24 19:54	26°Ω39'20	opposition	10611 Feb 25 19:39	10°η43'42 -0°53'05
retrograde	10604 Nov 23 12:22	28°Ω37'48	min. Earth dist.	10611 Feb 25 02:59	10°η44'52 28.79982 AU
opposition	10605 Feb 11 14:47	27°Ω12'54 -0°56'51	direct	10611 May 14 21:46	9°η20'06
min. Earth dist.	10605 Feb 10 23:03	27°Ω14'00 28.80853 AU	evening set	10611 Aug 09 23:43	11°η14'13
direct	10605 Apr 30 24:00	25°Ω49'14			
evening set	10605 Jul 26 23:35	27°Ω43'21	conjunction	10611 Aug 25 17:01	11°η49'42 -0°49'14
			minimum elong	10611 Aug 25 17:01	11°η49'42 0°49'26
conjunction	10605 Aug 11 14:44	28°Ω18'42 -0°52'58	max. Earth dist.	10611 Aug 26 10:12	11°η51'19 30.79927 AU
minimum elong	10605 Aug 11 14:44	28°Ω18'42 0°53'17	morning rise	10611 Sep 10 13:02	12°η25'25
max. Earth dist.	10605 Aug 12 06:38	28°Ω20'12 30.80584 AU	retrograde	10611 Dec 10 07:56	14°η24'05
morning rise	10605 Aug 27 08:26	28°Ω54'16	opposition	10612 Feb 28 08:28	12°η59'09 -0°52'10
	10605 Sep 29 02:23	0°η	min. Earth dist.	10612 Feb 27 15:28	13°η00'20 28.79926 AU
retrograde	10605 Nov 26 01:45	0°η52'45	direct	10612 May 16 08:44	11°η35'32
	10606 Jan 25 08:22	30°κΩ	evening set	10612 Aug 11 12:03	13°η29'39
opposition	10606 Feb 14 03:35	29°Ω27'50 -0°56'26			

conjunction	10612 Aug 27 05:50	14° <u>10</u> 05'08	-0°48'20	opposition	10619 Mar 15 23:49	28° <u>10</u> 44'34	-0°43'39
minimum elong	10612 Aug 27 05:50	14° <u>10</u> 05'08	0°48'32	min. Earth dist.	10619 Mar 15 06:59	28° <u>10</u> 45'44	28.79379 AU
max. Earth dist.	10612 Aug 27 23:30	14° <u>10</u> 06'48	30.79819 AU	direct	10619 Jun 01 22:50	27° <u>10</u> 20'44	
morning rise	10612 Sep 12 02:10	14° <u>10</u> 40'53		evening set	10619 Aug 28 02:42	29° <u>10</u> 14'40	
retrograde	10612 Dec 11 20:33	16° <u>10</u> 39'32					
opposition	10613 Mar 01 21:18	15° <u>10</u> 14'34	-0°51'10	conjunction	10619 Sep 12 23:16	29° <u>10</u> 50'18	-0°40'09
min. Earth dist.	10613 Mar 01 05:11	15° <u>10</u> 15'41	28.79772 AU	minimum elong	10619 Sep 12 23:16	29° <u>10</u> 50'18	0°40'11
direct	10613 May 18 21:05	13° <u>10</u> 50'55		max. Earth dist.	10619 Sep 13 17:57	29° <u>10</u> 52'04	30.79510 AU
evening set	10613 Aug 14 00:31	15° <u>10</u> 45'00			10619 Sep 17 05:53	0° <u>10</u>	
				morning rise	10619 Sep 28 22:15	0° <u>10</u> 26'11	
conjunction	10613 Aug 29 18:40	16° <u>10</u> 20'31	-0°47'22	retrograde	10619 Dec 28 15:25	2° <u>10</u> 24'33	
minimum elong	10613 Aug 29 18:40	16° <u>10</u> 20'31	0°47'32	opposition	10620 Mar 17 12:00	0° <u>10</u> 59'26	-0°42'09
max. Earth dist.	10613 Aug 30 11:48	16° <u>10</u> 22'08	30.79639 AU	min. Earth dist.	10620 Mar 16 19:02	1° <u>10</u> 00'37	28.79744 AU
morning rise	10613 Sep 14 15:26	16° <u>10</u> 56'17			10620 Apr 25 17:08	30° <u>10</u>	
retrograde	10613 Dec 14 11:33	18° <u>10</u> 54'52		direct	10620 Jun 03 10:26	29° <u>10</u> 35'37	
opposition	10614 Mar 04 09:47	17° <u>10</u> 29'52	-0°50'06		10620 Jul 11 07:40	0° <u>10</u>	
min. Earth dist.	10614 Mar 03 16:59	17° <u>10</u> 31'02	28.79560 AU	evening set	10620 Aug 29 15:14	1° <u>10</u> 29'34	
direct	10614 May 21 10:46	16° <u>10</u> 06'10					
evening set	10614 Aug 16 12:56	18° <u>10</u> 00'13		conjunction	10620 Sep 14 12:06	2° <u>10</u> 05'13	-0°38'43
				minimum elong	10620 Sep 14 12:06	2° <u>10</u> 05'13	0°38'45
conjunction	10614 Sep 01 07:27	18° <u>10</u> 35'45	-0°46'20	max. Earth dist.	10620 Sep 15 05:53	2° <u>10</u> 06'54	30.79956 AU
minimum elong	10614 Sep 01 07:27	18° <u>10</u> 35'45	0°46'29	morning rise	10620 Sep 30 11:37	2° <u>10</u> 41'07	
max. Earth dist.	10614 Sep 02 00:33	18° <u>10</u> 37'22	30.79410 AU	retrograde	10620 Dec 30 05:48	4° <u>10</u> 39'29	
morning rise	10614 Sep 17 04:37	19° <u>10</u> 11'32		min. Earth dist.	10621 Mar 19 06:44	3° <u>10</u> 15'37	28.80251 AU
retrograde	10614 Dec 17 00:21	21° <u>10</u> 10'05		opposition	10621 Mar 20 00:09	3° <u>10</u> 14'24	-0°40'35
opposition	10615 Mar 06 22:28	19° <u>10</u> 45'01	-0°48'57	direct	10621 Jun 05 20:26	1° <u>10</u> 50'37	
min. Earth dist.	10615 Mar 06 06:42	19° <u>10</u> 46'07	28.79337 AU	evening set	10621 Sep 01 03:50	3° <u>10</u> 44'36	
direct	10615 May 23 22:59	18° <u>10</u> 21'17					
evening set	10615 Aug 19 01:07	20° <u>10</u> 15'17		conjunction	10621 Sep 17 01:09	4° <u>10</u> 20'16	-0°37'13
				minimum elong	10621 Sep 17 01:09	4° <u>10</u> 20'16	0°37'13
conjunction	10615 Sep 03 20:07	20° <u>10</u> 50'50	-0°45'13	max. Earth dist.	10621 Sep 17 19:40	4° <u>10</u> 22'01	30.80505 AU
minimum elong	10615 Sep 03 20:07	20° <u>10</u> 50'50	0°45'21	morning rise	10621 Oct 03 00:53	4° <u>10</u> 56'11	
max. Earth dist.	10615 Sep 04 13:43	20° <u>10</u> 52'30	30.79214 AU	retrograde	10622 Jan 01 17:48	6° <u>10</u> 54'32	
morning rise	10615 Sep 19 17:38	21° <u>10</u> 26'38		opposition	10622 Mar 22 12:14	5° <u>10</u> 29'30	-0°38'58
retrograde	10615 Dec 19 13:44	23° <u>10</u> 25'08		min. Earth dist.	10622 Mar 21 19:37	5° <u>10</u> 30'40	28.80837 AU
opposition	10616 Mar 08 10:54	22° <u>10</u> 00'02	-0°47'44	direct	10622 Jun 08 07:57	4° <u>10</u> 05'46	
min. Earth dist.	10616 Mar 07 18:01	22° <u>10</u> 01'13	28.79167 AU	evening set	10622 Sep 03 16:36	5° <u>10</u> 59'47	
direct	10616 May 25 12:25	20° <u>10</u> 36'15					
evening set	10616 Aug 20 13:36	22° <u>10</u> 30'13		conjunction	10622 Sep 19 14:15	6° <u>10</u> 35'28	-0°35'40
				minimum elong	10622 Sep 19 14:15	6° <u>10</u> 35'28	0°35'40
conjunction	10616 Sep 05 08:51	23° <u>10</u> 05'47	-0°44'03	max. Earth dist.	10622 Sep 20 08:13	6° <u>10</u> 37'10	30.81129 AU
minimum elong	10616 Sep 05 08:52	23° <u>10</u> 05'47	0°44'11	morning rise	10622 Oct 05 14:23	7° <u>10</u> 11'25	
max. Earth dist.	10616 Sep 06 01:53	23° <u>10</u> 07'24	30.79085 AU	retrograde	10623 Jan 04 08:52	9° <u>10</u> 09'44	
morning rise	10616 Sep 21 06:53	23° <u>10</u> 41'37		min. Earth dist.	10623 Mar 24 07:07	7° <u>10</u> 45'59	28.81466 AU
retrograde	10616 Dec 21 02:58	25° <u>10</u> 40'04		opposition	10623 Mar 25 00:19	7° <u>10</u> 44'46	-0°37'16
opposition	10617 Mar 10 23:15	24° <u>10</u> 14'55	-0°46'27	direct	10623 Jun 10 20:48	6° <u>10</u> 21'04	
min. Earth dist.	10617 Mar 10 07:07	24° <u>10</u> 16'03	28.79102 AU	evening set	10623 Sep 06 05:23	8° <u>10</u> 15'07	
direct	10617 May 27 23:40	22° <u>10</u> 51'07					
evening set	10617 Aug 23 01:56	24° <u>10</u> 45'03		conjunction	10623 Sep 22 03:23	8° <u>10</u> 50'50	-0°34'04
				minimum elong	10623 Sep 22 03:23	8° <u>10</u> 50'50	0°34'01
conjunction	10617 Sep 07 21:45	25° <u>10</u> 20'39	-0°42'49	max. Earth dist.	10623 Sep 22 21:09	8° <u>10</u> 52'30	30.81740 AU
minimum elong	10617 Sep 07 21:45	25° <u>10</u> 20'39	0°42'54	morning rise	10623 Oct 08 03:52	9° <u>10</u> 26'47	
max. Earth dist.	10617 Sep 08 15:55	25° <u>10</u> 22'22	30.79082 AU	retrograde	10624 Jan 06 21:39	11° <u>10</u> 25'05	
morning rise	10617 Sep 23 19:59	25° <u>10</u> 56'29		opposition	10624 Mar 26 12:34	10° <u>10</u> 00'10	-0°35'31
retrograde	10617 Dec 23 15:26	27° <u>10</u> 54'54		min. Earth dist.	10624 Mar 25 20:49	10° <u>10</u> 01'16	28.82055 AU
opposition	10618 Mar 13 11:30	26° <u>10</u> 29'45	-0°45'05	direct	10624 Jun 12 08:19	8° <u>10</u> 36'28	
min. Earth dist.	10618 Mar 12 18:32	26° <u>10</u> 30'56	28.79161 AU	evening set	10624 Sep 07 18:22	10° <u>10</u> 30'32	
direct	10618 May 30 12:15	25° <u>10</u> 05'55					
evening set	10618 Aug 25 14:20	26° <u>10</u> 59'51		conjunction	10624 Sep 23 16:51	11° <u>10</u> 06'16	-0°32'24
				minimum elong	10624 Sep 23 16:51	11° <u>10</u> 06'16	0°32'21
conjunction	10618 Sep 10 10:21	27° <u>10</u> 35'28	-0°41'31	max. Earth dist.	10624 Sep 24 10:19	11° <u>10</u> 07'54	30.82297 AU
minimum elong	10618 Sep 10 10:21	27° <u>10</u> 35'28	0°41'35	morning rise	10624 Oct 09 17:37	11° <u>10</u> 42'14	
max. Earth dist.	10618 Sep 11 03:43	27° <u>10</u> 37'06	30.79217 AU	retrograde	10625 Jan 08 12:05	13° <u>10</u> 40'28	
morning rise	10618 Sep 26 09:06	28° <u>10</u> 11'20		min. Earth dist.	10625 Mar 28 08:15	12° <u>10</u> 16'43	28.82558 AU
	10618 Dec 01 21:06	0° <u>10</u>		opposition	10625 Mar 29 00:29	12° <u>10</u> 15'35	-0°33'43
retrograde	10618 Dec 26 04:04	0° <u>10</u> 09'43		direct	10625 Jun 14 21:43	10° <u>10</u> 51'53	
	10619 Jan 19 16:52	30° <u>10</u>		evening set	10625 Sep 10 07:29	12° <u>10</u> 45'57	

conjunction	10625 Sep 26 06:12	13° <u>♂</u> 21'42	-0°30'42	direct	10632 Jun 30 09:13	26° <u>♂</u> 35'41	
minimum elong	10625 Sep 26 06:12	13° <u>♂</u> 21'42	0°30'37	evening set	10632 Sep 26 01:53	28° <u>♂</u> 29'37	
max. Earth dist.	10625 Sep 26 22:25	13° <u>♂</u> 23'13	30.82750 AU				
morning rise	10625 Oct 12 07:24	13° <u>♂</u> 57'41		conjunction	10632 Oct 12 03:07	29° <u>♂</u> 05'26	-0°17'40
retrograde	10626 Jan 11 02:21	15° <u>♂</u> 55'50		minimum elong	10632 Oct 12 03:07	29° <u>♂</u> 05'26	0°17'27
opposition	10626 Mar 31 12:37	14° <u>♂</u> 30'57	-0°31'52	max. Earth dist.	10632 Oct 12 18:02	29° <u>♂</u> 06'49	30.86291 AU
min. Earth dist.	10626 Mar 30 21:43	14° <u>♂</u> 31'59	28.82973 AU	morning rise	10632 Oct 28 06:16	29° <u>♂</u> 41'27	
direct	10626 Jun 17 09:55	13° <u>♂</u> 07'13			10632 Nov 05 21:01	0° <u>♂</u>	
evening set	10626 Sep 12 20:15	15° <u>♂</u> 01'15		retrograde	10633 Jan 26 14:49	1° <u>♂</u> 38'53	
				opposition	10633 Apr 15 22:10	0° <u>♂</u> 14'02	-0°17'47
conjunction	10626 Sep 28 19:30	15° <u>♂</u> 37'01	-0°28'57	min. Earth dist.	10633 Apr 15 09:03	0° <u>♂</u> 14'57	28.86753 AU
minimum elong	10626 Sep 28 19:31	15° <u>♂</u> 37'01	0°28'51		10633 Apr 24 06:16	30° <u>♂</u>	
max. Earth dist.	10626 Sep 29 12:12	15° <u>♂</u> 38'35	30.83135 AU	direct	10633 Jul 02 19:44	28° <u>♂</u> 50'03	
morning rise	10626 Oct 14 20:53	16° <u>♂</u> 13'01			10633 Sep 07 08:23	0° <u>♂</u>	
retrograde	10627 Jan 13 14:49	18° <u>♂</u> 11'05		evening set	10633 Sep 28 14:52	0° <u>♂</u> 44'00	
min. Earth dist.	10627 Apr 02 09:21	16° <u>♂</u> 47'14	28.83325 AU				
opposition	10627 Apr 03 00:32	16° <u>♂</u> 46'10	-0°29'58	conjunction	10633 Oct 14 16:28	1° <u>♂</u> 19'50	-0°15'41
direct	10627 Jun 19 23:38	15° <u>♂</u> 22'24		minimum elong	10633 Oct 14 16:28	1° <u>♂</u> 19'50	0°15'27
evening set	10627 Sep 15 09:18	17° <u>♂</u> 16'24		behind sun begin	10633 Oct 14 14:56	1° <u>♂</u> 19'41	
				behind sun end	10633 Oct 14 18:00	1° <u>♂</u> 19'58	
conjunction	10627 Oct 01 08:45	17° <u>♂</u> 52'11	-0°27'10	max. Earth dist.	10633 Oct 15 07:19	1° <u>♂</u> 21'13	30.87218 AU
minimum elong	10627 Oct 01 08:45	17° <u>♂</u> 52'11	0°27'02	morning rise	10633 Oct 30 19:50	1° <u>♂</u> 55'51	
max. Earth dist.	10627 Oct 02 00:05	17° <u>♂</u> 53'37	30.83485 AU	retrograde	10634 Jan 29 04:41	3° <u>♂</u> 53'12	
morning rise	10627 Oct 17 10:37	18° <u>♂</u> 28'11		opposition	10634 Apr 18 09:32	2° <u>♂</u> 28'25	-0°15'38
retrograde	10628 Jan 16 03:14	20° <u>♂</u> 26'09		min. Earth dist.	10634 Apr 17 19:42	2° <u>♂</u> 29'23	28.87718 AU
opposition	10628 Apr 04 12:21	19° <u>♂</u> 01'13	-0°28'02	direct	10634 Jul 05 08:53	1° <u>♂</u> 04'28	
min. Earth dist.	10628 Apr 03 21:56	19° <u>♂</u> 02'14	28.83686 AU	evening set	10634 Oct 01 03:53	2° <u>♂</u> 58'26	
direct	10628 Jun 21 10:41	17° <u>♂</u> 37'24					
evening set	10628 Sep 16 22:09	19° <u>♂</u> 31'22		conjunction	10634 Oct 17 05:39	3° <u>♂</u> 34'17	-0°13'41
				minimum elong	10634 Oct 17 05:38	3° <u>♂</u> 34'17	0°13'25
conjunction	10628 Oct 02 22:09	20° <u>♂</u> 07'09	-0°25'20	behind sun begin	10634 Oct 17 02:01	3° <u>♂</u> 33'57	
minimum elong	10628 Oct 02 22:09	20° <u>♂</u> 07'09	0°25'11	behind sun end	10634 Oct 17 09:16	3° <u>♂</u> 34'36	
max. Earth dist.	10628 Oct 03 14:18	20° <u>♂</u> 08'40	30.83857 AU	max. Earth dist.	10634 Oct 17 19:37	3° <u>♂</u> 35'35	30.88214 AU
morning rise	10628 Oct 19 00:10	20° <u>♂</u> 43'10		morning rise	10634 Nov 02 09:19	4° <u>♂</u> 10'18	
retrograde	10629 Jan 17 14:25	22° <u>♂</u> 41'00		retrograde	10635 Jan 31 18:18	6° <u>♂</u> 07'36	
min. Earth dist.	10629 Apr 06 09:53	21° <u>♂</u> 17'04	28.84077 AU	opposition	10635 Apr 20 21:05	4° <u>♂</u> 42'53	-0°13'28
opposition	10629 Apr 07 00:03	21° <u>♂</u> 16'04	-0°26'03	min. Earth dist.	10635 Apr 20 08:31	4° <u>♂</u> 43'46	28.88739 AU
direct	10629 Jun 23 23:05	19° <u>♂</u> 52'12		direct	10635 Jul 07 20:28	3° <u>♂</u> 18'58	
evening set	10629 Sep 19 11:09	21° <u>♂</u> 46'08		evening set	10635 Oct 03 17:00	5° <u>♂</u> 12'58	
conjunction	10629 Oct 05 11:19	22° <u>♂</u> 21'56	-0°23'28	conjunction	10635 Oct 19 19:11	5° <u>♂</u> 48'49	-0°11'39
minimum elong	10629 Oct 05 11:19	22° <u>♂</u> 21'56	0°23'18	minimum elong	10635 Oct 19 19:12	5° <u>♂</u> 48'49	0°11'22
max. Earth dist.	10629 Oct 06 02:12	22° <u>♂</u> 23'19	30.84291 AU	behind sun begin	10635 Oct 19 14:28	5° <u>♂</u> 48'24	
morning rise	10629 Oct 21 13:45	22° <u>♂</u> 57'57		behind sun end	10635 Oct 19 23:56	5° <u>♂</u> 49'15	
retrograde	10630 Jan 20 03:42	24° <u>♂</u> 55'40		max. Earth dist.	10635 Oct 20 09:26	5° <u>♂</u> 50'09	30.89237 AU
opposition	10630 Apr 09 11:37	23° <u>♂</u> 30'44	-0°24'02	morning rise	10635 Nov 04 22:56	6° <u>♂</u> 24'51	
min. Earth dist.	10630 Apr 08 21:15	23° <u>♂</u> 31'45	28.84562 AU	retrograde	10636 Feb 03 07:07	8° <u>♂</u> 22'04	
direct	10630 Jun 26 09:39	22° <u>♂</u> 06'49		opposition	10636 Feb 22 08:19	6° <u>♂</u> 57'26	-0°11'17
evening set	10630 Sep 22 00:01	24° <u>♂</u> 00'44		min. Earth dist.	10636 Apr 21 19:46	6° <u>♂</u> 58'19	28.89735 AU
				direct	10636 Jul 09 09:45	5° <u>♂</u> 33'32	
conjunction	10630 Oct 08 00:37	24° <u>♂</u> 36'32	-0°21'34	evening set	10636 Oct 05 06:24	7° <u>♂</u> 27'34	
minimum elong	10630 Oct 08 00:37	24° <u>♂</u> 36'32	0°21'23				
max. Earth dist.	10630 Oct 08 16:10	24° <u>♂</u> 38'00	30.84824 AU	conjunction	10636 Oct 21 08:43	8° <u>♂</u> 03'26	-0°09'36
morning rise	10630 Oct 24 03:11	25° <u>♂</u> 12'33		minimum elong	10636 Oct 21 08:43	8° <u>♂</u> 03'26	0°09'18
retrograde	10631 Jan 22 13:50	27° <u>♂</u> 10'11		behind sun begin	10636 Oct 21 03:13	8° <u>♂</u> 02'57	
opposition	10631 Apr 11 23:14	25° <u>♂</u> 45'15	-0°21'59	behind sun end	10636 Oct 21 14:12	8° <u>♂</u> 03'56	
min. Earth dist.	10631 Apr 11 09:36	25° <u>♂</u> 46'13	28.85158 AU	max. Earth dist.	10636 Oct 21 21:09	8° <u>♂</u> 04'35	30.90198 AU
direct	10631 Jun 28 21:20	24° <u>♂</u> 21'18		morning rise	10636 Nov 06 12:49	8° <u>♂</u> 39'28	
evening set	10631 Sep 24 12:51	26° <u>♂</u> 15'13		retrograde	10637 Feb 04 20:28	10° <u>♂</u> 36'36	
				opposition	10637 Apr 24 19:46	9° <u>♂</u> 12'01	-0°09'05
conjunction	10631 Oct 10 13:46	26° <u>♂</u> 51'01	-0°19'38	min. Earth dist.	10637 Apr 24 08:21	9° <u>♂</u> 12'49	28.90655 AU
minimum elong	10631 Oct 10 13:46	26° <u>♂</u> 51'01	0°19'26	direct	10637 Jul 11 20:45	7° <u>♂</u> 48'07	
max. Earth dist.	10631 Oct 11 04:39	26° <u>♂</u> 52'24	30.85497 AU	evening set	10637 Oct 07 19:38	9° <u>♂</u> 42'11	
morning rise	10631 Oct 26 16:42	27° <u>♂</u> 27'02					
retrograde	10632 Jan 25 03:08	29° <u>♂</u> 24'34		conjunction	10637 Oct 23 22:20	10° <u>♂</u> 18'04	-0°07'33
opposition	10632 Apr 13 10:43	27° <u>♂</u> 59'40	-0°19'54	minimum elong	10637 Oct 23 22:20	10° <u>♂</u> 18'04	0°07'13
min. Earth dist.	10632 Apr 12 20:22	28° <u>♂</u> 00'40	28.85893 AU	behind sun begin	10637 Oct 23 16:19	10° <u>♂</u> 17'31	

behind sun end	10637 Oct 24 04:22	10° \mathbb{M} .18'36		max. Earth dist.	10642 Nov 05 02:31	21° \mathbb{M} .30'09	30.94512 AU
max. Earth dist.	10637 Oct 24 11:04	10° \mathbb{M} .19'14	30.91056 AU	morning rise	10642 Nov 20 22:11	22° \mathbb{M} .05'19	
morning rise	10637 Nov 09 02:24	10° \mathbb{M} .54'06		retrograde	10643 Feb 18 18:25	24° \mathbb{M} .01'42	
retrograde	10638 Feb 07 08:18	12° \mathbb{M} .51'07		opposition	10643 May 08 14:11	22° \mathbb{M} .37'17	0°04'13
opposition	10638 Apr 27 07:04	11° \mathbb{M} .26'35	-0°06'52	min. Earth dist.	10643 May 08 05:37	22° \mathbb{M} .37'53	28.94906 AU
min. Earth dist.	10638 Apr 26 20:22	11° \mathbb{M} .27'21	28.91451 AU	direct	10643 Jul 25 19:08	21° \mathbb{M} .13'07	
direct	10638 Jul 14 09:24	10° \mathbb{M} .02'41		evening set	10643 Oct 22 02:42	23° \mathbb{M} .07'12	
evening set	10638 Oct 10 08:59	11° \mathbb{M} .56'45					
conjunction	10638 Oct 26 11:48	12° \mathbb{M} .32'38	-0°05'29	conjunction	10643 Nov 07 06:36	23° \mathbb{M} .43'04	0°05'01
minimum elong	10638 Oct 26 11:48	12° \mathbb{M} .32'37	0°05'09	minimum elong	10643 Nov 07 06:35	23° \mathbb{M} .43'04	0°05'25
behind sun begin	10638 Oct 26 05:26	12° \mathbb{M} .32'03		behind sun begin	10643 Nov 07 00:15	23° \mathbb{M} .42'30	
behind sun end	10638 Oct 26 18:10	12° \mathbb{M} .33'12		behind sun end	10643 Nov 07 12:55	23° \mathbb{M} .43'38	
max. Earth dist.	10638 Oct 26 22:36	12° \mathbb{M} .33'37	30.91813 AU	max. Earth dist.	10643 Nov 07 14:53	23° \mathbb{M} .43'49	30.95323 AU
morning rise	10638 Nov 11 16:12	13° \mathbb{M} .08'40		morning rise	10643 Nov 23 11:34	24° \mathbb{M} .19'03	
retrograde	10639 Jan 22 13:37	15° \mathbb{M} .		retrograde	10644 Feb 21 06:37	26° \mathbb{M} .15'18	
opposition	10639 Feb 09 21:20	15° \mathbb{M} .05'34		opposition	10644 May 10 00:59	24° \mathbb{M} .50'54	0°06'26
min. Earth dist.	10639 Feb 28 04:53	15° \mathbb{R} \mathbb{M} .		min. Earth dist.	10644 May 09 17:34	24° \mathbb{M} .51'26	28.95787 AU
direct	10639 Apr 29 18:17	13° \mathbb{M} .41'04	-0°04'39	direct	10644 Jul 27 06:35	23° \mathbb{M} .26'43	
evening set	10639 Apr 29 07:55	13° \mathbb{M} .41'48	28.92168 AU	evening set	10644 Oct 23 15:43	25° \mathbb{M} .20'48	
conjunction	10639 Jul 16 20:16	12° \mathbb{M} .17'07		conjunction	10644 Nov 08 19:55	25° \mathbb{M} .56'41	0°07'04
evening set	10639 Oct 12 22:08	14° \mathbb{M} .11'11		minimum elong	10644 Nov 08 19:55	25° \mathbb{M} .56'41	0°07'29
conjunction	10639 Oct 29 01:21	14° \mathbb{M} .47'04	-0°03'25	behind sun begin	10644 Nov 08 13:57	25° \mathbb{M} .56'09	
minimum elong	10639 Oct 29 01:20	14° \mathbb{M} .47'04	0°03'03	behind sun end	10644 Nov 09 01:54	25° \mathbb{M} .57'12	
behind sun begin	10639 Oct 28 18:47	14° \mathbb{M} .46'28		max. Earth dist.	10644 Nov 09 04:34	25° \mathbb{M} .57'28	30.96270 AU
behind sun end	10639 Oct 29 07:53	14° \mathbb{M} .47'39		morning rise	10644 Nov 25 00:52	26° \mathbb{M} .32'39	
max. Earth dist.	10639 Oct 29 12:17	14° \mathbb{M} .48'04	30.92490 AU	retrograde	10645 Feb 22 18:33	28° \mathbb{M} .28'46	
morning rise	10639 Nov 03 19:45	15° \mathbb{M} .		opposition	10645 May 12 11:42	27° \mathbb{M} .04'26	0°08'37
retrograde	10639 Nov 14 05:47	15° \mathbb{M} .23'06		min. Earth dist.	10645 May 12 03:55	27° \mathbb{M} .04'59	28.96791 AU
opposition	10640 Feb 12 07:03	17° \mathbb{M} .19'52		direct	10645 Jul 29 19:39	25° \mathbb{M} .40'14	
min. Earth dist.	10640 May 01 05:29	15° \mathbb{M} .55'24	-0°02'26	evening set	10645 Oct 26 04:47	27° \mathbb{M} .34'21	
direct	10640 Apr 30 20:22	15° \mathbb{M} .56'02	28.92817 AU	conjunction	10645 Nov 11 08:58	28° \mathbb{M} .10'12	0°09'06
evening set	10640 Jun 06 00:56	15° \mathbb{R} \mathbb{M} .		minimum elong	10645 Nov 11 08:57	28° \mathbb{M} .10'12	0°09'32
conjunction	10640 Jul 18 08:08	14° \mathbb{M} .31'24		behind sun begin	10645 Nov 11 03:32	28° \mathbb{M} .09'43	
evening set	10640 Aug 28 20:15	15° \mathbb{M} .		behind sun end	10645 Nov 11 14:23	28° \mathbb{M} .10'41	
conjunction	10640 Oct 14 11:26	16° \mathbb{M} .25'27		max. Earth dist.	10645 Nov 11 16:18	28° \mathbb{M} .10'52	30.97340 AU
minimum elong	10640 Oct 30 14:47	17° \mathbb{M} .01'20	-0°01'18	morning rise	10645 Nov 27 14:04	28° \mathbb{M} .46'10	
behind sun begin	10640 Oct 30 08:14	17° \mathbb{M} .00'45		retrograde	10646 Jan 05 00:17	0° \mathbb{Z} .	
behind sun end	10640 Oct 30 21:21	17° \mathbb{M} .01'55		opposition	10646 Feb 25 07:42	0° \mathbb{Z} .42'11	
max. Earth dist.	10640 Oct 31 00:25	17° \mathbb{M} .02'13	30.93138 AU	min. Earth dist.	10646 Apr 18 19:29	30° \mathbb{R} \mathbb{M} .	
morning rise	10640 Nov 15 19:28	17° \mathbb{M} .37'21		opposition	10646 May 14 22:28	29° \mathbb{M} .17'54	0°10'48
retrograde	10641 Feb 13 19:28	19° \mathbb{M} .34'00		direct	10646 May 14 15:22	29° \mathbb{M} .18'24	28.97930 AU
opposition	10641 May 03 16:20	18° \mathbb{M} .09'32	-0°00'12	evening set	10646 Aug 01 06:36	27° \mathbb{M} .53'42	
min. Earth dist.	10641 May 03 06:58	18° \mathbb{M} .10'12	28.93462 AU		10646 Oct 28 17:46	29° \mathbb{M} .47'51	
asc. node	10641 Jun 05 21:04	17° \mathbb{M} .17'31			10646 Nov 03 06:48	0° \mathbb{Z} .	
direct	10641 Jul 20 19:37	16° \mathbb{M} .45'28		conjunction	10646 Nov 13 22:15	0° \mathbb{Z} .23'43	0°11'07
evening set	10641 Oct 17 00:37	18° \mathbb{M} .39'33		minimum elong	10646 Nov 13 22:15	0° \mathbb{Z} .23'43	0°11'35
conjunction	10641 Nov 02 04:12	19° \mathbb{M} .15'25	0°00'51	behind sun begin	10646 Nov 13 17:37	0° \mathbb{Z} .23'18	
minimum elong	10641 Nov 02 04:11	19° \mathbb{M} .15'25	0°01'14	behind sun end	10646 Nov 14 02:53	0° \mathbb{Z} .24'08	
behind sun begin	10641 Nov 01 21:37	19° \mathbb{M} .14'50		max. Earth dist.	10646 Nov 14 06:19	0° \mathbb{Z} .24'27	30.98532 AU
behind sun end	10641 Nov 02 10:45	19° \mathbb{M} .16'00		morning rise	10646 Nov 30 03:15	0° \mathbb{Z} .59'40	
max. Earth dist.	10641 Nov 02 13:38	19° \mathbb{M} .16'17	30.93788 AU	retrograde	10647 Feb 27 19:55	2° \mathbb{Z} .55'34	
morning rise	10641 Nov 18 08:55	19° \mathbb{M} .51'26		opposition	10647 May 17 09:07	1° \mathbb{Z} .31'23	0°12'58
retrograde	10642 Feb 16 06:04	21° \mathbb{M} .47'57		min. Earth dist.	10647 May 17 02:32	1° \mathbb{Z} .31'50	28.99153 AU
opposition	10642 May 06 03:23	20° \mathbb{M} .23'30	0°02'01	direct	10647 Aug 03 19:41	0° \mathbb{Z} .07'12	
min. Earth dist.	10642 May 05 19:27	20° \mathbb{M} .24'03	28.94143 AU	evening set	10647 Oct 31 06:57	2° \mathbb{Z} .01'23	
direct	10642 Jul 23 05:35	18° \mathbb{M} .59'23		conjunction	10647 Nov 16 11:25	2° \mathbb{Z} .37'15	0°13'08
evening set	10642 Oct 19 13:32	20° \mathbb{M} .53'27		minimum elong	10647 Nov 16 11:25	2° \mathbb{Z} .37'15	0°13'36
conjunction	10642 Nov 04 17:21	21° \mathbb{M} .29'19	0°02'57	behind sun begin	10647 Nov 16 07:57	2° \mathbb{Z} .36'56	
minimum elong	10642 Nov 04 17:21	21° \mathbb{M} .29'19	0°03'21	behind sun end	10647 Nov 16 14:53	2° \mathbb{Z} .37'33	
behind sun begin	10642 Nov 04 10:49	21° \mathbb{M} .28'44		max. Earth dist.	10647 Nov 16 17:47	2° \mathbb{Z} .37'49	30.99784 AU
behind sun end	10642 Nov 04 23:53	21° \mathbb{M} .29'54		morning rise	10647 Dec 02 16:38	3° \mathbb{Z} .13'11	
				retrograde	10648 Mar 01 08:27	5° \mathbb{Z} .08'59	
				opposition	10648 May 18 19:47	3° \mathbb{Z} .44'53	0°15'07

min. Earth dist.	10648 May 18 13:30	3°♊45'19	29.00409 AU	minimum elong	10654 Dec 02 07:44	18°♊09'37	0°27'00
direct	10648 Aug 05 06:47	2°♊20'43		max. Earth dist.	10654 Dec 02 08:18	18°♊09'41	31.06760 AU
evening set	10648 Nov 01 20:12	4°♊14'56		morning rise	10654 Dec 18 12:35	18°♊45'25	
				retrograde	10655 Mar 17 14:50	20°♊40'17	
conjunction	10648 Nov 18 00:51	4°♊50'48	0°15'07	opposition	10655 Jun 03 21:24	19°♊16'29	0°29'15
minimum elong	10648 Nov 18 00:51	4°♊50'48	0°15'36	min. Earth dist.	10655 Jun 03 20:29	19°♊16'33	29.07223 AU
behind sun begin	10648 Nov 17 23:47	4°♊50'42		direct	10655 Aug 21 15:32	17°♊52'03	
behind sun end	10648 Nov 18 01:56	4°♊50'53		evening set	10655 Nov 18 15:43	19°♊46'21	
max. Earth dist.	10648 Nov 18 07:18	4°♊51'23	31.01009 AU				
morning rise	10648 Dec 04 05:53	5°♊26'43		conjunction	10655 Dec 04 20:43	20°♊22'07	0°28'14
retrograde	10649 Mar 03 18:33	7°♊22'24		minimum elong	10655 Dec 04 20:43	20°♊22'07	0°28'46
opposition	10649 May 21 06:26	5°♊58'23	0°17'14	max. Earth dist.	10655 Dec 04 21:55	20°♊22'14	31.07683 AU
min. Earth dist.	10649 May 21 01:37	5°♊58'44	29.01602 AU	morning rise	10655 Dec 21 01:19	20°♊57'53	
direct	10649 Aug 07 18:17	4°♊34'13		retrograde	10656 Mar 19 02:06	22°♊52'36	
evening set	10649 Nov 04 09:30	6°♊28'28		opposition	10656 Jun 05 07:42	21°♊28'51	0°31'07
				min. Earth dist.	10656 Jun 05 07:16	21°♊28'53	29.08182 AU
conjunction	10649 Nov 20 14:09	7°♊04'19	0°17'06	direct	10656 Aug 23 04:53	20°♊04'24	
minimum elong	10649 Nov 20 14:09	7°♊04'19	0°17'35	evening set	10656 Nov 20 04:41	21°♊58'43	
max. Earth dist.	10649 Nov 20 18:55	7°♊04'45	31.02167 AU				
morning rise	10649 Dec 06 19:16	7°♊40'14		conjunction	10656 Dec 06 09:29	22°♊34'28	0°29'57
retrograde	10650 Mar 06 07:15	9°♊35'47		minimum elong	10656 Dec 06 09:29	22°♊34'28	0°30'30
opposition	10650 May 23 17:05	8°♊11'50	0°19'19	max. Earth dist.	10656 Dec 06 09:08	22°♊34'26	31.08697 AU
min. Earth dist.	10650 May 23 12:11	8°♊12'11	29.02710 AU	morning rise	10656 Dec 22 14:06	23°♊10'13	
direct	10650 Aug 10 05:26	6°♊47'38		retrograde	10657 Mar 21 13:58	25°♊04'49	
evening set	10650 Nov 06 22:36	8°♊41'54		opposition	10657 Jun 07 17:52	23°♊41'07	0°32'56
				min. Earth dist.	10657 Jun 07 17:20	23°♊41'10	29.09261 AU
conjunction	10650 Nov 23 03:22	9°♊17'44	0°19'02	direct	10657 Aug 25 16:05	22°♊16'39	
minimum elong	10650 Nov 23 03:22	9°♊17'44	0°19'32	evening set	10657 Nov 22 17:27	24°♊11'00	
max. Earth dist.	10650 Nov 23 07:37	9°♊18'08	31.03213 AU				
morning rise	10650 Dec 09 08:23	9°♊53'38		conjunction	10657 Dec 08 22:20	24°♊46'45	0°31'38
retrograde	10651 Mar 08 17:09	11°♊49'04		minimum elong	10657 Dec 08 22:20	24°♊46'45	0°32'10
opposition	10651 May 26 03:50	10°♊25'09	0°21'23	max. Earth dist.	10657 Dec 08 22:32	24°♊46'46	31.09831 AU
min. Earth dist.	10651 May 26 00:46	10°♊25'22	29.03708 AU	morning rise	10657 Dec 25 02:39	25°♊22'29	
direct	10651 Aug 12 15:29	9°♊00'55		retrograde	10658 Mar 23 23:54	27°♊16'58	
evening set	10651 Nov 09 11:47	10°♊55'11		opposition	10658 Jun 10 04:12	25°♊53'22	0°34'42
				min. Earth dist.	10658 Jun 10 04:37	25°♊53'20	29.10458 AU
conjunction	10651 Nov 25 16:40	11°♊31'01	0°20'57	direct	10658 Aug 28 03:24	24°♊28'55	
minimum elong	10651 Nov 25 16:40	11°♊31'01	0°21'27	evening set	10658 Nov 25 06:10	26°♊23'18	
max. Earth dist.	10651 Nov 25 20:01	11°♊31'19	31.04171 AU				
morning rise	10651 Dec 11 21:41	12°♊06'53		conjunction	10658 Dec 11 10:57	26°♊59'02	0°33'15
retrograde	10652 Mar 10 04:21	14°♊02'10		minimum elong	10658 Dec 11 10:56	26°♊59'02	0°33'49
opposition	10652 May 27 14:13	12°♊38'17	0°23'24	max. Earth dist.	10658 Dec 11 09:58	26°♊58'57	31.11096 AU
min. Earth dist.	10652 May 27 11:00	12°♊38'31	29.04618 AU	morning rise	10658 Dec 27 15:16	27°♊34'45	
direct	10652 Aug 14 04:38	11°♊14'00		retrograde	10659 Mar 26 12:31	29°♊29'08	
evening set	10652 Nov 11 01:00	13°♊08'16		opposition	10659 Jun 12 14:22	28°♊05'38	0°36'25
				min. Earth dist.	10659 Jun 12 14:20	28°♊05'39	29.11764 AU
conjunction	10652 Nov 27 05:51	13°♊44'05	0°22'49	direct	10659 Aug 30 14:08	26°♊41'13	
minimum elong	10652 Nov 27 05:50	13°♊44'05	0°23'20	evening set	10659 Nov 27 19:03	28°♊35'40	
max. Earth dist.	10652 Nov 27 07:55	13°♊44'17	31.05046 AU				
morning rise	10652 Dec 13 10:49	14°♊19'56		conjunction	10659 Dec 13 23:48	29°♊11'24	0°34'50
retrograde	10653 Mar 12 15:20	16°♊15'04		minimum elong	10659 Dec 13 23:48	29°♊11'24	0°35'23
opposition	10653 May 30 00:45	14°♊51'13	0°25'24	max. Earth dist.	10659 Dec 13 22:42	29°♊11'18	31.12425 AU
min. Earth dist.	10653 May 29 23:03	14°♊51'21	29.05481 AU	morning rise	10659 Dec 30 03:52	29°♊47'05	
direct	10653 Aug 16 15:25	13°♊26'53			10660 Jan 05 04:44	0°♊	
evening set	10653 Nov 13 13:51	15°♊21'09		retrograde	10660 Mar 27 22:02	1°♊41'24	
				opposition	10660 Jun 14 00:34	0°♊18'01	0°38'04
conjunction	10653 Nov 29 18:50	15°♊56'57	0°24'40	min. Earth dist.	10660 Jun 14 02:14	0°♊17'54	29.13110 AU
minimum elong	10653 Nov 29 18:50	15°♊56'57	0°25'11		10660 Jun 24 19:39	30°♊	
max. Earth dist.	10653 Nov 29 20:56	15°♊57'09	31.05899 AU	direct	10660 Aug 31 23:20	28°♊53'38	
morning rise	10653 Dec 15 23:38	16°♊32'47			10660 Nov 05 14:22	0°♊	
retrograde	10654 Mar 15 02:28	18°♊27'46		evening set	10660 Nov 29 07:58	0°♊48'08	
opposition	10654 Jun 01 11:07	17°♊03'57	0°27'21				
min. Earth dist.	10654 Jun 01 09:20	17°♊04'05	29.06326 AU	conjunction	10660 Dec 15 12:38	1°♊23'51	0°36'22
direct	10654 Aug 19 04:22	15°♊39'34		minimum elong	10660 Dec 15 12:38	1°♊23'51	0°36'56
evening set	10654 Nov 16 02:54	17°♊33'51		max. Earth dist.	10660 Dec 15 10:47	1°♊23'41	31.13769 AU
				morning rise	10660 Dec 31 16:33	1°♊59'31	
conjunction	10654 Dec 02 07:44	18°♊09'37	0°26'28	retrograde	10661 Mar 30 08:43	3°♊53'44	

opposition	10661 Jun 16 10:46	2°30'28	0°39'41	max. Earth dist.	10667 Dec 31 20:49	16°34'35	31.20476 AU
min. Earth dist.	10661 Jun 16 12:14	2°30'22	29.14424 AU	morning rise	10668 Jan 17 07:16	17°32'46	
direct	10661 Sep 03 11:43	1°30'07		retrograde	10668 Apr 14 14:37	19°31'10	
evening set	10661 Dec 01 20:48	3°30'40		opposition	10668 Jul 01 10:04	17°35'10	0°49'07
				min. Earth dist.	10668 Jul 01 16:27	17°35'43	29.20881 AU
conjunction	10661 Dec 18 01:17	3°36'22	0°37'50	direct	10668 Sep 18 22:30	16°33'34	
minimum elong	10661 Dec 18 01:17	3°36'22	0°38'23	evening set	10668 Dec 17 13:36	18°32'12	
max. Earth dist.	10661 Dec 17 22:14	3°36'05	31.15034 AU				
morning rise	10662 Jan 03 05:01	4°31'01		conjunction	10669 Jan 02 17:09	19°30'45	0°46'27
retrograde	10662 Apr 01 19:23	6°30'10		minimum elong	10669 Jan 02 17:09	19°30'45	0°47'00
opposition	10662 Jun 18 21:10	4°34'58	0°41'13	max. Earth dist.	10669 Jan 02 09:08	19°30'00	31.21255 AU
min. Earth dist.	10662 Jun 19 00:12	4°34'45	29.15650 AU	morning rise	10669 Jan 18 19:10	19°33'10	
direct	10662 Sep 05 21:16	3°31'37		retrograde	10669 Apr 16 23:18	21°32'26	
evening set	10662 Dec 04 09:39	5°31'13		opposition	10669 Jul 03 20:18	20°30'28	0°50'11
				min. Earth dist.	10669 Jul 04 04:01	20°30'56	29.21703 AU
conjunction	10662 Dec 20 14:09	5°34'54	0°39'15	direct	10669 Sep 21 08:48	18°34'51	
minimum elong	10662 Dec 20 14:09	5°34'54	0°39'49	evening set	10669 Dec 20 01:46	20°33'29	
max. Earth dist.	10662 Dec 20 10:47	5°34'35	31.16200 AU				
morning rise	10663 Jan 05 17:36	6°32'41		conjunction	10670 Jan 05 05:07	21°31'20	0°47'26
retrograde	10663 Apr 04 06:15	8°31'33		minimum elong	10670 Jan 05 05:07	21°31'20	0°47'57
opposition	10663 Jun 21 07:20	6°35'26	0°42'42	max. Earth dist.	10670 Jan 04 20:49	21°31'14	31.22124 AU
min. Earth dist.	10663 Jun 21 10:40	6°35'12	29.16745 AU	morning rise	10670 Jan 21 06:55	21°34'23	
direct	10663 Sep 08 09:24	5°31'03		retrograde	10670 Apr 19 09:08	23°34'33	
evening set	10663 Dec 06 22:39	7°32'41		opposition	10670 Jul 06 06:20	22°31'38	0°51'11
				min. Earth dist.	10670 Jul 06 13:20	22°31'09	29.22616 AU
conjunction	10663 Dec 23 02:54	8°30'12	0°40'37	direct	10670 Sep 23 20:45	20°35'30	
minimum elong	10663 Dec 23 02:54	8°30'12	0°41'10	evening set	10670 Dec 22 14:07	22°34'39	
max. Earth dist.	10663 Dec 22 21:33	8°30'51	31.17230 AU				
morning rise	10664 Jan 08 06:16	8°33'56		conjunction	10671 Jan 07 17:13	23°32'30	0°48'20
retrograde	10664 Apr 05 18:22	10°33'51		minimum elong	10671 Jan 07 17:13	23°32'30	0°48'52
opposition	10664 Jun 22 17:39	9°30'47	0°44'07	max. Earth dist.	10671 Jan 07 08:13	23°32'19	31.23083 AU
min. Earth dist.	10664 Jun 22 22:04	9°30'28	29.17720 AU	morning rise	10671 Jan 23 18:45	23°35'31	
direct	10664 Sep 09 20:54	7°34'23		retrograde	10671 Apr 21 19:09	25°35'36	
evening set	10664 Dec 08 11:22	9°33'01		opposition	10671 Jul 08 16:22	24°32'45	0°52'06
				min. Earth dist.	10671 Jul 09 00:26	24°32'11	29.23627 AU
conjunction	10664 Dec 24 15:38	10°31'39	0°41'55	direct	10671 Sep 26 05:40	23°30'40	
minimum elong	10664 Dec 24 15:38	10°31'39	0°42'28	evening set	10671 Dec 25 02:24	24°35'50	
max. Earth dist.	10664 Dec 24 10:32	10°31'11	31.18139 AU				
morning rise	10665 Jan 09 18:36	10°34'12		conjunction	10672 Jan 10 05:24	25°33'18	0°49'09
retrograde	10665 Apr 08 05:01	12°34'30		minimum elong	10672 Jan 10 05:24	25°33'18	0°49'40
opposition	10665 Jun 25 03:52	11°31'57	0°45'28	max. Earth dist.	10672 Jan 09 20:38	25°33'30	31.24129 AU
min. Earth dist.	10665 Jun 25 09:12	11°31'35	29.18573 AU	morning rise	10672 Jan 26 06:35	26°30'38	
direct	10665 Sep 12 10:32	9°35'31		retrograde	10672 Apr 23 05:15	28°30'40	
evening set	10665 Dec 11 00:09	11°35'10		opposition	10672 Jul 10 02:27	26°33'54	0°52'57
				min. Earth dist.	10672 Jul 10 10:28	26°33'21	29.24680 AU
conjunction	10665 Dec 27 04:06	12°32'46	0°43'09	direct	10672 Sep 27 17:19	25°31'51	
minimum elong	10665 Dec 27 04:06	12°32'46	0°43'41	evening set	10672 Dec 26 14:44	27°31'04	
max. Earth dist.	10665 Dec 26 21:07	12°32'08	31.18959 AU				
morning rise	10666 Jan 12 07:00	13°30'18		conjunction	10673 Jan 11 17:20	27°34'31	0°49'55
retrograde	10666 Apr 10 16:38	14°35'48		minimum elong	10673 Jan 11 17:20	27°34'31	0°50'26
opposition	10666 Jun 27 13:59	13°31'56	0°46'45	max. Earth dist.	10673 Jan 11 07:06	27°34'34	31.25183 AU
min. Earth dist.	10666 Jun 27 19:28	13°31'33	29.19367 AU	morning rise	10673 Jan 27 18:18	28°32'50	
direct	10666 Sep 14 21:55	12°30'26			10673 Mar 28 01:28	0°	
evening set	10666 Dec 13 12:35	14°30'25		retrograde	10673 Apr 25 16:47	0°13'49	
					10673 May 24 17:31	30°R3	
conjunction	10666 Dec 29 16:33	14°37'40	0°44'19	opposition	10673 Jul 12 12:35	28°35'10	0°53'43
minimum elong	10666 Dec 29 16:33	14°37'40	0°44'52	min. Earth dist.	10673 Jul 12 21:20	28°35'32	29.25729 AU
max. Earth dist.	10666 Dec 29 09:53	14°37'03	31.19722 AU	direct	10673 Sep 30 03:43	27°32'35	
morning rise	10667 Jan 14 19:05	15°31'30		evening set	10673 Dec 29 02:57	29°32'12	
retrograde	10667 Apr 13 02:41	17°30'41					
opposition	10667 Jun 30 00:10	15°34'40	0°47'58	conjunction	10674 Jan 14 05:28	29°35'49	0°50'36
min. Earth dist.	10667 Jun 30 06:59	15°34'12	29.20116 AU	minimum elong	10674 Jan 14 05:29	29°35'49	0°51'06
direct	10667 Sep 17 10:25	14°31'08		max. Earth dist.	10674 Jan 13 19:43	29°35'55	31.26195 AU
evening set	10667 Dec 16 01:10	16°31'45			10674 Jan 15 15:52	0°	
				morning rise	10674 Jan 30 05:58	0°32'06	
conjunction	10668 Jan 01 04:52	16°34'19	0°45'25	retrograde	10674 Apr 28 03:10	2°32'50	
minimum elong	10668 Jan 01 04:52	16°34'19	0°45'57	opposition	10674 Jul 14 22:46	1°32'26	0°54'25

min. Earth dist.	10674 Jul 15 08:27	1°01'46	29.26692 AU		10681 Jan 22 23:03	15°00'	
	10674 Aug 26 02:02	30°03'					
direct	10674 Oct 02 16:12	29°03'37"55		conjunction	10681 Jan 29 16:00	15°00'14"53	0°53'18
	10674 Nov 08 16:38	0°00'		minimum elong	10681 Jan 29 16:00	15°00'14"53	0°53'44
evening set	10674 Dec 31 15:17	1°00'32"46		max. Earth dist.	10681 Jan 29 01:48	15°00'13"34	31.30094 AU
				morning rise	10681 Feb 14 14:15	15°00'49"58	
conjunction	10675 Jan 16 17:25	2°00'08"11	0°51'12	retrograde	10681 May 13 02:02	17°00'42"23	
minimum elong	10675 Jan 16 17:25	2°00'08"11	0°51'43	opposition	10681 Jul 29 22:02	16°00'19"58	0°57'00
max. Earth dist.	10675 Jan 16 05:48	2°00'07"06	31.27104 AU	min. Earth dist.	10681 Jul 30 11:06	16°00'19"04	29.30315 AU
morning rise	10675 Feb 01 17:47	2°00'43"26			10681 Sep 30 21:54	15°00'00"	
retrograde	10675 Apr 30 15:09	4°00'36"19		direct	10681 Oct 17 23:56	14°00'55"18	
opposition	10675 Jul 17 08:56	3°00'13"47	0°55'01		10681 Nov 03 23:39	15°00'00"	
min. Earth dist.	10675 Jul 17 18:46	3°00'13"06	29.27539 AU	evening set	10682 Jan 16 03:05	16°00'50"13	
direct	10675 Oct 05 03:12	1°00'49"15		max. Earth dist.	10682 Jan 31 11:59	17°00'24"02	31.30490 AU
evening set	10676 Jan 03 03:32	3°00'44"10					
				conjunction	10682 Feb 01 03:17	17°00'25"27	0°53'23
conjunction	10676 Jan 19 05:33	4°00'19"33	0°51'44	minimum elong	10682 Feb 01 03:17	17°00'25"27	0°53'47
minimum elong	10676 Jan 19 05:33	4°00'19"33	0°52'13	morning rise	10682 Feb 17 01:19	18°00'00"30	
max. Earth dist.	10676 Jan 18 18:02	4°00'18"29	31.27868 AU	retrograde	10682 May 15 12:21	19°00'52"52	
morning rise	10676 Feb 04 05:25	4°00'54"47		opposition	10682 Aug 01 08:07	18°00'30"28	0°57'03
retrograde	10676 May 02 01:26	6°00'47"35		min. Earth dist.	10682 Aug 01 21:20	18°00'29"33	29.30769 AU
opposition	10676 Jul 18 19:11	5°00'25"06	0°55'33	direct	10682 Oct 20 09:59	17°00'05"46	
min. Earth dist.	10676 Jul 19 06:32	5°00'24"19	29.28232 AU	evening set	10683 Jan 18 14:33	19°00'00"41	
direct	10676 Oct 06 15:40	4°00'00"35					
evening set	10677 Jan 04 15:49	5°00'55"31		conjunction	10683 Feb 03 14:38	19°00'35"55	0°53'23
				minimum elong	10683 Feb 03 14:39	19°00'35"55	0°53'48
conjunction	10677 Jan 20 17:27	6°00'30"53	0°52'12	max. Earth dist.	10683 Feb 03 00:22	19°00'34"36	31.30988 AU
minimum elong	10677 Jan 20 17:27	6°00'30"53	0°52'41	morning rise	10683 Feb 19 12:12	20°00'10"56	
max. Earth dist.	10677 Jan 20 04:24	6°00'29"41	31.28499 AU	retrograde	10683 May 17 21:38	22°00'03"15	
morning rise	10677 Feb 05 17:07	7°00'06"05		opposition	10683 Aug 03 18:21	20°00'40"53	0°57'01
retrograde	10677 May 04 13:43	8°00'58"49		min. Earth dist.	10683 Aug 04 07:57	20°00'39"56	29.31308 AU
opposition	10677 Jul 21 05:22	7°00'36"22	0°56'00	direct	10683 Oct 22 21:36	19°00'16"12	
min. Earth dist.	10677 Jul 21 16:23	7°00'35"36	29.28796 AU	evening set	10684 Jan 21 02:12	21°00'11"09	
direct	10677 Oct 09 04:04	6°00'11"50		max. Earth dist.	10684 Feb 05 10:23	21°00'44"55	31.31580 AU
evening set	10678 Jan 07 03:45	8°00'06"46					
				conjunction	10684 Feb 06 01:48	21°00'46"20	0°53'19
conjunction	10678 Jan 23 05:11	8°00'42"07	0°52'35	minimum elong	10684 Feb 06 01:48	21°00'46"20	0°53'42
minimum elong	10678 Jan 23 05:11	8°00'42"07	0°53'02	morning rise	10684 Feb 21 23:11	22°00'21"21	
max. Earth dist.	10678 Jan 22 15:55	8°00'40"53	31.28996 AU	retrograde	10684 May 19 09:12	24°00'13"38	
morning rise	10678 Feb 08 04:27	9°00'17"17		opposition	10684 Aug 05 04:28	22°00'51"18	0°56'55
retrograde	10678 May 06 22:22	11°00'09"57		min. Earth dist.	10684 Aug 05 17:32	22°00'50"24	29.31939 AU
opposition	10678 Jul 23 15:40	9°00'47"31	0°56'22	direct	10684 Oct 24 07:50	21°00'26"39	
min. Earth dist.	10678 Jul 24 04:19	9°00'46"39	29.29245 AU	evening set	10685 Jan 22 13:38	23°00'21"38	
direct	10678 Oct 11 14:46	8°00'22"58					
evening set	10679 Jan 09 15:46	10°00'17"54		conjunction	10685 Feb 07 13:04	23°00'56"48	0°53'11
				minimum elong	10685 Feb 07 13:04	23°00'56"48	0°53'33
conjunction	10679 Jan 25 16:56	10°00'53"13	0°52'54	max. Earth dist.	10685 Feb 06 22:26	23°00'55"27	31.32230 AU
minimum elong	10679 Jan 25 16:57	10°00'53"13	0°53'22	morning rise	10685 Feb 23 09:56	24°00'31"46	
max. Earth dist.	10679 Jan 25 03:07	10°00'51"56	31.29407 AU	retrograde	10685 May 21 19:36	26°00'24"03	
morning rise	10679 Feb 10 15:57	11°00'28"21		opposition	10685 Aug 07 14:48	25°00'01"47	0°56'43
retrograde	10679 May 09 07:44	13°00'20"55		min. Earth dist.	10685 Aug 08 04:56	25°00'00"48	29.32597 AU
opposition	10679 Jul 26 01:39	11°00'58"31	0°56'40	direct	10685 Oct 26 20:12	23°00'37"10	
min. Earth dist.	10679 Jul 26 13:57	11°00'57"40	29.29613 AU	evening set	10686 Jan 25 01:02	25°00'32"10	
direct	10679 Oct 14 02:59	10°00'33"55		max. Earth dist.	10686 Feb 09 08:28	26°00'05"53	31.32886 AU
evening set	10680 Jan 12 03:45	12°00'28"50					
				conjunction	10686 Feb 10 00:03	26°00'07"19	0°52'58
conjunction	10680 Jan 28 04:35	13°00'04"08	0°53'08	minimum elong	10686 Feb 10 00:03	26°00'07"19	0°53'18
minimum elong	10680 Jan 28 04:35	13°00'04"08	0°53'34	morning rise	10686 Feb 25 20:44	26°00'42"16	
max. Earth dist.	10680 Jan 27 13:55	13°00'02"47	31.29748 AU	retrograde	10686 May 24 07:41	28°00'34"31	
morning rise	10680 Feb 13 03:16	13°00'39"15		opposition	10686 Aug 10 01:04	27°00'12"18	0°56'26
	10680 Mar 27 20:58	15°00'00"		min. Earth dist.	10686 Aug 10 14:35	27°00'11"22	29.33223 AU
retrograde	10680 May 10 17:19	15°00'31"45		direct	10686 Oct 29 08:39	25°00'47"43	
	10680 Jun 24 16:06	15°00'00"		evening set	10687 Jan 27 12:34	27°00'42"46	
opposition	10680 Jul 27 11:52	14°00'09"20	0°56'52				
min. Earth dist.	10680 Jul 28 01:12	14°00'08"24	29.29956 AU	conjunction	10687 Feb 12 11:19	28°00'17"53	0°52'40
direct	10680 Oct 15 11:57	12°00'44"41		minimum elong	10687 Feb 12 11:20	28°00'17"53	0°53'00
evening set	10681 Jan 13 15:22	14°00'39"36		max. Earth dist.	10687 Feb 11 19:39	28°00'16"27	31.33464 AU

morning rise	10687 Feb 28 07:33	28° \approx 52'49		direct	10693 Nov 13 13:27	11° \mathbb{H} 00'33	
	10687 Apr 04 00:28	0° \mathbb{H}		evening set	10694 Feb 11 19:24	12° \mathbb{H} 55'34	
retrograde	10687 May 26 16:56	0° \mathbb{H} 45'03					
	10687 Jul 20 05:07	30° $\mathbb{R}\approx$		conjunction	10694 Feb 27 15:55	13° \mathbb{H} 30'32	0°48'32
opposition	10687 Aug 12 11:26	29° \approx 22'53	0°56'05	minimum elong	10694 Feb 27 15:55	13° \mathbb{H} 30'32	0°48'44
min. Earth dist.	10687 Aug 13 02:29	29° \approx 21'51	29.33758 AU	max. Earth dist.	10694 Feb 26 22:39	13° \mathbb{H} 28'56	31.34479 AU
direct	10687 Oct 31 19:17	27° \approx 58'19		morning rise	10694 Mar 15 09:44	14° \mathbb{H} 05'18	
evening set	10688 Jan 30 00:08	29° \approx 53'22		retrograde	10694 Jun 10 13:51	15° \mathbb{H} 57'23	
	10688 Feb 02 01:21	0° \mathbb{H}		opposition	10694 Aug 27 13:03	14° \mathbb{H} 35'13	0°51'24
				min. Earth dist.	10694 Aug 28 05:45	14° \mathbb{H} 34'04	29.34525 AU
conjunction	10688 Feb 14 22:33	0° \mathbb{H} 28'29	0°52'17	direct	10694 Nov 16 01:53	13° \mathbb{H} 10'35	
minimum elong	10688 Feb 14 22:33	0° \mathbb{H} 28'29	0°52'36	evening set	10695 Feb 14 06:25	15° \mathbb{H} 05'36	
max. Earth dist.	10688 Feb 14 06:28	0° \mathbb{H} 27'00	31.33944 AU	max. Earth dist.	10695 Mar 01 08:44	15° \mathbb{H} 38'54	31.34519 AU
morning rise	10688 Mar 01 18:27	1° \mathbb{H} 03'23					
retrograde	10688 May 28 03:03	2° \mathbb{H} 55'35		conjunction	10695 Mar 02 02:29	15° \mathbb{H} 40'33	0°47'40
opposition	10688 Aug 13 21:53	1° \mathbb{H} 33'27	0°55'38	minimum elong	10695 Mar 02 02:29	15° \mathbb{H} 40'33	0°47'52
min. Earth dist.	10688 Aug 14 12:30	1° \mathbb{H} 32'27	29.34165 AU	morning rise	10695 Mar 17 20:04	16° \mathbb{H} 15'18	
direct	10688 Nov 02 07:44	0° \mathbb{H} 08'54		retrograde	10695 Jun 13 01:36	18° \mathbb{H} 07'23	
evening set	10689 Jan 31 11:33	2° \mathbb{H} 03'58		opposition	10695 Aug 29 23:29	16° \mathbb{H} 45'13	0°50'26
				min. Earth dist.	10695 Aug 30 14:59	16° \mathbb{H} 44'09	29.34606 AU
conjunction	10689 Feb 16 09:34	2° \mathbb{H} 39'03	0°51'50	direct	10695 Nov 18 14:17	15° \mathbb{H} 20'37	
minimum elong	10689 Feb 16 09:34	2° \mathbb{H} 39'03	0°52'09	evening set	10696 Feb 16 17:19	17° \mathbb{H} 15'39	
max. Earth dist.	10689 Feb 15 16:36	2° \mathbb{H} 37'29	31.34279 AU				
morning rise	10689 Mar 04 05:08	3° \mathbb{H} 13'56		conjunction	10696 Mar 03 13:06	17° \mathbb{H} 50'35	0°46'44
retrograde	10689 May 30 13:08	5° \mathbb{H} 06'07		minimum elong	10696 Mar 03 13:06	17° \mathbb{H} 50'35	0°46'53
opposition	10689 Aug 16 08:28	3° \mathbb{H} 44'00	0°55'07	max. Earth dist.	10696 Mar 02 19:49	17° \mathbb{H} 48'59	31.34646 AU
min. Earth dist.	10689 Aug 17 00:05	3° \mathbb{H} 42'55	29.34444 AU	morning rise	10696 Mar 19 06:17	18° \mathbb{H} 25'19	
direct	10689 Nov 04 17:23	2° \mathbb{H} 19'27		retrograde	10696 Jun 14 11:03	20° \mathbb{H} 17'26	
evening set	10690 Feb 02 22:54	4° \mathbb{H} 14'30		opposition	10696 Aug 31 10:17	18° \mathbb{H} 55'18	0°49'24
				min. Earth dist.	10696 Sep 01 02:34	18° \mathbb{H} 54'11	29.34782 AU
conjunction	10690 Feb 18 20:42	4° \mathbb{H} 49'34	0°51'19	direct	10696 Nov 20 00:46	17° \mathbb{H} 30'46	
minimum elong	10690 Feb 18 20:42	4° \mathbb{H} 49'34	0°51'36	evening set	10697 Feb 18 04:02	19° \mathbb{H} 25'49	
max. Earth dist.	10690 Feb 18 04:01	4° \mathbb{H} 48'01	31.34492 AU				
morning rise	10690 Mar 06 15:51	5° \mathbb{H} 24'25		conjunction	10697 Mar 05 23:30	20° \mathbb{H} 00'44	0°45'44
retrograde	10690 Jun 01 21:43	7° \mathbb{H} 16'35		minimum elong	10697 Mar 05 23:30	20° \mathbb{H} 00'44	0°45'53
opposition	10690 Aug 18 18:52	5° \mathbb{H} 54'28	0°54'32	max. Earth dist.	10697 Mar 05 06:39	19° \mathbb{H} 59'11	31.34863 AU
min. Earth dist.	10690 Aug 19 10:35	5° \mathbb{H} 53'23	29.34584 AU	morning rise	10697 Mar 21 16:22	20° \mathbb{H} 35'27	
direct	10690 Nov 07 05:34	4° \mathbb{H} 29'54		retrograde	10697 Jun 16 21:16	22° \mathbb{H} 27'36	
evening set	10691 Feb 05 10:18	6° \mathbb{H} 24'56		opposition	10697 Sep 02 20:57	21° \mathbb{H} 05'32	0°48'17
				min. Earth dist.	10697 Sep 03 12:18	21° \mathbb{H} 04'28	29.35008 AU
conjunction	10691 Feb 21 07:40	6° \mathbb{H} 59'59	0°50'44	direct	10697 Nov 22 13:13	19° \mathbb{H} 41'03	
minimum elong	10691 Feb 21 07:40	6° \mathbb{H} 59'59	0°51'00	evening set	10698 Feb 20 14:55	21° \mathbb{H} 36'07	
max. Earth dist.	10691 Feb 20 13:33	6° \mathbb{H} 58'19	31.34576 AU				
morning rise	10691 Mar 09 02:37	7° \mathbb{H} 34'50		conjunction	10698 Mar 08 09:58	22° \mathbb{H} 11'02	0°44'39
retrograde	10691 Jun 04 07:55	9° \mathbb{H} 26'57		minimum elong	10698 Mar 08 09:59	22° \mathbb{H} 11'02	0°44'47
opposition	10691 Aug 21 05:22	8° \mathbb{H} 04'50	0°53'51	max. Earth dist.	10698 Mar 07 16:41	22° \mathbb{H} 09'26	31.35094 AU
min. Earth dist.	10691 Aug 21 21:25	8° \mathbb{H} 03'43	29.34621 AU	morning rise	10698 Mar 24 02:35	22° \mathbb{H} 45'45	
direct	10691 Nov 09 15:32	6° \mathbb{H} 40'14		retrograde	10698 Jun 19 08:01	24° \mathbb{H} 37'57	
evening set	10692 Feb 07 21:26	8° \mathbb{H} 35'16		opposition	10698 Sep 05 07:38	23° \mathbb{H} 15'55	0°47'06
				min. Earth dist.	10698 Sep 05 23:37	23° \mathbb{H} 14'49	29.35239 AU
conjunction	10692 Feb 23 18:37	9° \mathbb{H} 10'18	0°50'04	direct	10698 Nov 24 22:46	21° \mathbb{H} 51'29	
minimum elong	10692 Feb 23 18:37	9° \mathbb{H} 10'18	0°50'18	evening set	10699 Feb 23 01:44	23° \mathbb{H} 46'35	
max. Earth dist.	10692 Feb 23 01:25	9° \mathbb{H} 08'42	31.34566 AU				
morning rise	10692 Mar 10 13:04	9° \mathbb{H} 45'06		conjunction	10699 Mar 10 20:36	24° \mathbb{H} 21'30	0°43'31
retrograde	10692 Jun 05 16:40	11° \mathbb{H} 37'13		minimum elong	10699 Mar 10 20:36	24° \mathbb{H} 21'30	0°43'38
opposition	10692 Aug 22 15:56	10° \mathbb{H} 15'04	0°53'07	max. Earth dist.	10699 Mar 10 04:01	24° \mathbb{H} 19'58	31.35298 AU
min. Earth dist.	10692 Aug 23 08:36	10° \mathbb{H} 13'55	29.34575 AU	morning rise	10699 Mar 26 12:48	24° \mathbb{H} 56'12	
direct	10692 Nov 11 03:00	8° \mathbb{H} 50'28		retrograde	10699 Jun 21 16:40	26° \mathbb{H} 48'26	
evening set	10693 Feb 09 08:36	10° \mathbb{H} 45'28		opposition	10699 Sep 07 18:32	25° \mathbb{H} 26'27	0°45'51
	10693 Feb 24 11:01	11° \mathbb{H} 18'47	31.34515 AU	min. Earth dist.	10699 Sep 08 10:25	25° \mathbb{H} 25'22	29.35391 AU
				direct	10699 Nov 27 10:55	24° \mathbb{H} 02'05	
conjunction	10693 Feb 25 05:17	11° \mathbb{H} 20'28	0°49'20	evening set	10700 Feb 25 12:39	25° \mathbb{H} 57'12	
minimum elong	10693 Feb 25 05:18	11° \mathbb{H} 20'28	0°49'34				
morning rise	10693 Mar 12 23:34	11° \mathbb{H} 55'16		conjunction	10700 Mar 13 06:59	26° \mathbb{H} 32'05	0°42'19
retrograde	10693 Jun 08 03:54	13° \mathbb{H} 47'21		minimum elong	10700 Mar 13 07:00	26° \mathbb{H} 32'05	0°42'23
opposition	10693 Aug 25 02:24	12° \mathbb{H} 25'11	0°52'18	max. Earth dist.	10700 Mar 12 13:15	26° \mathbb{H} 30'26	31.35401 AU
min. Earth dist.	10693 Aug 25 18:20	12° \mathbb{H} 24'05	29.34531 AU	morning rise	10700 Mar 28 23:00	27° \mathbb{H} 06'47	

retrograde	10700 Jun 24 02:50	28° H 59'04		evening set	10707 Mar 13 15:15	11° P 10'55	
opposition	10700 Sep 10 05:30	27° H 37'06	0°44'32				
min. Earth dist.	10700 Sep 10 21:26	27° H 36'01	29.35443 AU	conjunction	10707 Mar 29 07:25	11° P 45'41	0°32'21
direct	10700 Nov 29 20:22	26° H 12'46		minimum elong	10707 Mar 29 07:25	11° P 45'41	0°32'17
evening set	10701 Feb 27 23:24	28° H 07'53		max. Earth dist.	10707 Mar 28 14:05	11° P 44'05	31.32727 AU
				morning rise	10707 Apr 13 21:24	12° P 20'17	
conjunction	10701 Mar 15 17:35	28° H 42'46	0°41'03	retrograde	10707 Jul 10 03:41	14° P 12'45	
minimum elong	10701 Mar 15 17:36	28° H 42'46	0°41'07	opposition	10707 Sep 26 11:38	12° P 50'31	0°33'41
max. Earth dist.	10701 Mar 15 00:48	28° H 41'13	31.35382 AU	min. Earth dist.	10707 Sep 27 03:33	12° P 49'26	29.32503 AU
morning rise	10701 Mar 31 09:07	29° H 17'27		direct	10707 Dec 16 05:58	11° P 26'07	
	10701 Apr 21 00:52	0° P		evening set	10708 Mar 15 01:31	13° P 21'03	
retrograde	10701 Jun 26 11:52	1° P 09'47					
	10701 Sep 05 05:42	30° R H		conjunction	10708 Mar 30 17:29	13° P 55'49	0°30'44
opposition	10701 Sep 12 16:38	29° H 47'49	0°43'09	minimum elong	10708 Mar 30 17:29	13° P 55'49	0°30'38
min. Earth dist.	10701 Sep 13 09:14	29° H 46'41	29.35350 AU	max. Earth dist.	10708 Mar 30 01:32	13° P 54'20	31.32245 AU
direct	10701 Dec 02 06:59	28° H 23'30		morning rise	10708 Apr 15 07:05	14° P 30'24	
	10702 Feb 21 16:35	0° P		retrograde	10708 Jul 11 12:08	16° P 22'55	
evening set	10702 Mar 02 10:14	0° P 18'37		opposition	10708 Sep 27 22:58	15° P 00'40	0°31'56
max. Earth dist.	10702 Mar 17 09:59	0° P 51'48	31.35219 AU	min. Earth dist.	10708 Sep 28 14:10	14° P 59'38	29.32055 AU
				direct	10708 Dec 17 18:23	13° P 36'18	
conjunction	10702 Mar 18 03:57	0° P 53'28	0°39'44	evening set	10709 Mar 17 11:56	15° P 31'13	
minimum elong	10702 Mar 18 03:57	0° P 53'28	0°39'46	max. Earth dist.	10709 Apr 01 10:57	16° P 04'27	31.31847 AU
morning rise	10702 Apr 02 19:22	1° P 28'09					
retrograde	10702 Jun 28 23:17	3° P 20'31		conjunction	10709 Apr 02 03:27	16° P 05'59	0°29'04
opposition	10702 Sep 15 03:40	1° P 58'32	0°41'43	minimum elong	10709 Apr 02 03:27	16° P 05'59	0°28'58
min. Earth dist.	10702 Sep 15 19:40	1° P 57'26	29.35108 AU	morning rise	10709 Apr 17 16:57	16° P 40'34	
direct	10702 Dec 04 17:36	0° P 34'13		retrograde	10709 Jul 13 22:36	18° P 33'10	
evening set	10703 Mar 04 20:59	2° P 29'19		opposition	10709 Sep 30 10:14	17° P 10'55	0°30'07
				min. Earth dist.	10709 Oct 01 00:50	17° P 09'55	29.31696 AU
conjunction	10703 Mar 20 14:31	3° P 04'09	0°38'21	direct	10709 Dec 20 04:00	15° P 46'35	
minimum elong	10703 Mar 20 14:31	3° P 04'10	0°38'23	evening set	10710 Mar 19 22:08	17° P 41'31	
max. Earth dist.	10703 Mar 19 21:08	3° P 02'33	31.34893 AU				
morning rise	10703 Apr 05 05:29	3° P 38'49		conjunction	10710 Apr 04 13:33	18° P 16'16	0°27'21
retrograde	10703 Jul 01 09:15	5° P 31'12		minimum elong	10710 Apr 04 13:33	18° P 16'16	0°27'13
opposition	10703 Sep 17 14:51	4° P 09'11	0°40'13	max. Earth dist.	10710 Apr 03 22:34	18° P 14'53	31.31505 AU
min. Earth dist.	10703 Sep 18 07:56	4° P 08'01	29.34709 AU	morning rise	10710 Apr 20 02:40	18° P 50'51	
direct	10703 Dec 07 05:57	2° P 44'52		retrograde	10710 Jul 16 07:48	20° P 43'33	
evening set	10704 Mar 06 07:47	4° P 39'56		opposition	10710 Oct 02 21:43	19° P 21'18	0°28'16
max. Earth dist.	10704 Mar 21 06:56	5° P 13'05	31.34441 AU	min. Earth dist.	10710 Oct 03 12:35	19° P 20'17	29.31351 AU
				direct	10710 Dec 22 14:38	17° P 57'02	
conjunction	10704 Mar 22 00:54	5° P 14'45	0°36'56	evening set	10711 Mar 22 08:35	19° P 51'59	
minimum elong	10704 Mar 22 00:54	5° P 14'45	0°36'55				
morning rise	10704 Apr 06 15:41	5° P 49'23		conjunction	10711 Apr 06 23:32	20° P 26'44	0°25'36
retrograde	10704 Jul 02 20:47	7° P 41'48		minimum elong	10711 Apr 06 23:32	20° P 26'44	0°25'27
opposition	10704 Sep 19 02:00	6° P 19'43	0°38'39	max. Earth dist.	10711 Apr 06 07:56	20° P 25'17	31.31162 AU
min. Earth dist.	10704 Sep 19 18:04	6° P 18'38	29.34194 AU	morning rise	10711 Apr 22 12:33	21° P 01'19	
direct	10704 Dec 08 18:21	4° P 55'22		retrograde	10711 Jul 18 19:25	22° P 54'06	
evening set	10705 Mar 08 18:14	6° P 50'24		opposition	10711 Oct 05 09:08	21° P 31'53	0°26'23
				min. Earth dist.	10711 Oct 05 22:57	21° P 30'56	29.30990 AU
conjunction	10705 Mar 24 11:05	7° P 25'13	0°35'27	direct	10711 Dec 25 00:56	20° P 07'40	
minimum elong	10705 Mar 24 11:05	7° P 25'13	0°35'26	evening set	10712 Mar 23 18:56	22° P 02'38	
max. Earth dist.	10705 Mar 23 17:24	7° P 23'34	31.33881 AU				
morning rise	10705 Apr 09 01:33	7° P 59'50		conjunction	10712 Apr 08 09:43	22° P 37'23	0°23'49
retrograde	10705 Jul 05 06:33	9° P 52'16		minimum elong	10712 Apr 08 09:43	22° P 37'23	0°23'38
opposition	10705 Sep 21 13:17	8° P 30'07	0°37'03	max. Earth dist.	10712 Apr 07 19:04	22° P 36'01	31.30766 AU
min. Earth dist.	10705 Sep 22 06:14	8° P 28'58	29.33614 AU	morning rise	10712 Apr 23 22:21	23° P 11'58	
direct	10705 Dec 11 05:32	7° P 05'45		retrograde	10712 Jul 20 05:58	25° P 04'52	
evening set	10706 Mar 11 04:43	9° P 00'44		opposition	10712 Oct 06 20:54	23° P 42'39	0°24'27
				min. Earth dist.	10712 Oct 07 11:28	23° P 41'39	29.30557 AU
conjunction	10706 Mar 26 21:18	9° P 35'31	0°33'55	direct	10712 Dec 26 12:12	22° P 18'30	
minimum elong	10706 Mar 26 21:18	9° P 35'31	0°33'52	evening set	10713 Mar 26 05:15	24° P 13'28	
max. Earth dist.	10706 Mar 26 04:13	9° P 33'56	31.33295 AU				
morning rise	10706 Apr 11 11:30	10° P 10'07		conjunction	10713 Apr 10 19:40	24° P 48'12	0°21'59
retrograde	10706 Jul 07 16:54	12° P 02'33		minimum elong	10713 Apr 10 19:40	24° P 48'12	0°21'48
opposition	10706 Sep 24 00:19	10° P 40'22	0°35'23	max. Earth dist.	10713 Apr 10 04:49	24° P 46'49	31.30291 AU
min. Earth dist.	10706 Sep 24 16:13	10° P 39'17	29.33026 AU	morning rise	10713 Apr 26 08:12	25° P 22'48	
direct	10706 Dec 13 19:08	9° P 15'58		retrograde	10713 Jul 22 18:03	27° P 15'48	

opposition	10713 Oct 09 08:33	25° Υ 53'34	0°22'29	behind sun end	10719 Apr 24 13:06	7° \mathcal{S} 54'48	
min. Earth dist.	10713 Oct 09 21:58	25° Υ 52'39	29.30018 AU	max. Earth dist.	10719 Apr 23 19:26	7° \mathcal{S} 53'10	31.24975 AU
direct	10713 Dec 28 23:50	24° Υ 29'27		morning rise	10719 May 09 19:14	8° \mathcal{S} 28'56	
evening set	10714 Mar 28 15:42	26° Υ 24'27		retrograde	10719 Aug 05 08:11	10° \mathcal{S} 22'22	
				opposition	10719 Oct 23 07:42	8° \mathcal{S} 59'49	0°10'08
conjunction	10714 Apr 13 05:52	26° Υ 59'11	0°20'08	min. Earth dist.	10719 Oct 23 20:11	8° \mathcal{S} 58'58	29.24491 AU
minimum elong	10714 Apr 13 05:52	26° Υ 59'11	0°19'55	direct	10720 Jan 11 23:40	7° \mathcal{S} 35'41	
max. Earth dist.	10714 Apr 12 15:05	26° Υ 57'48	31.29682 AU	evening set	10720 Apr 10 05:08	9° \mathcal{S} 30'29	
morning rise	10714 Apr 28 18:08	27° Υ 33'46					
retrograde	10714 Jul 25 04:49	29° Υ 26'52		conjunction	10720 Apr 25 17:43	10° \mathcal{S} 05'11	0°08'34
opposition	10714 Oct 11 20:16	28° Υ 04'37	0°20'29	minimum elong	10720 Apr 25 17:44	10° \mathcal{S} 05'11	0°08'13
min. Earth dist.	10714 Oct 12 10:38	28° Υ 03'39	29.29348 AU	behind sun begin	10720 Apr 25 12:01	10° \mathcal{S} 04'40	
direct	10714 Dec 31 10:41	26° Υ 40'32		behind sun end	10720 Apr 25 23:26	10° \mathcal{S} 05'42	
evening set	10715 Mar 31 02:08	28° Υ 35'31		max. Earth dist.	10720 Apr 25 05:08	10° \mathcal{S} 04'01	31.24019 AU
				morning rise	10720 May 11 05:00	10° \mathcal{S} 39'47	
conjunction	10715 Apr 15 16:04	29° Υ 10'15	0°18'15	retrograde	10720 Aug 06 19:11	12° \mathcal{S} 33'19	
minimum elong	10715 Apr 15 16:05	29° Υ 10'15	0°18'02	opposition	10720 Oct 24 19:39	11° \mathcal{S} 10'42	0°08'01
max. Earth dist.	10715 Apr 15 01:48	29° Υ 08'55	31.28944 AU	min. Earth dist.	10720 Oct 25 06:27	11° \mathcal{S} 09'58	29.23591 AU
morning rise	10715 May 01 04:06	29° Υ 44'50		direct	10721 Jan 13 10:27	9° \mathcal{S} 46'34	
	10715 May 08 04:34	0° \mathcal{S}		evening set	10721 Apr 12 15:02	11° \mathcal{S} 41'21	
retrograde	10715 Jul 27 16:17	1° \mathcal{S} 38'00					
opposition	10715 Oct 14 08:05	0° \mathcal{S} 15'44	0°18'27	conjunction	10721 Apr 28 03:33	12° \mathcal{S} 16'03	0°06'35
min. Earth dist.	10715 Oct 14 21:34	0° \mathcal{S} 14'49	29.28527 AU	minimum elong	10721 Apr 28 03:32	12° \mathcal{S} 16'03	0°06'14
	10715 Oct 24 00:37	30° \mathcal{R} '		behind sun begin	10721 Apr 27 21:26	12° \mathcal{S} 15'30	
direct	10716 Jan 03 00:38	28° Υ 51'39		behind sun end	10721 Apr 28 09:38	12° \mathcal{S} 16'36	
	10716 Mar 09 20:13	0° \mathcal{S}		max. Earth dist.	10721 Apr 27 16:19	12° \mathcal{S} 15'01	31.23168 AU
evening set	10716 Apr 01 12:30	0° \mathcal{S} 46'38		morning rise	10721 May 13 14:33	12° \mathcal{S} 50'40	
max. Earth dist.	10716 Apr 16 11:15	1° \mathcal{S} 19'58	31.28057 AU	retrograde	10721 Aug 09 05:05	14° \mathcal{S} 44'18	
				opposition	10721 Oct 27 07:46	13° \mathcal{S} 21'39	0°05'53
conjunction	10716 Apr 17 02:04	1° \mathcal{S} 21'21	0°16'21	min. Earth dist.	10721 Oct 27 18:46	13° \mathcal{S} 20'54	29.22791 AU
minimum elong	10716 Apr 17 02:04	1° \mathcal{S} 21'21	0°16'06	direct	10722 Jan 15 20:59	11° \mathcal{S} 57'32	
behind sun begin	10716 Apr 17 01:36	1° \mathcal{S} 21'19		evening set	10722 Apr 15 01:08	13° \mathcal{S} 52'18	
behind sun end	10716 Apr 17 02:31	1° \mathcal{S} 21'24					
morning rise	10716 May 02 13:59	1° \mathcal{S} 55'57		conjunction	10722 Apr 30 13:23	14° \mathcal{S} 27'00	0°04'35
retrograde	10716 Jul 29 04:04	3° \mathcal{S} 49'12		minimum elong	10722 Apr 30 13:23	14° \mathcal{S} 27'00	0°04'13
opposition	10716 Oct 15 20:02	2° \mathcal{S} 26'52	0°16'24	behind sun begin	10722 Apr 30 07:03	14° \mathcal{S} 26'26	
min. Earth dist.	10716 Oct 16 09:45	2° \mathcal{S} 25'56	29.27588 AU	behind sun end	10722 Apr 30 19:43	14° \mathcal{S} 27'35	
direct	10717 Jan 04 12:10	1° \mathcal{S} 02'46		max. Earth dist.	10722 Apr 30 02:34	14° \mathcal{S} 26'00	31.22421 AU
evening set	10717 Apr 03 22:41	2° \mathcal{S} 57'43			10722 May 15 06:43	15° \mathcal{S}	
				morning rise	10722 May 16 00:20	15° \mathcal{S} 01'37	
conjunction	10717 Apr 19 12:10	3° \mathcal{S} 32'26	0°14'26	retrograde	10722 Aug 11 16:47	16° \mathcal{S} 55'21	
minimum elong	10717 Apr 19 12:10	3° \mathcal{S} 32'26	0°14'10	opposition	10722 Oct 29 19:37	15° \mathcal{S} 32'41	0°03'44
behind sun begin	10717 Apr 19 08:58	3° \mathcal{S} 32'09		min. Earth dist.	10722 Oct 30 04:57	15° \mathcal{S} 32'03	29.22070 AU
behind sun end	10717 Apr 19 15:21	3° \mathcal{S} 32'43			10722 Nov 19 08:40	15° \mathcal{R} '	
max. Earth dist.	10717 Apr 18 22:33	3° \mathcal{S} 31'10	31.27067 AU	direct	10723 Jan 18 07:36	14° \mathcal{S} 08'37	
morning rise	10717 May 04 23:47	4° \mathcal{S} 07'01			10723 Mar 16 12:48	15° \mathcal{S}	
retrograde	10717 Jul 31 12:39	6° \mathcal{S} 00'20		evening set	10723 Apr 17 11:17	16° \mathcal{S} 03'24	
opposition	10717 Oct 18 07:49	4° \mathcal{S} 37'56	0°14'20				
min. Earth dist.	10717 Oct 18 21:05	4° \mathcal{S} 37'02	29.26552 AU	conjunction	10723 May 02 23:16	16° \mathcal{S} 38'06	0°02'33
direct	10718 Jan 07 01:04	3° \mathcal{S} 13'49		minimum elong	10723 May 02 23:17	16° \mathcal{S} 38'06	0°02'11
evening set	10718 Apr 06 08:55	5° \mathcal{S} 08'43		behind sun begin	10723 May 02 16:52	16° \mathcal{S} 37'31	
				behind sun end	10723 May 03 05:43	16° \mathcal{S} 38'40	
conjunction	10718 Apr 21 22:00	5° \mathcal{S} 43'26	0°12'29	max. Earth dist.	10723 May 02 13:02	16° \mathcal{S} 37'09	31.21722 AU
minimum elong	10718 Apr 21 22:01	5° \mathcal{S} 43'26	0°12'11	morning rise	10723 May 18 10:06	17° \mathcal{S} 12'43	
behind sun begin	10718 Apr 21 17:39	5° \mathcal{S} 43'02		retrograde	10723 Aug 14 04:21	19° \mathcal{S} 06'35	
behind sun end	10718 Apr 22 02:23	5° \mathcal{S} 43'49		opposition	10723 Nov 01 07:55	17° \mathcal{S} 43'54	0°01'34
max. Earth dist.	10718 Apr 21 07:46	5° \mathcal{S} 42'06	31.26018 AU	min. Earth dist.	10723 Nov 01 17:39	17° \mathcal{S} 43'14	29.21392 AU
morning rise	10718 May 07 09:39	6° \mathcal{S} 18'02		direct	10724 Jan 20 18:20	16° \mathcal{S} 19'53	
retrograde	10718 Aug 02 23:04	8° \mathcal{S} 11'23		evening set	10724 Apr 18 21:16	18° \mathcal{S} 14'39	
opposition	10718 Oct 20 19:42	6° \mathcal{S} 48'55	0°12'15				
min. Earth dist.	10718 Oct 21 08:17	6° \mathcal{S} 48'03	29.25503 AU	conjunction	10724 May 04 09:09	18° \mathcal{S} 49'21	0°00'29
direct	10719 Jan 09 12:05	5° \mathcal{S} 24'47		minimum elong	10724 May 04 09:09	18° \mathcal{S} 49'21	0°00'05
evening set	10719 Apr 08 18:57	7° \mathcal{S} 19'37		behind sun begin	10724 May 04 03:06	18° \mathcal{S} 48'48	
				behind sun end	10724 May 04 15:11	18° \mathcal{S} 49'53	
conjunction	10719 Apr 24 07:57	7° \mathcal{S} 54'20	0°10'32	max. Earth dist.	10724 May 04 00:03	18° \mathcal{S} 48'31	31.21050 AU
minimum elong	10719 Apr 24 07:57	7° \mathcal{S} 54'20	0°10'13	morning rise	10724 May 19 19:47	19° \mathcal{S} 23'58	
behind sun begin	10719 Apr 24 02:48	7° \mathcal{S} 53'52		desc. node	10724 Jul 29 14:12	21° \mathcal{S} 13'03	

retrograde	10724 Aug 15 16:30	21° 8 17'58		direct	10730 Feb 02 18:57	29° 8 30'05	
opposition	10724 Nov 02 20:10	19° 8 55'15	-0°00'36		10730 Mar 17 17:03	0° II	
min. Earth dist.	10724 Nov 03 04:39	19° 8 54'41	29.20701 AU	evening set	10730 May 02 10:51	1° II 24'46	
direct	10725 Jan 22 07:39	18° 8 31'17					
evening set	10725 Apr 21 07:32	20° 8 26'04		conjunction	10730 May 17 21:43	1° II 59'29	-0°11'37
				minimum elong	10730 May 17 21:43	1° II 59'29	0°12'06
conjunction	10725 May 06 19:05	21° 8 00'46	-0°01'37	behind sun begin	10730 May 17 17:19	1° II 59'05	
minimum elong	10725 May 06 19:05	21° 8 00'46	0°02'00	behind sun end	10730 May 18 02:08	1° II 59'53	
behind sun begin	10725 May 06 12:40	21° 8 00'11		max. Earth dist.	10730 May 17 14:47	1° II 58'51	31.15316 AU
behind sun end	10725 May 07 01:31	21° 8 01'20		morning rise	10730 Jun 02 07:54	2° II 34'10	
max. Earth dist.	10725 May 06 09:41	20° 8 59'54	31.20339 AU	retrograde	10730 Aug 29 10:54	4° II 28'49	
morning rise	10725 May 22 05:44	21° 8 35'24		opposition	10730 Nov 16 23:08	3° II 05'49	-0°13'28
retrograde	10725 Aug 18 05:05	23° 8 29'31		min. Earth dist.	10730 Nov 17 06:03	3° II 05'21	29.14702 AU
opposition	10725 Nov 05 08:26	22° 8 06'47	-0°02'46	direct	10731 Feb 05 05:57	1° II 41'55	
min. Earth dist.	10725 Nov 05 16:59	22° 8 06'12	29.19970 AU	evening set	10731 May 04 21:04	3° II 36'34	
direct	10726 Jan 24 18:35	20° 8 42'51					
evening set	10726 Apr 23 17:44	22° 8 37'38		conjunction	10731 May 20 07:47	4° II 11'17	-0°13'35
				minimum elong	10731 May 20 07:46	4° II 11'17	0°14'04
conjunction	10726 May 09 05:17	23° 8 12'20	-0°03'39	behind sun begin	10731 May 20 04:29	4° II 10'59	
minimum elong	10726 May 09 05:16	23° 8 12'20	0°04'05	behind sun end	10731 May 20 11:04	4° II 11'35	
behind sun begin	10726 May 08 22:56	23° 8 11'46		max. Earth dist.	10731 May 20 01:23	4° II 10'41	31.14093 AU
behind sun end	10726 May 09 11:36	23° 8 12'54		morning rise	10731 Jun 04 17:58	4° II 45'59	
max. Earth dist.	10726 May 08 21:09	23° 8 11'35	31.19562 AU	retrograde	10731 Aug 31 22:41	6° II 40'43	
morning rise	10726 May 24 15:40	23° 8 46'59		opposition	10731 Nov 19 11:42	5° II 17'39	-0°15'34
retrograde	10726 Aug 20 15:11	25° 8 41'12		min. Earth dist.	10731 Nov 19 16:47	5° II 17'18	29.13495 AU
opposition	10726 Nov 07 20:53	24° 8 18'27	-0°04'55	direct	10732 Feb 07 16:54	3° II 53'44	
min. Earth dist.	10726 Nov 08 04:57	24° 8 17'54	29.19134 AU	evening set	10732 May 06 07:08	5° II 48'21	
direct	10727 Jan 27 07:34	22° 8 54'33					
evening set	10727 Apr 26 04:06	24° 8 49'20		conjunction	10732 May 21 17:39	6° II 23'05	-0°15'32
				minimum elong	10732 May 21 17:40	6° II 23'05	0°16'02
conjunction	10727 May 11 15:16	25° 8 24'02	-0°05'39	behind sun begin	10732 May 21 16:44	6° II 23'00	
minimum elong	10727 May 11 15:16	25° 8 24'02	0°06'05	behind sun end	10732 May 21 18:35	6° II 23'10	
behind sun begin	10727 May 11 09:09	25° 8 23'29		max. Earth dist.	10732 May 21 11:57	6° II 22'33	31.12914 AU
behind sun end	10727 May 11 21:22	25° 8 24'35		morning rise	10732 Jun 06 03:50	6° II 57'48	
max. Earth dist.	10727 May 11 06:24	25° 8 23'13	31.18672 AU	retrograde	10732 Sep 02 10:26	8° II 52'40	
morning rise	10727 May 27 01:43	25° 8 58'42		opposition	10732 Nov 21 00:26	7° II 29'31	-0°17'38
retrograde	10727 Aug 23 03:15	27° 8 53'02		min. Earth dist.	10732 Nov 21 05:37	7° II 29'10	29.12375 AU
opposition	10727 Nov 10 09:25	26° 8 30'14	-0°07'05	direct	10733 Feb 09 03:48	6° II 05'37	
min. Earth dist.	10727 Nov 10 16:54	26° 8 29'44	29.18189 AU	evening set	10733 May 08 17:14	8° II 00'13	
direct	10728 Jan 29 19:11	25° 8 06'22					
evening set	10728 Apr 27 14:22	27° 8 01'07		conjunction	10733 May 24 03:46	8° II 34'57	-0°17'27
				minimum elong	10733 May 24 03:46	8° II 34'57	0°17'57
conjunction	10728 May 13 01:32	27° 8 35'50	-0°07'39	max. Earth dist.	10733 May 23 23:33	8° II 34'33	31.11851 AU
minimum elong	10728 May 13 01:32	27° 8 35'50	0°08'07	morning rise	10733 Jun 08 13:51	9° II 09'40	
behind sun begin	10728 May 12 19:48	27° 8 35'19		retrograde	10733 Sep 04 22:59	11° II 04'40	
behind sun end	10728 May 13 07:16	27° 8 36'21		opposition	10733 Nov 23 12:54	9° II 41'29	-0°19'41
max. Earth dist.	10728 May 12 18:01	27° 8 35'08	31.17659 AU	min. Earth dist.	10733 Nov 23 16:28	9° II 41'14	29.11359 AU
morning rise	10728 May 28 11:45	28° 8 10'30		direct	10734 Feb 11 16:39	8° II 17'36	
	10728 Aug 07 09:49	0° II		evening set	10734 May 11 03:30	10° II 12'13	
retrograde	10728 Aug 24 13:28	0° II 04'57					
	10728 Sep 10 23:11	30° 8 8		conjunction	10734 May 26 13:49	10° II 46'57	-0°19'21
opposition	10728 Nov 11 22:04	28° 8 42'06	-0°09'13	minimum elong	10734 May 26 13:48	10° II 46'57	0°19'53
min. Earth dist.	10728 Nov 12 05:48	28° 8 41'34	29.17113 AU	max. Earth dist.	10734 May 26 09:33	10° II 46'33	31.10888 AU
direct	10729 Jan 31 07:30	27° 8 18'14		morning rise	10734 Jun 11 00:01	11° II 21'42	
evening set	10729 Apr 30 00:38	29° 8 12'57		retrograde	10734 Sep 07 12:08	13° II 16'49	
				opposition	10734 Nov 26 01:39	11° II 53'36	-0°21'42
conjunction	10729 May 15 11:34	29° 8 47'39	-0°09'39	min. Earth dist.	10734 Nov 26 04:50	11° II 53'23	29.10452 AU
minimum elong	10729 May 15 11:34	29° 8 47'39	0°10'06	direct	10735 Feb 14 03:12	10° II 29'46	
behind sun begin	10729 May 15 06:23	29° 8 47'11		evening set	10735 May 13 13:33	12° II 24'24	
behind sun end	10729 May 15 16:45	29° 8 48'07					
max. Earth dist.	10729 May 15 03:39	29° 8 46'56	31.16535 AU	conjunction	10735 May 28 23:55	12° II 59'08	-0°21'14
	10729 May 20 22:20	0° II		minimum elong	10735 May 28 23:55	12° II 59'08	0°21'45
morning rise	10729 May 30 21:54	0° II 22'21		max. Earth dist.	10735 May 28 21:30	12° II 58'55	31.10016 AU
retrograde	10729 Aug 27 00:55	2° II 16'53		morning rise	10735 Jun 13 09:58	13° II 33'54	
opposition	10729 Nov 14 10:34	0° II 53'58	-0°11'21	retrograde	10735 Sep 09 23:08	15° II 29'10	
min. Earth dist.	10729 Nov 14 17:03	0° II 53'32	29.15936 AU	opposition	10735 Nov 28 14:29	14° II 05'57	-0°23'42
	10729 Dec 20 07:34	30° 8 8		min. Earth dist.	10735 Nov 28 16:41	14° II 05'48	29.09604 AU

direct	10736 Feb 16 16:04	12° Π 42'10			10742 Jul 25 12:19	0° \mathfrak{D}	
evening set	10736 May 14 23:54	14° Π 36'48		retrograde	10742 Sep 25 11:04	1° \mathfrak{D} 00'41	
					10742 Nov 30 06:00	30° \mathfrak{R} Π	
conjunction	10736 May 30 10:02	15° Π 11'33 -0°23'05		opposition	10742 Dec 14 09:42	29° Π 37'07 -0°36'33	
minimum elong	10736 May 30 10:02	15° Π 11'33 0°23'38		min. Earth dist.	10742 Dec 14 08:19	29° Π 37'12 29.02465 AU	
max. Earth dist.	10736 May 30 07:18	15° Π 11'18 31.09200 AU		direct	10743 Mar 04 03:02	28° Π 13'25	
morning rise	10736 Jun 14 20:17	15° Π 46'20			10743 May 27 11:03	0° \mathfrak{D}	
retrograde	10736 Sep 11 12:44	17° Π 41'45		evening set	10743 May 31 01:28	0° \mathfrak{D} 07'55	
opposition	10736 Nov 30 03:18	16° Π 18'30 -0°25'40					
min. Earth dist.	10736 Nov 30 04:38	16° Π 18'25 29.08806 AU		conjunction	10743 Jun 15 11:25	0° \mathfrak{D} 42'45 -0°34'56	
direct	10737 Feb 18 04:03	14° Π 54'47		minimum elong	10743 Jun 15 11:25	0° \mathfrak{D} 42'45 0°35'30	
evening set	10737 May 17 10:07	16° Π 49'25		max. Earth dist.	10743 Jun 15 12:08	0° \mathfrak{D} 42'49 31.01789 AU	
				morning rise	10743 Jun 30 22:08	1° \mathfrak{D} 17'39	
conjunction	10737 Jun 01 20:21	17° Π 24'12 -0°24'54		retrograde	10743 Sep 28 00:08	3° \mathfrak{D} 13'53	
minimum elong	10737 Jun 01 20:21	17° Π 24'12 0°25'26		opposition	10743 Dec 16 22:56	1° \mathfrak{D} 50'13 -0°38'11	
max. Earth dist.	10737 Jun 01 19:16	17° Π 24'06 31.08391 AU		min. Earth dist.	10743 Dec 16 21:22	1° \mathfrak{D} 50'19 29.01141 AU	
morning rise	10737 Jun 17 06:30	17° Π 59'00		direct	10744 Mar 05 13:39	0° \mathfrak{D} 26'29	
retrograde	10737 Sep 14 00:08	19° Π 54'33		evening set	10744 Jun 01 11:55	2° \mathfrak{D} 20'56	
opposition	10737 Dec 02 16:17	18° Π 31'18 -0°27'35					
min. Earth dist.	10737 Dec 02 17:40	18° Π 31'12 29.07980 AU		conjunction	10744 Jun 16 22:04	2° \mathfrak{D} 55'46 -0°36'27	
direct	10738 Feb 20 16:38	17° Π 07'37		minimum elong	10744 Jun 16 22:04	2° \mathfrak{D} 55'46 0°37'01	
evening set	10738 May 19 20:38	19° Π 02'16		max. Earth dist.	10744 Jun 17 00:36	2° \mathfrak{D} 56'01 31.00481 AU	
				morning rise	10744 Jul 02 08:45	3° \mathfrak{D} 30'42	
conjunction	10738 Jun 04 06:40	19° Π 37'03 -0°26'41		retrograde	10744 Sep 29 11:51	5° \mathfrak{D} 27'01	
minimum elong	10738 Jun 04 06:40	19° Π 37'03 0°27'14		opposition	10744 Dec 18 11:58	4° \mathfrak{D} 03'14 -0°39'46	
max. Earth dist.	10738 Jun 04 05:22	19° Π 36'55 31.07546 AU		min. Earth dist.	10744 Dec 18 09:21	4° \mathfrak{D} 03'25 28.99868 AU	
morning rise	10738 Jun 19 16:57	20° Π 11'53		direct	10745 Mar 08 03:09	2° \mathfrak{D} 39'29	
retrograde	10738 Sep 16 12:02	22° Π 07'34		evening set	10745 Jun 03 22:31	4° \mathfrak{D} 33'54	
opposition	10738 Dec 05 05:11	20° Π 44'17 -0°29'28					
min. Earth dist.	10738 Dec 05 05:18	20° Π 44'17 29.07101 AU		conjunction	10745 Jun 19 08:33	5° \mathfrak{D} 08'45 -0°37'54	
direct	10739 Feb 23 04:12	19° Π 20'39		minimum elong	10745 Jun 19 08:33	5° \mathfrak{D} 08'45 0°38'28	
evening set	10739 May 22 07:09	21° Π 15'17		max. Earth dist.	10745 Jun 19 10:51	5° \mathfrak{D} 08'58 30.99259 AU	
				morning rise	10745 Jul 04 19:33	5° \mathfrak{D} 43'42	
conjunction	10739 Jun 06 17:12	21° Π 50'05 -0°28'25		retrograde	10745 Oct 02 02:07	7° \mathfrak{D} 40'07	
minimum elong	10739 Jun 06 17:12	21° Π 50'05 0°28'58		opposition	10745 Dec 21 01:02	6° \mathfrak{D} 16'16 -0°41'18	
max. Earth dist.	10739 Jun 06 16:45	21° Π 50'03 31.06613 AU		min. Earth dist.	10745 Dec 20 21:22	6° \mathfrak{D} 16'31 28.98706 AU	
morning rise	10739 Jun 22 03:27	22° Π 24'56		direct	10746 Mar 10 15:11	4° \mathfrak{D} 52'30	
retrograde	10739 Sep 18 22:41	24° Π 20'46		evening set	10746 Jun 06 09:01	6° \mathfrak{D} 46'54	
opposition	10739 Dec 07 18:26	22° Π 57'26 -0°31'19					
min. Earth dist.	10739 Dec 07 19:04	22° Π 57'24 29.06121 AU		conjunction	10746 Jun 21 19:12	7° \mathfrak{D} 21'46 -0°39'18	
direct	10740 Feb 25 15:31	21° Π 33'49		minimum elong	10746 Jun 21 19:12	7° \mathfrak{D} 21'46 0°39'52	
evening set	10740 May 23 17:39	23° Π 28'26		max. Earth dist.	10746 Jun 21 23:21	7° \mathfrak{D} 22'10 30.98143 AU	
				morning rise	10746 Jul 07 06:10	7° \mathfrak{D} 56'44	
conjunction	10740 Jun 08 03:41	24° Π 03'15 -0°30'07		retrograde	10746 Oct 04 13:31	9° \mathfrak{D} 53'16	
minimum elong	10740 Jun 08 03:41	24° Π 03'15 0°30'41		opposition	10746 Dec 23 14:09	8° \mathfrak{D} 29'22 -0°42'46	
max. Earth dist.	10740 Jun 08 03:30	24° Π 03'14 31.05579 AU		min. Earth dist.	10746 Dec 23 10:08	8° \mathfrak{D} 29'38 28.97649 AU	
morning rise	10740 Jun 23 14:01	24° Π 38'06		direct	10747 Mar 13 03:50	7° \mathfrak{D} 05'37	
retrograde	10740 Sep 20 11:13	26° Π 34'03		evening set	10747 Jun 08 19:38	9° \mathfrak{D} 00'01	
opposition	10740 Dec 09 07:31	25° Π 10'41 -0°33'06					
min. Earth dist.	10740 Dec 09 06:43	25° Π 10'44 29.05016 AU		conjunction	10747 Jun 24 05:48	9° \mathfrak{D} 34'54 -0°40'38	
direct	10741 Feb 27 03:07	23° Π 47'03		minimum elong	10747 Jun 24 05:48	9° \mathfrak{D} 34'54 0°41'12	
evening set	10741 May 26 04:21	25° Π 41'38		max. Earth dist.	10747 Jun 24 10:07	9° \mathfrak{D} 35'18 30.97155 AU	
				morning rise	10747 Jul 09 17:02	10° \mathfrak{D} 09'54	
conjunction	10741 Jun 10 14:19	26° Π 16'27 -0°31'46		retrograde	10747 Oct 07 02:37	12° \mathfrak{D} 06'32	
minimum elong	10741 Jun 10 14:19	26° Π 16'27 0°32'20		opposition	10747 Dec 26 03:15	10° \mathfrak{D} 42'36 -0°44'10	
max. Earth dist.	10741 Jun 10 14:09	26° Π 16'26 31.04402 AU		min. Earth dist.	10747 Dec 25 21:36	10° \mathfrak{D} 43'00 28.96716 AU	
morning rise	10741 Jun 26 00:48	26° Π 51'21		direct	10748 Mar 14 15:38	9° \mathfrak{D} 18'53	
retrograde	10741 Sep 22 22:54	28° Π 47'24		evening set	10748 Jun 10 06:10	11° \mathfrak{D} 13'17	
opposition	10741 Dec 11 20:37	27° Π 23'56 -0°34'51					
min. Earth dist.	10741 Dec 11 20:29	27° Π 23'56 29.03786 AU		conjunction	10748 Jun 25 16:29	11° \mathfrak{D} 48'12 -0°41'55	
direct	10742 Mar 01 14:19	26° Π 00'17		minimum elong	10748 Jun 25 16:29	11° \mathfrak{D} 48'12 0°42'29	
evening set	10742 May 28 14:55	27° Π 54'49		max. Earth dist.	10748 Jun 25 22:02	11° \mathfrak{D} 48'43 30.96259 AU	
				morning rise	10748 Jul 11 03:51	12° \mathfrak{D} 23'13	
conjunction	10742 Jun 13 01:01	28° Π 29'39 -0°33'23		retrograde	10748 Oct 08 14:08	14° \mathfrak{D} 20'00	
minimum elong	10742 Jun 13 01:01	28° Π 29'39 0°33'57		opposition	10748 Dec 27 16:31	12° \mathfrak{D} 56'03 -0°45'30	
max. Earth dist.	10742 Jun 13 01:57	28° Π 29'44 31.03127 AU		min. Earth dist.	10748 Dec 27 11:04	12° \mathfrak{D} 56'25 28.95860 AU	
morning rise	10742 Jun 28 11:30	29° Π 04'32		direct	10749 Mar 17 03:12	11° \mathfrak{D} 32'22	

evening set	10749 Jun 12 16:54	13° \mathring{O} 26'47		opposition	10756 Jan 13 13:35	28° \mathring{O} 35'15	-0°52'51
				min. Earth dist.	10756 Jan 13 04:55	28° \mathring{O} 35'51	28.89177 AU
conjunction	10749 Jun 28 03:19	14° \mathring{O} 01'42	-0°43'08	direct	10756 Apr 01 13:37	27° \mathring{O} 11'37	
minimum elong	10749 Jun 28 03:19	14° \mathring{O} 01'42	0°43'41	evening set	10756 Jun 27 22:03	29° \mathring{O} 05'59	
max. Earth dist.	10749 Jun 28 09:28	14° \mathring{O} 02'17	30.95438 AU				
morning rise	10749 Jul 13 14:52	14° \mathring{O} 36'45		conjunction	10756 Jul 13 09:26	29° \mathring{O} 41'01	-0°49'46
retrograde	10749 Oct 11 03:16	16° \mathring{O} 33'40		minimum elong	10756 Jul 13 09:26	29° \mathring{O} 41'01	0°50'17
opposition	10749 Dec 30 05:29	15° \mathring{O} 09'43	-0°46'46	max. Earth dist.	10756 Jul 13 18:31	29° \mathring{O} 41'53	30.88602 AU
min. Earth dist.	10749 Dec 29 22:24	15° \mathring{O} 10'12	28.95051 AU		10756 Jul 21 17:14	0° \mathring{O}	
direct	10750 Mar 19 14:48	13° \mathring{O} 46'05		morning rise	10756 Jul 28 22:38	0° \mathring{O} 16'15	
evening set	10750 Jun 15 03:48	15° \mathring{O} 40'31		retrograde	10756 Oct 26 23:35	2° \mathring{O} 13'53	
				opposition	10757 Jan 15 02:45	0° \mathring{O} 49'31	-0°53'36
conjunction	10750 Jun 30 14:14	16° \mathring{O} 15'27	-0°44'17	min. Earth dist.	10757 Jan 14 16:44	0° \mathring{O} 50'12	28.88092 AU
minimum elong	10750 Jun 30 14:14	16° \mathring{O} 15'27	0°44'51		10757 Feb 16 03:29	30° \mathring{R} \mathring{O}	
max. Earth dist.	10750 Jun 30 20:40	16° \mathring{O} 16'04	30.94630 AU	direct	10757 Apr 04 02:31	29° \mathring{O} 25'51	
morning rise	10750 Jul 16 02:01	16° \mathring{O} 50'32			10757 May 19 07:55	0° \mathring{O}	
retrograde	10750 Oct 13 15:20	18° \mathring{O} 47'36		evening set	10757 Jun 30 09:09	1° \mathring{O} 20'10	
opposition	10751 Jan 01 18:53	17° \mathring{O} 23'37	-0°47'58				
min. Earth dist.	10751 Jan 01 12:19	17° \mathring{O} 24'04	28.94249 AU	conjunction	10757 Jul 15 20:46	1° \mathring{O} 55'14	-0°50'25
direct	10751 Mar 22 01:27	16° \mathring{O} 00'02		minimum elong	10757 Jul 15 20:46	1° \mathring{O} 55'14	0°50'56
evening set	10751 Jun 17 14:35	17° \mathring{O} 54'29		max. Earth dist.	10757 Jul 16 06:54	1° \mathring{O} 56'12	30.87549 AU
				morning rise	10757 Jul 31 10:09	2° \mathring{O} 30'29	
conjunction	10751 Jul 03 01:15	18° \mathring{O} 29'27	-0°45'22	retrograde	10757 Oct 29 11:58	4° \mathring{O} 28'11	
minimum elong	10751 Jul 03 01:15	18° \mathring{O} 29'27	0°45'56	opposition	10758 Jan 17 15:53	3° \mathring{O} 03'44	-0°54'16
max. Earth dist.	10751 Jul 03 08:55	18° \mathring{O} 30'10	30.93813 AU	min. Earth dist.	10758 Jan 17 06:05	3° \mathring{O} 04'25	28.87103 AU
morning rise	10751 Jul 18 13:06	19° \mathring{O} 04'33		direct	10758 Apr 06 15:22	1° \mathring{O} 40'02	
retrograde	10751 Oct 16 04:01	21° \mathring{O} 01'45		evening set	10758 Jul 02 20:15	3° \mathring{O} 34'20	
opposition	10752 Jan 04 08:13	19° \mathring{O} 37'45	-0°49'06				
min. Earth dist.	10752 Jan 04 00:24	19° \mathring{O} 38'18	28.93400 AU	conjunction	10758 Jul 18 08:05	4° \mathring{O} 09'25	-0°51'01
direct	10752 Mar 23 13:20	18° \mathring{O} 14'12		minimum elong	10758 Jul 18 08:05	4° \mathring{O} 09'25	0°51'31
evening set	10752 Jun 19 01:45	20° \mathring{O} 08'40		max. Earth dist.	10758 Jul 18 18:58	4° \mathring{O} 10'27	30.86634 AU
				morning rise	10758 Aug 02 21:44	4° \mathring{O} 44'41	
conjunction	10752 Jul 04 12:23	20° \mathring{O} 43'39	-0°46'23	retrograde	10758 Nov 01 01:14	6° \mathring{O} 42'28	
minimum elong	10752 Jul 04 12:23	20° \mathring{O} 43'39	0°46'57	opposition	10759 Jan 20 05:00	5° \mathring{O} 17'57	-0°54'51
max. Earth dist.	10752 Jul 04 19:30	20° \mathring{O} 44'19	30.92925 AU	min. Earth dist.	10759 Jan 19 17:19	5° \mathring{O} 18'45	28.86258 AU
morning rise	10752 Jul 20 00:36	21° \mathring{O} 18'46		direct	10759 Apr 09 04:05	3° \mathring{O} 54'14	
retrograde	10752 Oct 17 17:52	23° \mathring{O} 16'07		evening set	10759 Jul 05 07:20	5° \mathring{O} 48'30	
opposition	10753 Jan 05 21:33	21° \mathring{O} 52'04	-0°50'09				
min. Earth dist.	10753 Jan 05 14:02	21° \mathring{O} 52'35	28.92477 AU	conjunction	10759 Jul 20 19:18	6° \mathring{O} 23'37	-0°51'31
direct	10753 Mar 25 23:08	20° \mathring{O} 28'31		minimum elong	10759 Jul 20 19:18	6° \mathring{O} 23'37	0°52'00
evening set	10753 Jun 21 12:48	22° \mathring{O} 22'59		max. Earth dist.	10759 Jul 21 06:40	6° \mathring{O} 24'41	30.85857 AU
				morning rise	10759 Aug 05 09:19	6° \mathring{O} 58'55	
conjunction	10753 Jul 06 23:47	22° \mathring{O} 57'59	-0°47'20	retrograde	10759 Nov 03 12:32	8° \mathring{O} 56'46	
minimum elong	10753 Jul 06 23:47	22° \mathring{O} 57'59	0°47'53	opposition	10760 Jan 22 18:17	7° \mathring{O} 32'12	-0°55'22
max. Earth dist.	10753 Jul 07 08:08	22° \mathring{O} 58'46	30.91944 AU	min. Earth dist.	10760 Jan 22 06:52	7° \mathring{O} 32'59	28.85562 AU
morning rise	10753 Jul 22 12:04	23° \mathring{O} 33'08		direct	10760 Apr 10 14:57	6° \mathring{O} 08'30	
retrograde	10753 Oct 20 06:38	25° \mathring{O} 30'34		evening set	10760 Jul 06 18:29	8° \mathring{O} 02'45	
opposition	10754 Jan 08 10:54	24° \mathring{O} 06'29	-0°51'08				
min. Earth dist.	10754 Jan 08 02:46	24° \mathring{O} 07'02	28.91436 AU	conjunction	10760 Jul 22 06:50	8° \mathring{O} 37'52	-0°51'57
direct	10754 Mar 28 12:48	22° \mathring{O} 42'55		minimum elong	10760 Jul 22 06:50	8° \mathring{O} 37'52	0°52'26
evening set	10754 Jun 23 23:58	24° \mathring{O} 37'22		max. Earth dist.	10760 Jul 22 19:39	8° \mathring{O} 39'05	30.85234 AU
				morning rise	10760 Aug 06 21:03	9° \mathring{O} 13'12	
conjunction	10754 Jul 09 10:56	25° \mathring{O} 12'22	-0°48'13	retrograde	10760 Nov 05 00:50	11° \mathring{O} 11'07	
minimum elong	10754 Jul 09 10:56	25° \mathring{O} 12'22	0°48'46	opposition	10761 Jan 24 07:15	9° \mathring{O} 46'32	-0°55'47
max. Earth dist.	10754 Jul 09 18:33	25° \mathring{O} 13'06	30.90861 AU	min. Earth dist.	10761 Jan 23 18:21	9° \mathring{O} 47'26	28.84998 AU
morning rise	10754 Jul 24 23:37	25° \mathring{O} 47'33		direct	10761 Apr 13 02:53	8° \mathring{O} 22'51	
retrograde	10754 Oct 22 21:51	27° \mathring{O} 45'04		evening set	10761 Jul 09 05:51	10° \mathring{O} 17'06	
opposition	10755 Jan 11 00:14	26° \mathring{O} 20'53	-0°52'02				
min. Earth dist.	10755 Jan 10 15:37	26° \mathring{O} 21'29	28.90321 AU	conjunction	10761 Jul 24 18:18	10° \mathring{O} 52'15	-0°52'18
direct	10755 Mar 31 00:58	24° \mathring{O} 57'18		minimum elong	10761 Jul 24 18:19	10° \mathring{O} 52'15	0°52'47
evening set	10755 Jun 26 11:00	26° \mathring{O} 51'42		max. Earth dist.	10761 Jul 25 06:51	10° \mathring{O} 53'26	30.84726 AU
				morning rise	10761 Aug 09 08:59	11° \mathring{O} 27'36	
conjunction	10755 Jul 11 22:17	27° \mathring{O} 26'44	-0°49'02	retrograde	10761 Nov 07 14:27	13° \mathring{O} 25'37	
minimum elong	10755 Jul 11 22:17	27° \mathring{O} 26'44	0°49'34	opposition	10762 Jan 26 20:27	12° \mathring{O} 01'00	-0°56'07
max. Earth dist.	10755 Jul 12 07:22	27° \mathring{O} 27'36	30.89721 AU	min. Earth dist.	10762 Jan 26 07:39	12° \mathring{O} 01'53	28.84546 AU
morning rise	10755 Jul 27 11:05	28° \mathring{O} 01'56		direct	10762 Apr 15 12:40	10° \mathring{O} 37'21	
retrograde	10755 Oct 25 09:30	29° \mathring{O} 59'32		evening set	10762 Jul 11 17:04	12° \mathring{O} 31'36	

conjunction	10762 Jul 27 05:55	13°♊06'46	-0°52'35	retrograde	10768 Nov 23 13:12	29°♊10'31	
minimum elong	10762 Jul 27 05:55	13°♊06'46	0°53'02	opposition	10769 Feb 11 16:37	27°♊45'41	-0°56'02
max. Earth dist.	10762 Jul 27 20:05	13°♊08'06	30.84309 AU	min. Earth dist.	10769 Feb 11 02:29	27°♊46'40	28.81047 AU
morning rise	10762 Aug 11 20:43	13°♊42'08		direct	10769 May 01 02:45	26°♊22'03	
	10762 Sep 21 00:43	15°♊		evening set	10769 Jul 27 03:12	28°♊16'13	
retrograde	10762 Nov 10 02:47	15°♊40'15					
	10763 Jan 01 04:55	15°♋♊		conjunction	10769 Aug 11 18:11	28°♊51'32	-0°52'14
opposition	10763 Jan 29 09:38	14°♊15'38	-0°56'22	minimum elong	10769 Aug 11 18:11	28°♊51'32	0°52'35
min. Earth dist.	10763 Jan 28 20:00	14°♊16'35	28.84152 AU	max. Earth dist.	10769 Aug 12 09:55	28°♊53'02	30.80725 AU
direct	10763 Apr 18 01:32	12°♊52'01		morning rise	10769 Aug 27 11:27	29°♊27'06	
evening set	10763 Jul 14 04:41	14°♊46'16			10769 Sep 11 20:20	0°♋	
	10763 Jul 20 07:36	15°♊		retrograde	10769 Nov 26 02:12	1°♋25'32	
				opposition	10770 Feb 14 05:32	0°♋00'40	-0°55'41
conjunction	10763 Jul 29 17:38	15°♊21'27	-0°52'46	min. Earth dist.	10770 Feb 13 14:08	0°♋01'44	28.80494 AU
minimum elong	10763 Jul 29 17:38	15°♊21'27	0°53'13		10770 Feb 14 15:08	30°♋♊	
max. Earth dist.	10763 Jul 30 07:08	15°♊22'44	30.83938 AU	direct	10770 May 03 15:26	28°♊37'00	
morning rise	10763 Aug 14 08:55	15°♊56'51			10770 Jul 15 01:59	0°♋	
retrograde	10763 Nov 12 17:52	17°♊55'03		evening set	10770 Jul 29 15:00	0°♋31'08	
opposition	10764 Jan 31 22:49	16°♊30'26	-0°56'31				
min. Earth dist.	10764 Jan 31 08:51	16°♊31'24	28.83791 AU	conjunction	10770 Aug 14 06:08	1°♋06'29	-0°51'52
direct	10764 Apr 19 12:08	15°♊06'50		minimum elong	10770 Aug 14 06:08	1°♋06'29	0°52'11
evening set	10764 Jul 15 16:13	17°♊01'07		max. Earth dist.	10770 Aug 14 21:32	1°♋07'57	30.80223 AU
				morning rise	10770 Aug 29 23:54	1°♋42'04	
conjunction	10764 Jul 31 05:35	17°♊36'19	-0°52'53	retrograde	10770 Nov 28 15:02	3°♋40'33	
minimum elong	10764 Jul 31 05:35	17°♊36'19	0°53'18	opposition	10771 Feb 16 18:34	2°♋15'38	-0°55'15
max. Earth dist.	10764 Jul 31 20:19	17°♊37'43	30.83553 AU	min. Earth dist.	10771 Feb 16 03:23	2°♋16'41	28.80063 AU
morning rise	10764 Aug 15 21:04	18°♊11'45		direct	10771 May 06 01:45	0°♋51'57	
retrograde	10764 Nov 14 06:26	20°♊10'02		evening set	10771 Aug 01 02:46	2°♋46'05	
opposition	10765 Feb 02 12:03	18°♊45'24	-0°56'36				
min. Earth dist.	10765 Feb 01 22:20	18°♊46'21	28.83376 AU	conjunction	10771 Aug 16 18:25	3°♋21'26	-0°51'25
direct	10765 Apr 22 00:14	17°♊21'49		minimum elong	10771 Aug 16 18:25	3°♋21'26	0°51'44
evening set	10765 Jul 18 04:03	19°♊16'06		max. Earth dist.	10771 Aug 17 11:21	3°♋23'03	30.79857 AU
				morning rise	10771 Sep 01 12:24	3°♋57'03	
conjunction	10765 Aug 02 17:37	19°♊51'20	-0°52'55	retrograde	10771 Dec 01 02:37	5°♋55'34	
minimum elong	10765 Aug 02 17:37	19°♊51'20	0°53'19	opposition	10772 Feb 19 07:22	4°♋30'37	-0°54'43
max. Earth dist.	10765 Aug 03 07:43	19°♊52'40	30.83107 AU	min. Earth dist.	10772 Feb 18 15:17	4°♋31'44	28.79765 AU
morning rise	10765 Aug 18 09:32	20°♊26'47		direct	10772 May 07 14:22	3°♋06'56	
retrograde	10765 Nov 16 21:49	22°♊25'08		evening set	10772 Aug 02 14:43	5°♋01'04	
min. Earth dist.	10766 Feb 04 10:44	21°♊01'28	28.82885 AU				
opposition	10766 Feb 05 01:10	21°♊00'28	-0°56'35	conjunction	10772 Aug 18 06:35	5°♋36'27	-0°50'53
direct	10766 Apr 24 12:59	19°♊36'53		minimum elong	10772 Aug 18 06:35	5°♋36'27	0°51'10
evening set	10766 Jul 20 15:53	21°♊31'10		max. Earth dist.	10772 Aug 18 22:52	5°♋37'59	30.79636 AU
				morning rise	10772 Sep 03 01:08	6°♋12'05	
conjunction	10766 Aug 05 05:47	22°♊06'25	-0°52'52	retrograde	10772 Dec 02 16:48	8°♋10'38	
minimum elong	10766 Aug 05 05:47	22°♊06'25	0°53'15	opposition	10773 Feb 20 20:13	6°♋45'41	-0°54'07
max. Earth dist.	10766 Aug 05 20:22	22°♊07'48	30.82561 AU	min. Earth dist.	10773 Feb 20 03:44	6°♋46'49	28.79617 AU
morning rise	10766 Aug 19 21:59	22°♊41'54		direct	10773 May 10 00:16	5°♋22'00	
retrograde	10766 Nov 10 11:13	24°♊40'17		evening set	10773 Aug 05 02:37	7°♋16'08	
opposition	10767 Feb 07 14:30	23°♊15'35	-0°56'29				
min. Earth dist.	10767 Feb 07 00:49	23°♊16'32	28.82300 AU	conjunction	10773 Aug 20 18:57	7°♋51'32	-0°50'17
direct	10767 Apr 27 01:58	21°♊52'00		minimum elong	10773 Aug 20 18:57	7°♋51'32	0°50'33
evening set	10767 Jul 23 03:33	23°♊46'14		max. Earth dist.	10773 Aug 21 12:39	7°♋53'13	30.79543 AU
				morning rise	10773 Sep 05 13:42	8°♋27'12	
conjunction	10767 Aug 07 17:50	24°♊21'30	-0°52'44	retrograde	10773 Dec 05 05:04	10°♋25'47	
minimum elong	10767 Aug 07 17:50	24°♊21'31	0°53'06	opposition	10774 Feb 23 09:00	9°♋00'50	-0°53'26
max. Earth dist.	10767 Aug 08 08:32	24°♊22'54	30.81956 AU	min. Earth dist.	10774 Feb 22 16:29	9°♋01'59	28.79581 AU
morning rise	10767 Aug 23 10:25	24°♊57'01		direct	10774 May 12 11:39	7°♋37'11	
retrograde	10767 Nov 22 01:12	26°♊55'26		evening set	10774 Aug 07 14:41	9°♋31'19	
opposition	10768 Feb 10 03:37	25°♊30'40	-0°56'18				
min. Earth dist.	10768 Feb 09 12:42	25°♊31'42	28.81668 AU	conjunction	10774 Aug 23 07:18	10°♋06'45	-0°49'36
direct	10768 Apr 28 15:14	24°♊07'03		minimum elong	10774 Aug 23 07:18	10°♋06'45	0°49'51
evening set	10768 Jul 24 15:26	26°♊01'15		max. Earth dist.	10774 Aug 24 00:37	10°♋08'23	30.79577 AU
				morning rise	10774 Sep 08 02:33	10°♋42'26	
conjunction	10768 Aug 09 05:58	26°♊36'33	-0°52'31	retrograde	10774 Dec 07 20:33	12°♋41'03	
minimum elong	10768 Aug 09 05:58	26°♊36'33	0°52'53	opposition	10775 Feb 25 21:49	11°♋16'07	-0°52'39
max. Earth dist.	10768 Aug 09 20:38	26°♊37'56	30.81315 AU	min. Earth dist.	10775 Feb 25 04:27	11°♋17'20	28.79660 AU
morning rise	10768 Aug 24 22:59	27°♊12'05		direct	10775 May 15 00:03	9°♋52'30	

evening set	10775 Aug 10 02:45	11° <u>10</u> 46'39		opposition	10782 Mar 13 14:39	27° <u>10</u> 04'25	-0°45'02
				min. Earth dist.	10782 Mar 12 22:26	27° <u>10</u> 05'33	28.79423 AU
conjunction	10775 Aug 25 19:46	12° <u>10</u> 22'06	-0°48'50	direct	10782 May 30 13:58	25° <u>10</u> 40'40	
minimum elong	10775 Aug 25 19:46	12° <u>10</u> 22'07	0°49'04	evening set	10782 Aug 25 17:56	27° <u>10</u> 34'40	
max. Earth dist.	10775 Aug 26 13:52	12° <u>10</u> 23'49	30.79680 AU				
morning rise	10775 Sep 10 15:22	12° <u>10</u> 57'49		conjunction	10782 Sep 10 13:42	28° <u>10</u> 10'16	-0°41'30
retrograde	10775 Dec 10 09:56	14° <u>10</u> 56'28		minimum elong	10782 Sep 10 13:42	28° <u>10</u> 10'16	0°41'34
opposition	10776 Feb 28 10:44	13° <u>10</u> 31'33	-0°51'48	max. Earth dist.	10782 Sep 11 07:24	28° <u>10</u> 11'56	30.79344 AU
min. Earth dist.	10776 Feb 27 18:10	13° <u>10</u> 32'42	28.79782 AU	morning rise	10782 Sep 26 11:54	28° <u>10</u> 46'07	
direct	10776 May 16 12:24	12° <u>10</u> 07'58			10782 Nov 03 07:20	0° <u>10</u>	
evening set	10776 Aug 11 15:04	14° <u>10</u> 02'08		retrograde	10782 Dec 26 05:27	0° <u>10</u> 44'34	
					10783 Feb 18 22:36	30° <u>10</u>	
conjunction	10776 Aug 27 08:30	14° <u>10</u> 37'37	-0°48'00	min. Earth dist.	10783 Mar 15 10:58	29° <u>10</u> 20'35	28.79354 AU
minimum elong	10776 Aug 27 08:30	14° <u>10</u> 37'37	0°48'12	opposition	10783 Mar 16 03:03	29° <u>10</u> 19'27	-0°43'40
max. Earth dist.	10776 Aug 28 02:25	14° <u>10</u> 39'18	30.79812 AU	direct	10783 Jun 02 02:04	27° <u>10</u> 55'40	
morning rise	10776 Sep 12 04:29	15° <u>10</u> 13'21		evening set	10783 Aug 28 06:24	29° <u>10</u> 49'38	
retrograde	10776 Dec 12 00:39	17° <u>10</u> 12'01			10783 Sep 01 22:22	0° <u>10</u>	
opposition	10777 Mar 01 23:19	15° <u>10</u> 47'07	-0°50'51				
min. Earth dist.	10777 Mar 01 05:54	15° <u>10</u> 48'20	28.79896 AU	conjunction	10783 Sep 13 02:28	0° <u>10</u> 25'14	-0°40'11
direct	10777 May 19 01:06	14° <u>10</u> 23'32		minimum elong	10783 Sep 13 02:29	0° <u>10</u> 25'14	0°40'14
evening set	10777 Aug 14 03:36	16° <u>10</u> 17'43		max. Earth dist.	10783 Sep 13 19:31	0° <u>10</u> 26'51	30.79340 AU
				morning rise	10783 Sep 29 01:12	1° <u>10</u> 01'06	
conjunction	10777 Aug 29 21:18	16° <u>10</u> 53'13	-0°47'05	retrograde	10783 Dec 28 19:20	2° <u>10</u> 59'30	
minimum elong	10777 Aug 29 21:18	16° <u>10</u> 53'13	0°47'16	opposition	10784 Mar 17 15:20	1° <u>10</u> 34'22	-0°42'14
max. Earth dist.	10777 Aug 30 14:47	16° <u>10</u> 54'52	30.79889 AU	min. Earth dist.	10784 Mar 16 22:36	1° <u>10</u> 35'33	28.79412 AU
morning rise	10777 Sep 14 17:41	17° <u>10</u> 28'59		direct	10784 Jun 03 13:51	0° <u>10</u> 10'33	
retrograde	10777 Dec 14 14:22	19° <u>10</u> 27'39		evening set	10784 Aug 29 18:57	2° <u>10</u> 04'31	
opposition	10778 Mar 04 12:15	18° <u>10</u> 02'45	-0°49'50				
min. Earth dist.	10778 Mar 03 20:01	18° <u>10</u> 03'53	28.79939 AU	conjunction	10784 Sep 14 15:27	2° <u>10</u> 40'08	-0°38'49
direct	10778 May 21 13:18	16° <u>10</u> 39'11		minimum elong	10784 Sep 14 15:27	2° <u>10</u> 40'08	0°38'50
evening set	10778 Aug 16 15:56	18° <u>10</u> 33'20		max. Earth dist.	10784 Sep 15 09:13	2° <u>10</u> 41'49	30.79452 AU
				morning rise	10784 Sep 30 14:27	3° <u>10</u> 16'01	
conjunction	10778 Sep 01 10:08	19° <u>10</u> 08'52	-0°46'06	retrograde	10784 Dec 30 07:20	5° <u>10</u> 14'22	
minimum elong	10778 Sep 01 10:08	19° <u>10</u> 08'52	0°46'16	min. Earth dist.	10785 Mar 19 11:30	3° <u>10</u> 50'22	28.79596 AU
max. Earth dist.	10778 Sep 02 04:02	19° <u>10</u> 10'33	30.79888 AU	opposition	10785 Mar 20 03:30	3° <u>10</u> 49'14	-0°40'44
morning rise	10778 Sep 17 06:48	19° <u>10</u> 44'38		direct	10785 Jun 06 01:27	2° <u>10</u> 25'24	
retrograde	10778 Dec 17 04:49	21° <u>10</u> 43'18		evening set	10785 Sep 01 07:28	4° <u>10</u> 19'22	
min. Earth dist.	10779 Mar 06 08:03	20° <u>10</u> 19'33	28.79880 AU				
opposition	10779 Mar 07 01:00	20° <u>10</u> 18'22	-0°48'45	conjunction	10785 Sep 17 04:23	4° <u>10</u> 55'01	-0°37'23
direct	10779 May 24 03:13	18° <u>10</u> 54'46		minimum elong	10785 Sep 17 04:23	4° <u>10</u> 55'01	0°37'24
evening set	10779 Aug 19 04:33	20° <u>10</u> 48'54		max. Earth dist.	10785 Sep 17 22:02	4° <u>10</u> 56'40	30.79721 AU
				morning rise	10785 Oct 03 03:46	5° <u>10</u> 30'54	
conjunction	10779 Sep 03 23:00	21° <u>10</u> 24'26	-0°45'03	retrograde	10786 Jan 01 21:50	7° <u>10</u> 29'14	
minimum elong	10779 Sep 03 23:00	21° <u>10</u> 24'26	0°45'12	opposition	10786 Mar 22 15:39	6° <u>10</u> 04'07	-0°39'10
max. Earth dist.	10779 Sep 04 15:49	21° <u>10</u> 26'02	30.79785 AU	min. Earth dist.	10786 Mar 21 22:30	6° <u>10</u> 05'19	28.79932 AU
morning rise	10779 Sep 19 20:13	22° <u>10</u> 00'15		direct	10786 Jun 08 13:46	4° <u>10</u> 40'17	
retrograde	10779 Dec 19 17:08	23° <u>10</u> 58'51		evening set	10786 Sep 03 19:58	6° <u>10</u> 34'15	
opposition	10780 Mar 08 13:41	22° <u>10</u> 33'53	-0°47'35				
min. Earth dist.	10780 Mar 07 21:44	22° <u>10</u> 35'00	28.79746 AU	conjunction	10786 Sep 19 17:11	7° <u>10</u> 09'55	-0°35'54
direct	10780 May 25 14:22	21° <u>10</u> 10'15		minimum elong	10786 Sep 19 17:11	7° <u>10</u> 09'55	0°35'53
evening set	10780 Aug 20 16:59	23° <u>10</u> 04'19		max. Earth dist.	10786 Sep 20 10:49	7° <u>10</u> 11'35	30.80121 AU
				morning rise	10786 Oct 05 16:59	7° <u>10</u> 45'50	
conjunction	10780 Sep 05 12:02	23° <u>10</u> 39'53	-0°43'56	retrograde	10787 Jan 04 11:27	9° <u>10</u> 44'08	
minimum elong	10780 Sep 05 12:02	23° <u>10</u> 39'53	0°44'03	min. Earth dist.	10787 Mar 24 11:42	8° <u>10</u> 20'11	28.80400 AU
max. Earth dist.	10780 Sep 06 05:43	23° <u>10</u> 41'33	30.79627 AU	opposition	10787 Mar 25 03:57	8° <u>10</u> 19'03	-0°37'33
morning rise	10780 Sep 21 09:29	24° <u>10</u> 15'42		direct	10787 Jun 11 01:44	6° <u>10</u> 55'15	
retrograde	10780 Dec 21 04:44	26° <u>10</u> 14'15		evening set	10787 Sep 06 08:35	8° <u>10</u> 49'14	
min. Earth dist.	10781 Mar 10 09:54	24° <u>10</u> 50'23	28.79566 AU				
opposition	10781 Mar 11 02:11	24° <u>10</u> 49'14	-0°46'21	conjunction	10787 Sep 22 06:19	9° <u>10</u> 24'56	-0°34'21
direct	10781 May 28 03:31	23° <u>10</u> 25'33		minimum elong	10787 Sep 22 06:20	9° <u>10</u> 24'56	0°34'20
evening set	10781 Aug 23 05:31	25° <u>10</u> 19'35		max. Earth dist.	10787 Sep 23 00:30	9° <u>10</u> 26'38	30.80653 AU
				morning rise	10787 Oct 08 06:23	10° <u>10</u> 00'52	
conjunction	10781 Sep 08 00:45	25° <u>10</u> 55'09	-0°42'45	retrograde	10788 Jan 07 02:03	11° <u>10</u> 59'08	
minimum elong	10781 Sep 08 00:45	25° <u>10</u> 55'09	0°42'50	opposition	10788 Mar 26 15:53	10° <u>10</u> 34'06	-0°35'52
max. Earth dist.	10781 Sep 08 17:19	25° <u>10</u> 56'43	30.79457 AU	min. Earth dist.	10788 Mar 25 22:53	10° <u>10</u> 35'18	28.80964 AU
morning rise	10781 Sep 23 22:44	26° <u>10</u> 30'59		direct	10788 Jun 12 15:12	9° <u>10</u> 10'20	
retrograde	10781 Dec 23 18:07	28° <u>10</u> 29'29		evening set	10788 Sep 07 21:28	11° <u>10</u> 04'21	

conjunction	10788 Sep 23 19:26	11° <u>♂</u> 40'04	-0°32'46	direct	10795 Jun 29 00:23	24° <u>♂</u> 56'17	
minimum elong	10788 Sep 23 19:26	11° <u>♂</u> 40'04	0°32'41	evening set	10795 Sep 24 16:03	26° <u>♂</u> 50'15	
max. Earth dist.	10788 Sep 24 12:40	11° <u>♂</u> 41'41	30.81243 AU				
morning rise	10788 Oct 09 19:58	12° <u>♂</u> 16'02		conjunction	10795 Oct 10 16:33	27° <u>♂</u> 26'03	-0°20'23
retrograde	10789 Jan 08 14:52	14° <u>♂</u> 14'17		minimum elong	10795 Oct 10 16:34	27° <u>♂</u> 26'03	0°20'10
opposition	10789 Mar 29 04:02	12° <u>♂</u> 49'18	-0°34'08	max. Earth dist.	10795 Oct 11 07:20	27° <u>♂</u> 27'26	30.84405 AU
min. Earth dist.	10789 Mar 28 12:08	12° <u>♂</u> 50'25	28.81572 AU	morning rise	10795 Oct 26 19:10	28° <u>♂</u> 02'04	
direct	10789 Jun 15 01:56	11° <u>♂</u> 25'34		retrograde	10796 Jan 25 05:58	29° <u>♂</u> 59'44	
evening set	10789 Sep 10 10:13	13° <u>♂</u> 19'36		opposition	10796 Apr 13 14:52	28° <u>♂</u> 34'48	-0°20'43
				min. Earth dist.	10796 Apr 13 01:43	28° <u>♂</u> 35'43	28.84685 AU
conjunction	10789 Sep 26 08:42	13° <u>♂</u> 55'21	-0°31'07	direct	10796 Jun 30 12:39	27° <u>♂</u> 10'50	
minimum elong	10789 Sep 26 08:42	13° <u>♂</u> 55'21	0°31'02	evening set	10796 Sep 26 04:55	29° <u>♂</u> 04'47	
max. Earth dist.	10789 Sep 27 02:37	13° <u>♂</u> 57'02	30.81842 AU				
morning rise	10789 Oct 12 09:22	14° <u>♂</u> 31'19		conjunction	10796 Oct 12 05:51	29° <u>♂</u> 40'36	-0°18'28
retrograde	10790 Jan 11 03:36	16° <u>♂</u> 29'32		minimum elong	10796 Oct 12 05:51	29° <u>♂</u> 40'36	0°18'14
opposition	10790 Mar 31 16:05	15° <u>♂</u> 04'36	-0°32'20	max. Earth dist.	10796 Oct 12 20:51	29° <u>♂</u> 42'00	30.84966 AU
min. Earth dist.	10790 Mar 31 00:05	15° <u>♂</u> 05'44	28.82143 AU		10796 Oct 20 20:51	0° <u>♂</u>	
direct	10790 Jun 17 14:55	13° <u>♂</u> 40'54		morning rise	10796 Oct 28 08:39	0° <u>♂</u> 16'36	
evening set	10790 Sep 12 23:19	15° <u>♂</u> 34'57		retrograde	10797 Jan 26 19:14	2° <u>♂</u> 14'09	
				opposition	10797 Apr 16 02:15	0° <u>♂</u> 49'14	-0°18'40
conjunction	10790 Sep 28 21:59	16° <u>♂</u> 10'42	-0°29'25	min. Earth dist.	10797 Apr 15 12:18	0° <u>♂</u> 50'12	28.85303 AU
minimum elong	10790 Sep 28 21:59	16° <u>♂</u> 10'42	0°29'18		10797 May 17 05:13	30° <u>♂</u>	
max. Earth dist.	10790 Sep 29 14:15	16° <u>♂</u> 12'14	30.82385 AU	direct	10797 Jul 03 02:15	29° <u>♂</u> 25'13	
morning rise	10790 Oct 14 23:09	16° <u>♂</u> 46'42			10797 Aug 17 19:04	0° <u>♂</u>	
retrograde	10791 Jan 13 17:37	18° <u>♂</u> 44'51		evening set	10797 Sep 28 17:49	1° <u>♂</u> 19'10	
opposition	10791 Apr 03 04:10	17° <u>♂</u> 19'58	-0°30'30				
min. Earth dist.	10791 Apr 02 12:46	17° <u>♂</u> 21'02	28.82653 AU	conjunction	10797 Oct 14 18:53	1° <u>♂</u> 54'59	-0°16'33
direct	10791 Jun 20 01:14	15° <u>♂</u> 56'14		minimum elong	10797 Oct 14 18:54	1° <u>♂</u> 54'59	0°16'17
evening set	10791 Sep 15 12:14	17° <u>♂</u> 50'17		max. Earth dist.	10797 Oct 15 09:06	1° <u>♂</u> 56'18	30.85651 AU
				morning rise	10797 Oct 30 22:02	2° <u>♂</u> 31'00	
conjunction	10791 Oct 01 11:27	18° <u>♂</u> 26'04	-0°27'41	retrograde	10798 Jan 29 07:52	4° <u>♂</u> 28'27	
minimum elong	10791 Oct 01 11:27	18° <u>♂</u> 26'04	0°27'33	opposition	10798 Apr 18 13:47	3° <u>♂</u> 03'32	-0°16'35
max. Earth dist.	10791 Oct 02 04:12	18° <u>♂</u> 27'38	30.82846 AU	min. Earth dist.	10798 Apr 18 00:41	3° <u>♂</u> 04'27	28.86070 AU
morning rise	10791 Oct 17 12:48	19° <u>♂</u> 02'04		direct	10798 Jul 05 13:06	1° <u>♂</u> 39'31	
retrograde	10792 Jan 16 04:27	21° <u>♂</u> 00'09		evening set	10798 Oct 01 06:39	3° <u>♂</u> 33'27	
opposition	10792 Apr 04 16:10	19° <u>♂</u> 35'16	-0°28'37				
min. Earth dist.	10792 Apr 04 01:27	19° <u>♂</u> 36'18	28.83063 AU	conjunction	10798 Oct 17 08:13	4° <u>♂</u> 09'17	-0°14'35
direct	10792 Jun 21 13:41	18° <u>♂</u> 11'31		minimum elong	10798 Oct 17 08:13	4° <u>♂</u> 09'17	0°14'18
evening set	10792 Sep 17 01:20	20° <u>♂</u> 05'33		behind sun begin	10798 Oct 17 05:17	4° <u>♂</u> 09'01	
				behind sun end	10798 Oct 17 11:09	4° <u>♂</u> 09'33	
conjunction	10792 Oct 03 00:48	20° <u>♂</u> 41'19	-0°25'55	max. Earth dist.	10798 Oct 17 23:17	4° <u>♂</u> 10'41	30.86496 AU
minimum elong	10792 Oct 03 00:48	20° <u>♂</u> 41'19	0°25'45	morning rise	10798 Nov 02 11:26	4° <u>♂</u> 45'18	
max. Earth dist.	10792 Oct 03 16:06	20° <u>♂</u> 42'45	30.83233 AU	retrograde	10799 Jan 31 20:57	6° <u>♂</u> 42'38	
morning rise	10792 Oct 19 02:34	21° <u>♂</u> 17'20		min. Earth dist.	10799 Apr 20 11:38	5° <u>♂</u> 18'43	28.86981 AU
retrograde	10793 Jan 17 17:07	23° <u>♂</u> 15'19		opposition	10799 Apr 21 01:04	5° <u>♂</u> 17'46	-0°14'29
opposition	10793 Apr 07 03:55	21° <u>♂</u> 50'26	-0°26'42	direct	10799 Jul 08 02:33	3° <u>♂</u> 53'45	
min. Earth dist.	10793 Apr 06 13:11	21° <u>♂</u> 51'28	28.83426 AU	evening set	10799 Oct 03 19:43	5° <u>♂</u> 47'42	
direct	10793 Jun 24 01:03	20° <u>♂</u> 26'37					
evening set	10793 Sep 19 14:17	22° <u>♂</u> 20'38		conjunction	10799 Oct 19 21:25	6° <u>♂</u> 23'33	-0°12'37
				minimum elong	10799 Oct 19 21:25	6° <u>♂</u> 23'33	0°12'19
conjunction	10793 Oct 05 14:09	22° <u>♂</u> 56'26	-0°24'06	behind sun begin	10799 Oct 19 17:09	6° <u>♂</u> 23'10	
minimum elong	10793 Oct 05 14:09	22° <u>♂</u> 56'26	0°23'56	behind sun end	10799 Oct 20 01:42	6° <u>♂</u> 23'56	
max. Earth dist.	10793 Oct 06 05:47	22° <u>♂</u> 57'54	30.83581 AU	max. Earth dist.	10799 Oct 20 11:08	6° <u>♂</u> 24'49	30.87481 AU
morning rise	10793 Oct 21 16:07	23° <u>♂</u> 32'27		morning rise	10799 Nov 05 01:04	6° <u>♂</u> 59'34	
retrograde	10794 Jan 20 04:21	25° <u>♂</u> 30'19		retrograde	10800 Feb 03 10:27	8° <u>♂</u> 56'49	
opposition	10794 Apr 09 15:45	24° <u>♂</u> 05'25	-0°24'45	opposition	10800 Apr 22 12:27	7° <u>♂</u> 32'01	-0°12'21
min. Earth dist.	10794 Apr 09 02:07	24° <u>♂</u> 06'23	28.83780 AU	min. Earth dist.	10800 Apr 21 23:25	7° <u>♂</u> 32'56	28.88025 AU
direct	10794 Jun 26 11:57	22° <u>♂</u> 41'33		direct	10800 Jul 09 13:25	6° <u>♂</u> 08'01	
evening set	10794 Sep 22 03:03	24° <u>♂</u> 35'33		evening set	10800 Oct 05 08:43	8° <u>♂</u> 01'59	
conjunction	10794 Oct 08 03:17	25° <u>♂</u> 11'20	-0°22'15	conjunction	10800 Oct 21 10:51	8° <u>♂</u> 37'50	-0°10'37
minimum elong	10794 Oct 08 03:17	25° <u>♂</u> 11'20	0°22'03	minimum elong	10800 Oct 21 10:51	8° <u>♂</u> 37'50	0°10'17
max. Earth dist.	10794 Oct 08 18:21	25° <u>♂</u> 12'45	30.83965 AU	behind sun begin	10800 Oct 21 05:41	8° <u>♂</u> 37'22	
morning rise	10794 Oct 24 05:36	25° <u>♂</u> 47'21		behind sun end	10800 Oct 21 16:01	8° <u>♂</u> 38'18	
retrograde	10795 Jan 22 17:41	27° <u>♂</u> 45'08		max. Earth dist.	10800 Oct 22 01:17	8° <u>♂</u> 39'11	30.88562 AU
opposition	10795 Apr 12 03:22	26° <u>♂</u> 20'12	-0°22'45	morning rise	10800 Nov 06 14:30	9° <u>♂</u> 13'52	
min. Earth dist.	10795 Apr 11 13:01	26° <u>♂</u> 21'13	28.84188 AU	retrograde	10801 Feb 04 21:17	11° <u>♂</u> 11'01	

opposition	10801 Apr 24 23:41	9° \mathbb{M} 46'19	-0°10'11	evening set	10806 Oct 19 16:07	21° \mathbb{M} 28'01	
min. Earth dist.	10801 Apr 24 11:16	9° \mathbb{M} 47'11	28.89129 AU				
direct	10801 Jul 12 01:29	8° \mathbb{M} 22'21		conjunction	10806 Nov 04 19:31	22° \mathbb{M} 03'53	0°01'43
evening set	10801 Oct 07 21:56	10° \mathbb{M} 16'21		minimum elong	10806 Nov 04 19:32	22° \mathbb{M} 03'53	0°02'09
				behind sun begin	10806 Nov 04 12:58	22° \mathbb{M} 03'18	
conjunction	10801 Oct 24 00:12	10° \mathbb{M} 52'12	-0°08'36	behind sun end	10806 Nov 05 02:06	22° \mathbb{M} 04'28	
minimum elong	10801 Oct 24 00:11	10° \mathbb{M} 52'12	0°08'16	max. Earth dist.	10806 Nov 05 04:47	22° \mathbb{M} 04'44	30.94297 AU
behind sun begin	10801 Oct 23 18:25	10° \mathbb{M} 51'41		morning rise	10806 Nov 21 00:16	22° \mathbb{M} 39'54	
behind sun end	10801 Oct 24 05:58	10° \mathbb{M} 52'43		retrograde	10807 Feb 18 23:02	24° \mathbb{M} 36'25	
max. Earth dist.	10801 Oct 24 13:09	10° \mathbb{M} 53'24	30.89689 AU	opposition	10807 May 08 18:49	23° \mathbb{M} 12'00	0°02'54
morning rise	10801 Nov 09 04:11	11° \mathbb{M} 28'14		min. Earth dist.	10807 May 08 10:33	23° \mathbb{M} 12'35	28.94698 AU
retrograde	10802 Feb 07 10:22	13° \mathbb{M} 25'19		direct	10807 Jul 25 22:40	21° \mathbb{M} 47'55	
opposition	10802 Apr 27 10:59	12° \mathbb{M} 00'41	-0°08'01	evening set	10807 Oct 22 05:12	23° \mathbb{M} 42'00	
min. Earth dist.	10802 Apr 26 22:39	12° \mathbb{M} 01'33	28.90252 AU				
direct	10802 Jul 14 12:08	10° \mathbb{M} 36'44		conjunction	10807 Nov 07 09:01	24° \mathbb{M} 17'52	0°03'46
evening set	10802 Oct 10 11:04	12° \mathbb{M} 30'46		minimum elong	10807 Nov 07 09:00	24° \mathbb{M} 17'52	0°04'12
				behind sun begin	10807 Nov 07 02:32	24° \mathbb{M} 17'17	
conjunction	10802 Oct 26 13:40	13° \mathbb{M} 06'38	-0°06'35	behind sun end	10807 Nov 07 15:28	24° \mathbb{M} 18'26	
minimum elong	10802 Oct 26 13:40	13° \mathbb{M} 06'38	0°06'13	max. Earth dist.	10807 Nov 07 18:37	24° \mathbb{M} 18'45	30.95095 AU
behind sun begin	10802 Oct 26 07:27	13° \mathbb{M} 06'05		morning rise	10807 Nov 23 13:43	24° \mathbb{M} 53'51	
behind sun end	10802 Oct 26 19:53	13° \mathbb{M} 07'11		retrograde	10808 Feb 21 11:59	26° \mathbb{M} 50'14	
max. Earth dist.	10802 Oct 27 02:43	13° \mathbb{M} 07'50	30.90777 AU	opposition	10808 May 10 05:41	25° \mathbb{M} 25'50	0°05'04
morning rise	10802 Nov 11 17:43	13° \mathbb{M} 42'40		min. Earth dist.	10808 May 09 21:25	25° \mathbb{M} 26'25	28.95505 AU
	10802 Dec 22 05:15	15° \mathbb{M}		direct	10808 Jul 27 12:46	24° \mathbb{M} 01'44	
retrograde	10803 Feb 09 21:40	15° \mathbb{M} 39'39		evening set	10808 Oct 23 18:23	25° \mathbb{M} 55'48	
	10803 Apr 01 20:36	15° \mathbb{K} \mathbb{M}					
opposition	10803 Apr 29 22:23	14° \mathbb{M} 15'06	-0°05'51	conjunction	10808 Nov 08 22:09	26° \mathbb{M} 31'40	0°05'47
min. Earth dist.	10803 Apr 29 11:34	14° \mathbb{M} 15'52	28.91301 AU	minimum elong	10808 Nov 08 22:09	26° \mathbb{M} 31'40	0°06'15
direct	10803 Jul 16 22:39	12° \mathbb{M} 51'09		behind sun begin	10808 Nov 08 15:57	26° \mathbb{M} 31'07	
evening set	10803 Oct 13 00:25	14° \mathbb{M} 45'13		behind sun end	10808 Nov 09 04:22	26° \mathbb{M} 32'14	
	10803 Oct 19 17:20	15° \mathbb{M}		max. Earth dist.	10808 Nov 09 06:12	26° \mathbb{M} 32'24	30.95930 AU
conjunction	10803 Oct 29 03:17	15° \mathbb{M} 21'05	-0°04'33	morning rise	10808 Nov 25 03:05	27° \mathbb{M} 07'39	
minimum elong	10803 Oct 29 03:16	15° \mathbb{M} 21'05	0°04'11	retrograde	10809 Feb 23 00:34	29° \mathbb{M} 03'54	
behind sun begin	10803 Oct 28 20:48	15° \mathbb{M} 20'30		opposition	10809 May 12 16:29	27° \mathbb{M} 39'32	0°07'14
behind sun end	10803 Oct 29 09:43	15° \mathbb{M} 21'39		min. Earth dist.	10809 May 12 08:45	27° \mathbb{M} 40'05	28.96389 AU
max. Earth dist.	10803 Oct 29 15:00	15° \mathbb{M} 22'10	30.91786 AU	direct	10809 Jul 30 00:13	26° \mathbb{M} 15'23	
morning rise	10803 Nov 14 07:33	15° \mathbb{M} 57'06		evening set	10809 Oct 26 07:22	28° \mathbb{M} 09'28	
retrograde	10804 Feb 12 10:26	17° \mathbb{M} 53'59					
opposition	10804 May 01 09:29	16° \mathbb{M} 29'30	-0°03'40	conjunction	10809 Nov 11 11:27	28° \mathbb{M} 45'20	0°07'47
min. Earth dist.	10804 Apr 30 22:29	16° \mathbb{M} 30'16	28.92255 AU	minimum elong	10809 Nov 11 11:27	28° \mathbb{M} 45'20	0°08'15
direct	10804 Jul 18 10:45	15° \mathbb{M} 05'32		behind sun begin	10809 Nov 11 05:40	28° \mathbb{M} 44'49	
evening set	10804 Oct 14 13:47	16° \mathbb{M} 59'36		behind sun end	10809 Nov 11 17:15	28° \mathbb{M} 45'51	
conjunction	10804 Oct 30 16:49	17° \mathbb{M} 35'28	-0°02'30	max. Earth dist.	10809 Nov 11 20:11	28° \mathbb{M} 46'08	30.96857 AU
minimum elong	10804 Oct 30 16:49	17° \mathbb{M} 35'28	0°02'06	morning rise	10809 Nov 27 16:16	29° \mathbb{M} 21'18	
behind sun begin	10804 Oct 30 10:15	17° \mathbb{M} 34'53			10809 Dec 16 06:33	0° \mathbb{X}	
behind sun end	10804 Oct 30 23:23	17° \mathbb{M} 36'03		retrograde	10810 Feb 25 11:04	1° \mathbb{X} 17'25	
max. Earth dist.	10804 Oct 31 03:43	17° \mathbb{M} 36'28	30.92683 AU		10810 May 11 01:17	30° \mathbb{R} \mathbb{M}	
morning rise	10804 Nov 15 21:14	18° \mathbb{M} 11'30		opposition	10810 May 15 03:17	29° \mathbb{M} 53'06	0°09'23
retrograde	10805 Feb 13 21:59	20° \mathbb{M} 08'16		min. Earth dist.	10810 May 14 20:00	29° \mathbb{M} 53'37	28.97368 AU
opposition	10805 May 03 20:47	18° \mathbb{M} 43'48	-0°01'28	direct	10810 Aug 01 12:35	28° \mathbb{M} 28'56	
min. Earth dist.	10805 May 03 11:27	18° \mathbb{M} 44'28	28.93112 AU		10810 Oct 17 23:56	0° \mathbb{X}	
direct	10805 Jul 20 22:27	17° \mathbb{M} 19'49		evening set	10810 Oct 28 20:22	0° \mathbb{X} 23'02	
evening set	10805 Oct 17 02:50	19° \mathbb{M} 13'53					
conjunction	10805 Nov 02 06:11	19° \mathbb{M} 49'45	-0°00'23	conjunction	10810 Nov 14 00:30	0° \mathbb{X} 58'53	0°09'47
minimum elong	10805 Nov 02 06:11	19° \mathbb{M} 49'45	0°00'01	minimum elong	10810 Nov 14 00:30	0° \mathbb{X} 58'53	0°10'17
behind sun begin	10805 Nov 02 01:49	19° \mathbb{M} 49'23		behind sun begin	10810 Nov 13 19:20	0° \mathbb{X} 58'26	
behind sun end	10805 Nov 02 10:33	19° \mathbb{M} 50'07		behind sun end	10810 Nov 14 05:40	0° \mathbb{X} 59'21	
max. Earth dist.	10805 Nov 02 16:41	19° \mathbb{M} 50'43	30.93514 AU	max. Earth dist.	10810 Nov 14 07:51	0° \mathbb{X} 59'33	30.97904 AU
morning rise	10805 Nov 18 10:41	20° \mathbb{M} 25'46		morning rise	10810 Nov 30 05:33	1° \mathbb{X} 34'51	
asc. node	10806 Jan 11 19:36	22° \mathbb{M} 01'31		retrograde	10811 Feb 27 23:47	3° \mathbb{X} 30'50	
retrograde	10806 Feb 16 10:39	22° \mathbb{M} 22'25		opposition	10811 May 17 13:59	2° \mathbb{X} 06'35	0°11'31
opposition	10806 May 06 07:50	20° \mathbb{M} 57'59	0°00'43	min. Earth dist.	10811 May 17 06:31	2° \mathbb{X} 07'06	28.98477 AU
min. Earth dist.	10806 May 05 22:10	20° \mathbb{M} 58'39	28.93909 AU	direct	10811 Aug 03 23:27	0° \mathbb{X} 42'24	
direct	10806 Jul 23 11:46	19° \mathbb{M} 33'57		evening set	10811 Oct 31 09:26	2° \mathbb{X} 36'31	
				conjunction	10811 Nov 16 13:48	3° \mathbb{X} 12'23	0°11'46
				minimum elong	10811 Nov 16 13:47	3° \mathbb{X} 12'23	0°12'15

behind sun begin	10811 Nov 16 09:29	3°♂12'00		opposition	10818 Jun 01 16:26	17°♂40'28	0°25'47
behind sun end	10811 Nov 16 18:06	3°♂12'46		min. Earth dist.	10818 Jun 01 14:10	17°♂40'37	29.06674 AU
max. Earth dist.	10811 Nov 16 21:34	3°♂13'06	30.99064 AU	direct	10818 Aug 19 08:01	16°♂16'13	
morning rise	10811 Dec 02 18:44	3°♂48'20		evening set	10818 Nov 16 05:33	18°♂10'31	
retrograde	10812 Mar 01 10:25	5°♂44'12					
opposition	10812 May 19 00:39	4°♂20'02	0°13'38	conjunction	10818 Dec 02 10:27	18°♂46'18	0°25'00
min. Earth dist.	10812 May 18 18:24	4°♂20'28	28.99691 AU	minimum elong	10818 Dec 02 10:27	18°♂46'18	0°25'34
direct	10812 Aug 05 09:33	2°♂55'52		max. Earth dist.	10818 Dec 02 12:42	18°♂46'31	31.07095 AU
evening set	10812 Nov 01 22:33	4°♂50'01		morning rise	10818 Dec 18 15:10	19°♂22'07	
				retrograde	10819 Mar 17 19:26	21°♂17'08	
conjunction	10812 Nov 18 02:59	5°♂25'52	0°13'44	opposition	10819 Jun 04 02:55	19°♂53'23	0°27'41
minimum elong	10812 Nov 18 02:59	5°♂25'52	0°14'15	min. Earth dist.	10819 Jun 04 01:38	19°♂53'29	29.07515 AU
behind sun begin	10812 Nov 18 00:02	5°♂25'36		direct	10819 Aug 21 20:52	18°♂29'06	
behind sun end	10812 Nov 18 05:56	5°♂26'08		evening set	10819 Nov 18 18:43	20°♂23'23	
max. Earth dist.	10812 Nov 18 09:47	5°♂26'29	31.00337 AU				
morning rise	10812 Dec 04 08:02	6°♂01'48		conjunction	10819 Dec 04 23:29	20°♂59'09	0°26'45
retrograde	10813 Mar 03 21:51	7°♂57'34		minimum elong	10819 Dec 04 23:29	20°♂59'09	0°27'19
opposition	10813 May 21 11:16	6°♂33'30	0°15'44	max. Earth dist.	10819 Dec 04 23:52	20°♂59'11	31.07922 AU
min. Earth dist.	10813 May 21 04:32	6°♂33'58	29.00994 AU	morning rise	10819 Dec 21 04:15	21°♂34'57	
direct	10813 Aug 07 21:08	5°♂09'21		retrograde	10820 Mar 19 08:00	23°♂29'47	
evening set	10813 Nov 04 11:33	7°♂03'32		opposition	10820 Jun 05 13:10	22°♂06'04	0°29'32
				min. Earth dist.	10820 Jun 05 12:01	22°♂06'09	29.08335 AU
conjunction	10813 Nov 20 16:03	7°♂39'23	0°15'41	direct	10820 Aug 23 08:44	20°♂41'43	
minimum elong	10813 Nov 20 16:03	7°♂39'23	0°16'12	evening set	10820 Nov 20 07:38	22°♂36'00	
max. Earth dist.	10813 Nov 20 22:26	7°♂39'58	31.01651 AU				
morning rise	10813 Dec 06 21:04	8°♂15'18		conjunction	10820 Dec 06 12:30	23°♂11'46	0°28'28
retrograde	10814 Mar 06 08:21	10°♂10'59		minimum elong	10820 Dec 06 12:30	23°♂11'46	0°29'03
opposition	10814 May 23 22:02	8°♂47'00	0°17'49	max. Earth dist.	10820 Dec 06 13:10	23°♂11'49	31.08736 AU
min. Earth dist.	10814 May 23 16:55	8°♂47'22	29.02313 AU	morning rise	10820 Dec 22 17:01	23°♂47'32	
direct	10814 Aug 10 07:30	7°♂22'52		retrograde	10821 Mar 21 17:44	25°♂42'14	
evening set	10814 Nov 07 00:45	9°♂17'06		opposition	10821 Jun 07 23:35	24°♂18'32	0°31'20
				min. Earth dist.	10821 Jun 07 23:46	24°♂18'31	29.09166 AU
conjunction	10814 Nov 23 05:25	9°♂52'56	0°17'37	direct	10821 Aug 25 19:49	22°♂54'08	
minimum elong	10814 Nov 23 05:25	9°♂52'56	0°18'09	evening set	10821 Nov 22 20:22	24°♂48'24	
max. Earth dist.	10814 Nov 23 11:10	9°♂53'28	31.02954 AU				
morning rise	10814 Dec 09 10:23	10°♂28'51		conjunction	10821 Dec 09 01:09	25°♂24'09	0°30'08
retrograde	10815 Mar 08 20:34	12°♂24'25		minimum elong	10821 Dec 09 01:09	25°♂24'09	0°30'42
opposition	10815 May 26 08:32	11°♂00'31	0°19'51	max. Earth dist.	10821 Dec 09 00:49	25°♂24'07	31.09600 AU
min. Earth dist.	10815 May 26 03:22	11°♂00'53	29.03573 AU	morning rise	10821 Dec 25 05:40	25°♂59'54	
direct	10815 Aug 12 19:26	9°♂36'23		retrograde	10822 Mar 24 04:33	27°♂54'27	
evening set	10815 Nov 09 14:09	11°♂30'39		opposition	10822 Jun 10 09:47	26°♂30'48	0°33'06
				min. Earth dist.	10822 Jun 10 09:26	26°♂30'49	29.10064 AU
conjunction	10815 Nov 25 18:46	12°♂06'29	0°19'30	direct	10822 Aug 28 07:38	25°♂06'21	
minimum elong	10815 Nov 25 18:46	12°♂06'29	0°20'02	evening set	10822 Nov 25 09:12	27°♂00'38	
max. Earth dist.	10815 Nov 25 22:55	12°♂06'52	31.04158 AU				
morning rise	10815 Dec 11 23:46	12°♂42'22		conjunction	10822 Dec 11 13:59	27°♂36'22	0°31'45
retrograde	10816 Mar 10 08:26	14°♂37'49		minimum elong	10822 Dec 11 13:58	27°♂36'22	0°32'20
opposition	10816 May 27 19:18	13°♂13'59	0°21'52	max. Earth dist.	10822 Dec 11 13:21	27°♂36'19	31.10534 AU
min. Earth dist.	10816 May 27 15:45	13°♂14'14	29.04727 AU	morning rise	10822 Dec 27 18:19	28°♂12'05	
direct	10816 Aug 14 06:22	11°♂49'50			10823 Mar 06 23:02	0°♂	
evening set	10816 Nov 11 03:17	13°♂44'07		retrograde	10823 Mar 26 14:09	0°♂06'31	
					10823 Apr 15 10:26	30°♂♂	
conjunction	10816 Nov 27 08:05	14°♂19'56	0°21'22	opposition	10823 Jun 12 20:00	28°♂42'55	0°34'48
minimum elong	10816 Nov 27 08:05	14°♂19'56	0°21'56	min. Earth dist.	10823 Jun 12 20:59	28°♂42'51	29.11060 AU
max. Earth dist.	10816 Nov 27 12:09	14°♂20'18	31.05245 AU	direct	10823 Aug 30 17:30	27°♂18'26	
morning rise	10816 Dec 13 12:53	14°♂55'48		evening set	10823 Nov 27 21:59	29°♂12'45	
retrograde	10817 Mar 12 20:28	16°♂51'06					
opposition	10817 May 30 05:53	15°♂27'19	0°23'51	conjunction	10823 Dec 14 02:45	29°♂48'28	0°33'20
min. Earth dist.	10817 May 30 02:44	15°♂27'32	29.05745 AU	minimum elong	10823 Dec 14 02:45	29°♂48'28	0°33'54
direct	10817 Aug 16 20:26	14°♂03'08		max. Earth dist.	10823 Dec 14 01:51	29°♂48'23	31.11592 AU
evening set	10817 Nov 13 16:33	15°♂57'25			10823 Dec 19 07:02	0°♂	
				morning rise	10823 Dec 30 06:56	0°♂24'10	
conjunction	10817 Nov 29 21:14	16°♂33'14	0°23'12	retrograde	10824 Mar 28 01:15	2°♂18'29	
minimum elong	10817 Nov 29 21:14	16°♂33'14	0°23'45	opposition	10824 Jun 14 06:10	0°♂54'58	0°36'28
max. Earth dist.	10817 Nov 29 23:17	16°♂33'25	31.06213 AU	min. Earth dist.	10824 Jun 14 06:33	0°♂54'56	29.12169 AU
morning rise	10817 Dec 16 02:09	17°♂09'04			10824 Jul 19 19:53	30°♂♂	
retrograde	10818 Mar 15 08:43	19°♂04'14		direct	10824 Sep 01 04:46	29°♂30'29	

	10824 Oct 13 21:08	0°♁	retrograde	10831 Apr 13 08:17	17°♁42'59	
evening set	10824 Nov 29 10:42	1°♁24'51	opposition	10831 Jun 30 05:25	16°♁19'59	0°46'25
			min. Earth dist.	10831 Jun 30 10:36	16°♁19'38	29.19895 AU
conjunction	10824 Dec 15 15:17	2°♁00'33 0°34'51	direct	10831 Sep 17 14:46	14°♁55'32	
minimum elong	10824 Dec 15 15:17	2°♁00'33 0°35'27	evening set	10831 Dec 16 03:49	16°♁50'10	
max. Earth dist.	10824 Dec 15 13:27	2°♁00'23 31.12754 AU				
morning rise	10824 Dec 31 19:20	2°♁36'13	conjunction	10832 Jan 01 07:39	17°♁25'45	0°43'58
retrograde	10825 Mar 30 12:13	4°♁30'28	minimum elong	10832 Jan 01 07:39	17°♁25'45	0°44'33
opposition	10825 Jun 16 16:27	3°♁07'01 0°38'04	max. Earth dist.	10832 Jan 01 00:37	17°♁25'06	31.20258 AU
min. Earth dist.	10825 Jun 16 17:55	3°♁06'55 29.13389 AU	morning rise	10832 Jan 17 10:10	18°♁01'14	
direct	10825 Sep 03 14:55	1°♁42'34	retrograde	10832 Apr 14 17:49	19°♁54'45	
evening set	10825 Dec 01 23:20	3°♁37'00	opposition	10832 Jul 01 15:39	18°♁31'47	0°47'35
			min. Earth dist.	10832 Jul 01 22:26	18°♁31'18	29.20654 AU
conjunction	10825 Dec 18 03:59	4°♁12'41 0°36'20	direct	10832 Sep 19 00:44	17°♁07'17	
minimum elong	10825 Dec 18 03:59	4°♁12'41 0°36'55	evening set	10832 Dec 17 16:10	19°♁01'53	
max. Earth dist.	10825 Dec 18 02:34	4°♁12'33 31.14011 AU				
morning rise	10826 Jan 03 07:46	4°♁48'19	conjunction	10833 Jan 02 19:51	19°♁37'27	0°45'02
retrograde	10826 Apr 01 23:43	6°♁42'29	minimum elong	10833 Jan 02 19:51	19°♁37'27	0°45'36
opposition	10826 Jun 19 02:31	5°♁19'09 0°39'37	max. Earth dist.	10833 Jan 02 12:23	19°♁36'45	31.21000 AU
min. Earth dist.	10826 Jun 19 04:12	5°♁19'02 29.14657 AU	morning rise	10833 Jan 18 22:07	20°♁12'54	
direct	10826 Sep 06 03:48	3°♁54'44	retrograde	10833 Apr 17 03:47	22°♁06'18	
evening set	10826 Dec 04 12:10	5°♁49'13	opposition	10833 Jul 04 01:39	20°♁43'20	0°48'40
			min. Earth dist.	10833 Jul 04 08:05	20°♁42'53	29.21379 AU
conjunction	10826 Dec 20 16:35	6°♁24'54 0°37'45	direct	10833 Sep 21 12:09	19°♁18'47	
minimum elong	10826 Dec 20 16:35	6°♁24'54 0°38'21	evening set	10833 Dec 20 04:36	21°♁13'23	
max. Earth dist.	10826 Dec 20 13:25	6°♁24'36 31.15281 AU				
morning rise	10827 Jan 05 20:21	7°♁00'31	conjunction	10834 Jan 05 08:02	21°♁48'55	0°46'01
retrograde	10827 Apr 04 11:53	8°♁54'37	minimum elong	10834 Jan 05 08:02	21°♁48'55	0°46'35
opposition	10827 Jun 21 12:44	7°♁31'22 0°41'06	max. Earth dist.	10834 Jan 04 23:30	21°♁48'08	31.21726 AU
min. Earth dist.	10827 Jun 21 15:10	7°♁31'12 29.15916 AU	morning rise	10834 Jan 21 10:06	22°♁24'20	
direct	10827 Sep 08 14:33	6°♁06'58	retrograde	10834 Apr 19 13:07	24°♁17'37	
evening set	10827 Dec 07 00:57	8°♁01'31	opposition	10834 Jul 06 11:39	22°♁54'40	0°49'42
			min. Earth dist.	10834 Jul 06 19:12	22°♁54'08	29.22133 AU
conjunction	10827 Dec 23 05:24	8°♁37'11 0°39'07	direct	10834 Sep 23 22:33	21°♁30'03	
minimum elong	10827 Dec 23 05:24	8°♁37'11 0°39'42	evening set	10834 Dec 22 16:51	23°♁24'39	
max. Earth dist.	10827 Dec 23 02:25	8°♁36'54 31.16493 AU				
morning rise	10828 Jan 08 08:45	9°♁12'47	conjunction	10835 Jan 07 20:14	24°♁00'10	0°46'57
retrograde	10828 Apr 05 22:50	11°♁06'47	minimum elong	10835 Jan 07 20:14	24°♁00'10	0°47'31
opposition	10828 Jun 22 22:56	9°♁43'37 0°42'32	max. Earth dist.	10835 Jan 07 12:11	23°♁59'25	31.22503 AU
min. Earth dist.	10828 Jun 23 02:28	9°♁43'23 29.17077 AU	morning rise	10835 Jan 23 21:56	24°♁35'33	
direct	10828 Sep 10 02:55	8°♁19'15	retrograde	10835 Apr 21 22:44	26°♁28'42	
evening set	10828 Dec 08 13:49	10°♁13'50	opposition	10835 Jul 08 21:39	25°♁05'47	0°50'39
			min. Earth dist.	10835 Jul 09 05:13	25°♁05'15	29.22940 AU
conjunction	10828 Dec 24 17:59	10°♁49'29 0°40'25	direct	10835 Sep 26 10:51	23°♁41'08	
minimum elong	10828 Dec 24 17:59	10°♁49'29 0°41'01	evening set	10835 Dec 25 05:11	25°♁35'45	
max. Earth dist.	10828 Dec 24 13:00	10°♁49'01 31.17605 AU				
morning rise	10829 Jan 09 21:17	11°♁25'03	conjunction	10836 Jan 10 08:10	26°♁11'13	0°47'48
retrograde	10829 Apr 08 12:02	13°♁18'57	minimum elong	10836 Jan 10 08:10	26°♁11'13	0°48'21
opposition	10829 Jun 25 09:09	11°♁55'51 0°43'53	max. Earth dist.	10836 Jan 09 22:46	26°♁10'21	31.23356 AU
min. Earth dist.	10829 Jun 25 12:50	11°♁55'36 29.18136 AU	morning rise	10836 Jan 26 09:42	26°♁46'34	
direct	10829 Sep 12 15:10	10°♁31'28	retrograde	10836 Apr 23 09:59	28°♁39'38	
evening set	10829 Dec 11 02:24	12°♁26'05	opposition	10836 Jul 10 07:38	27°♁16'44	0°51'31
			min. Earth dist.	10836 Jul 10 15:20	27°♁16'12	29.23857 AU
conjunction	10829 Dec 27 06:34	13°♁01'43 0°41'40	direct	10836 Sep 27 20:58	25°♁52'05	
minimum elong	10829 Dec 27 06:34	13°♁01'43 0°42'14	evening set	10836 Dec 26 17:16	27°♁46'43	
max. Earth dist.	10829 Dec 27 01:36	13°♁01'15 31.18594 AU				
morning rise	10830 Jan 12 09:31	13°♁37'15	conjunction	10837 Jan 11 20:13	28°♁22'10	0°48'35
retrograde	10830 Apr 10 21:42	15°♁31'03	minimum elong	10837 Jan 11 20:13	28°♁22'10	0°49'08
opposition	10830 Jun 27 19:27	14°♁08'00 0°45'11	max. Earth dist.	10837 Jan 11 11:37	28°♁21'22	31.24326 AU
min. Earth dist.	10830 Jun 28 00:50	14°♁07'38 29.19065 AU	morning rise	10837 Jan 27 21:17	28°♁57'29	
direct	10830 Sep 15 02:45	12°♁43'36		10837 Feb 28 18:51	0°♁	
evening set	10830 Dec 13 15:10	14°♁38'13	retrograde	10837 Apr 25 20:10	0°♁50'28	
				10837 Jun 22 20:06	30°♁	
conjunction	10830 Dec 29 19:08	15°♁13'49 0°42'51	opposition	10837 Jul 12 17:43	29°♁27'38	0°52'19
minimum elong	10830 Dec 29 19:08	15°♁13'49 0°43'26	min. Earth dist.	10837 Jul 13 01:59	29°♁27'04	29.24876 AU
max. Earth dist.	10830 Dec 29 12:42	15°♁13'13 31.19476 AU	direct	10837 Sep 30 09:09	28°♁03'00	
morning rise	10831 Jan 14 21:57	15°♁49'20	evening set	10837 Dec 29 05:22	29°♁57'40	

	10837 Dec 30 07:18	0°		retrograde	10844 May 10 20:38	16°	07'19"
					10844 Jul 18 14:20	15°	
conjunction	10838 Jan 14 07:58	0°	33'06" 0°49'18"	opposition	10844 Jul 27 16:41	14°	44'58" 0°55'45"
minimum elong	10838 Jan 14 07:58	0°	33'06" 0°49'50"	min. Earth dist.	10844 Jul 28 04:55	14°	44'07" 29.30969 AU
max. Earth dist.	10838 Jan 13 22:01	0°	32'11" 31.25398 AU	direct	10844 Oct 15 15:18	13°	20'25"
morning rise	10838 Jan 30 08:58	1°	08'23"		10845 Jan 06 13:09	15°	
retrograde	10838 Apr 28 08:50	3°	01'18"	evening set	10845 Jan 13 18:03	15°	15'19"
opposition	10838 Jul 15 03:41	1°	38'33" 0°53'03"				
min. Earth dist.	10838 Jul 15 11:40	1°	38'00" 29.25975 AU	conjunction	10845 Jan 29 18:48	15°	50'35" 0°52'16"
direct	10838 Oct 02 21:03	0°	13'57"	minimum elong	10845 Jan 29 18:48	15°	50'35" 0°52'43"
evening set	10838 Dec 31 17:31	2°	08'40"	max. Earth dist.	10845 Jan 29 04:15	15°	49'15" 31.31160 AU
				morning rise	10845 Feb 14 17:32	16°	25'42"
conjunction	10839 Jan 16 20:01	2°	44'05" 0°49'57"	retrograde	10845 May 13 07:41	18°	18'12"
minimum elong	10839 Jan 16 20:01	2°	44'05" 0°50'28"	opposition	10845 Jul 30 02:48	16°	55'50" 0°55'56"
max. Earth dist.	10839 Jan 16 10:27	2°	43'12" 31.26500 AU	min. Earth dist.	10845 Jul 30 15:22	16°	54'58" 29.31403 AU
morning rise	10839 Feb 01 20:33	3°	19'21"	direct	10845 Oct 18 01:03	15°	31'16"
retrograde	10839 Apr 30 18:31	5°	12'12"	evening set	10846 Jan 16 05:40	17°	26'10"
opposition	10839 Jul 17 13:45	3°	49'33" 0°53'42"				
min. Earth dist.	10839 Jul 17 23:15	3°	48'53" 29.27072 AU	conjunction	10846 Feb 01 06:21	18°	01'25" 0°52'23"
direct	10839 Oct 05 08:13	2°	24'59"	minimum elong	10846 Feb 01 06:21	18°	01'25" 0°52'49"
evening set	10840 Jan 03 05:47	4°	19'45"	max. Earth dist.	10846 Jan 31 16:26	18°	00'08" 31.31557 AU
				morning rise	10846 Feb 17 04:37	18°	36'29"
conjunction	10840 Jan 19 07:56	4°	55'09" 0°50'31"	retrograde	10846 May 15 17:23	20°	28'55"
minimum elong	10840 Jan 19 07:56	4°	55'09" 0°51'02"	opposition	10846 Aug 01 13:01	19°	06'34" 0°56'01"
max. Earth dist.	10840 Jan 18 21:14	4°	54'09" 31.27579 AU	min. Earth dist.	10846 Aug 02 02:26	19°	05'38" 29.31775 AU
morning rise	10840 Feb 04 08:16	5°	30'23"	direct	10846 Oct 20 13:40	17°	41'59"
retrograde	10840 May 02 05:48	7°	23'11"	evening set	10847 Jan 18 17:30	19°	36'52"
opposition	10840 Jul 18 23:51	6°	00'37" 0°54'16"				
min. Earth dist.	10840 Jul 19 08:58	5°	59'59" 29.28109 AU	conjunction	10847 Feb 03 17:43	20°	12'05" 0°52'26"
direct	10840 Oct 06 20:00	4°	36'05"	minimum elong	10847 Feb 03 17:43	20°	12'05" 0°52'51"
evening set	10841 Jan 04 17:49	6°	30'54"	max. Earth dist.	10847 Feb 03 02:26	20°	10'41" 31.31930 AU
				morning rise	10847 Feb 19 15:48	20°	47'08"
conjunction	10841 Jan 20 19:44	7°	06'16" 0°51'01"	retrograde	10847 May 18 05:30	22°	39'30"
minimum elong	10841 Jan 20 19:44	7°	06'16" 0°51'31"	opposition	10847 Aug 03 23:03	21°	17'09" 0°56'02"
max. Earth dist.	10841 Jan 20 08:33	7°	05'14" 31.28553 AU	min. Earth dist.	10847 Aug 04 11:59	21°	16'15" 29.32159 AU
morning rise	10841 Feb 05 19:40	7°	41'29"	direct	10847 Oct 23 02:10	19°	52'31"
retrograde	10841 May 04 15:50	9°	34'14"	evening set	10848 Jan 21 05:04	21°	47'25"
opposition	10841 Jul 21 10:09	8°	11'45" 0°54'46"				
min. Earth dist.	10841 Jul 21 20:51	8°	11'00" 29.29033 AU	conjunction	10848 Feb 06 05:06	22°	22'37" 0°52'25"
direct	10841 Oct 09 05:55	6°	47'14"	minimum elong	10848 Feb 06 05:06	22°	22'37" 0°52'49"
evening set	10842 Jan 07 05:57	8°	42'04"	max. Earth dist.	10848 Feb 05 14:31	22°	21'17" 31.32328 AU
				morning rise	10848 Feb 22 02:41	22°	57'38"
conjunction	10842 Jan 23 07:39	9°	17'25" 0°51'26"	retrograde	10848 May 19 14:41	24°	49'57"
minimum elong	10842 Jan 23 07:39	9°	17'25" 0°51'56"	opposition	10848 Aug 05 09:23	23°	27'36" 0°55'58"
max. Earth dist.	10842 Jan 22 19:51	9°	16'20" 31.29412 AU	min. Earth dist.	10848 Aug 05 23:20	23°	26'39" 29.32597 AU
morning rise	10842 Feb 08 07:16	9°	52'37"	direct	10848 Oct 24 13:32	22°	02'59"
retrograde	10842 May 07 01:52	11°	45'18"	evening set	10849 Jan 22 16:30	23°	57'53"
opposition	10842 Jul 23 20:13	10°	22'52" 0°55'10"				
min. Earth dist.	10842 Jul 24 06:48	10°	22'08" 29.29814 AU	conjunction	10849 Feb 07 16:08	24°	33'04" 0°52'19"
direct	10842 Oct 11 17:17	8°	58'22"	minimum elong	10849 Feb 07 16:09	24°	33'04" 0°52'42"
evening set	10843 Jan 09 18:08	10°	53'14"	max. Earth dist.	10849 Feb 07 01:04	24°	31'40" 31.32815 AU
				morning rise	10849 Feb 23 13:30	25°	08'03"
conjunction	10843 Jan 25 19:29	11°	28'33" 0°51'47"	retrograde	10849 May 22 01:37	27°	00'19"
minimum elong	10843 Jan 25 19:29	11°	28'33" 0°52'16"	opposition	10849 Aug 07 19:33	25°	38'01" 0°55'49"
max. Earth dist.	10843 Jan 25 06:18	11°	27'20" 31.30118 AU	min. Earth dist.	10849 Aug 08 08:30	25°	37'07" 29.33122 AU
morning rise	10843 Feb 10 18:51	12°	03'43"	direct	10849 Oct 27 01:46	24°	13'24"
retrograde	10843 May 09 11:26	13°	56'21"	evening set	10850 Jan 25 03:59	26°	08'19"
opposition	10843 Jul 26 06:29	12°	33'58" 0°55'30"				
min. Earth dist.	10843 Jul 26 18:20	12°	33'08" 29.30460 AU	conjunction	10850 Feb 10 03:22	26°	43'29" 0°52'09"
direct	10843 Oct 14 03:25	11°	09'27"	minimum elong	10850 Feb 10 03:22	26°	43'29" 0°52'31"
evening set	10844 Jan 12 06:03	13°	04'19"	max. Earth dist.	10850 Feb 09 12:19	26°	42'06" 31.33377 AU
				morning rise	10850 Feb 26 00:21	27°	18'27"
conjunction	10844 Jan 28 07:15	13°	39'38" 0°52'04"	retrograde	10850 May 24 12:02	29°	10'41"
minimum elong	10844 Jan 28 07:15	13°	39'38" 0°52'32"	opposition	10850 Aug 10 05:44	27°	48'26" 0°55'36"
max. Earth dist.	10844 Jan 27 18:18	13°	38'26" 31.30695 AU	min. Earth dist.	10850 Aug 10 19:46	27°	47'28" 29.33723 AU
morning rise	10844 Feb 13 06:09	14°	14'45"	direct	10850 Oct 29 12:09	26°	23'51"
	10844 Mar 06 11:11	15°		evening set	10851 Jan 27 15:28	28°	18'48"

conjunction	10851 Feb 12 14:35	28° 53 '57	0°51'54	retrograde	10857 Jun 08 09:05	14° 14 '24'09	
minimum elong	10851 Feb 12 14:36	28° 53 '57	0°52'15	opposition	10857 Aug 25 06:57	13° 10 '02'03	0°51'48
max. Earth dist.	10851 Feb 11 23:34	28° 52 '33	31.34001 AU	min. Earth dist.	10857 Aug 25 23:48	13° 10 '00'54	29.35897 AU
morning rise	10851 Feb 28 11:13	29° 28 '53		direct	10857 Nov 13 17:35	11° 13 '37'32	
	10851 Mar 15 08:54	0° 11 '		evening set	10858 Feb 11 22:54	13° 13 '32'31	
retrograde	10851 May 26 21:35	1° 11 '21'06					
opposition	10851 Aug 12 15:59	29° 58 '55	0°55'17	conjunction	10858 Feb 27 19:42	14° 10 '07'30	0°48'07
	10851 Aug 12 00:18	30° 08 '		minimum elong	10858 Feb 27 19:43	14° 10 '07'30	0°48'20
min. Earth dist.	10851 Aug 13 05:31	29° 57 '59	29.34336 AU	max. Earth dist.	10858 Feb 27 01:39	14° 10 '05'50	31.35790 AU
direct	10851 Oct 31 23:54	28° 34 '23		morning rise	10858 Mar 15 14:01	14° 10 '42'17	
	10852 Jan 16 02:00	0° 11 '		retrograde	10858 Jun 10 19:56	16° 13 '34'22	
evening set	10852 Jan 30 02:57	0° 11 '29'21		opposition	10858 Aug 27 17:17	15° 13 '12'15	0°50'58
max. Earth dist.	10852 Feb 14 09:42	1° 10 '03'00	31.34598 AU	min. Earth dist.	10858 Aug 28 09:23	15° 13 '11'09	29.35730 AU
				direct	10858 Nov 16 06:30	13° 10 '47'41	
conjunction	10852 Feb 15 01:37	1° 10 '04'28	0°51'34	evening set	10859 Feb 14 09:58	15° 13 '42'39	
minimum elong	10852 Feb 15 01:37	1° 10 '04'28	0°51'54				
morning rise	10852 Mar 01 21:56	1° 10 '39'24		conjunction	10859 Mar 02 06:28	16° 10 '17'38	0°47'18
retrograde	10852 May 28 06:52	3° 13 '31'36		minimum elong	10859 Mar 02 06:28	16° 10 '17'38	0°47'29
opposition	10852 Aug 14 02:23	2° 10 '09'29	0°54'54	max. Earth dist.	10859 Mar 01 12:21	16° 10 '15'57	31.35596 AU
min. Earth dist.	10852 Aug 14 16:47	2° 10 '08'29	29.34916 AU	morning rise	10859 Mar 18 00:24	16° 10 '52'23	
direct	10852 Nov 02 09:32	0° 11 '44'58		retrograde	10859 Jun 13 06:12	18° 10 '44'27	
evening set	10853 Jan 31 14:19	2° 10 '39'58		opposition	10859 Aug 30 03:58	17° 10 '22'18	0°50'04
				min. Earth dist.	10859 Aug 30 20:59	17° 10 '21'08	29.35537 AU
conjunction	10853 Feb 16 12:49	3° 10 '15'04	0°51'10	direct	10859 Nov 18 17:43	15° 10 '57'43	
minimum elong	10853 Feb 16 12:49	3° 10 '15'04	0°51'30	evening set	10860 Feb 16 20:46	17° 10 '52'39	
max. Earth dist.	10853 Feb 15 21:27	3° 10 '13'39	31.35133 AU				
morning rise	10853 Mar 04 08:41	3° 10 '49'58		conjunction	10860 Mar 03 16:57	18° 10 '27'36	0°46'25
retrograde	10853 May 30 15:39	5° 10 '42'10		minimum elong	10860 Mar 03 16:57	18° 10 '27'36	0°46'35
opposition	10853 Aug 16 12:46	4° 10 '20'05	0°54'26	max. Earth dist.	10860 Mar 02 23:19	18° 10 '25'58	31.35413 AU
min. Earth dist.	10853 Aug 17 03:30	4° 10 '19'04	29.35391 AU	morning rise	10860 Mar 19 10:32	19° 10 '02'21	
direct	10853 Nov 04 20:32	2° 10 '55'36		retrograde	10860 Jun 14 15:12	20° 10 '54'24	
evening set	10854 Feb 03 01:49	4° 10 '50'36		opposition	10860 Aug 31 14:33	19° 10 '32'14	0°49'05
				min. Earth dist.	10860 Sep 01 06:40	19° 10 '31'07	29.35372 AU
conjunction	10854 Feb 18 23:50	5° 10 '25'41	0°50'42	direct	10860 Nov 20 06:13	18° 10 '07'38	
minimum elong	10854 Feb 18 23:51	5° 10 '25'41	0°51'00	evening set	10861 Feb 18 07:38	20° 10 '02'34	
max. Earth dist.	10854 Feb 18 06:57	5° 10 '24'07	31.35546 AU	max. Earth dist.	10861 Mar 05 09:16	20° 10 '35'49	31.35286 AU
morning rise	10854 Mar 06 19:32	6° 10 '00'34					
retrograde	10854 Jun 02 02:51	7° 10 '52'45		conjunction	10861 Mar 06 03:23	20° 10 '37'30	0°45'28
opposition	10854 Aug 18 23:14	6° 10 '30'41	0°53'53	minimum elong	10861 Mar 06 03:24	20° 10 '37'30	0°45'37
min. Earth dist.	10854 Aug 19 14:10	6° 10 '29'39	29.35740 AU	morning rise	10861 Mar 21 20:43	21° 10 '12'14	
direct	10854 Nov 07 06:07	5° 10 '06'12		retrograde	10861 Jun 17 00:29	23° 10 '04'17	
evening set	10855 Feb 05 13:12	7° 10 '01'13		opposition	10861 Sep 03 01:06	21° 10 '42'07	0°48'02
				min. Earth dist.	10861 Sep 03 17:25	21° 10 '40'59	29.35303 AU
conjunction	10855 Feb 21 11:03	7° 10 '36'17	0°50'09	direct	10861 Nov 22 15:51	20° 10 '17'32	
minimum elong	10855 Feb 21 11:03	7° 10 '36'17	0°50'26	evening set	10862 Feb 20 18:21	22° 10 '12'28	
max. Earth dist.	10855 Feb 20 18:41	7° 10 '34'46	31.35811 AU				
morning rise	10855 Mar 09 06:12	8° 10 '11'08		conjunction	10862 Mar 08 13:56	22° 10 '47'24	0°44'27
retrograde	10855 Jun 04 12:00	10° 10 '03'18		minimum elong	10862 Mar 08 13:56	22° 10 '47'24	0°44'35
opposition	10855 Aug 21 09:47	8° 10 '41'14	0°53'16	max. Earth dist.	10862 Mar 07 21:01	22° 10 '45'49	31.35265 AU
min. Earth dist.	10855 Aug 22 01:44	8° 10 '40'09	29.35925 AU	morning rise	10862 Mar 24 06:50	23° 10 '22'06	
direct	10855 Nov 09 18:22	7° 10 '16'46		retrograde	10862 Jun 19 08:57	25° 10 '14'11	
evening set	10856 Feb 08 00:39	9° 10 '11'46		opposition	10862 Sep 05 11:47	23° 10 '52'02	0°46'56
				min. Earth dist.	10862 Sep 06 03:51	23° 10 '50'56	29.35313 AU
conjunction	10856 Feb 23 22:01	9° 10 '46'48	0°49'33	direct	10862 Nov 25 02:42	22° 10 '27'30	
minimum elong	10856 Feb 23 22:01	9° 10 '46'48	0°49'48	evening set	10863 Feb 23 05:11	24° 10 '22'28	
max. Earth dist.	10856 Feb 23 04:11	9° 10 '45'09	31.35932 AU	max. Earth dist.	10863 Mar 10 06:31	24° 10 '55'43	31.35319 AU
morning rise	10856 Mar 10 16:59	10° 10 '21'38					
retrograde	10856 Jun 05 23:47	12° 10 '13'47		conjunction	10863 Mar 11 00:16	24° 10 '57'22	0°43'23
opposition	10856 Aug 22 20:18	10° 10 '51'42	0°52'34	minimum elong	10863 Mar 11 00:16	24° 10 '57'22	0°43'29
min. Earth dist.	10856 Aug 23 11:48	10° 10 '50'38	29.35976 AU	morning rise	10863 Mar 26 16:59	25° 10 '32'04	
direct	10856 Nov 11 06:15	9° 10 '27'12		retrograde	10863 Jun 21 20:06	27° 10 '24'12	
evening set	10857 Feb 09 11:43	11° 10 '22'13		opposition	10863 Sep 07 22:26	26° 10 '02'06	0°45'44
				min. Earth dist.	10863 Sep 08 14:00	26° 10 '01'01	29.35397 AU
conjunction	10857 Feb 25 08:54	11° 10 '57'13	0°48'52	direct	10863 Nov 27 11:43	24° 10 '37'36	
minimum elong	10857 Feb 25 08:54	11° 10 '57'13	0°49'06	evening set	10864 Feb 25 15:51	26° 10 '32'36	
max. Earth dist.	10857 Feb 24 15:31	11° 10 '55'37	31.35911 AU				
morning rise	10857 Mar 13 03:26	12° 10 '32'02		conjunction	10864 Mar 12 10:46	27° 10 '07'29	0°42'15

minimum elong	10864 Mar 12 10:46	27° \mathbf{K} 07'29	0°42'20	opposition	10870 Sep 23 03:27	11° \mathbf{P} 15'25	0°35'44
max. Earth dist.	10864 Mar 11 18:13	27° \mathbf{K} 05'57	31.35412 AU	min. Earth dist.	10870 Sep 23 19:56	11° \mathbf{P} 14'17	29.33993 AU
morning rise	10864 Mar 28 03:00	27° \mathbf{K} 42'11		direct	10870 Dec 12 21:05	9° \mathbf{P} 51'05	
retrograde	10864 Jun 23 05:24	29° \mathbf{K} 34'23		evening set	10871 Mar 12 18:36	11° \mathbf{P} 46'04	
opposition	10864 Sep 09 09:18	28° \mathbf{K} 12'18	0°44'29				
min. Earth dist.	10864 Sep 10 01:28	28° \mathbf{K} 11'12	29.35485 AU	conjunction	10871 Mar 28 11:17	12° \mathbf{P} 20'52	0°32'41
direct	10864 Nov 28 23:07	26° \mathbf{K} 47'53		minimum elong	10871 Mar 28 11:17	12° \mathbf{P} 20'52	0°32'37
evening set	10865 Feb 27 02:33	28° \mathbf{K} 42'54		max. Earth dist.	10871 Mar 27 18:25	12° \mathbf{P} 19'18	31.33661 AU
				morning rise	10871 Apr 13 01:29	12° \mathbf{P} 55'29	
conjunction	10865 Mar 14 21:00	29° \mathbf{K} 17'47	0°41'03	retrograde	10871 Jul 09 05:42	14° \mathbf{P} 47'55	
minimum elong	10865 Mar 14 21:00	29° \mathbf{K} 17'47	0°41'06	opposition	10871 Sep 25 14:39	13° \mathbf{P} 25'46	0°34'05
max. Earth dist.	10865 Mar 14 03:33	29° \mathbf{K} 16'09	31.35492 AU	min. Earth dist.	10871 Sep 26 07:02	13° \mathbf{P} 24'39	29.33366 AU
morning rise	10865 Mar 30 13:07	29° \mathbf{K} 52'28		direct	10871 Dec 15 09:20	12° \mathbf{P} 01'24	
	10865 Apr 03 00:51	0° \mathbf{P}		evening set	10872 Mar 14 05:06	13° \mathbf{P} 56'20	
retrograde	10865 Jun 25 17:26	1° \mathbf{P} 44'43					
opposition	10865 Sep 11 20:06	0° \mathbf{P} 22'40	0°43'11	conjunction	10872 Mar 29 21:18	14° \mathbf{P} 31'07	0°31'08
min. Earth dist.	10865 Sep 12 11:28	0° \mathbf{P} 21'37	29.35532 AU	minimum elong	10872 Mar 29 21:19	14° \mathbf{P} 31'07	0°31'02
	10865 Sep 25 19:21	30° \mathbf{K}		max. Earth dist.	10872 Mar 29 03:44	14° \mathbf{P} 29'29	31.33037 AU
direct	10865 Dec 01 10:07	28° \mathbf{K} 58'18		morning rise	10872 Apr 14 11:25	15° \mathbf{P} 05'44	
	10866 Feb 03 01:06	0° \mathbf{P}		retrograde	10872 Jul 10 16:28	16° \mathbf{P} 58'12	
evening set	10866 Mar 01 13:18	0° \mathbf{P} 53'21		opposition	10872 Sep 27 01:49	15° \mathbf{P} 35'59	0°32'23
				min. Earth dist.	10872 Sep 27 17:24	15° \mathbf{P} 34'55	29.32762 AU
conjunction	10866 Mar 17 07:32	1° \mathbf{P} 28'13	0°39'47	direct	10872 Dec 16 19:29	14° \mathbf{P} 11'36	
minimum elong	10866 Mar 17 07:32	1° \mathbf{P} 28'13	0°39'49	evening set	10873 Mar 16 15:16	16° \mathbf{P} 06'29	
max. Earth dist.	10866 Mar 16 14:39	1° \mathbf{P} 26'39	31.35488 AU				
morning rise	10866 Apr 01 23:11	2° \mathbf{P} 02'53		conjunction	10873 Apr 01 07:20	16° \mathbf{P} 41'15	0°29'31
retrograde	10866 Jun 28 03:16	3° \mathbf{P} 55'12		minimum elong	10873 Apr 01 07:20	16° \mathbf{P} 41'15	0°29'24
opposition	10866 Sep 14 07:03	2° \mathbf{P} 33'10	0°41'48	max. Earth dist.	10873 Mar 31 15:15	16° \mathbf{P} 39'45	31.32450 AU
min. Earth dist.	10866 Sep 14 23:39	2° \mathbf{P} 32'02	29.35479 AU	morning rise	10873 Apr 16 21:02	17° \mathbf{P} 15'51	
direct	10866 Dec 03 20:29	1° \mathbf{P} 08'50		retrograde	10873 Jul 13 00:41	19° \mathbf{P} 08'22	
evening set	10867 Mar 04 00:09	3° \mathbf{P} 03'54		opposition	10873 Sep 29 13:08	17° \mathbf{P} 46'06	0°30'39
				min. Earth dist.	10873 Sep 30 04:54	17° \mathbf{P} 45'01	29.32210 AU
conjunction	10867 Mar 19 17:59	3° \mathbf{P} 38'45	0°38'28	direct	10873 Dec 19 06:51	16° \mathbf{P} 21'43	
minimum elong	10867 Mar 19 17:59	3° \mathbf{P} 38'45	0°38'29	evening set	10874 Mar 19 01:40	18° \mathbf{P} 16'35	
max. Earth dist.	10867 Mar 19 00:41	3° \mathbf{P} 37'09	31.35383 AU				
morning rise	10867 Apr 04 09:25	4° \mathbf{P} 13'25		conjunction	10874 Apr 03 17:18	18° \mathbf{P} 51'20	0°27'53
retrograde	10867 Jun 30 14:57	6° \mathbf{P} 05'46		minimum elong	10874 Apr 03 17:18	18° \mathbf{P} 51'20	0°27'44
opposition	10867 Sep 16 18:05	4° \mathbf{P} 43'45	0°40'22	max. Earth dist.	10874 Apr 03 00:50	18° \mathbf{P} 49'48	31.31953 AU
min. Earth dist.	10867 Sep 17 09:46	4° \mathbf{P} 42'41	29.35304 AU	morning rise	10874 Apr 19 06:53	19° \mathbf{P} 25'55	
direct	10867 Dec 06 09:46	3° \mathbf{P} 19'26		retrograde	10874 Jul 15 11:57	21° \mathbf{P} 18'29	
evening set	10868 Mar 05 10:48	5° \mathbf{P} 14'30		opposition	10874 Oct 02 00:16	19° \mathbf{P} 56'12	0°28'52
max. Earth dist.	10868 Mar 20 10:49	5° \mathbf{P} 47'43	31.35134 AU	min. Earth dist.	10874 Oct 02 14:37	19° \mathbf{P} 55'13	29.31760 AU
				direct	10874 Dec 21 17:14	18° \mathbf{P} 31'50	
conjunction	10868 Mar 21 04:18	5° \mathbf{P} 49'21	0°37'06	evening set	10875 Mar 21 11:56	20° \mathbf{P} 26'42	
minimum elong	10868 Mar 21 04:18	5° \mathbf{P} 49'21	0°37'06				
morning rise	10868 Apr 05 19:24	6° \mathbf{P} 24'00		conjunction	10875 Apr 06 03:22	21° \mathbf{P} 01'27	0°26'11
retrograde	10868 Jul 02 02:28	8° \mathbf{P} 16'23		minimum elong	10875 Apr 06 03:22	21° \mathbf{P} 01'27	0°26'01
opposition	10868 Sep 18 05:17	6° \mathbf{P} 54'21	0°38'52	max. Earth dist.	10875 Apr 05 12:00	21° \mathbf{P} 00'01	31.31546 AU
min. Earth dist.	10868 Sep 18 21:56	6° \mathbf{P} 53'13	29.34995 AU	morning rise	10875 Apr 21 16:35	21° \mathbf{P} 36'02	
direct	10868 Dec 07 21:29	5° \mathbf{P} 30'03		retrograde	10875 Jul 17 22:00	23° \mathbf{P} 28'41	
evening set	10869 Mar 07 21:28	7° \mathbf{P} 25'06		opposition	10875 Oct 04 11:46	22° \mathbf{P} 06'23	0°27'02
				min. Earth dist.	10875 Oct 05 02:40	22° \mathbf{P} 05'22	29.31393 AU
conjunction	10869 Mar 23 14:43	7° \mathbf{P} 59'56	0°35'41	direct	10875 Dec 24 03:15	20° \mathbf{P} 42'04	
minimum elong	10869 Mar 23 14:43	7° \mathbf{P} 59'56	0°35'39	evening set	10876 Mar 22 22:05	22° \mathbf{P} 36'56	
max. Earth dist.	10869 Mar 22 21:33	7° \mathbf{P} 58'20	31.34761 AU				
morning rise	10869 Apr 08 05:30	8° \mathbf{P} 34'34		conjunction	10876 Apr 07 13:11	23° \mathbf{P} 11'40	0°24'27
retrograde	10869 Jul 04 11:39	10° \mathbf{P} 26'59		minimum elong	10876 Apr 07 13:11	23° \mathbf{P} 11'40	0°24'17
opposition	10869 Sep 20 16:16	9° \mathbf{P} 04'56	0°37'19	max. Earth dist.	10876 Apr 06 22:13	23° \mathbf{P} 10'17	31.31218 AU
min. Earth dist.	10869 Sep 21 08:22	9° \mathbf{P} 03'50	29.34546 AU	morning rise	10876 Apr 23 02:15	23° \mathbf{P} 46'16	
direct	10869 Dec 10 10:28	7° \mathbf{P} 40'37		retrograde	10876 Jul 19 09:46	25° \mathbf{P} 39'00	
evening set	10870 Mar 10 08:10	9° \mathbf{P} 35'39		opposition	10876 Oct 05 23:11	24° \mathbf{P} 16'43	0°25'10
max. Earth dist.	10870 Mar 25 06:59	10° \mathbf{P} 08'47	31.34255 AU	min. Earth dist.	10876 Oct 06 12:40	24° \mathbf{P} 15'47	29.31071 AU
				direct	10876 Dec 25 16:02	22° \mathbf{P} 52'27	
conjunction	10870 Mar 26 01:01	10° \mathbf{P} 10'27	0°34'12	evening set	10877 Mar 25 08:24	24° \mathbf{P} 47'21	
minimum elong	10870 Mar 26 01:02	10° \mathbf{P} 10'27	0°34'10				
morning rise	10870 Apr 10 15:39	10° \mathbf{P} 45'05		conjunction	10877 Apr 09 23:12	25° \mathbf{P} 22'05	0°22'41
retrograde	10870 Jul 06 21:25	12° \mathbf{P} 37'31		minimum elong	10877 Apr 09 23:12	25° \mathbf{P} 22'05	0°22'29

max. Earth dist.	10877 Apr 09 08:23	25° Υ 20'42	31.30896 AU	conjunction	10883 Apr 23 11:48	8° \mathcal{B} 27'50	0°11'29
morning rise	10877 Apr 25 12:02	25° Υ 56'40		minimum elong	10883 Apr 23 11:48	8° \mathcal{B} 27'50	0°11'09
retrograde	10877 Jul 21 21:42	27° Υ 49'30		behind sun begin	10883 Apr 23 06:59	8° \mathcal{B} 27'24	
opposition	10877 Oct 08 10:39	26° Υ 27'14	0°23'15	behind sun end	10883 Apr 23 16:36	8° \mathcal{B} 28'16	
min. Earth dist.	10877 Oct 09 00:45	26° Υ 26'16	29.30745 AU	max. Earth dist.	10883 Apr 22 21:51	8° \mathcal{B} 26'32	31.27017 AU
direct	10877 Dec 28 02:57	25° Υ 03'02		morning rise	10883 May 08 23:27	9° \mathcal{B} 02'26	
evening set	10878 Mar 27 18:43	26° Υ 57'57		retrograde	10883 Aug 04 12:07	10° \mathcal{B} 55'49	
				opposition	10883 Oct 22 09:42	9° \mathcal{B} 33'25	0°11'11
conjunction	10878 Apr 12 09:19	27° Υ 32'41	0°20'53	min. Earth dist.	10883 Oct 22 21:52	9° \mathcal{B} 32'36	29.26502 AU
minimum elong	10878 Apr 12 09:19	27° Υ 32'41	0°20'40	direct	10884 Jan 10 23:31	8° \mathcal{B} 09'23	
max. Earth dist.	10878 Apr 11 19:16	27° Υ 31'23	31.30546 AU	evening set	10884 Apr 09 08:42	10° \mathcal{B} 04'14	
morning rise	10878 Apr 27 21:52	28° Υ 07'16					
	10878 Jul 20 20:13	0° \mathcal{B}		conjunction	10884 Apr 24 21:43	10° \mathcal{B} 38'56	0°09'33
retrograde	10878 Jul 24 07:49	0° \mathcal{B} 00'12		minimum elong	10884 Apr 24 21:43	10° \mathcal{B} 38'56	0°09'13
	10878 Jul 27 18:55	30° $\mathcal{R}\Upsilon$		behind sun begin	10884 Apr 24 16:15	10° \mathcal{B} 38'27	
opposition	10878 Oct 10 22:17	28° Υ 37'57	0°21'19	behind sun end	10884 Apr 25 03:11	10° \mathcal{B} 39'26	
min. Earth dist.	10878 Oct 11 11:35	28° Υ 37'02	29.30346 AU	max. Earth dist.	10884 Apr 24 08:43	10° \mathcal{B} 37'44	31.25959 AU
direct	10878 Dec 30 15:44	27° Υ 13'49		morning rise	10884 May 10 09:08	11° \mathcal{B} 13'33	
evening set	10879 Mar 30 05:07	29° Υ 08'45		retrograde	10884 Aug 05 22:14	13° \mathcal{B} 07'02	
				opposition	10884 Oct 23 21:47	11° \mathcal{B} 44'33	0°09'06
conjunction	10879 Apr 14 19:17	29° Υ 43'28	0°19'03	min. Earth dist.	10884 Oct 24 10:35	11° \mathcal{B} 43'40	29.25435 AU
minimum elong	10879 Apr 14 19:17	29° Υ 43'28	0°18'48	direct	10885 Jan 12 09:46	10° \mathcal{B} 20'29	
max. Earth dist.	10879 Apr 14 04:36	29° Υ 42'06	31.30100 AU	evening set	10885 Apr 11 18:53	12° \mathcal{B} 15'18	
	10879 Apr 22 04:07	0° \mathcal{B}					
morning rise	10879 Apr 30 07:42	0° \mathcal{B} 18'04		conjunction	10885 Apr 27 07:39	12° \mathcal{B} 50'00	0°07'37
retrograde	10879 Jul 26 18:56	2° \mathcal{B} 11'06		minimum elong	10885 Apr 27 07:39	12° \mathcal{B} 50'00	0°07'15
opposition	10879 Oct 13 10:06	0° \mathcal{B} 48'51	0°19'20	behind sun begin	10885 Apr 27 01:44	12° \mathcal{B} 49'28	
min. Earth dist.	10879 Oct 13 23:33	0° \mathcal{B} 47'56	29.29855 AU	behind sun end	10885 Apr 27 13:34	12° \mathcal{B} 50'32	
	10879 Nov 14 07:30	30° $\mathcal{R}\Upsilon$		max. Earth dist.	10885 Apr 26 19:14	12° \mathcal{B} 48'50	31.24903 AU
direct	10880 Jan 02 02:25	29° Υ 24'46		morning rise	10885 May 12 18:57	13° \mathcal{B} 24'36	
	10880 Feb 18 04:42	0° \mathcal{B}			10885 Jul 06 11:23	15° \mathcal{B}	
evening set	10880 Mar 31 15:26	1° \mathcal{B} 19'42		retrograde	10885 Aug 08 09:58	15° \mathcal{B} 18'09	
					10885 Sep 11 05:25	15° $\mathcal{R}\mathcal{B}$	
conjunction	10880 Apr 16 05:30	1° \mathcal{B} 54'26	0°17'12	opposition	10885 Oct 26 09:34	13° \mathcal{B} 55'36	0°07'00
minimum elong	10880 Apr 16 05:30	1° \mathcal{B} 54'26	0°16'56	min. Earth dist.	10885 Oct 26 20:46	13° \mathcal{B} 54'50	29.24394 AU
max. Earth dist.	10880 Apr 15 16:01	1° \mathcal{B} 53'11	31.29542 AU	direct	10886 Jan 14 23:04	12° \mathcal{B} 31'31	
morning rise	10880 May 01 17:33	2° \mathcal{B} 29'01		evening set	10886 Apr 14 05:05	14° \mathcal{B} 26'19	
retrograde	10880 Jul 28 04:22	4° \mathcal{B} 22'10					
opposition	10880 Oct 14 21:56	2° \mathcal{B} 59'54	0°17'20	conjunction	10886 Apr 29 17:34	15° \mathcal{B} 01'01	0°05'40
min. Earth dist.	10880 Oct 15 11:23	2° \mathcal{B} 58'59	29.29223 AU	minimum elong	10886 Apr 29 17:35	15° \mathcal{B} 01'01	0°05'17
direct	10881 Jan 03 14:45	1° \mathcal{B} 35'51		behind sun begin	10886 Apr 29 11:21	15° \mathcal{B} 00'28	
evening set	10881 Apr 03 01:52	3° \mathcal{B} 30'47		behind sun end	10886 Apr 29 23:48	15° \mathcal{B} 01'35	
				max. Earth dist.	10886 Apr 29 05:30	14° \mathcal{B} 59'54	31.23892 AU
conjunction	10881 Apr 18 15:31	4° \mathcal{B} 05'30	0°15'19		10886 Apr 29 06:32	15° \mathcal{B}	
minimum elong	10881 Apr 18 15:31	4° \mathcal{B} 05'31	0°15'01	morning rise	10886 May 15 04:44	15° \mathcal{B} 35'38	
behind sun begin	10881 Apr 18 13:05	4° \mathcal{B} 05'17		retrograde	10886 Aug 10 22:22	17° \mathcal{B} 29'16	
behind sun end	10881 Apr 18 17:58	4° \mathcal{B} 05'44		opposition	10886 Oct 28 21:43	16° \mathcal{B} 06'40	0°04'54
max. Earth dist.	10881 Apr 18 01:05	4° \mathcal{B} 04'10	31.28844 AU	min. Earth dist.	10886 Oct 29 08:59	16° \mathcal{B} 05'54	29.23437 AU
morning rise	10881 May 04 03:35	4° \mathcal{B} 40'07			10886 Dec 14 23:39	15° $\mathcal{R}\mathcal{B}$	
retrograde	10881 Jul 30 16:01	6° \mathcal{B} 33'20		direct	10887 Jan 17 09:58	14° \mathcal{B} 42'36	
opposition	10881 Oct 17 09:48	5° \mathcal{B} 11'03	0°15'18		10887 Feb 19 04:23	15° \mathcal{B}	
min. Earth dist.	10881 Oct 17 22:40	5° \mathcal{B} 10'11	29.28451 AU	evening set	10887 Apr 16 15:04	16° \mathcal{B} 37'23	
direct	10882 Jan 06 01:23	3° \mathcal{B} 47'01					
evening set	10882 Apr 05 12:13	5° \mathcal{B} 41'56		conjunction	10887 May 02 03:27	17° \mathcal{B} 12'05	0°03'41
				minimum elong	10887 May 02 03:26	17° \mathcal{B} 12'05	0°03'17
conjunction	10882 Apr 21 01:46	6° \mathcal{B} 16'40	0°13'24	behind sun begin	10887 May 01 21:03	17° \mathcal{B} 11'30	
minimum elong	10882 Apr 21 01:45	6° \mathcal{B} 16'40	0°13'06	behind sun end	10887 May 02 09:49	17° \mathcal{B} 12'39	
behind sun begin	10882 Apr 20 21:52	6° \mathcal{B} 16'19		max. Earth dist.	10887 May 01 16:46	17° \mathcal{B} 11'05	31.22985 AU
behind sun end	10882 Apr 21 05:39	6° \mathcal{B} 17'01		morning rise	10887 May 17 14:22	17° \mathcal{B} 46'41	
max. Earth dist.	10882 Apr 20 12:21	6° \mathcal{B} 15'25	31.27990 AU	retrograde	10887 Aug 13 08:31	19° \mathcal{B} 40'26	
morning rise	10882 May 06 13:27	6° \mathcal{B} 51'16		opposition	10887 Oct 31 09:49	18° \mathcal{B} 17'47	0°02'47
retrograde	10882 Aug 02 00:38	8° \mathcal{B} 44'35		min. Earth dist.	10887 Oct 31 19:40	18° \mathcal{B} 17'07	29.22566 AU
opposition	10882 Oct 19 21:45	7° \mathcal{B} 22'15	0°13'15	direct	10888 Jan 19 22:41	16° \mathcal{B} 53'45	
min. Earth dist.	10882 Oct 20 11:11	7° \mathcal{B} 21'20	29.27524 AU	evening set	10888 Apr 18 01:14	18° \mathcal{B} 48'32	
direct	10883 Jan 08 12:59	5° \mathcal{B} 58'13					
evening set	10883 Apr 07 22:37	7° \mathcal{B} 53'06		conjunction	10888 May 03 13:16	19° \mathcal{B} 23'14	0°01'41
				minimum elong	10888 May 03 13:16	19° \mathcal{B} 23'14	0°01'16

behind sun begin	10888 May 03 06:50	19° 8 22'39		morning rise	10893 May 30 01:48	0° II 55'53	
behind sun end	10888 May 03 19:41	19° 8 23'48		retrograde	10893 Aug 26 02:45	2° II 50'21	
max. Earth dist.	10888 May 03 02:24	19° 8 22'13	31.22160 AU	opposition	10893 Nov 13 11:56	1° II 27'32	-0°09'55
morning rise	10888 May 19 00:12	19° 8 57'51		min. Earth dist.	10893 Nov 13 19:50	1° II 27'00	29.17447 AU
retrograde	10888 Aug 14 20:41	21° 8 51'42		direct	10894 Feb 01 19:01	0° II 03'41	
opposition	10888 Nov 01 21:54	20° 8 29'02	0°00'40	evening set	10894 May 01 14:38	1° II 58'26	
min. Earth dist.	10888 Nov 02 07:24	20° 8 28'23	29.21783 AU				
direct	10889 Jan 21 09:54	19° 8 05'02		conjunction	10894 May 17 01:41	2° II 33'09	-0°10'16
desc. node	10889 Feb 27 00:00	19° 8 26'46		minimum elong	10894 May 17 01:41	2° II 33'09	0°10'46
evening set	10889 Apr 20 11:15	20° 8 59'49		behind sun begin	10894 May 16 20:44	2° II 32'42	
				behind sun end	10894 May 17 06:39	2° II 33'36	
conjunction	10889 May 05 23:15	21° 8 34'31	-0°00'23	max. Earth dist.	10894 May 16 18:11	2° II 32'27	31.16872 AU
minimum elong	10889 May 05 23:16	21° 8 34'31	0°00'49	morning rise	10894 Jun 01 12:00	3° II 07'50	
behind sun begin	10889 May 05 16:51	21° 8 33'57		retrograde	10894 Aug 28 14:46	5° II 02'24	
behind sun end	10889 May 06 05:41	21° 8 35'06		opposition	10894 Nov 16 00:32	3° II 39'32	-0°12'00
max. Earth dist.	10889 May 05 14:08	21° 8 33'41	31.21395 AU	min. Earth dist.	10894 Nov 16 07:06	3° II 39'05	29.16265 AU
morning rise	10889 May 21 09:58	22° 8 09'09		direct	10895 Feb 04 07:48	2° II 15'40	
retrograde	10889 Aug 17 07:06	24° 8 03'07		evening set	10895 May 04 00:55	4° II 10'23	
opposition	10889 Nov 04 10:08	22° 8 40'26	-0°01'27				
min. Earth dist.	10889 Nov 04 19:13	22° 8 39'49	29.21016 AU	conjunction	10895 May 19 11:46	4° II 45'06	-0°12'12
direct	10890 Jan 23 23:05	21° 8 16'29		minimum elong	10895 May 19 11:46	4° II 45'06	0°12'44
evening set	10890 Apr 22 21:29	23° 8 11'16		behind sun begin	10895 May 19 07:39	4° II 44'44	
				behind sun end	10895 May 19 15:53	4° II 45'29	
conjunction	10890 May 08 09:08	23° 8 45'58	-0°02'24	max. Earth dist.	10895 May 19 04:13	4° II 44'25	31.15627 AU
minimum elong	10890 May 08 09:07	23° 8 45'58	0°02'51	morning rise	10895 Jun 03 22:05	5° II 19'48	
behind sun begin	10890 May 08 02:43	23° 8 45'24		retrograde	10895 Aug 31 03:12	7° II 14'29	
behind sun end	10890 May 08 15:32	23° 8 46'33		opposition	10895 Nov 18 13:19	5° II 51'31	-0°14'04
max. Earth dist.	10890 May 07 23:31	23° 8 45'05	31.20633 AU	min. Earth dist.	10895 Nov 18 20:16	5° II 51'02	29.14977 AU
morning rise	10890 May 23 19:52	24° 8 20'37		direct	10896 Feb 06 18:29	4° II 27'38	
retrograde	10890 Aug 19 18:57	26° 8 14'42		evening set	10896 May 05 11:08	6° II 22'19	
opposition	10890 Nov 06 22:23	24° 8 52'00	-0°03'35				
min. Earth dist.	10890 Nov 07 06:30	24° 8 51'27	29.20245 AU	conjunction	10896 May 20 21:59	6° II 57'02	-0°14'07
direct	10891 Jan 26 09:52	23° 8 28'05		minimum elong	10896 May 20 21:59	6° II 57'02	0°14'39
evening set	10891 Apr 25 07:39	25° 8 22'52		behind sun begin	10896 May 20 19:09	6° II 56'47	
				behind sun end	10896 May 21 00:49	6° II 57'17	
conjunction	10891 May 10 19:14	25° 8 57'35	-0°04'23	max. Earth dist.	10896 May 20 15:40	6° II 56'27	31.14304 AU
minimum elong	10891 May 10 19:15	25° 8 57'35	0°04'52	morning rise	10896 Jun 05 08:11	7° II 31'44	
behind sun begin	10891 May 10 12:58	25° 8 57'01		retrograde	10896 Sep 01 14:04	9° II 26'30	
behind sun end	10891 May 11 01:31	25° 8 58'09		opposition	10896 Nov 20 01:48	8° II 03'27	-0°16'06
max. Earth dist.	10891 May 10 11:01	25° 8 56'50	31.19833 AU	min. Earth dist.	10896 Nov 20 07:37	8° II 03'03	29.13624 AU
morning rise	10891 May 26 05:43	26° 8 32'14		direct	10897 Feb 08 07:35	6° II 39'33	
retrograde	10891 Aug 22 04:05	28° 8 26'27		evening set	10897 May 07 21:25	8° II 34'11	
opposition	10891 Nov 09 10:57	27° 8 03'44	-0°05'42				
min. Earth dist.	10891 Nov 09 19:20	27° 8 03'09	29.19414 AU	conjunction	10897 May 23 08:01	9° II 08'55	-0°16'01
direct	10892 Jan 28 21:36	25° 8 39'51		minimum elong	10897 May 23 08:01	9° II 08'54	0°16'34
evening set	10892 Apr 26 17:53	27° 8 34'37		max. Earth dist.	10897 May 23 01:24	9° II 08'18	31.12950 AU
				morning rise	10897 Jun 07 18:21	9° II 43'38	
conjunction	10892 May 12 05:12	28° 8 09'20	-0°06'21	retrograde	10897 Sep 04 02:56	11° II 38'29	
minimum elong	10892 May 12 05:12	28° 8 09'20	0°06'50	opposition	10897 Nov 22 14:28	10° II 15'20	-0°18'08
behind sun begin	10892 May 11 23:12	28° 8 08'48		min. Earth dist.	10897 Nov 22 19:51	10° II 14'58	29.12295 AU
behind sun end	10892 May 12 11:11	28° 8 09'52		direct	10898 Feb 10 19:19	8° II 51'25	
max. Earth dist.	10892 May 11 20:42	28° 8 08'33	31.18967 AU	evening set	10898 May 10 07:29	10° II 46'01	
morning rise	10892 May 27 15:43	28° 8 44'00					
	10892 Jul 06 05:02	0° II		conjunction	10898 May 25 18:06	11° II 20'45	-0°17'54
retrograde	10892 Aug 23 16:10	0° II 38'20		minimum elong	10898 May 25 18:07	11° II 20'45	0°18'27
	10892 Oct 13 05:54	30° 8		max. Earth dist.	10898 May 25 13:27	11° II 20'20	31.11646 AU
opposition	10892 Nov 10 23:23	29° 8 15'35	-0°07'49	morning rise	10898 Jun 10 04:14	11° II 55'29	
min. Earth dist.	10892 Nov 11 06:29	29° 8 15'06	29.18494 AU	retrograde	10898 Sep 06 13:48	13° II 50'26	
direct	10893 Jan 30 08:26	27° 8 51'44		opposition	10898 Nov 25 03:10	12° II 27'13	-0°20'08
evening set	10893 Apr 29 04:13	29° 8 46'29		min. Earth dist.	10898 Nov 25 07:45	12° II 26'55	29.11034 AU
	10893 May 05 05:59	0° II		direct	10899 Feb 13 08:55	11° II 03'18	
				evening set	10899 May 12 17:46	12° II 57'54	
conjunction	10893 May 14 15:26	0° II 21'12	-0°08'19				
minimum elong	10893 May 14 15:26	0° II 21'12	0°08'49	conjunction	10899 May 28 04:07	13° II 32'38	-0°19'45
behind sun begin	10893 May 14 09:52	0° II 20'42		minimum elong	10899 May 28 04:07	13° II 32'38	0°20'19
behind sun end	10893 May 14 20:59	0° II 21'42		max. Earth dist.	10899 May 27 23:22	13° II 32'12	31.10450 AU
max. Earth dist.	10893 May 14 07:34	0° II 20'29	31.17979 AU	morning rise	10899 Jun 12 14:23	14° II 07'23	

retrograde	10899 Sep 09 02:11	16°II02'28		minimum elong	10906 Jun 13 04:11	29°II00'57	0°32'25
opposition	10899 Nov 27 15:51	14°II39'12 -0°22'06		max. Earth dist.	10906 Jun 13 04:00	29°II00'56	31.03811 AU
min. Earth dist.	10899 Nov 27 19:01	14°II38'59 29.09907 AU		morning rise	10906 Jun 28 14:45	29°II35'50	
direct	10900 Feb 15 19:52	13°II15'17			10906 Jul 09 18:32	0°☾	
evening set	10900 May 15 03:47	15°II09'53		retrograde	10906 Sep 25 15:01	1°☾31'55	
				opposition	10906 Dec 14 10:14	0°☾08'27 -0°34'52	
conjunction	10900 May 30 14:13	15°II44'38 -0°21'34		min. Earth dist.	10906 Dec 14 09:26	0°☾08'30 29.03271 AU	
minimum elong	10900 May 30 14:13	15°II44'38 0°22'08			10906 Dec 19 14:24	30°RII	
max. Earth dist.	10900 May 30 11:13	15°II44'21 31.09373 AU		direct	10907 Mar 04 03:04	28°II44'48	
morning rise	10900 Jun 15 00:22	16°II19'24			10907 May 12 12:51	0°☾	
retrograde	10900 Sep 11 11:48	18°II14'37		evening set	10907 May 31 04:47	0°☾39'25	
opposition	10900 Nov 30 04:37	16°II51'19 -0°24'02					
min. Earth dist.	10900 Nov 30 07:37	16°II51'07 29.08883 AU		conjunction	10907 Jun 15 14:57	1°☾14'15 -0°33'22	
direct	10901 Feb 18 08:00	15°II27'27		minimum elong	10907 Jun 15 14:57	1°☾14'15 0°33'59	
evening set	10901 May 17 14:04	17°II22'02		max. Earth dist.	10907 Jun 15 16:14	1°☾14'22 31.02675 AU	
				morning rise	10907 Jul 01 01:26	1°☾49'09	
conjunction	10901 Jun 02 00:20	17°II56'48 -0°23'22		retrograde	10907 Sep 28 03:01	3°☾45'20	
minimum elong	10901 Jun 02 00:19	17°II56'48 0°23'57		opposition	10907 Dec 16 23:23	2°☾21'47 -0°36'31	
max. Earth dist.	10901 Jun 01 21:31	17°II56'33 31.08408 AU		min. Earth dist.	10907 Dec 16 22:15	2°☾21'52 29.02078 AU	
morning rise	10901 Jun 17 10:36	18°II31'36		direct	10908 Mar 05 16:42	0°☾58'07	
retrograde	10901 Sep 14 00:25	20°II26'57		evening set	10908 Jun 01 15:25	2°☾52'42	
opposition	10901 Dec 02 17:12	19°II03'38 -0°25'56					
min. Earth dist.	10901 Dec 02 18:28	19°II03'33 29.07955 AU		conjunction	10908 Jun 17 01:28	3°☾27'32 -0°34'53	
direct	10902 Feb 20 18:51	17°II39'49		minimum elong	10908 Jun 17 01:28	3°☾27'32 0°35'29	
evening set	10902 May 20 00:21	19°II34'25		max. Earth dist.	10908 Jun 17 02:14	3°☾27'37 31.01446 AU	
				morning rise	10908 Jul 02 12:16	4°☾02'28	
conjunction	10902 Jun 04 10:35	20°II09'12 -0°25'08		retrograde	10908 Sep 29 16:05	5°☾58'44	
minimum elong	10902 Jun 04 10:34	20°II09'12 0°25'42		opposition	10908 Dec 18 12:30	4°☾35'05 -0°38'06	
max. Earth dist.	10902 Jun 04 08:49	20°II09'02 31.07504 AU		min. Earth dist.	10908 Dec 18 10:29	4°☾35'13 29.00818 AU	
morning rise	10902 Jun 19 20:49	20°II44'01		direct	10909 Mar 08 04:17	3°☾11'22	
retrograde	10902 Sep 16 11:19	22°II39'31		evening set	10909 Jun 04 01:57	5°☾05'54	
opposition	10902 Dec 05 06:11	21°II16'11 -0°27'49					
min. Earth dist.	10902 Dec 05 07:48	21°II16'05 29.07078 AU		conjunction	10909 Jun 19 12:09	5°☾40'46 -0°36'21	
direct	10903 Feb 23 05:17	19°II52'25		minimum elong	10909 Jun 19 12:09	5°☾40'46 0°36'57	
evening set	10903 May 22 10:34	21°II47'02		max. Earth dist.	10909 Jun 19 14:18	5°☾40'58 31.00159 AU	
				morning rise	10909 Jul 04 22:55	6°☾15'42	
conjunction	10903 Jun 06 20:46	22°II21'49 -0°26'52		retrograde	10909 Oct 02 02:52	8°☾12'02	
minimum elong	10903 Jun 06 20:46	22°II21'49 0°27'27		opposition	10909 Dec 21 01:35	6°☾48'18 -0°39'38	
max. Earth dist.	10903 Jun 06 19:56	22°II21'44 31.06646 AU		min. Earth dist.	10909 Dec 20 23:36	6°☾48'26 28.99534 AU	
morning rise	10903 Jun 22 07:03	22°II56'39		direct	10910 Mar 10 17:58	5°☾24'33	
retrograde	10903 Sep 18 23:34	24°II52'19		evening set	10910 Jun 06 12:33	7°☾19'02	
opposition	10903 Dec 07 19:04	23°II28'58 -0°29'39					
min. Earth dist.	10903 Dec 07 19:05	23°II28'58 29.06215 AU		conjunction	10910 Jun 21 22:42	7°☾53'54 -0°37'45	
direct	10904 Feb 25 17:11	22°II05'15		minimum elong	10910 Jun 21 22:42	7°☾53'54 0°38'21	
evening set	10904 May 23 21:05	23°II59'52		max. Earth dist.	10910 Jun 22 01:06	7°☾54'08 30.98908 AU	
				morning rise	10910 Jul 07 09:42	8°☾28'51	
conjunction	10904 Jun 08 07:09	24°II34'41 -0°28'33		retrograde	10910 Oct 04 16:17	10°☾25'17	
minimum elong	10904 Jun 08 07:09	24°II34'41 0°29'08		opposition	10910 Dec 23 14:41	9°☾01'27 -0°41'07	
max. Earth dist.	10904 Jun 08 06:23	24°II34'36 31.05766 AU		min. Earth dist.	10910 Dec 23 10:54	9°☾01'42 28.98323 AU	
morning rise	10904 Jun 23 17:34	25°II09'32		direct	10911 Mar 13 06:21	7°☾37'41	
retrograde	10904 Sep 20 12:30	27°II05'21		evening set	10911 Jun 08 23:02	9°☾32'07	
opposition	10904 Dec 09 08:00	25°II41'58 -0°31'26					
min. Earth dist.	10904 Dec 09 08:24	25°II41'57 29.05324 AU		conjunction	10911 Jun 24 09:15	10°☾07'00 -0°39'06	
direct	10905 Feb 27 02:24	24°II18'17		minimum elong	10911 Jun 24 09:14	10°☾07'00 0°39'43	
evening set	10905 May 26 07:33	26°II12'55		max. Earth dist.	10911 Jun 24 12:46	10°☾07'20 30.97737 AU	
				morning rise	10911 Jul 09 20:21	10°☾41'58	
conjunction	10905 Jun 10 17:44	26°II47'44 -0°30'12		retrograde	10911 Oct 07 02:43	12°☾38'30	
minimum elong	10905 Jun 10 17:44	26°II47'44 0°30'49		opposition	10911 Dec 26 03:56	11°☾14'35 -0°42'32	
max. Earth dist.	10905 Jun 10 18:08	26°II47'47 31.04840 AU		min. Earth dist.	10911 Dec 26 00:18	11°☾14'50 28.97218 AU	
morning rise	10905 Jun 26 04:05	27°II22'36		direct	10912 Mar 14 17:41	9°☾50'49	
retrograde	10905 Sep 23 00:35	29°II18'34		evening set	10912 Jun 10 09:38	11°☾45'13	
opposition	10905 Dec 11 21:01	27°II55'09 -0°33'11					
min. Earth dist.	10905 Dec 11 20:20	27°II55'12 29.04346 AU		conjunction	10912 Jun 25 19:58	12°☾20'07 -0°40'24	
direct	10906 Mar 01 15:20	26°II31'30		minimum elong	10912 Jun 25 19:58	12°☾20'07 0°40'59	
evening set	10906 May 28 18:13	28°II26'08		max. Earth dist.	10912 Jun 26 00:35	12°☾20'33 30.96699 AU	
				morning rise	10912 Jul 11 07:11	12°☾55'07	
conjunction	10906 Jun 13 04:12	29°II00'57 -0°31'49		retrograde	10912 Oct 08 14:34	14°☾51'44	

opposition	10912 Dec 27 16:49	13°☾27'47	-0°43'53	max. Earth dist.	10919 Jul 12 09:16	27°☾57'47	30.91111 AU
min. Earth dist.	10912 Dec 27 11:22	13°☾28'10	28.96239 AU	morning rise	10919 Jul 27 13:40	28°☾32'11	
direct	10913 Mar 17 05:35	12°☾04'01			10919 Sep 12 15:50	0°♈	
evening set	10913 Jun 12 20:21	13°☾58'25		retrograde	10919 Oct 25 13:20	0°♈29'43	
					10919 Dec 08 15:29	30°♈☾	
conjunction	10913 Jun 28 06:40	14°☾33'20	-0°41'38	opposition	10920 Jan 13 13:56	29°☾05'35	-0°51'26
minimum elong	10913 Jun 28 06:40	14°☾33'20	0°42'14	min. Earth dist.	10920 Jan 13 04:44	29°☾06'13	28.90647 AU
max. Earth dist.	10913 Jun 28 11:33	14°☾33'48	30.95774 AU	direct	10920 Apr 01 16:39	27°☾42'03	
morning rise	10913 Jul 13 18:09	15°☾08'21		evening set	10920 Jun 28 01:12	29°☾36'31	
retrograde	10913 Oct 11 03:14	17°☾05'07			10920 Jul 08 10:58	0°♈	
opposition	10913 Dec 30 06:03	15°☾41'07	-0°45'11				
min. Earth dist.	10913 Dec 30 00:40	15°☾41'29	28.95378 AU	conjunction	10920 Jul 13 12:28	0°♈11'34	-0°48'27
direct	10914 Mar 19 15:03	14°☾17'23		minimum elong	10920 Jul 13 12:28	0°♈11'34	0°48'59
evening set	10914 Jun 15 06:54	16°☾11'47		max. Earth dist.	10920 Jul 13 21:09	0°♈12'23	30.90102 AU
				morning rise	10920 Jul 29 01:22	0°♈46'47	
conjunction	10914 Jun 30 17:26	16°☾46'42	-0°42'48	retrograde	10920 Oct 27 00:14	2°♈44'23	
minimum elong	10914 Jun 30 17:26	16°☾46'42	0°43'24	opposition	10921 Jan 15 03:14	1°♈20'12	-0°52'12
max. Earth dist.	10914 Jun 30 23:57	16°☾47'19	30.94963 AU	min. Earth dist.	10921 Jan 14 18:51	1°♈20'46	28.89595 AU
morning rise	10914 Jul 16 04:57	17°☾21'45			10921 Mar 20 22:59	30°♈☾	
retrograde	10914 Oct 13 15:41	19°☾18'39		direct	10921 Apr 04 04:37	29°☾56'38	
opposition	10915 Jan 01 19:15	17°☾54'38	-0°46'24		10921 Apr 18 04:37	0°♈	
min. Earth dist.	10915 Jan 01 12:22	17°☾55'06	28.94601 AU	evening set	10921 Jun 30 12:26	1°♈51'04	
direct	10915 Mar 22 03:47	16°☾30'56					
evening set	10915 Jun 17 17:46	18°☾25'22		conjunction	10921 Jul 15 23:57	2°♈26'08	-0°49'08
				minimum elong	10921 Jul 15 23:57	2°♈26'08	0°49'41
conjunction	10915 Jul 03 04:15	19°☾00'18	-0°43'55	max. Earth dist.	10921 Jul 16 09:16	2°♈27'01	30.89027 AU
minimum elong	10915 Jul 03 04:15	19°☾00'18	0°44'31	morning rise	10921 Jul 31 13:05	3°♈01'22	
max. Earth dist.	10915 Jul 03 10:30	19°☾00'53	30.94222 AU	retrograde	10921 Oct 29 12:37	4°♈59'02	
morning rise	10915 Jul 18 16:07	19°☾35'22		opposition	10922 Jan 17 16:29	3°♈34'46	-0°52'54
retrograde	10915 Oct 16 06:22	21°☾32'24		min. Earth dist.	10922 Jan 17 06:41	3°♈35'26	28.88498 AU
opposition	10916 Jan 04 08:30	20°☾08'22	-0°47'33	direct	10922 Apr 06 17:25	2°♈11'10	
min. Earth dist.	10916 Jan 04 01:21	20°☾08'52	28.93893 AU	evening set	10922 Jul 02 23:34	4°♈05'33	
direct	10916 Mar 23 14:16	18°☾44'43					
evening set	10916 Jun 19 04:33	20°☾39'10		conjunction	10922 Jul 18 11:10	4°♈40'38	-0°49'45
				minimum elong	10922 Jul 18 11:10	4°♈40'38	0°50'16
conjunction	10916 Jul 04 15:20	21°☾14'08	-0°44'58	max. Earth dist.	10922 Jul 18 20:32	4°♈41'32	30.87929 AU
minimum elong	10916 Jul 04 15:20	21°☾14'08	0°45'32	morning rise	10922 Aug 03 00:39	5°♈15'54	
max. Earth dist.	10916 Jul 04 23:17	21°☾14'53	30.93517 AU	retrograde	10922 Nov 01 01:07	7°♈13'39	
morning rise	10916 Jul 20 03:15	21°☾49'14		opposition	10923 Jan 20 05:53	5°♈49'17	-0°53'32
retrograde	10916 Oct 17 19:01	23°☾46'24		min. Earth dist.	10923 Jan 19 20:24	5°♈49'56	28.87433 AU
opposition	10917 Jan 05 21:47	22°☾22'22	-0°48'38	direct	10923 Apr 09 03:33	4°♈25'39	
min. Earth dist.	10917 Jan 05 14:11	22°☾22'53	28.93178 AU	evening set	10923 Jul 05 10:43	6°♈20'00	
direct	10917 Mar 26 02:58	20°☾58'46					
evening set	10917 Jun 21 15:39	22°☾53'14		conjunction	10923 Jul 20 22:40	6°♈55'06	-0°50'18
				minimum elong	10923 Jul 20 22:40	6°♈55'06	0°50'49
conjunction	10917 Jul 07 02:22	23°☾28'13	-0°45'56	max. Earth dist.	10923 Jul 21 09:32	6°♈56'08	30.86900 AU
minimum elong	10917 Jul 07 02:22	23°☾28'13	0°46'31	morning rise	10923 Aug 05 12:19	7°♈30'23	
max. Earth dist.	10917 Jul 07 09:48	23°☾28'55	30.92791 AU	retrograde	10923 Nov 03 12:53	9°♈28'11	
morning rise	10917 Jul 22 14:37	24°☾03'20		opposition	10924 Jan 22 18:59	8°♈03'45	-0°54'04
retrograde	10917 Oct 20 09:35	26°☾00'39		min. Earth dist.	10924 Jan 22 08:04	8°♈04'30	28.86450 AU
opposition	10918 Jan 08 11:04	24°☾36'36	-0°49'38	direct	10924 Apr 10 16:47	6°♈40'05	
min. Earth dist.	10918 Jan 08 02:46	24°☾37'10	28.92432 AU	evening set	10924 Jul 06 22:01	8°♈34'25	
direct	10918 Mar 28 14:08	23°☾13'02					
evening set	10918 Jun 24 02:45	25°☾07'31		conjunction	10924 Jul 22 10:02	9°♈09'32	-0°50'46
				minimum elong	10924 Jul 22 10:02	9°♈09'32	0°51'16
conjunction	10918 Jul 09 13:43	25°☾42'31	-0°46'51	max. Earth dist.	10924 Jul 22 20:33	9°♈10'31	30.85974 AU
minimum elong	10918 Jul 09 13:43	25°☾42'31	0°47'24	morning rise	10924 Aug 07 00:08	9°♈44'50	
max. Earth dist.	10918 Jul 09 22:17	25°☾43'20	30.91997 AU	retrograde	10924 Nov 05 02:28	11°♈42'43	
morning rise	10918 Jul 25 02:03	26°☾17'41		opposition	10925 Jan 24 08:12	10°♈18'13	-0°54'32
retrograde	10918 Oct 22 22:25	28°☾15'06		min. Earth dist.	10925 Jan 23 21:01	10°♈18'59	28.85594 AU
opposition	10919 Jan 11 00:34	26°☾51'02	-0°50'34	direct	10925 Apr 13 02:51	8°♈54'32	
min. Earth dist.	10919 Jan 10 16:33	26°☾51'35	28.91592 AU	evening set	10925 Jul 09 09:09	10°♈48'51	
direct	10919 Mar 31 03:49	25°☾27'30					
evening set	10919 Jun 26 13:55	27°☾21'58		conjunction	10925 Jul 24 21:33	11°♈23'59	-0°51'09
				minimum elong	10925 Jul 24 21:33	11°♈23'59	0°51'39
conjunction	10919 Jul 12 01:00	27°☾57'00	-0°47'41	max. Earth dist.	10925 Jul 25 09:54	11°♈25'09	30.85175 AU
minimum elong	10919 Jul 12 01:00	27°☾57'00	0°48'15	morning rise	10925 Aug 09 11:45	11°♈59'18	

retrograde	10925 Nov 07 14:33	13°♏57'16	evening set	10932 Jul 24 18:19	26°♏32'44	
opposition	10926 Jan 26 21:22	12°♏32'43 -0°54'54				
min. Earth dist.	10926 Jan 26 09:23	12°♏33'32 28.84857 AU	conjunction	10932 Aug 09 08:41	27°♏08'02 -0°51'41	
direct	10926 Apr 15 14:52	11°♏09'02	minimum elong	10932 Aug 09 08:41	27°♏08'02 0°52'03	
evening set	10926 Jul 11 20:32	13°♏03'20	max. Earth dist.	10932 Aug 09 23:39	27°♏09'27 30.81594 AU	
			morning rise	10932 Aug 25 01:13	27°♏43'33	
conjunction	10926 Jul 27 09:02	13°♏38'29 -0°51'28	retrograde	10932 Nov 23 13:47	29°♏41'59	
minimum elong	10926 Jul 27 09:02	13°♏38'29 0°51'56	opposition	10933 Feb 11 17:45	28°♏17'14 -0°55'10	
max. Earth dist.	10926 Jul 27 21:07	13°♏39'38 30.84513 AU	min. Earth dist.	10933 Feb 11 03:16	28°♏18'15 28.81304 AU	
morning rise	10926 Aug 11 23:42	14°♏13'50	direct	10933 May 01 05:16	26°♏53'37	
	10926 Sep 02 23:45	15°♏	evening set	10933 Jul 27 06:14	28°♏47'52	
retrograde	10926 Nov 10 05:27	16°♏11'53				
	10927 Jan 21 17:37	15°♏♏	conjunction	10933 Aug 11 20:44	29°♏23'11 -0°51'26	
opposition	10927 Jan 29 10:34	14°♏47'17 -0°55'12	minimum elong	10933 Aug 11 20:44	29°♏23'11 0°51'48	
min. Earth dist.	10927 Jan 28 21:41	14°♏48'11 28.84263 AU	max. Earth dist.	10933 Aug 12 10:48	29°♏24'31 30.80934 AU	
direct	10927 Apr 18 02:02	13°♏23'37	morning rise	10933 Aug 27 13:47	29°♏58'43	
	10927 Jul 06 02:58	15°♏		10933 Aug 28 03:36	0°♏	
evening set	10927 Jul 14 07:46	15°♏17'55	retrograde	10933 Nov 26 02:52	1°♏57'11	
			opposition	10934 Feb 14 06:57	0°♏32'22 -0°54'52	
conjunction	10927 Jul 29 20:40	15°♏53'05 -0°51'42	min. Earth dist.	10934 Feb 13 16:47	0°♏33'21 28.80629 AU	
minimum elong	10927 Jul 29 20:40	15°♏53'05 0°52'10		10934 Mar 06 05:31	30°♏♏	
max. Earth dist.	10927 Jul 30 10:14	15°♏54'23 30.83965 AU	direct	10934 May 03 15:42	29°♏08'43	
morning rise	10927 Aug 14 11:33	16°♏28'28		10934 Jun 28 11:29	0°♏	
retrograde	10927 Nov 12 18:51	18°♏26'35	evening set	10934 Jul 29 18:01	1°♏02'56	
opposition	10928 Jan 31 23:49	17°♏01'58 -0°55'24				
min. Earth dist.	10928 Jan 31 10:57	17°♏02'52 28.83759 AU	conjunction	10934 Aug 14 09:01	1°♏38'15 -0°51'07	
direct	10928 Apr 19 15:22	15°♏38'20	minimum elong	10934 Aug 14 09:01	1°♏38'15 0°51'27	
evening set	10928 Jul 15 19:18	17°♏32'37	max. Earth dist.	10934 Aug 15 00:30	1°♏39'43 30.80254 AU	
			morning rise	10934 Aug 30 02:16	2°♏13'49	
conjunction	10928 Jul 31 08:24	18°♏07'49 -0°51'51	retrograde	10934 Nov 28 14:53	4°♏12'18	
minimum elong	10928 Jul 31 08:24	18°♏07'49 0°52'17	opposition	10935 Feb 16 19:57	2°♏47'25 -0°54'29	
max. Earth dist.	10928 Jul 31 21:53	18°♏09'06 30.83508 AU	min. Earth dist.	10935 Feb 16 05:20	2°♏48'26 28.79959 AU	
morning rise	10928 Aug 15 23:41	18°♏43'14	direct	10935 May 06 03:54	1°♏23'43	
retrograde	10928 Nov 14 09:40	20°♏41'25	evening set	10935 Aug 01 05:53	3°♏17'54	
opposition	10929 Feb 02 12:49	19°♏16'48 -0°55'31				
min. Earth dist.	10929 Feb 01 22:43	19°♏17'46 28.83327 AU	conjunction	10935 Aug 16 21:06	3°♏53'15 -0°50'44	
direct	10929 Apr 22 03:34	17°♏53'10	minimum elong	10935 Aug 16 21:06	3°♏53'15 0°51'03	
evening set	10929 Jul 18 06:56	19°♏47'29	max. Earth dist.	10935 Aug 17 12:00	3°♏54'39 30.79620 AU	
			morning rise	10935 Sep 01 14:55	4°♏28'50	
conjunction	10929 Aug 02 20:17	20°♏22'42 -0°51'56	retrograde	10935 Dec 01 05:09	6°♏27'20	
minimum elong	10929 Aug 02 20:17	20°♏22'42 0°52'22	opposition	10936 Feb 19 08:54	5°♏02'23 -0°54'01	
max. Earth dist.	10929 Aug 03 10:23	20°♏24'02 30.83083 AU	min. Earth dist.	10936 Feb 18 17:47	5°♏03'26 28.79371 AU	
morning rise	10929 Aug 18 11:52	20°♏58'08	direct	10936 May 07 15:12	3°♏38'39	
retrograde	10929 Nov 16 22:18	22°♏56'24	evening set	10936 Aug 02 17:45	5°♏32'49	
opposition	10930 Feb 05 02:09	21°♏31'46 -0°55'34				
min. Earth dist.	10930 Feb 04 12:46	21°♏32'41 28.82909 AU	conjunction	10936 Aug 18 09:24	6°♏08'11 -0°50'16	
direct	10930 Apr 24 15:36	20°♏08'10	minimum elong	10936 Aug 18 09:24	6°♏08'11 0°50'32	
evening set	10930 Jul 20 18:31	22°♏02'28	max. Earth dist.	10936 Aug 19 01:35	6°♏09'43 30.79074 AU	
			morning rise	10936 Sep 03 03:25	6°♏43'47	
conjunction	10930 Aug 05 08:13	22°♏37'43 -0°51'56	retrograde	10936 Dec 02 17:51	8°♏42'18	
minimum elong	10930 Aug 05 08:13	22°♏37'43 0°52'20	opposition	10937 Feb 20 21:41	7°♏17'19 -0°53'29	
max. Earth dist.	10930 Aug 05 22:50	22°♏39'06 30.82661 AU	min. Earth dist.	10937 Feb 20 06:39	7°♏18'21 28.78890 AU	
morning rise	10930 Aug 21 00:05	23°♏13'11	direct	10937 May 10 04:04	5°♏53'34	
retrograde	10930 Nov 19 12:37	25°♏11'31	evening set	10937 Aug 05 05:40	7°♏47'43	
opposition	10931 Feb 07 15:23	23°♏46'52 -0°55'31				
min. Earth dist.	10931 Feb 07 00:50	23°♏47'52 28.82459 AU	conjunction	10937 Aug 20 21:35	8°♏23'06 -0°49'43	
direct	10931 Apr 27 04:56	22°♏23'17	minimum elong	10937 Aug 20 21:35	8°♏23'06 0°50'00	
evening set	10931 Jul 23 06:28	24°♏17'35	max. Earth dist.	10937 Aug 21 13:38	8°♏24'37 30.78675 AU	
			morning rise	10937 Sep 05 16:03	8°♏58'44	
conjunction	10931 Aug 07 20:21	24°♏52'51 -0°51'50	retrograde	10937 Dec 05 08:24	10°♏57'16	
minimum elong	10931 Aug 07 20:21	24°♏52'51 0°52'15	opposition	10938 Feb 23 10:28	9°♏32'15 -0°52'51	
max. Earth dist.	10931 Aug 08 10:32	24°♏54'12 30.82167 AU	min. Earth dist.	10938 Feb 22 18:06	9°♏33'23 28.78569 AU	
morning rise	10931 Aug 23 12:40	25°♏28'21	direct	10938 May 12 15:50	8°♏08'29	
retrograde	10931 Nov 22 01:46	27°♏26'45	evening set	10938 Aug 07 17:31	10°♏02'38	
opposition	10932 Feb 10 04:37	26°♏02'03 -0°55'23				
min. Earth dist.	10932 Feb 09 15:01	26°♏02'59 28.81931 AU	conjunction	10938 Aug 23 09:48	10°♏38'03 -0°49'06	
direct	10932 Apr 28 15:54	24°♏38'27	minimum elong	10938 Aug 23 09:48	10°♏38'03 0°49'20	

max. Earth dist.	10938 Aug 24 02:38	10° <u>10</u> 39'39	30.78424 AU	conjunction	10945 Sep 08 02:34	26° <u>10</u> 25'52	-0°42'41
morning rise	10938 Sep 08 04:37	11° <u>10</u> 13'43		minimum elong	10945 Sep 08 02:35	26° <u>10</u> 25'52	0°42'47
retrograde	10938 Dec 07 21:30	13° <u>10</u> 12'17		max. Earth dist.	10945 Sep 08 20:22	26° <u>10</u> 27'32	30.79003 AU
opposition	10939 Feb 25 23:23	11° <u>10</u> 47'15	-0°52'09	morning rise	10945 Sep 24 00:00	27° <u>10</u> 01'41	
min. Earth dist.	10939 Feb 25 07:31	11° <u>10</u> 48'21	28.78398 AU	retrograde	10945 Dec 23 17:36	29° <u>10</u> 00'19	
direct	10939 May 15 04:04	10° <u>10</u> 23'30		opposition	10946 Mar 13 16:21	27° <u>10</u> 35'20	-0°45'00
evening set	10939 Aug 10 05:30	12° <u>10</u> 17'39		min. Earth dist.	10946 Mar 13 00:18	27° <u>10</u> 36'27	28.79019 AU
				direct	10946 May 30 15:22	26° <u>10</u> 11'40	
conjunction	10939 Aug 25 22:13	12° <u>10</u> 53'05	-0°48'24	evening set	10946 Aug 25 20:05	28° <u>10</u> 05'46	
minimum elong	10939 Aug 25 22:13	12° <u>10</u> 53'05	0°48'39				
max. Earth dist.	10939 Aug 26 15:38	12° <u>10</u> 54'44	30.78338 AU	conjunction	10946 Sep 10 15:24	28° <u>10</u> 41'21	-0°41'30
morning rise	10939 Sep 10 17:25	13° <u>10</u> 28'46		minimum elong	10946 Sep 10 15:24	28° <u>10</u> 41'21	0°41'33
retrograde	10939 Dec 10 12:43	15° <u>10</u> 27'21		max. Earth dist.	10946 Sep 11 08:23	28° <u>10</u> 42'58	30.78974 AU
opposition	10940 Feb 28 11:55	14° <u>10</u> 02'20	-0°51'21	morning rise	10946 Sep 26 13:20	29° <u>10</u> 17'12	
min. Earth dist.	10940 Feb 27 18:45	14° <u>10</u> 03'32	28.78378 AU		10946 Oct 16 22:17	0° <u>10</u>	
direct	10940 May 16 17:29	12° <u>10</u> 38'37		retrograde	10946 Dec 26 07:55	1° <u>10</u> 15'46	
evening set	10940 Aug 11 17:40	14° <u>10</u> 32'46			10947 Mar 10 16:04	30° <u>10</u>	
				opposition	10947 Mar 16 04:53	29° <u>10</u> 50'44	-0°43'42
conjunction	10940 Aug 27 10:39	15° <u>10</u> 08'14	-0°47'38	min. Earth dist.	10947 Mar 15 12:12	29° <u>10</u> 51'54	28.78978 AU
minimum elong	10940 Aug 27 10:39	15° <u>10</u> 08'14	0°47'50	direct	10947 Jun 02 02:56	28° <u>10</u> 27'01	
max. Earth dist.	10940 Aug 28 03:57	15° <u>10</u> 09'53	30.78377 AU		10947 Aug 18 14:35	0° <u>10</u>	
morning rise	10940 Sep 12 06:19	15° <u>10</u> 43'57		evening set	10947 Aug 28 08:40	0° <u>10</u> 21'05	
retrograde	10940 Dec 12 01:53	17° <u>10</u> 42'34					
min. Earth dist.	10941 Mar 01 08:20	16° <u>10</u> 18'43	28.78477 AU	conjunction	10947 Sep 13 04:24	0° <u>10</u> 56'42	-0°40'14
opposition	10941 Mar 02 00:46	16° <u>10</u> 17'34	-0°50'29	minimum elong	10947 Sep 13 04:24	0° <u>10</u> 56'42	0°40'18
direct	10941 May 19 04:38	14° <u>10</u> 53'53		max. Earth dist.	10947 Sep 13 21:39	0° <u>10</u> 58'19	30.78930 AU
evening set	10941 Aug 14 05:40	16° <u>10</u> 48'03		morning rise	10947 Sep 29 02:40	1° <u>10</u> 32'33	
				retrograde	10947 Dec 28 20:26	3° <u>10</u> 31'03	
conjunction	10941 Aug 29 23:09	17° <u>10</u> 23'32	-0°46'47	opposition	10948 Mar 17 17:15	2° <u>10</u> 05'59	-0°42'19
minimum elong	10941 Aug 29 23:09	17° <u>10</u> 23'32	0°46'59	min. Earth dist.	10948 Mar 17 01:34	2° <u>10</u> 07'04	28.78956 AU
max. Earth dist.	10941 Aug 30 17:30	17° <u>10</u> 25'17	30.78523 AU	direct	10948 Jun 03 15:40	0° <u>10</u> 42'12	
morning rise	10941 Sep 14 19:03	17° <u>10</u> 59'17		evening set	10948 Aug 29 21:13	2° <u>10</u> 36'14	
retrograde	10941 Dec 14 14:21	19° <u>10</u> 57'55					
opposition	10942 Mar 04 13:29	18° <u>10</u> 32'57	-0°49'33	conjunction	10948 Sep 14 17:21	3° <u>10</u> 11'51	-0°38'56
min. Earth dist.	10942 Mar 03 20:04	18° <u>10</u> 34'10	28.78646 AU	minimum elong	10948 Sep 14 17:22	3° <u>10</u> 11'52	0°38'57
direct	10942 May 21 17:33	17° <u>10</u> 09'19		max. Earth dist.	10948 Sep 15 10:43	3° <u>10</u> 13'30	30.78951 AU
evening set	10942 Aug 16 18:04	19° <u>10</u> 03'29		morning rise	10948 Sep 30 15:59	3° <u>10</u> 47'44	
				retrograde	10948 Dec 30 10:59	5° <u>10</u> 46'10	
conjunction	10942 Sep 01 11:45	19° <u>10</u> 39'00	-0°45'52	opposition	10949 Mar 20 05:32	4° <u>10</u> 21'03	-0°40'53
minimum elong	10942 Sep 01 11:46	19° <u>10</u> 39'00	0°46'01	min. Earth dist.	10949 Mar 19 12:47	4° <u>10</u> 22'13	28.79017 AU
max. Earth dist.	10942 Sep 02 05:11	19° <u>10</u> 40'39	30.78711 AU	direct	10949 Jun 06 05:22	2° <u>10</u> 57'14	
morning rise	10942 Sep 17 08:12	20° <u>10</u> 14'46		evening set	10949 Sep 01 09:41	4° <u>10</u> 51'14	
retrograde	10942 Dec 17 04:09	22° <u>10</u> 13'26					
min. Earth dist.	10943 Mar 06 09:27	20° <u>10</u> 49'39	28.78843 AU	conjunction	10949 Sep 17 06:06	5° <u>10</u> 26'53	-0°37'34
opposition	10943 Mar 07 02:15	20° <u>10</u> 48'29	-0°48'31	minimum elong	10949 Sep 17 06:06	5° <u>10</u> 26'53	0°37'34
direct	10943 May 24 03:44	19° <u>10</u> 24'52		max. Earth dist.	10949 Sep 17 23:16	5° <u>10</u> 28'30	30.79059 AU
evening set	10943 Aug 19 06:27	21° <u>10</u> 19'03		morning rise	10949 Oct 03 05:08	6° <u>10</u> 02'46	
				retrograde	10950 Jan 01 23:39	8° <u>10</u> 01'09	
conjunction	10943 Sep 04 00:41	21° <u>10</u> 54'36	-0°44'52	opposition	10950 Mar 22 17:56	6° <u>10</u> 36'00	-0°39'23
minimum elong	10943 Sep 04 00:42	21° <u>10</u> 54'36	0°45'01	min. Earth dist.	10950 Mar 22 02:03	6° <u>10</u> 37'07	28.79196 AU
max. Earth dist.	10943 Sep 04 19:05	21° <u>10</u> 56'20	30.78886 AU	direct	10950 Jun 08 16:58	5° <u>10</u> 12'10	
morning rise	10943 Sep 19 21:21	22° <u>10</u> 30'23		evening set	10950 Sep 03 22:11	7° <u>10</u> 06'09	
retrograde	10943 Dec 19 16:30	24° <u>10</u> 29'04					
opposition	10944 Mar 08 14:58	23° <u>10</u> 04'07	-0°47'25	conjunction	10950 Sep 19 19:07	7° <u>10</u> 41'48	-0°36'08
min. Earth dist.	10944 Mar 07 22:08	23° <u>10</u> 05'18	28.78980 AU	minimum elong	10950 Sep 19 19:08	7° <u>10</u> 41'48	0°36'06
direct	10944 May 25 16:00	21° <u>10</u> 40'31		max. Earth dist.	10950 Sep 20 13:09	7° <u>10</u> 43'30	30.79310 AU
evening set	10944 Aug 20 19:05	23° <u>10</u> 34'41		morning rise	10950 Oct 05 18:25	8° <u>10</u> 17'42	
				retrograde	10951 Jan 04 12:53	10° <u>10</u> 16'01	
conjunction	10944 Sep 05 13:33	24° <u>10</u> 10'14	-0°43'49	opposition	10951 Mar 25 06:00	8° <u>10</u> 50'53	-0°37'50
minimum elong	10944 Sep 05 13:33	24° <u>10</u> 10'14	0°43'55	min. Earth dist.	10951 Mar 24 13:10	8° <u>10</u> 52'04	28.79511 AU
max. Earth dist.	10944 Sep 06 06:38	24° <u>10</u> 11'51	30.78987 AU	direct	10951 Jun 11 06:15	7° <u>10</u> 27'03	
morning rise	10944 Sep 21 10:44	24° <u>10</u> 46'04		evening set	10951 Sep 06 10:51	9° <u>10</u> 21'01	
retrograde	10944 Dec 21 05:47	26° <u>10</u> 44'43					
min. Earth dist.	10945 Mar 10 10:58	25° <u>10</u> 20'56	28.79041 AU	conjunction	10951 Sep 22 08:02	9° <u>10</u> 56'41	-0°34'39
opposition	10945 Mar 11 03:38	25° <u>10</u> 19'46	-0°46'15	minimum elong	10951 Sep 22 08:02	9° <u>10</u> 56'41	0°34'37
direct	10945 May 28 03:13	23° <u>10</u> 56'08		max. Earth dist.	10951 Sep 23 01:10	9° <u>10</u> 58'18	30.79698 AU
evening set	10945 Aug 23 07:37	25° <u>10</u> 50'17		morning rise	10951 Oct 08 07:51	10° <u>10</u> 32'37	

retrograde	10952 Jan 07 02:48	12° <u>♂</u> 30'53		minimum elong	10958 Oct 08 04:57	25° <u>♂</u> 43'10	0°22'42
opposition	10952 Mar 26 18:13	11° <u>♂</u> 05'46	-0°36'13	max. Earth dist.	10958 Oct 08 20:13	25° <u>♂</u> 44'35	30.84016 AU
min. Earth dist.	10952 Mar 26 01:51	11° <u>♂</u> 06'55	28.79976 AU	morning rise	10958 Oct 24 06:57	26° <u>♂</u> 19'11	
direct	10952 Jun 12 17:06	9° <u>♂</u> 41'56		retrograde	10959 Jan 22 20:50	28° <u>♂</u> 17'07	
evening set	10952 Sep 07 23:23	11° <u>♂</u> 35'54		opposition	10959 Apr 12 06:21	26° <u>♂</u> 52'17	-0°23'28
				min. Earth dist.	10959 Apr 11 16:45	26° <u>♂</u> 53'14	28.84247 AU
conjunction	10952 Sep 23 21:06	12° <u>♂</u> 11'36	-0°33'07	direct	10959 Jun 29 03:07	25° <u>♂</u> 28'30	
minimum elong	10952 Sep 23 21:06	12° <u>♂</u> 11'36	0°33'02	evening set	10959 Sep 24 18:13	27° <u>♂</u> 22'34	
max. Earth dist.	10952 Sep 24 15:23	12° <u>♂</u> 13'19	30.80226 AU				
morning rise	10952 Oct 09 21:03	12° <u>♂</u> 47'32		conjunction	10959 Oct 10 18:28	27° <u>♂</u> 58'22	-0°21'05
retrograde	10953 Jan 08 14:32	14° <u>♂</u> 45'46		minimum elong	10959 Oct 10 18:28	27° <u>♂</u> 58'22	0°20'51
opposition	10953 Mar 29 06:15	13° <u>♂</u> 20'42	-0°34'32	max. Earth dist.	10959 Oct 11 09:51	27° <u>♂</u> 59'48	30.84438 AU
min. Earth dist.	10953 Mar 28 13:34	13° <u>♂</u> 21'52	28.80558 AU	morning rise	10959 Oct 26 20:39	28° <u>♂</u> 34'23	
direct	10953 Jun 15 05:30	11° <u>♂</u> 56'54			10959 Dec 11 18:17	0° <u>♂</u>	
evening set	10953 Sep 10 12:12	13° <u>♂</u> 50'53		retrograde	10960 Jan 25 10:35	0° <u>♂</u> 32'12	
					10960 Mar 11 00:39	30° <u>♂</u>	
conjunction	10953 Sep 26 10:07	14° <u>♂</u> 26'36	-0°31'32	opposition	10960 Apr 13 18:02	29° <u>♂</u> 07'22	-0°21'30
minimum elong	10953 Sep 26 10:07	14° <u>♂</u> 26'36	0°31'26	min. Earth dist.	10960 Apr 13 04:00	29° <u>♂</u> 08'21	28.84650 AU
max. Earth dist.	10953 Sep 27 03:21	14° <u>♂</u> 28'13	30.80876 AU	direct	10960 Jun 30 17:10	27° <u>♂</u> 43'32	
morning rise	10953 Oct 12 10:35	15° <u>♂</u> 02'33		evening set	10960 Sep 26 07:16	29° <u>♂</u> 37'35	
retrograde	10954 Jan 11 03:45	17° <u>♂</u> 00'46			10960 Oct 06 09:12	0° <u>♂</u>	
opposition	10954 Mar 31 18:22	15° <u>♂</u> 35'45	-0°32'48				
min. Earth dist.	10954 Mar 31 01:45	15° <u>♂</u> 36'55	28.81256 AU	conjunction	10960 Oct 12 07:40	0° <u>♂</u> 13'23	-0°19'13
direct	10954 Jun 17 15:56	14° <u>♂</u> 11'59		minimum elong	10960 Oct 12 07:39	0° <u>♂</u> 13'23	0°18'57
evening set	10954 Sep 13 00:53	16° <u>♂</u> 06'00		max. Earth dist.	10960 Oct 12 21:47	0° <u>♂</u> 14'42	30.84845 AU
				morning rise	10960 Oct 28 10:14	0° <u>♂</u> 49'25	
conjunction	10954 Sep 28 23:19	16° <u>♂</u> 41'44	-0°29'53	retrograde	10961 Jan 27 00:32	2° <u>♂</u> 47'07	
minimum elong	10954 Sep 28 23:19	16° <u>♂</u> 41'44	0°29'45	opposition	10961 Apr 16 05:44	1° <u>♂</u> 22'16	-0°19'29
max. Earth dist.	10954 Sep 29 17:26	16° <u>♂</u> 43'26	30.81596 AU	min. Earth dist.	10961 Apr 15 16:36	1° <u>♂</u> 23'11	28.85083 AU
morning rise	10954 Oct 14 24:00	17° <u>♂</u> 17'42			10961 Jun 23 11:12	30° <u>♂</u>	
retrograde	10955 Jan 13 15:27	19° <u>♂</u> 15'53		direct	10961 Jul 03 05:15	29° <u>♂</u> 58'23	
opposition	10955 Apr 03 06:28	17° <u>♂</u> 50'57	-0°31'02		10961 Jul 12 19:54	0° <u>♂</u>	
min. Earth dist.	10955 Apr 02 14:36	17° <u>♂</u> 52'04	28.81981 AU	evening set	10961 Sep 28 20:10	1° <u>♂</u> 52'24	
direct	10955 Jun 20 03:09	16° <u>♂</u> 27'13					
evening set	10955 Sep 15 13:58	18° <u>♂</u> 21'16		conjunction	10961 Oct 14 21:02	2° <u>♂</u> 28'13	-0°17'20
				minimum elong	10961 Oct 14 21:03	2° <u>♂</u> 28'13	0°17'03
conjunction	10955 Oct 01 12:40	18° <u>♂</u> 57'01	-0°28'12	max. Earth dist.	10961 Oct 15 11:58	2° <u>♂</u> 29'37	30.85308 AU
minimum elong	10955 Oct 01 12:41	18° <u>♂</u> 57'01	0°28'04	morning rise	10961 Oct 30 23:43	3° <u>♂</u> 04'15	
max. Earth dist.	10955 Oct 02 05:34	18° <u>♂</u> 58'36	30.82323 AU	retrograde	10962 Jan 29 11:32	5° <u>♂</u> 01'50	
morning rise	10955 Oct 17 13:46	19° <u>♂</u> 33'00		opposition	10962 Apr 18 17:15	3° <u>♂</u> 36'59	-0°17'27
retrograde	10956 Jan 16 05:47	21° <u>♂</u> 31'09		min. Earth dist.	10962 Apr 18 03:59	3° <u>♂</u> 37'55	28.85581 AU
opposition	10956 Apr 04 18:21	20° <u>♂</u> 06'16	-0°29'12	direct	10962 Jul 05 18:23	2° <u>♂</u> 13'03	
min. Earth dist.	10956 Apr 04 02:17	20° <u>♂</u> 07'24	28.82685 AU	evening set	10962 Oct 01 09:10	4° <u>♂</u> 07'02	
direct	10956 Jun 21 13:47	18° <u>♂</u> 42'33					
evening set	10956 Sep 17 03:05	20° <u>♂</u> 36'38		conjunction	10962 Oct 17 10:13	4° <u>♂</u> 42'52	-0°15'26
				minimum elong	10962 Oct 17 10:13	4° <u>♂</u> 42'52	0°15'07
conjunction	10956 Oct 03 02:09	21° <u>♂</u> 12'24	-0°26'29	behind sun begin	10962 Oct 17 08:10	4° <u>♂</u> 42'41	
minimum elong	10956 Oct 03 02:09	21° <u>♂</u> 12'24	0°26'18	behind sun end	10962 Oct 17 12:17	4° <u>♂</u> 43'03	
max. Earth dist.	10956 Oct 03 18:53	21° <u>♂</u> 13'58	30.82979 AU	max. Earth dist.	10962 Oct 17 23:52	4° <u>♂</u> 44'08	30.85862 AU
morning rise	10956 Oct 19 03:28	21° <u>♂</u> 48'24		morning rise	10962 Nov 02 13:21	5° <u>♂</u> 18'54	
retrograde	10957 Jan 17 18:01	23° <u>♂</u> 46'30		retrograde	10963 Feb 01 00:22	7° <u>♂</u> 16'22	
opposition	10957 Apr 07 06:30	22° <u>♂</u> 21'40	-0°27'20	opposition	10963 Apr 21 04:45	5° <u>♂</u> 51'31	-0°15'24
min. Earth dist.	10957 Apr 06 15:49	22° <u>♂</u> 22'42	28.83296 AU	min. Earth dist.	10963 Apr 20 15:41	5° <u>♂</u> 52'26	28.86195 AU
direct	10957 Jun 24 02:12	20° <u>♂</u> 57'57		direct	10963 Jul 08 05:27	4° <u>♂</u> 27'32	
evening set	10957 Sep 19 16:02	22° <u>♂</u> 52'02		evening set	10963 Oct 03 22:08	6° <u>♂</u> 21'31	
conjunction	10957 Oct 05 15:30	23° <u>♂</u> 27'49	-0°24'43	conjunction	10963 Oct 19 23:37	6° <u>♂</u> 57'21	-0°13'30
minimum elong	10957 Oct 05 15:30	23° <u>♂</u> 27'49	0°24'31	minimum elong	10963 Oct 19 23:37	6° <u>♂</u> 57'21	0°13'11
max. Earth dist.	10957 Oct 06 07:36	23° <u>♂</u> 29'19	30.83549 AU	behind sun begin	10963 Oct 19 19:50	6° <u>♂</u> 57'01	
morning rise	10957 Oct 21 17:08	24° <u>♂</u> 03'49		behind sun end	10963 Oct 20 03:24	6° <u>♂</u> 57'42	
retrograde	10958 Jan 20 08:17	26° <u>♂</u> 01'51		max. Earth dist.	10963 Oct 20 14:06	6° <u>♂</u> 58'42	30.86528 AU
opposition	10958 Apr 09 18:28	24° <u>♂</u> 37'02	-0°25'25	morning rise	10963 Nov 05 02:47	7° <u>♂</u> 33'23	
min. Earth dist.	10958 Apr 09 03:19	24° <u>♂</u> 38'05	28.83809 AU	retrograde	10964 Feb 03 11:21	9° <u>♂</u> 30'44	
direct	10958 Jun 26 15:38	23° <u>♂</u> 13'17		opposition	10964 Apr 22 16:05	8° <u>♂</u> 05'54	-0°13'19
evening set	10958 Sep 22 05:12	25° <u>♂</u> 07'22		min. Earth dist.	10964 Apr 22 03:35	8° <u>♂</u> 06'47	28.86925 AU
				direct	10964 Jul 09 16:52	6° <u>♂</u> 41'55	
conjunction	10958 Oct 08 04:57	25° <u>♂</u> 43'10	-0°22'55	evening set	10964 Oct 05 11:09	8° <u>♂</u> 35'53	

conjunction	10964 Oct 21 12:49	9° <u>ℓ</u> 11'43	-0°11'33	max. Earth dist.	10969 Nov 02 18:25	20° <u>ℓ</u> 24'22	30.92470 AU
minimum elong	10964 Oct 21 12:49	9° <u>ℓ</u> 11'43	0°11'12	morning rise	10969 Nov 18 12:03	20° <u>ℓ</u> 59'23	
behind sun begin	10964 Oct 21 08:01	9° <u>ℓ</u> 11'17		retrograde	10970 Feb 16 14:50	22° <u>ℓ</u> 56'10	
behind sun end	10964 Oct 21 17:37	9° <u>ℓ</u> 12'09		opposition	10970 May 06 11:44	21° <u>ℓ</u> 31'41	-0°00'33
max. Earth dist.	10964 Oct 22 02:17	9° <u>ℓ</u> 12'58	30.87340 AU	min. Earth dist.	10970 May 06 02:01	21° <u>ℓ</u> 32'22	28.92940 AU
morning rise	10964 Nov 06 16:20	9° <u>ℓ</u> 47'45		direct	10970 Jul 23 14:59	20° <u>ℓ</u> 07'41	
retrograde	10965 Feb 05 00:12	11° <u>ℓ</u> 45'00		asc. node	10970 Aug 08 15:23	20° <u>ℓ</u> 12'04	
opposition	10965 Apr 25 03:26	10° <u>ℓ</u> 20'12	-0°11'13	evening set	10970 Oct 19 17:59	22° <u>ℓ</u> 01'46	
min. Earth dist.	10965 Apr 24 14:21	10° <u>ℓ</u> 21'08	28.87806 AU				
direct	10965 Jul 12 03:40	8° <u>ℓ</u> 56'12		conjunction	10970 Nov 04 21:16	22° <u>ℓ</u> 37'39	0°00'29
evening set	10965 Oct 07 24:00	10° <u>ℓ</u> 50'10		minimum elong	10970 Nov 04 21:17	22° <u>ℓ</u> 37'39	0°00'57
				behind sun begin	10970 Nov 04 14:43	22° <u>ℓ</u> 37'04	
conjunction	10965 Oct 24 02:01	11° <u>ℓ</u> 26'01	-0°09'35	behind sun end	10970 Nov 05 03:51	22° <u>ℓ</u> 38'14	
minimum elong	10965 Oct 24 02:00	11° <u>ℓ</u> 26'01	0°09'14	max. Earth dist.	10970 Nov 05 08:10	22° <u>ℓ</u> 38'39	30.93364 AU
behind sun begin	10965 Oct 23 20:29	11° <u>ℓ</u> 25'31		morning rise	10970 Nov 21 01:40	23° <u>ℓ</u> 13'39	
behind sun end	10965 Oct 24 07:31	11° <u>ℓ</u> 26'31		retrograde	10971 Feb 19 02:23	25° <u>ℓ</u> 10'18	
max. Earth dist.	10965 Oct 24 15:48	11° <u>ℓ</u> 27'18	30.88279 AU	opposition	10971 May 08 22:51	23° <u>ℓ</u> 45'51	0°01'36
morning rise	10965 Nov 09 05:39	12° <u>ℓ</u> 02'03		min. Earth dist.	10971 May 08 13:32	23° <u>ℓ</u> 46'31	28.93777 AU
retrograde	10966 Feb 07 10:37	13° <u>ℓ</u> 59'12		direct	10971 Jul 26 04:16	22° <u>ℓ</u> 21'49	
opposition	10966 Apr 27 14:53	12° <u>ℓ</u> 34'29	-0°09'07	evening set	10971 Oct 22 07:21	24° <u>ℓ</u> 15'54	
min. Earth dist.	10966 Apr 27 02:54	12° <u>ℓ</u> 35'19	28.88803 AU				
direct	10966 Jul 14 15:01	11° <u>ℓ</u> 10'29		conjunction	10971 Nov 07 10:40	24° <u>ℓ</u> 51'46	0°02'32
evening set	10966 Oct 10 13:04	13° <u>ℓ</u> 04'28		minimum elong	10971 Nov 07 10:40	24° <u>ℓ</u> 51'46	0°03'00
				behind sun begin	10971 Nov 07 04:07	24° <u>ℓ</u> 51'11	
conjunction	10966 Oct 26 15:22	13° <u>ℓ</u> 40'19	-0°07'37	behind sun end	10971 Nov 07 17:12	24° <u>ℓ</u> 52'21	
minimum elong	10966 Oct 26 15:22	13° <u>ℓ</u> 40'19	0°07'14	max. Earth dist.	10971 Nov 07 19:40	24° <u>ℓ</u> 52'35	30.94171 AU
behind sun begin	10966 Oct 26 09:21	13° <u>ℓ</u> 39'47		morning rise	10971 Nov 23 15:19	25° <u>ℓ</u> 27'46	
behind sun end	10966 Oct 26 21:23	13° <u>ℓ</u> 40'52		retrograde	10972 Feb 21 15:29	27° <u>ℓ</u> 24'16	
max. Earth dist.	10966 Oct 27 04:39	13° <u>ℓ</u> 41'33	30.89335 AU	opposition	10972 May 10 09:48	25° <u>ℓ</u> 59'52	0°03'44
morning rise	10966 Nov 11 19:15	14° <u>ℓ</u> 16'21		min. Earth dist.	10972 May 10 01:09	26° <u>ℓ</u> 00'28	28.94564 AU
	10966 Dec 02 20:18	15° <u>ℓ</u>		direct	10972 Jul 27 15:43	24° <u>ℓ</u> 35'47	
retrograde	10967 Feb 09 23:54	16° <u>ℓ</u> 13'25		evening set	10972 Oct 23 20:27	26° <u>ℓ</u> 29'51	
	10967 Apr 23 09:38	15° <u>ℓ</u>					
opposition	10967 Apr 30 01:57	14° <u>ℓ</u> 48'46	-0°06'59	conjunction	10972 Nov 09 00:07	27° <u>ℓ</u> 05'44	0°04'31
min. Earth dist.	10967 Apr 29 13:28	14° <u>ℓ</u> 49'38	28.89882 AU	minimum elong	10972 Nov 09 00:07	27° <u>ℓ</u> 05'44	0°05'01
direct	10967 Jul 17 02:49	13° <u>ℓ</u> 24'46		behind sun begin	10972 Nov 08 17:44	27° <u>ℓ</u> 05'10	
	10967 Oct 04 07:51	15° <u>ℓ</u>		behind sun end	10972 Nov 09 06:30	27° <u>ℓ</u> 06'18	
evening set	10967 Oct 13 02:19	15° <u>ℓ</u> 18'48		max. Earth dist.	10972 Nov 09 09:35	27° <u>ℓ</u> 06'36	30.94941 AU
				morning rise	10972 Nov 25 04:42	27° <u>ℓ</u> 41'43	
conjunction	10967 Oct 29 04:49	15° <u>ℓ</u> 54'40	-0°05'38	retrograde	10973 Feb 23 02:25	29° <u>ℓ</u> 38'05	
minimum elong	10967 Oct 29 04:48	15° <u>ℓ</u> 54'39	0°05'14	opposition	10973 May 12 20:47	28° <u>ℓ</u> 13'41	0°05'52
behind sun begin	10967 Oct 28 22:26	15° <u>ℓ</u> 54'05		min. Earth dist.	10973 May 12 13:04	28° <u>ℓ</u> 14'14	28.95329 AU
behind sun end	10967 Oct 29 11:09	15° <u>ℓ</u> 55'14		direct	10973 Jul 30 03:37	26° <u>ℓ</u> 49'34	
max. Earth dist.	10967 Oct 29 17:22	15° <u>ℓ</u> 55'49	30.90421 AU	evening set	10973 Oct 26 09:29	28° <u>ℓ</u> 43'38	
morning rise	10967 Nov 14 08:52	16° <u>ℓ</u> 30'41					
retrograde	10968 Feb 12 12:02	18° <u>ℓ</u> 27'40		conjunction	10973 Nov 11 13:14	29° <u>ℓ</u> 19'30	0°06'30
opposition	10968 May 01 13:19	17° <u>ℓ</u> 03'05	-0°04'50	minimum elong	10973 Nov 11 13:14	29° <u>ℓ</u> 19'30	0°07'00
min. Earth dist.	10968 May 01 02:27	17° <u>ℓ</u> 03'51	28.90971 AU	behind sun begin	10973 Nov 11 07:10	29° <u>ℓ</u> 18'57	
direct	10968 Jul 18 13:26	15° <u>ℓ</u> 39'06		behind sun end	10973 Nov 11 19:18	29° <u>ℓ</u> 20'03	
evening set	10968 Oct 14 15:25	17° <u>ℓ</u> 33'10		max. Earth dist.	10973 Nov 11 21:18	29° <u>ℓ</u> 20'14	30.95726 AU
				morning rise	10973 Nov 27 18:04	29° <u>ℓ</u> 55'29	
conjunction	10968 Oct 30 18:13	18° <u>ℓ</u> 09'01	-0°03'38		10973 Nov 29 19:59	0° <u>♊</u>	
minimum elong	10968 Oct 30 18:13	18° <u>ℓ</u> 09'01	0°03'12	retrograde	10974 Feb 25 14:30	1° <u>♊</u> 51'43	
behind sun begin	10968 Oct 30 11:41	18° <u>ℓ</u> 08'26		opposition	10974 May 15 07:35	0° <u>♊</u> 27'21	0°07'59
behind sun end	10968 Oct 31 00:45	18° <u>ℓ</u> 09'36		min. Earth dist.	10974 May 14 23:39	0° <u>♊</u> 27'54	28.96136 AU
max. Earth dist.	10968 Oct 31 06:41	18° <u>ℓ</u> 10'10	30.91488 AU		10974 May 31 19:15	30° <u>ℓ</u>	
morning rise	10968 Nov 15 22:20	18° <u>ℓ</u> 45'03		direct	10974 Aug 01 14:52	29° <u>ℓ</u> 03'10	
retrograde	10969 Feb 14 01:22	20° <u>ℓ</u> 41'56			10974 Sep 30 08:00	0° <u>♊</u>	
opposition	10969 May 04 00:30	19° <u>ℓ</u> 17'25	-0°02'42	evening set	10974 Oct 28 22:35	0° <u>♊</u> 57'14	
min. Earth dist.	10969 May 03 13:27	19° <u>ℓ</u> 18'11	28.91997 AU				
direct	10969 Jul 21 03:12	17° <u>ℓ</u> 53'26		conjunction	10974 Nov 14 02:34	1° <u>♊</u> 33'06	0°08'27
evening set	10969 Oct 17 04:47	19° <u>ℓ</u> 47'30		minimum elong	10974 Nov 14 02:33	1° <u>♊</u> 33'06	0°08'58
				behind sun begin	10974 Nov 13 20:58	1° <u>♊</u> 32'36	
conjunction	10969 Nov 02 07:40	20° <u>ℓ</u> 23'22	-0°01'36	behind sun end	10974 Nov 14 08:09	1° <u>♊</u> 33'36	
minimum elong	10969 Nov 02 07:40	20° <u>ℓ</u> 23'22	0°01'09	max. Earth dist.	10974 Nov 14 10:43	1° <u>♊</u> 33'51	30.96553 AU
behind sun begin	10969 Nov 02 01:06	20° <u>ℓ</u> 22'47		morning rise	10974 Nov 30 07:22	2° <u>♊</u> 09'04	
behind sun end	10969 Nov 02 14:13	20° <u>ℓ</u> 23'58		retrograde	10975 Feb 27 23:54	4° <u>♊</u> 05'10	

opposition	10975 May 17 18:18	2°♊40'50	0°10'05	min. Earth dist.	10981 May 30 05:26	16°♊00'54	29.04455 AU
min. Earth dist.	10975 May 17 11:39	2°♊41'18	28.97006 AU	direct	10981 Aug 16 23:38	14°♊36'25	
direct	10975 Aug 04 01:56	1°♊16'38		evening set	10981 Nov 13 17:46	16°♊30'42	
evening set	10975 Oct 31 11:38	3°♊10'42					
				conjunction	10981 Nov 29 22:30	17°♊06'32	0°21'43
conjunction	10975 Nov 16 15:45	3°♊46'33	0°10'25	minimum elong	10981 Nov 29 22:30	17°♊06'32	0°22'19
minimum elong	10975 Nov 16 15:45	3°♊46'33	0°10'56	max. Earth dist.	10981 Nov 30 03:15	17°♊06'58	31.05091 AU
behind sun begin	10975 Nov 16 10:50	3°♊46'07		morning rise	10981 Dec 16 03:16	17°♊42'23	
behind sun end	10975 Nov 16 20:40	3°♊46'59		retrograde	10982 Mar 15 12:28	19°♊37'42	
max. Earth dist.	10975 Nov 16 23:12	3°♊47'14	30.97481 AU	opposition	10982 Jun 01 20:38	18°♊13'55	0°24'11
morning rise	10975 Dec 02 20:38	4°♊22'30		min. Earth dist.	10982 Jun 01 17:24	18°♊14'08	29.05713 AU
retrograde	10976 Mar 01 12:13	6°♊18'28		direct	10982 Aug 19 12:11	16°♊49'44	
opposition	10976 May 19 04:56	4°♊54'11	0°12'10	evening set	10982 Nov 16 07:04	18°♊44'03	
min. Earth dist.	10976 May 18 21:36	4°♊54'42	28.97989 AU				
direct	10976 Aug 05 13:04	3°♊29'57		conjunction	10982 Dec 02 11:43	19°♊19'51	0°23'30
evening set	10976 Nov 02 00:33	5°♊24'02		minimum elong	10982 Dec 02 11:43	19°♊19'51	0°24'05
				max. Earth dist.	10982 Dec 02 14:31	19°♊20'06	31.06298 AU
conjunction	10976 Nov 18 04:43	5°♊59'53	0°12'21	morning rise	10982 Dec 18 16:34	19°♊55'42	
minimum elong	10976 Nov 18 04:43	5°♊59'53	0°12'53	retrograde	10983 Mar 18 00:28	21°♊50'52	
behind sun begin	10976 Nov 18 00:46	5°♊59'32		opposition	10983 Jun 04 07:03	20°♊27'08	0°26'05
behind sun end	10976 Nov 18 08:40	6°♊00'14		min. Earth dist.	10983 Jun 04 03:58	20°♊27'21	29.06864 AU
max. Earth dist.	10976 Nov 18 11:47	6°♊00'32	30.98520 AU	direct	10983 Aug 21 23:52	19°♊02'56	
morning rise	10976 Dec 04 09:38	6°♊35'50		evening set	10983 Nov 18 20:11	20°♊57'15	
retrograde	10977 Mar 03 22:52	8°♊31'41					
opposition	10977 May 21 15:43	7°♊07'27	0°14'14	conjunction	10983 Dec 05 00:56	21°♊33'02	0°25'15
min. Earth dist.	10977 May 21 09:37	7°♊07'53	28.99104 AU	minimum elong	10983 Dec 05 00:56	21°♊33'02	0°25'51
direct	10977 Aug 07 23:05	5°♊43'12		max. Earth dist.	10983 Dec 05 03:26	21°♊33'16	31.07385 AU
evening set	10977 Nov 04 13:28	7°♊37'19		morning rise	10983 Dec 21 05:35	22°♊08'51	
				retrograde	10984 Mar 19 10:03	24°♊03'53	
conjunction	10977 Nov 20 17:52	8°♊13'10	0°14'16	opposition	10984 Jun 05 17:39	22°♊40'12	0°27'56
minimum elong	10977 Nov 20 17:52	8°♊13'10	0°14'49	min. Earth dist.	10984 Jun 05 16:13	22°♊40'18	29.07903 AU
behind sun begin	10977 Nov 20 15:30	8°♊12'57		direct	10984 Aug 23 10:54	21°♊15'57	
behind sun end	10977 Nov 20 20:15	8°♊13'22		evening set	10984 Nov 20 09:05	23°♊10'15	
max. Earth dist.	10977 Nov 21 01:06	8°♊13'49	30.99710 AU				
morning rise	10977 Dec 06 22:45	8°♊49'05		conjunction	10984 Dec 06 13:50	23°♊46'02	0°26'57
retrograde	10978 Mar 06 11:10	10°♊44'49		minimum elong	10984 Dec 06 13:50	23°♊46'02	0°27'34
opposition	10978 May 24 02:12	9°♊20'40	0°16'17	max. Earth dist.	10984 Dec 06 15:09	23°♊46'09	31.08392 AU
min. Earth dist.	10978 May 23 19:37	9°♊21'08	29.00352 AU	morning rise	10984 Dec 22 18:28	24°♊21'49	
direct	10978 Aug 10 12:24	7°♊56'26		retrograde	10985 Mar 21 22:02	26°♊16'42	
evening set	10978 Nov 07 02:34	9°♊50'36		opposition	10985 Jun 08 04:03	24°♊53'02	0°29'44
				min. Earth dist.	10985 Jun 08 02:19	24°♊53'10	29.08872 AU
conjunction	10978 Nov 23 06:58	10°♊26'26	0°16'10	direct	10985 Aug 25 22:19	23°♊28'44	
minimum elong	10978 Nov 23 06:58	10°♊26'26	0°16'44	evening set	10985 Nov 22 22:07	25°♊23'02	
max. Earth dist.	10978 Nov 23 12:56	10°♊26'59	31.01016 AU				
morning rise	10978 Dec 09 11:59	11°♊02'21		conjunction	10985 Dec 09 02:50	25°♊58'47	0°28'37
retrograde	10979 Mar 08 23:54	12°♊57'59		minimum elong	10985 Dec 09 02:50	25°♊58'47	0°29'15
opposition	10979 May 26 12:51	11°♊33'56	0°18'18	max. Earth dist.	10985 Dec 09 03:22	25°♊58'50	31.09333 AU
min. Earth dist.	10979 May 26 07:17	11°♊34'19	29.01708 AU	morning rise	10985 Dec 25 07:21	26°♊34'33	
direct	10979 Aug 12 23:33	10°♊09'43		retrograde	10986 Mar 24 07:17	28°♊29'17	
evening set	10979 Nov 09 15:33	12°♊03'56		opposition	10986 Jun 10 14:22	27°♊05'39	0°31'29
				min. Earth dist.	10986 Jun 10 14:20	27°♊05'39	29.09809 AU
conjunction	10979 Nov 25 20:10	12°♊39'46	0°18'03	direct	10986 Aug 28 08:35	25°♊41'18	
minimum elong	10979 Nov 25 20:10	12°♊39'46	0°18'37	evening set	10986 Nov 25 11:01	27°♊35'35	
max. Earth dist.	10979 Nov 26 02:33	12°♊40'21	31.02397 AU				
morning rise	10979 Dec 12 01:00	13°♊15'39		conjunction	10986 Dec 11 15:48	28°♊11'19	0°30'15
retrograde	10980 Mar 10 11:26	15°♊11'11		minimum elong	10986 Dec 11 15:48	28°♊11'19	0°30'52
opposition	10980 May 27 23:22	13°♊47'14	0°20'18	max. Earth dist.	10986 Dec 11 16:07	28°♊11'21	31.10270 AU
min. Earth dist.	10980 May 27 18:09	13°♊47'36	29.03090 AU	morning rise	10986 Dec 27 20:11	28°♊47'03	
direct	10980 Aug 14 11:54	12°♊23'03			10987 Feb 03 23:44	0°♊	
evening set	10980 Nov 11 04:46	14°♊17'19		retrograde	10987 Mar 26 17:57	0°♊41'38	
					10987 May 17 20:51	30°♊	
conjunction	10980 Nov 27 09:16	14°♊53'08	0°19'54	opposition	10987 Jun 13 00:36	29°♊18'01	0°33'12
minimum elong	10980 Nov 27 09:16	14°♊53'08	0°20'29	min. Earth dist.	10987 Jun 13 00:20	29°♊18'02	29.10745 AU
max. Earth dist.	10980 Nov 27 13:48	14°♊53'33	31.03777 AU	direct	10987 Aug 30 21:35	27°♊53'37	
morning rise	10980 Dec 13 14:14	15°♊29'01		evening set	10987 Nov 27 23:55	29°♊47'54	
retrograde	10981 Mar 13 01:23	17°♊24'27			10987 Dec 03 12:55	0°♊	
opposition	10981 May 30 09:58	16°♊00'35	0°22'16				

conjunction	10987 Dec 14 04:30	0°323'37	0°31'49	direct	10994 Sep 15 04:56	13°318'01	
minimum elong	10987 Dec 14 04:30	0°323'37	0°32'27	evening set	10994 Dec 13 17:01	15°312'35	
max. Earth dist.	10987 Dec 14 03:30	0°323'32	31.11220 AU				
morning rise	10987 Dec 30 08:49	0°359'19		conjunction	10994 Dec 29 21:03	15°348'12	0°41'24
retrograde	10988 Mar 28 05:12	2°353'46		minimum elong	10994 Dec 29 21:03	15°348'12	0°42'01
opposition	10988 Jun 14 10:52	1°330'11	0°34'52	max. Earth dist.	10994 Dec 29 16:01	15°347'44	31.19655 AU
min. Earth dist.	10988 Jun 14 11:33	1°330'08	29.11739 AU	morning rise	10995 Jan 15 00:01	16°323'45	
direct	10988 Sep 01 08:11	0°305'44		retrograde	10995 Apr 13 10:47	18°317'31	
evening set	10988 Nov 29 12:35	2°300'02		opposition	10995 Jun 30 10:16	16°354'32	0°44'53
				min. Earth dist.	10995 Jun 30 15:17	16°354'11	29.20198 AU
conjunction	10988 Dec 15 17:17	2°335'44	0°33'21	direct	10995 Sep 17 14:56	15°330'11	
minimum elong	10988 Dec 15 17:17	2°335'44	0°33'58	evening set	10995 Dec 16 05:39	17°324'47	
max. Earth dist.	10988 Dec 15 16:47	2°335'42	31.12251 AU				
morning rise	10988 Dec 31 21:18	3°311'25		conjunction	10996 Jan 01 09:36	18°300'23	0°42'32
retrograde	10989 Mar 30 15:52	5°305'44		minimum elong	10996 Jan 01 09:36	18°300'23	0°43'09
opposition	10989 Jun 16 21:03	3°342'12	0°36'28	max. Earth dist.	10996 Jan 01 04:05	17°359'52	31.20663 AU
min. Earth dist.	10989 Jun 16 21:50	3°342'09	29.12814 AU	morning rise	10996 Jan 17 12:16	18°335'53	
direct	10989 Sep 03 20:29	2°317'44		retrograde	10996 Apr 14 20:47	20°329'33	
evening set	10989 Dec 02 01:19	4°312'03		opposition	10996 Jul 01 20:27	19°306'38	0°46'04
				min. Earth dist.	10996 Jul 02 01:31	19°306'17	29.21130 AU
conjunction	10989 Dec 18 05:49	4°347'44	0°34'50	direct	10996 Sep 19 03:22	17°342'16	
minimum elong	10989 Dec 18 05:49	4°347'44	0°35'28	evening set	10996 Dec 17 18:22	19°336'53	
max. Earth dist.	10989 Dec 18 03:47	4°347'33	31.13384 AU				
morning rise	10990 Jan 03 09:52	5°323'23		conjunction	10997 Jan 02 22:02	20°312'27	0°43'37
retrograde	10990 Apr 02 04:54	7°317'35		minimum elong	10997 Jan 02 22:02	20°312'27	0°44'13
opposition	10990 Jun 19 07:15	5°354'08	0°38'01	max. Earth dist.	10997 Jan 02 14:53	20°311'48	31.21532 AU
min. Earth dist.	10990 Jun 19 08:15	5°354'04	29.14005 AU	morning rise	10997 Jan 19 00:34	20°347'56	
direct	10990 Sep 06 08:07	4°329'40		retrograde	10997 Apr 17 07:37	22°341'29	
evening set	10990 Dec 04 14:00	6°324'02		opposition	10997 Jul 04 06:36	21°318'36	0°47'10
				min. Earth dist.	10997 Jul 04 12:54	21°318'10	29.21953 AU
conjunction	10990 Dec 20 18:36	6°359'42	0°36'16	direct	10997 Sep 21 13:06	19°354'11	
minimum elong	10990 Dec 20 18:36	6°359'42	0°36'52	evening set	10997 Dec 20 06:48	21°348'49	
max. Earth dist.	10990 Dec 20 17:14	6°359'35	31.14619 AU				
morning rise	10991 Jan 05 22:17	7°335'20		conjunction	10998 Jan 05 10:31	22°324'21	0°44'37
retrograde	10991 Apr 04 15:21	9°329'26		minimum elong	10998 Jan 05 10:31	22°324'21	0°45'14
opposition	10991 Jun 21 17:24	8°306'04	0°39'31	max. Earth dist.	10998 Jan 05 03:29	22°323'43	31.22302 AU
min. Earth dist.	10991 Jun 21 19:22	8°305'56	29.15279 AU	morning rise	10998 Jan 21 12:42	22°359'48	
direct	10991 Sep 08 20:16	6°341'38		retrograde	10998 Apr 19 17:38	24°353'15	
evening set	10991 Dec 07 02:48	8°336'03		opposition	10998 Jul 06 16:44	23°330'23	0°48'13
				min. Earth dist.	10998 Jul 06 23:34	23°329'54	29.22670 AU
conjunction	10991 Dec 23 07:09	9°311'43	0°37'38	direct	10998 Sep 24 01:30	22°305'55	
minimum elong	10991 Dec 23 07:09	9°311'43	0°38'16	evening set	10998 Dec 22 19:23	24°300'33	
max. Earth dist.	10991 Dec 23 04:20	9°311'27	31.15934 AU				
morning rise	10992 Jan 08 10:49	9°347'19		conjunction	10999 Jan 07 22:44	24°336'04	0°45'34
retrograde	10992 Apr 06 03:34	11°341'20		minimum elong	10999 Jan 07 22:44	24°336'04	0°46'09
opposition	10992 Jun 23 03:33	10°318'05	0°40'57	max. Earth dist.	10999 Jan 07 13:52	24°335'14	31.22989 AU
min. Earth dist.	10992 Jun 23 05:16	10°317'58	29.16610 AU	morning rise	10999 Jan 24 00:48	25°311'28	
direct	10992 Sep 10 07:30	8°353'41		retrograde	10999 Apr 22 05:55	27°304'47	
evening set	10992 Dec 08 15:21	10°348'10		opposition	10999 Jul 09 02:42	25°341'56	0°49'11
				min. Earth dist.	10999 Jul 09 09:57	25°341'25	29.23345 AU
conjunction	10992 Dec 24 19:41	11°323'48	0°38'57	direct	10999 Sep 26 13:42	24°317'25	
minimum elong	10992 Dec 24 19:41	11°323'48	0°39'34	evening set	10999 Dec 25 07:38	26°312'02	
max. Earth dist.	10992 Dec 24 16:56	11°323'33	31.17252 AU				
morning rise	10993 Jan 09 23:02	11°359'23		conjunction	11000 Jan 10 10:58	26°347'32	0°46'26
retrograde	10993 Apr 08 13:32	13°353'20		minimum elong	11000 Jan 10 10:58	26°347'32	0°47'02
opposition	10993 Jun 25 13:51	12°330'11	0°42'20	max. Earth dist.	11000 Jan 10 02:42	26°346'46	31.23650 AU
min. Earth dist.	10993 Jun 25 17:12	12°329'57	29.17910 AU	morning rise	11000 Jan 26 12:36	27°322'54	
direct	10993 Sep 12 18:06	11°305'50		retrograde	11000 Apr 24 15:21	29°316'06	
evening set	10993 Dec 11 04:09	13°300'21		opposition	11000 Jul 11 12:51	27°353'15	0°50'05
				min. Earth dist.	11000 Jul 11 21:05	27°352'40	29.24011 AU
conjunction	10993 Dec 27 08:20	13°335'59	0°40'12	direct	11000 Sep 29 02:14	26°328'41	
minimum elong	10993 Dec 27 08:20	13°335'59	0°40'50	evening set	11000 Dec 27 19:46	28°323'18	
max. Earth dist.	10993 Dec 27 04:19	13°335'37	31.18518 AU				
morning rise	10994 Jan 12 11:34	14°311'33		conjunction	11001 Jan 12 22:46	28°358'46	0°47'15
retrograde	10994 Apr 11 01:45	16°305'24		minimum elong	11001 Jan 12 22:46	28°358'46	0°47'49
opposition	10994 Jun 27 23:54	14°342'22	0°43'38	max. Earth dist.	11001 Jan 12 13:14	28°357'53	31.24341 AU
min. Earth dist.	10994 Jun 28 03:07	14°342'08	29.19120 AU	morning rise	11001 Jan 29 00:18	29°334'06	

	11001 Feb 10 07:57	0° \approx		evening set	11008 Jan 13 08:22	13° \approx 39'49	
retrograde	11001 Apr 27 02:58	1° \approx 27'11					
opposition	11001 Jul 13 22:48	0° \approx 04'21	0°50'54	conjunction	11008 Jan 29 09:39	14° \approx 15'08	0°50'57
min. Earth dist.	11001 Jul 14 06:30	0° \approx 03'48	29.24734 AU	minimum elong	11008 Jan 29 09:39	14° \approx 15'08	0°51'26
	11001 Jul 16 13:12	30° \approx 8'3		max. Earth dist.	11008 Jan 28 20:37	14° \approx 13'56	31.30563 AU
direct	11001 Oct 01 14:00	28° \approx 39'44		morning rise	11008 Feb 14 09:02	14° \approx 50'17	
	11001 Dec 13 18:05	0° \approx			11008 Feb 18 21:52	15° \approx	
evening set	11001 Dec 30 07:54	0° \approx 34'21		retrograde	11008 May 12 02:39	16° \approx 42'53	
				opposition	11008 Jul 28 21:13	15° \approx 20'27	0°54'35
conjunction	11002 Jan 15 10:47	1° \approx 09'48	0°47'59	min. Earth dist.	11008 Jul 29 08:19	15° \approx 19'41	29.30939 AU
minimum elong	11002 Jan 15 10:47	1° \approx 09'48	0°48'33		11008 Aug 10 07:09	15° \approx 8'8	
max. Earth dist.	11002 Jan 15 01:36	1° \approx 08'57	31.25094 AU	direct	11008 Oct 16 18:23	13° \approx 55'55	
morning rise	11002 Jan 31 11:54	1° \approx 45'06			11008 Dec 20 14:58	15° \approx	
retrograde	11002 Apr 29 12:43	3° \approx 38'04		evening set	11009 Jan 14 20:09	15° \approx 50'44	
opposition	11002 Jul 16 08:48	2° \approx 15'16	0°51'40				
min. Earth dist.	11002 Jul 16 17:42	2° \approx 14'39	29.25540 AU	conjunction	11009 Jan 30 21:21	16° \approx 26'02	0°51'11
direct	11002 Oct 04 01:29	0° \approx 50'39		minimum elong	11009 Jan 30 21:21	16° \approx 26'02	0°51'38
evening set	11003 Jan 01 20:05	2° \approx 45'16		max. Earth dist.	11009 Jan 30 08:45	16° \approx 24'52	31.31206 AU
				morning rise	11009 Feb 15 20:15	17° \approx 01'09	
conjunction	11003 Jan 17 22:42	3° \approx 20'41	0°48'40	retrograde	11009 May 14 12:04	18° \approx 53'41	
minimum elong	11003 Jan 17 22:42	3° \approx 20'41	0°49'12	opposition	11009 Jul 31 07:29	17° \approx 31'18	0°54'48
max. Earth dist.	11003 Jan 17 12:49	3° \approx 19'47	31.25958 AU	min. Earth dist.	11009 Jul 31 19:52	17° \approx 30'26	29.31511 AU
morning rise	11003 Feb 02 23:36	3° \approx 55'58		direct	11009 Oct 19 06:25	16° \approx 06'46	
retrograde	11003 May 02 00:08	5° \approx 48'51		evening set	11010 Jan 17 08:10	18° \approx 01'35	
opposition	11003 Jul 18 18:46	4° \approx 26'05	0°52'20				
min. Earth dist.	11003 Jul 19 02:53	4° \approx 25'31	29.26448 AU	conjunction	11010 Feb 02 08:57	18° \approx 36'51	0°51'21
direct	11003 Oct 06 13:12	3° \approx 01'28		minimum elong	11010 Feb 02 08:57	18° \approx 36'51	0°51'49
evening set	11004 Jan 04 08:03	4° \approx 56'07		max. Earth dist.	11010 Feb 01 18:46	18° \approx 35'33	31.31723 AU
				morning rise	11010 Feb 18 07:42	19° \approx 11'57	
conjunction	11004 Jan 20 10:25	5° \approx 31'31	0°49'16	retrograde	11010 May 16 23:47	21° \approx 04'25	
minimum elong	11004 Jan 20 10:25	5° \approx 31'31	0°49'49	opposition	11010 Aug 02 17:28	19° \approx 42'03	0°54'56
max. Earth dist.	11004 Jan 20 00:16	5° \approx 30'35	31.26906 AU	min. Earth dist.	11010 Aug 03 05:35	19° \approx 41'12	29.31970 AU
morning rise	11004 Feb 05 10:59	6° \approx 06'47		direct	11010 Oct 21 18:17	18° \approx 17'29	
retrograde	11004 May 03 08:45	7° \approx 59'35		evening set	11011 Jan 19 19:59	20° \approx 12'19	
opposition	11004 Jul 20 04:53	6° \approx 36'54	0°52'57				
min. Earth dist.	11004 Jul 20 14:14	6° \approx 36'15	29.27436 AU	conjunction	11011 Feb 04 20:35	20° \approx 47'34	0°51'26
direct	11004 Oct 07 22:52	5° \approx 12'19		minimum elong	11011 Feb 04 20:35	20° \approx 47'34	0°51'52
evening set	11005 Jan 05 20:04	7° \approx 07'00		max. Earth dist.	11011 Feb 04 06:29	20° \approx 46'16	31.32127 AU
				morning rise	11011 Feb 20 18:52	21° \approx 22'38	
conjunction	11005 Jan 21 22:16	7° \approx 42'22	0°49'47	retrograde	11011 May 19 09:42	23° \approx 15'02	
minimum elong	11005 Jan 21 22:16	7° \approx 42'22	0°50'19	opposition	11011 Aug 05 03:44	21° \approx 52'40	0°54'59
max. Earth dist.	11005 Jan 21 12:11	7° \approx 41'27	31.27915 AU	min. Earth dist.	11011 Aug 05 17:17	21° \approx 51'44	29.32339 AU
morning rise	11005 Feb 06 22:30	8° \approx 17'36		direct	11011 Oct 24 06:09	20° \approx 28'06	
retrograde	11005 May 05 18:23	10° \approx 10'21		evening set	11012 Jan 22 07:33	22° \approx 22'55	
opposition	11005 Jul 22 14:48	8° \approx 47'45	0°53'28				
min. Earth dist.	11005 Jul 22 24:00	8° \approx 47'07	29.28436 AU	conjunction	11012 Feb 07 07:49	22° \approx 58'08	0°51'28
direct	11005 Oct 10 10:16	7° \approx 23'11		minimum elong	11012 Feb 07 07:49	22° \approx 58'08	0°51'54
evening set	11006 Jan 08 08:13	9° \approx 17'54		max. Earth dist.	11012 Feb 06 17:01	22° \approx 56'47	31.32474 AU
				morning rise	11012 Feb 23 05:52	23° \approx 33'10	
conjunction	11006 Jan 24 10:03	9° \approx 53'16	0°50'15	retrograde	11012 May 20 20:43	25° \approx 25'30	
minimum elong	11006 Jan 24 10:03	9° \approx 53'16	0°50'47	opposition	11012 Aug 06 13:49	24° \approx 03'09	0°54'58
max. Earth dist.	11006 Jan 23 22:38	9° \approx 52'13	31.28893 AU	min. Earth dist.	11012 Aug 07 02:41	24° \approx 02'16	29.32665 AU
morning rise	11006 Feb 09 10:05	10° \approx 28'28		direct	11012 Oct 25 18:32	22° \approx 38'33	
retrograde	11006 May 08 05:07	12° \approx 21'11		evening set	11013 Jan 23 19:08	24° \approx 33'22	
opposition	11006 Jul 25 00:55	10° \approx 58'39	0°53'55				
min. Earth dist.	11006 Jul 25 11:06	10° \approx 57'56	29.29388 AU	conjunction	11013 Feb 08 19:06	25° \approx 08'34	0°51'25
direct	11006 Oct 12 19:16	9° \approx 34'06		minimum elong	11013 Feb 08 19:06	25° \approx 08'34	0°51'49
evening set	11007 Jan 10 20:14	11° \approx 28'52		max. Earth dist.	11013 Feb 08 03:58	25° \approx 07'10	31.32795 AU
				morning rise	11013 Feb 24 16:48	25° \approx 43'35	
conjunction	11007 Jan 26 21:57	12° \approx 04'12	0°50'38	retrograde	11013 May 23 04:53	27° \approx 35'51	
minimum elong	11007 Jan 26 21:57	12° \approx 04'12	0°51'07	opposition	11013 Aug 08 23:54	26° \approx 13'30	0°54'53
max. Earth dist.	11007 Jan 26 10:46	12° \approx 03'10	31.29789 AU	min. Earth dist.	11013 Aug 09 13:54	26° \approx 12'32	29.33010 AU
morning rise	11007 Feb 11 21:30	12° \approx 39'23		direct	11013 Oct 28 04:32	24° \approx 48'52	
retrograde	11007 May 10 14:38	14° \approx 32'01		evening set	11014 Jan 26 06:34	26° \approx 43'41	
opposition	11007 Jul 27 11:03	13° \approx 09'34	0°54'17				
min. Earth dist.	11007 Jul 27 21:50	13° \approx 08'49	29.30221 AU	conjunction	11014 Feb 11 06:20	27° \approx 18'52	0°51'17
direct	11007 Oct 15 07:13	11° \approx 45'02		minimum elong	11014 Feb 11 06:20	27° \approx 18'52	0°51'41

max. Earth dist.	11014 Feb 10 15:35	27° \approx 17'30	31.33166 AU	min. Earth dist.	11020 Aug 24 15:22	11° \times 24'47	29.36688 AU
morning rise	11014 Feb 27 03:40	27° \approx 53'51		direct	11020 Nov 12 08:50	10° \times 01'25	
retrograde	11014 May 25 13:39	29° \approx 46'03		evening set	11021 Feb 10 13:48	11° \times 56'23	
opposition	11014 Aug 11 10:01	28° \approx 23'44	0°54'43				
min. Earth dist.	11014 Aug 11 23:28	28° \approx 22'48	29.33409 AU	conjunction	11021 Feb 26 11:17	12° \times 31'25	0°48'23
direct	11014 Oct 30 16:06	26° \approx 59'06		minimum elong	11021 Feb 26 11:17	12° \times 31'25	0°48'37
evening set	11015 Jan 28 18:02	28° \approx 53'55		max. Earth dist.	11021 Feb 25 18:38	12° \times 29'53	31.36803 AU
				morning rise	11021 Mar 14 06:17	13° \times 06'14	
conjunction	11015 Feb 13 17:21	29° \approx 29'05	0°51'06	retrograde	11021 Jun 09 15:06	14° \times 58'23	
minimum elong	11015 Feb 13 17:21	29° \approx 29'05	0°51'27	opposition	11021 Aug 26 10:16	13° \times 36'21	0°51'20
max. Earth dist.	11015 Feb 13 01:47	29° \approx 27'38	31.33609 AU	min. Earth dist.	11021 Aug 27 01:12	13° \times 35'19	29.36946 AU
	11015 Feb 27 17:49	0° \times		direct	11021 Nov 14 21:42	12° \times 11'54	
morning rise	11015 Mar 01 14:24	0° \times 04'02		evening set	11022 Feb 13 01:09	14° \times 06'53	
retrograde	11015 May 27 23:49	1° \times 56'13					
opposition	11015 Aug 13 20:13	0° \times 33'55	0°54'28	conjunction	11022 Feb 28 22:17	14° \times 41'54	0°47'41
min. Earth dist.	11015 Aug 14 09:53	0° \times 32'58	29.33915 AU	minimum elong	11022 Feb 28 22:18	14° \times 41'54	0°47'55
	11015 Sep 03 20:52	30° \times		max. Earth dist.	11022 Feb 28 04:58	14° \times 40'18	31.36981 AU
direct	11015 Nov 02 00:32	29° \approx 09'18		morning rise	11022 Mar 16 16:56	15° \times 16'42	
	11015 Dec 29 07:54	0° \times		retrograde	11022 Jun 12 00:13	17° \times 08'49	
evening set	11016 Jan 31 05:16	1° \times 04'09		opposition	11022 Aug 28 20:55	15° \times 46'47	0°50'33
				min. Earth dist.	11022 Aug 29 13:07	15° \times 45'40	29.37057 AU
conjunction	11016 Feb 16 04:26	1° \times 39'17	0°50'49	direct	11022 Nov 17 08:08	14° \times 22'20	
minimum elong	11016 Feb 16 04:26	1° \times 39'17	0°51'11	evening set	11023 Feb 15 12:16	16° \times 17'18	
max. Earth dist.	11016 Feb 15 13:50	1° \times 37'56	31.34165 AU				
morning rise	11016 Mar 03 01:01	2° \times 14'13		conjunction	11023 Mar 03 09:09	16° \times 52'17	0°46'55
retrograde	11016 May 29 08:33	4° \times 06'23		minimum elong	11023 Mar 03 09:09	16° \times 52'17	0°47'07
opposition	11016 Aug 15 06:24	2° \times 44'08	0°54'08	max. Earth dist.	11023 Mar 02 16:04	16° \times 50'42	31.37023 AU
min. Earth dist.	11016 Aug 15 20:09	2° \times 43'11	29.34505 AU	morning rise	11023 Mar 19 03:24	17° \times 27'04	
direct	11016 Nov 03 12:04	1° \times 19'34		retrograde	11023 Jun 14 09:18	19° \times 19'09	
evening set	11017 Feb 01 16:33	3° \times 14'26		opposition	11023 Aug 31 07:29	17° \times 57'06	0°49'41
				min. Earth dist.	11023 Aug 31 23:27	17° \times 56'00	29.37026 AU
conjunction	11017 Feb 17 15:16	3° \times 49'33	0°50'29	direct	11023 Nov 19 20:42	16° \times 32'38	
minimum elong	11017 Feb 17 15:16	3° \times 49'33	0°50'48	evening set	11024 Feb 17 23:25	18° \times 27'34	
max. Earth dist.	11017 Feb 16 23:29	3° \times 48'05	31.34793 AU				
morning rise	11017 Mar 05 11:43	4° \times 24'28		conjunction	11024 Mar 04 19:52	19° \times 02'32	0°46'05
retrograde	11017 May 31 20:05	6° \times 16'38		minimum elong	11024 Mar 04 19:52	19° \times 02'32	0°46'17
opposition	11017 Aug 17 16:37	4° \times 54'26	0°53'43	max. Earth dist.	11024 Mar 04 01:41	19° \times 00'52	31.36942 AU
min. Earth dist.	11017 Aug 18 06:09	4° \times 53'30	29.35147 AU	morning rise	11024 Mar 20 13:54	19° \times 37'18	
direct	11017 Nov 05 22:17	3° \times 29'54		retrograde	11024 Jun 15 19:25	21° \times 29'22	
evening set	11018 Feb 04 03:51	5° \times 24'49		opposition	11024 Sep 01 18:00	20° \times 07'17	0°48'46
max. Earth dist.	11018 Feb 19 11:27	5° \times 58'32	31.35423 AU	min. Earth dist.	11024 Sep 02 10:23	20° \times 06'10	29.36911 AU
				direct	11024 Nov 21 06:12	18° \times 42'48	
conjunction	11018 Feb 20 02:24	5° \times 59'55	0°50'04	evening set	11025 Feb 19 10:15	20° \times 37'42	
minimum elong	11018 Feb 20 02:24	5° \times 59'55	0°50'23				
morning rise	11018 Mar 07 22:19	6° \times 34'48		conjunction	11025 Mar 07 06:33	21° \times 12'38	0°45'12
retrograde	11018 Jun 03 05:20	8° \times 26'59		minimum elong	11025 Mar 07 06:34	21° \times 12'38	0°45'20
opposition	11018 Aug 20 02:55	7° \times 04'51	0°53'14	max. Earth dist.	11025 Mar 06 13:17	21° \times 11'03	31.36793 AU
min. Earth dist.	11018 Aug 20 17:35	7° \times 03'50	29.35753 AU	morning rise	11025 Mar 23 00:10	21° \times 47'23	
direct	11018 Nov 08 09:01	5° \times 40'21		retrograde	11025 Jun 18 03:26	23° \times 39'26	
evening set	11019 Feb 06 15:17	7° \times 35'18		opposition	11025 Sep 04 04:37	22° \times 17'19	0°47'47
				min. Earth dist.	11025 Sep 04 21:13	22° \times 16'11	29.36734 AU
conjunction	11019 Feb 22 13:22	8° \times 10'22	0°49'35	direct	11025 Nov 23 18:20	20° \times 52'48	
minimum elong	11019 Feb 22 13:22	8° \times 10'22	0°49'51	evening set	11026 Feb 21 21:15	22° \times 47'41	
max. Earth dist.	11019 Feb 21 21:14	8° \times 08'53	31.36001 AU				
morning rise	11019 Mar 10 09:05	8° \times 45'15		conjunction	11026 Mar 09 17:02	23° \times 22'36	0°44'14
retrograde	11019 Jun 05 17:25	10° \times 37'25		minimum elong	11026 Mar 09 17:02	23° \times 22'36	0°44'22
opposition	11019 Aug 22 13:19	9° \times 15'20	0°52'41	max. Earth dist.	11026 Mar 08 22:42	23° \times 20'54	31.36619 AU
min. Earth dist.	11019 Aug 23 03:23	9° \times 14'22	29.36284 AU	morning rise	11026 Mar 25 10:28	23° \times 57'19	
direct	11019 Nov 10 20:44	7° \times 50'52		retrograde	11026 Jun 20 14:07	25° \times 49'21	
evening set	11020 Feb 09 02:27	9° \times 45'50		opposition	11026 Sep 06 15:08	24° \times 27'13	0°46'43
max. Earth dist.	11020 Feb 24 08:23	10° \times 19'25	31.36465 AU	min. Earth dist.	11026 Sep 07 07:10	24° \times 26'07	29.36580 AU
				direct	11026 Nov 26 04:27	23° \times 02'41	
conjunction	11020 Feb 25 00:18	10° \times 20'53	0°49'01	evening set	11027 Feb 24 08:00	24° \times 57'33	
minimum elong	11020 Feb 25 00:18	10° \times 20'53	0°49'17	max. Earth dist.	11027 Mar 11 10:32	25° \times 30'53	31.36487 AU
morning rise	11020 Mar 11 19:33	10° \times 55'44					
retrograde	11020 Jun 07 04:01	12° \times 47'54		conjunction	11027 Mar 12 03:37	25° \times 32'28	0°43'13
opposition	11020 Aug 23 23:55	11° \times 25'51	0°52'02	minimum elong	11027 Mar 12 03:37	25° \times 32'28	0°43'19

morning rise	11027 Mar 27 20:32	26° H 07'10	opposition	11033 Sep 21 19:05	9° V 38'37	0°37'32
retrograde	11027 Jun 22 23:02	27° H 59'13	min. Earth dist.	11033 Sep 22 11:07	9° V 37'31	29.36212 AU
opposition	11027 Sep 09 01:57	26° H 37'04 0°45'36	direct	11033 Dec 11 10:57	8° V 14'22	
min. Earth dist.	11027 Sep 09 18:30	26° H 35'56 29.36487 AU	evening set	11034 Mar 11 10:51	10° V 09'23	
direct	11027 Nov 28 14:57	25° H 12'33	max. Earth dist.	11034 Mar 26 11:29	10° V 42'39	31.36001 AU
evening set	11028 Feb 26 18:41	27° H 07'26				
conjunction	11028 Mar 13 13:50	27° H 42'19 0°42'08	conjunction	11034 Mar 27 04:12	10° V 44'12	0°34'26
minimum elong	11028 Mar 13 13:51	27° H 42'19 0°42'14	minimum elong	11034 Mar 27 04:13	10° V 44'12	0°34'23
max. Earth dist.	11028 Mar 12 20:17	27° H 40'41 31.36445 AU	morning rise	11034 Apr 11 19:01	11° V 18'51	
morning rise	11028 Mar 29 06:37	28° H 17'00	retrograde	11034 Jul 07 23:13	13° V 11'16	
retrograde	11028 Jun 01 06:49	0° V	opposition	11034 Sep 24 06:17	11° V 49'16	0°35'59
	11028 Jun 24 10:42	0° V 09'05	min. Earth dist.	11034 Sep 24 22:40	11° V 48'09	29.35806 AU
	11028 Jul 17 21:55	30° R H	direct	11034 Dec 13 23:10	10° V 25'03	
opposition	11028 Sep 10 12:35	28° H 46'57 0°44'25	evening set	11035 Mar 13 21:38	12° V 20'02	
min. Earth dist.	11028 Sep 11 03:55	28° H 45'54 29.36481 AU	conjunction	11035 Mar 29 14:30	12° V 54'51	0°32'58
direct	11028 Nov 30 02:28	27° H 22'29	minimum elong	11035 Mar 29 14:30	12° V 54'51	0°32'52
evening set	11029 Feb 28 05:22	29° H 17'22	max. Earth dist.	11035 Mar 28 20:34	12° V 53'11	31.35530 AU
max. Earth dist.	11029 Mar 15 07:26	29° H 50'41 31.36468 AU	morning rise	11035 Apr 14 05:12	13° V 29'29	
conjunction	11029 Mar 16 00:18	29° H 52'15 0°41'00	retrograde	11035 Jul 10 09:55	15° V 21'56	
minimum elong	11029 Mar 16 00:19	29° H 52'15 0°41'03	opposition	11035 Sep 26 17:28	13° V 59'55	0°34'24
	11029 Mar 19 11:46	0° V	min. Earth dist.	11035 Sep 27 09:21	13° V 58'50	29.35268 AU
morning rise	11029 Mar 31 16:40	0° V 26'56	direct	11035 Dec 16 09:01	12° V 35'41	
retrograde	11029 Jun 26 21:27	2° V 19'04	evening set	11036 Mar 15 08:02	14° V 30'39	
opposition	11029 Sep 12 23:17	0° V 56'58 0°43'09	max. Earth dist.	11036 Mar 30 07:49	15° V 03'52	31.34919 AU
min. Earth dist.	11029 Sep 13 15:31	0° V 55'51 29.36527 AU	conjunction	11036 Mar 31 00:46	15° V 05'27	0°31'27
	11029 Oct 20 23:37	30° R H	minimum elong	11036 Mar 31 00:46	15° V 05'27	0°31'21
direct	11029 Dec 02 13:57	29° H 32'32	morning rise	11036 Apr 15 15:04	15° V 40'04	
	11030 Jan 13 04:26	0° V	retrograde	11036 Jul 11 18:51	17° V 32'34	
evening set	11030 Mar 02 16:08	1° V 27'28	opposition	11036 Sep 28 04:46	16° V 10'29	0°32'46
conjunction	11030 Mar 18 10:43	2° V 02'20 0°39'48	min. Earth dist.	11036 Sep 28 21:33	16° V 09'20	29.34594 AU
minimum elong	11030 Mar 18 10:43	2° V 02'20 0°39'51	direct	11036 Dec 17 19:21	14° V 46'13	
max. Earth dist.	11030 Mar 17 17:48	2° V 00'46 31.36529 AU	evening set	11037 Mar 17 18:37	16° V 41'09	
morning rise	11030 Apr 03 02:50	2° V 37'00	conjunction	11037 Apr 02 10:57	17° V 15'56	0°29'54
retrograde	11030 Jun 29 08:48	4° V 29'12	minimum elong	11037 Apr 02 10:57	17° V 15'56	0°29'46
opposition	11030 Sep 15 10:04	3° V 07'08 0°41'50	max. Earth dist.	11037 Apr 01 17:23	17° V 14'18	31.34208 AU
min. Earth dist.	11030 Sep 16 01:20	3° V 06'06 29.36570 AU	morning rise	11037 Apr 18 01:08	17° V 50'33	
direct	11030 Dec 05 02:31	1° V 42'47	retrograde	11037 Jul 14 06:05	19° V 43'03	
evening set	11031 Mar 05 02:47	3° V 37'45	opposition	11037 Sep 30 15:47	18° V 20'55	0°31'05
conjunction	11031 Mar 20 20:59	4° V 12'36 0°38'32	min. Earth dist.	11037 Oct 01 07:30	18° V 19'51	29.33844 AU
minimum elong	11031 Mar 20 20:59	4° V 12'36 0°38'32	direct	11037 Dec 20 07:33	16° V 56'37	
max. Earth dist.	11031 Mar 20 03:51	4° V 11'01 31.36548 AU	evening set	11038 Mar 20 05:02	18° V 51'31	
morning rise	11031 Apr 05 12:47	4° V 47'16	conjunction	11038 Apr 04 21:07	19° V 26'17	0°28'18
retrograde	11031 Jul 01 18:34	6° V 39'31	minimum elong	11038 Apr 04 21:08	19° V 26'17	0°28'10
opposition	11031 Sep 17 21:05	5° V 17'30 0°40'28	max. Earth dist.	11038 Apr 04 04:12	19° V 24'43	31.33437 AU
min. Earth dist.	11031 Sep 18 13:10	5° V 16'24 29.36565 AU	morning rise	11038 Apr 20 10:57	20° V 00'53	
direct	11031 Dec 07 12:39	3° V 53'12	retrograde	11038 Jul 16 16:40	21° V 53'26	
evening set	11032 Mar 06 13:27	5° V 48'11	opposition	11038 Oct 03 03:11	20° V 31'12	0°29'21
conjunction	11032 Mar 22 07:25	6° V 23'02 0°37'13	min. Earth dist.	11038 Oct 03 19:32	20° V 30'05	29.33082 AU
minimum elong	11032 Mar 22 07:25	6° V 23'02 0°37'13	direct	11038 Dec 22 19:12	19° V 06'53	
max. Earth dist.	11032 Mar 21 14:55	6° V 21'30 31.36498 AU	evening set	11039 Mar 22 15:15	21° V 01'44	
morning rise	11032 Apr 06 22:52	6° V 57'41	conjunction	11039 Apr 07 07:00	21° V 36'30	0°26'41
retrograde	11032 Jul 03 04:14	8° V 49'59	minimum elong	11039 Apr 07 07:01	21° V 36'30	0°26'29
opposition	11032 Sep 19 08:00	7° V 28'00 0°39'01	max. Earth dist.	11039 Apr 06 14:36	21° V 34'58	31.32699 AU
min. Earth dist.	11032 Sep 19 23:47	7° V 26'55 29.36452 AU	morning rise	11039 Apr 22 20:36	22° V 11'05	
direct	11032 Dec 09 01:11	6° V 03'44	retrograde	11039 Jul 19 03:23	24° V 03'40	
evening set	11033 Mar 09 00:13	7° V 58'44	opposition	11039 Oct 05 14:27	22° V 41'23	0°27'35
conjunction	11033 Mar 24 17:45	8° V 33'35 0°35'51	min. Earth dist.	11039 Oct 06 05:19	22° V 40'22	29.32373 AU
minimum elong	11033 Mar 24 17:45	8° V 33'35 0°35'48	direct	11039 Dec 25 07:51	21° V 17'03	
max. Earth dist.	11033 Mar 24 00:10	8° V 31'57 31.36322 AU	evening set	11040 Mar 24 01:33	23° V 11'53	
morning rise	11033 Apr 09 09:02	9° V 08'14	conjunction	11040 Apr 08 16:58	23° V 46'37	0°25'00
retrograde	11033 Jul 05 15:12	11° V 00'36	minimum elong	11040 Apr 08 16:58	23° V 46'37	0°24'49

max. Earth dist.	11040 Apr 08 00:42	23° Υ 45'07	31.32034 AU	behind sun begin	11046 Apr 22 01:33	6° \mathcal{B} 49'02	
morning rise	11040 Apr 24 06:20	24° Υ 21'12		behind sun end	11046 Apr 22 08:13	6° \mathcal{B} 49'38	
retrograde	11040 Jul 20 13:42	26° Υ 13'50		max. Earth dist.	11046 Apr 21 14:57	6° \mathcal{B} 48'02	31.28864 AU
opposition	11040 Oct 07 01:44	24° Υ 51'31	0°25'47	morning rise	11046 May 07 16:59	7° \mathcal{B} 23'56	
min. Earth dist.	11040 Oct 07 16:50	24° Υ 50'29	29.31767 AU	retrograde	11046 Aug 03 04:11	9° \mathcal{B} 17'07	
direct	11040 Dec 26 18:30	23° Υ 27'12		opposition	11046 Oct 20 23:14	7° \mathcal{B} 54'47	0°14'14
evening set	11041 Mar 26 11:44	25° Υ 22'01		min. Earth dist.	11046 Oct 21 11:42	7° \mathcal{B} 53'56	29.28504 AU
				direct	11047 Jan 09 13:44	6° \mathcal{B} 30'42	
				evening set	11047 Apr 09 01:22	8° \mathcal{B} 25'34	
conjunction	11041 Apr 11 02:59	25° Υ 56'45	0°23'18				
minimum elong	11041 Apr 11 02:59	25° Υ 56'45	0°23'04				
max. Earth dist.	11041 Apr 10 12:01	25° Υ 55'22	31.31479 AU	conjunction	11047 Apr 24 14:54	9° \mathcal{B} 00'17	0°12'26
morning rise	11041 Apr 26 16:04	26° Υ 31'20		minimum elong	11047 Apr 24 14:55	9° \mathcal{B} 00'17	0°12'04
retrograde	11041 Jul 22 23:50	28° Υ 24'01		behind sun begin	11047 Apr 24 10:29	8° \mathcal{B} 59'53	
opposition	11041 Oct 09 13:05	27° Υ 01'42	0°23'56	behind sun end	11047 Apr 24 19:20	9° \mathcal{B} 00'41	
min. Earth dist.	11041 Oct 10 03:16	27° Υ 00'44	29.31239 AU	max. Earth dist.	11047 Apr 24 01:23	8° \mathcal{B} 59'02	31.28086 AU
direct	11041 Dec 29 07:48	25° Υ 37'25		morning rise	11047 May 10 02:44	9° \mathcal{B} 34'53	
evening set	11042 Mar 28 22:01	27° Υ 32'14		retrograde	11047 Aug 05 15:30	11° \mathcal{B} 28'11	
				opposition	11047 Oct 23 11:15	10° \mathcal{B} 05'48	0°12'13
conjunction	11042 Apr 13 12:50	28° Υ 06'58	0°21'34	min. Earth dist.	11047 Oct 24 00:31	10° \mathcal{B} 04'54	29.27666 AU
minimum elong	11042 Apr 13 12:50	28° Υ 06'58	0°21'19	direct	11048 Jan 12 00:42	8° \mathcal{B} 41'45	
max. Earth dist.	11042 Apr 12 21:25	28° Υ 05'32	31.30987 AU	evening set	11048 Apr 10 11:40	10° \mathcal{B} 36'37	
morning rise	11042 Apr 29 01:47	28° Υ 41'33		max. Earth dist.	11048 Apr 25 11:45	11° \mathcal{B} 10'05	31.27189 AU
	11042 Jun 09 18:07	0° \mathcal{B}					
retrograde	11042 Jul 25 11:01	0° \mathcal{B} 34'20		conjunction	11048 Apr 26 01:00	11° \mathcal{B} 11'19	0°10'32
	11042 Sep 10 17:22	30° $\mathcal{R}\Upsilon$		minimum elong	11048 Apr 26 00:59	11° \mathcal{B} 11'19	0°10'11
opposition	11042 Oct 12 00:32	29° Υ 12'00	0°22'04	behind sun begin	11048 Apr 25 19:50	11° \mathcal{B} 10'52	
min. Earth dist.	11042 Oct 12 14:20	29° Υ 11'03	29.30775 AU	behind sun end	11048 Apr 26 06:09	11° \mathcal{B} 11'47	
direct	11042 Dec 31 18:02	27° Υ 47'45		morning rise	11048 May 11 12:40	11° \mathcal{B} 45'55	
evening set	11043 Mar 31 08:11	29° Υ 42'35		retrograde	11048 Aug 07 02:46	13° \mathcal{B} 39'18	
	11043 Apr 08 05:25	0° \mathcal{B}		opposition	11048 Oct 24 22:58	12° \mathcal{B} 16'53	0°10'11
				min. Earth dist.	11048 Oct 25 11:08	12° \mathcal{B} 16'03	29.26696 AU
conjunction	11043 Apr 15 22:52	0° \mathcal{B} 17'19	0°19'47	direct	11049 Jan 13 13:08	10° \mathcal{B} 52'49	
minimum elong	11043 Apr 15 22:52	0° \mathcal{B} 17'19	0°19'30	evening set	11049 Apr 12 21:59	12° \mathcal{B} 47'40	
max. Earth dist.	11043 Apr 15 08:56	0° \mathcal{B} 16'01	31.30530 AU				
morning rise	11043 May 01 11:27	0° \mathcal{B} 51'54		conjunction	11049 Apr 28 11:02	13° \mathcal{B} 22'23	0°08'38
retrograde	11043 Jul 27 19:35	2° \mathcal{B} 44'46		minimum elong	11049 Apr 28 11:02	13° \mathcal{B} 22'23	0°08'14
opposition	11043 Oct 14 12:08	1° \mathcal{B} 22'27	0°20'09	behind sun begin	11049 Apr 28 05:19	13° \mathcal{B} 21'52	
min. Earth dist.	11043 Oct 15 01:51	1° \mathcal{B} 21'31	29.30309 AU	behind sun end	11049 Apr 28 16:44	13° \mathcal{B} 22'53	
	11043 Dec 23 18:45	30° $\mathcal{R}\Upsilon$		max. Earth dist.	11049 Apr 27 21:30	13° \mathcal{B} 21'07	31.26165 AU
direct	11044 Jan 03 05:55	29° Υ 58'16		morning rise	11049 May 13 22:36	13° \mathcal{B} 56'59	
	11044 Jan 13 12:38	0° \mathcal{B}			11049 Jun 14 15:27	15° \mathcal{B}	
evening set	11044 Apr 01 18:25	1° \mathcal{B} 53'06		retrograde	11049 Aug 09 14:02	15° \mathcal{B} 50'27	
					11049 Oct 07 07:33	15° $\mathcal{R}\mathcal{B}$	
conjunction	11044 Apr 17 08:42	2° \mathcal{B} 27'50	0°17'59	opposition	11049 Oct 27 11:00	14° \mathcal{B} 27'57	0°08'08
minimum elong	11044 Apr 17 08:42	2° \mathcal{B} 27'50	0°17'42	min. Earth dist.	11049 Oct 27 23:37	14° \mathcal{B} 27'06	29.25635 AU
max. Earth dist.	11044 Apr 16 18:03	2° \mathcal{B} 26'28	31.30057 AU	direct	11050 Jan 16 00:23	13° \mathcal{B} 03'54	
morning rise	11044 May 02 21:15	3° \mathcal{B} 02'25		evening set	11050 Apr 15 08:03	14° \mathcal{B} 58'42	
retrograde	11044 Jul 29 06:46	4° \mathcal{B} 55'23			11050 Apr 15 22:12	15° \mathcal{B}	
opposition	11044 Oct 15 23:43	3° \mathcal{B} 33'04	0°18'12				
min. Earth dist.	11044 Oct 16 12:36	3° \mathcal{B} 32'12	29.29808 AU	conjunction	11050 Apr 30 20:58	15° \mathcal{B} 33'25	0°06'44
direct	11045 Jan 04 15:48	2° \mathcal{B} 08'56		minimum elong	11050 Apr 30 20:59	15° \mathcal{B} 33'25	0°06'19
evening set	11045 Apr 04 04:43	4° \mathcal{B} 03'47		behind sun begin	11050 Apr 30 14:54	15° \mathcal{B} 32'52	
				behind sun end	11050 May 01 03:04	15° \mathcal{B} 33'58	
conjunction	11045 Apr 19 18:51	4° \mathcal{B} 38'30	0°16'09	max. Earth dist.	11050 Apr 30 08:47	15° \mathcal{B} 32'17	31.25077 AU
minimum elong	11045 Apr 19 18:51	4° \mathcal{B} 38'30	0°15'50	morning rise	11050 May 16 08:17	16° \mathcal{B} 08'01	
behind sun begin	11045 Apr 19 17:34	4° \mathcal{B} 38'23		retrograde	11050 Aug 12 00:46	18° \mathcal{B} 01'33	
behind sun end	11045 Apr 19 20:07	4° \mathcal{B} 38'37		opposition	11050 Oct 29 22:59	16° \mathcal{B} 39'00	0°06'05
max. Earth dist.	11045 Apr 19 05:18	4° \mathcal{B} 37'15	31.29507 AU	min. Earth dist.	11050 Oct 30 10:43	16° \mathcal{B} 38'12	29.24528 AU
morning rise	11045 May 05 07:01	5° \mathcal{B} 13'06		direct	11051 Jan 18 14:31	15° \mathcal{B} 14'55	
retrograde	11045 Jul 31 16:20	7° \mathcal{B} 06'11		evening set	11051 Apr 17 18:15	17° \mathcal{B} 09'42	
opposition	11045 Oct 18 11:26	5° \mathcal{B} 43'51	0°16'14				
min. Earth dist.	11045 Oct 19 01:06	5° \mathcal{B} 42'55	29.29211 AU	conjunction	11051 May 03 06:47	17° \mathcal{B} 44'24	0°04'49
direct	11046 Jan 07 02:01	4° \mathcal{B} 19'45		minimum elong	11051 May 03 06:47	17° \mathcal{B} 44'24	0°04'22
evening set	11046 Apr 06 15:08	6° \mathcal{B} 14'37		behind sun begin	11051 May 03 00:27	17° \mathcal{B} 43'50	
				behind sun end	11051 May 03 13:06	17° \mathcal{B} 44'58	
conjunction	11046 Apr 22 04:54	6° \mathcal{B} 49'20	0°14'18	max. Earth dist.	11051 May 02 18:15	17° \mathcal{B} 43'15	31.23984 AU
minimum elong	11046 Apr 22 04:53	6° \mathcal{B} 49'20	0°13'59	morning rise	11051 May 18 18:06	18° \mathcal{B} 19'01	

retrograde	11051 Aug 14 12:21	20° 8 12'38			11057 Apr 22 06:08	0° II	
opposition	11051 Nov 01 11:00	18° 8 50'00	0°04'01	evening set	11057 Apr 30 06:49	0° II 17'22	
min. Earth dist.	11051 Nov 01 22:02	18° 8 49'15	29.23475 AU				
direct	11052 Jan 21 01:25	17° 8 25'55		conjunction	11057 May 15 18:18	0° II 52'05	-0°06'59
evening set	11052 Apr 19 04:11	19° 8 20'41		minimum elong	11057 May 15 18:18	0° II 52'05	0°07'31
				behind sun begin	11057 May 15 12:27	0° II 51'33	
conjunction	11052 May 04 16:40	19° 8 55'23	0°02'52	behind sun end	11057 May 16 00:10	0° II 52'36	
minimum elong	11052 May 04 16:41	19° 8 55'23	0°02'26	max. Earth dist.	11057 May 15 10:35	0° II 51'22	31.19019 AU
behind sun begin	11052 May 04 10:15	19° 8 54'48		morning rise	11057 May 31 04:51	1° II 26'45	
behind sun end	11052 May 04 23:06	19° 8 55'57		retrograde	11057 Aug 27 04:44	3° II 21'05	
max. Earth dist.	11052 May 04 05:56	19° 8 54'23	31.22964 AU	opposition	11057 Nov 14 12:15	1° II 58'19	-0°08'27
morning rise	11052 May 20 03:42	20° 8 30'00		min. Earth dist.	11057 Nov 14 19:07	1° II 57'51	29.18620 AU
retrograde	11052 Aug 15 20:53	22° 8 23'42		direct	11058 Feb 02 19:44	0° II 34'28	
opposition	11052 Nov 02 23:05	21° 8 01'02	0°01'56	evening set	11058 May 02 17:07	2° II 29'14	
min. Earth dist.	11052 Nov 03 09:39	21° 8 00'19	29.22497 AU				
direct	11053 Jan 22 13:57	19° 8 36'58		conjunction	11058 May 18 04:19	3° II 03'57	-0°08'54
evening set	11053 Apr 21 14:22	21° 8 31'42		minimum elong	11058 May 18 04:18	3° II 03'57	0°09'26
				behind sun begin	11058 May 17 22:55	3° II 03'28	
conjunction	11053 May 07 02:30	22° 8 06'25	0°00'53	behind sun end	11058 May 18 09:42	3° II 04'26	
minimum elong	11053 May 07 02:29	22° 8 06'25	0°00'24	max. Earth dist.	11058 May 17 20:25	3° II 03'13	31.18197 AU
behind sun begin	11053 May 06 20:05	22° 8 05'50		morning rise	11058 Jun 02 14:49	3° II 38'38	
behind sun end	11053 May 07 08:52	22° 8 06'59		retrograde	11058 Aug 29 17:23	5° II 33'06	
max. Earth dist.	11053 May 06 15:28	22° 8 05'24	31.22047 AU	opposition	11058 Nov 17 00:55	4° II 10'18	-0°10'31
morning rise	11053 May 22 13:31	22° 8 41'02		min. Earth dist.	11058 Nov 17 08:07	4° II 09'49	29.17761 AU
retrograde	11053 Aug 18 08:03	24° 8 34'51		direct	11059 Feb 05 07:05	2° II 46'29	
desc. node	11053 Oct 12 09:37	23° 8 49'59		evening set	11059 May 05 03:25	4° II 41'14	
opposition	11053 Nov 05 11:03	23° 8 12'09	-0°00'09				
min. Earth dist.	11053 Nov 05 20:13	23° 8 11'32	29.21633 AU	conjunction	11059 May 20 14:36	5° II 15'57	-0°10'49
direct	11054 Jan 25 00:26	21° 8 48'07		minimum elong	11059 May 20 14:36	5° II 15'57	0°11'22
evening set	11054 Apr 24 00:24	23° 8 42'51		behind sun begin	11059 May 20 09:52	5° II 15'32	
				behind sun end	11059 May 20 19:19	5° II 16'23	
conjunction	11054 May 09 12:27	24° 8 17'34	-0°01'08	max. Earth dist.	11059 May 20 07:57	5° II 15'21	31.17280 AU
minimum elong	11054 May 09 12:27	24° 8 17'34	0°01'36	morning rise	11059 Jun 05 00:55	5° II 50'39	
behind sun begin	11054 May 09 06:01	24° 8 16'59		retrograde	11059 Sep 01 05:28	7° II 45'13	
behind sun end	11054 May 09 18:53	24° 8 18'08		opposition	11059 Nov 19 13:29	6° II 22'23	-0°12'34
max. Earth dist.	11054 May 09 03:02	24° 8 16'42	31.21227 AU	min. Earth dist.	11059 Nov 19 20:00	6° II 21'57	29.16776 AU
morning rise	11054 May 24 23:14	24° 8 52'12		direct	11060 Feb 07 20:48	4° II 58'35	
retrograde	11054 Aug 20 18:04	26° 8 46'08		evening set	11060 May 06 13:52	6° II 53'20	
opposition	11054 Nov 07 23:23	25° 8 23'25	-0°02'14				
min. Earth dist.	11054 Nov 08 08:42	25° 8 22'47	29.20853 AU	conjunction	11060 May 22 00:46	7° II 28'03	-0°12'43
direct	11055 Jan 27 10:59	23° 8 59'26		minimum elong	11060 May 22 00:46	7° II 28'03	0°13'16
evening set	11055 Apr 26 10:25	25° 8 54'10		behind sun begin	11060 May 21 20:57	7° II 27'43	
				behind sun end	11060 May 22 04:34	7° II 28'24	
conjunction	11055 May 11 22:11	26° 8 28'52	-0°03'06	max. Earth dist.	11060 May 21 17:21	7° II 27'22	31.16230 AU
minimum elong	11055 May 11 22:12	26° 8 28'52	0°03'37	morning rise	11060 Jun 06 11:13	8° II 02'45	
behind sun begin	11055 May 11 15:50	26° 8 28'18		retrograde	11060 Sep 02 17:56	9° II 57'27	
behind sun end	11055 May 12 04:34	26° 8 29'27		opposition	11060 Nov 21 02:09	8° II 34'33	-0°14'35
max. Earth dist.	11055 May 11 13:05	26° 8 28'02	31.20487 AU	min. Earth dist.	11060 Nov 21 08:23	8° II 34'07	29.15662 AU
morning rise	11055 May 27 08:59	27° 8 03'31		direct	11061 Feb 09 08:00	7° II 10'44	
retrograde	11055 Aug 23 05:31	28° 8 57'35		evening set	11061 May 09 00:11	9° II 05'27	
opposition	11055 Nov 10 11:34	27° 8 34'52	-0°04'18				
min. Earth dist.	11055 Nov 10 19:15	27° 8 34'21	29.20126 AU	conjunction	11061 May 24 11:07	9° II 40'11	-0°14'35
direct	11056 Jan 29 22:16	26° 8 10'55		minimum elong	11061 May 24 11:07	9° II 40'11	0°15'11
evening set	11056 Apr 27 20:35	28° 8 05'40		behind sun begin	11061 May 24 08:48	9° II 39'58	
				behind sun end	11061 May 24 13:26	9° II 40'24	
conjunction	11056 May 13 08:13	28° 8 40'23	-0°05'03	max. Earth dist.	11061 May 24 05:01	9° II 39'37	31.15042 AU
minimum elong	11056 May 13 08:12	28° 8 40'23	0°05'33	morning rise	11061 Jun 08 21:20	10° II 14'54	
behind sun begin	11056 May 13 02:01	28° 8 39'49		retrograde	11061 Sep 05 03:52	12° II 09'40	
behind sun end	11056 May 13 14:24	28° 8 40'56		opposition	11061 Nov 23 14:51	10° II 46'42	-0°16'36
max. Earth dist.	11056 May 12 23:47	28° 8 39'36	31.19759 AU	min. Earth dist.	11061 Nov 23 21:01	10° II 46'17	29.14407 AU
morning rise	11056 May 28 18:52	29° 8 15'02		direct	11062 Feb 11 21:31	9° II 22'52	
	11056 Jun 19 09:55	0° II		evening set	11062 May 11 10:38	11° II 17'33	
retrograde	11056 Aug 24 16:53	1° II 09'15					
	11056 Nov 03 16:17	30° R 8		conjunction	11062 May 26 21:17	11° II 52'17	-0°16'27
opposition	11056 Nov 11 23:51	29° 8 46'30	-0°06'23	minimum elong	11062 May 26 21:17	11° II 52'17	0°17'02
min. Earth dist.	11056 Nov 12 08:04	29° 8 45'57	29.19399 AU	max. Earth dist.	11062 May 26 14:42	11° II 51'40	31.13755 AU
direct	11057 Jan 31 08:01	28° 8 22'37		morning rise	11062 Jun 11 07:39	12° II 27'00	

retrograde	11062 Sep 07 16:07	14°II21'52		minimum elong	11069 Jun 10 20:37	27°II18'06	0°29'19
opposition	11062 Nov 26 03:33	12°II58'48	-0°18'34	max. Earth dist.	11069 Jun 10 19:29	27°II18'00	31.05926 AU
min. Earth dist.	11062 Nov 26 08:32	12°II58'28	29.13092 AU	morning rise	11069 Jun 26 07:08	27°II52'57	
direct	11063 Feb 14 09:23	11°II34'57		retrograde	11069 Sep 23 04:06	29°II48'44	
evening set	11063 May 13 20:43	13°II29'35		opposition	11069 Dec 11 21:12	28°II25'22	-0°31'32
				min. Earth dist.	11069 Dec 11 21:13	28°II25'22	29.05473 AU
conjunction	11063 May 29 07:24	14°II04'19	-0°18'17	direct	11070 Mar 01 16:37	27°II01'40	
minimum elong	11063 May 29 07:24	14°II04'19	0°18'53	evening set	11070 May 28 20:57	28°II56'19	
max. Earth dist.	11063 May 29 02:16	14°II03'51	31.12420 AU				
morning rise	11063 Jun 13 17:38	14°II39'04		conjunction	11070 Jun 13 07:11	29°II31'08	-0°30'16
retrograde	11063 Sep 10 02:11	16°II34'01		minimum elong	11070 Jun 13 07:11	29°II31'08	0°30'54
opposition	11063 Nov 28 16:20	15°II10'52	-0°20'32	max. Earth dist.	11070 Jun 13 07:39	29°II31'10	31.04990 AU
min. Earth dist.	11063 Nov 28 21:33	15°II10'31	29.11766 AU		11070 Jun 26 00:58	0°00'00	
direct	11064 Feb 16 21:14	13°II46'59		morning rise	11070 Jun 28 17:35	0°00'00'00	
evening set	11064 May 15 07:02	15°II41'35		retrograde	11070 Sep 25 15:47	2°00'01'55	
				opposition	11070 Dec 14 10:20	0°00'38'32	-0°33'14
conjunction	11064 May 30 17:33	16°II16'19	-0°20'06	min. Earth dist.	11070 Dec 14 10:05	0°00'38'33	29.04513 AU
minimum elong	11064 May 30 17:33	16°II16'19	0°20'41		11071 Jan 07 21:06	30°00'00'00	
max. Earth dist.	11064 May 30 12:48	16°II15'53	31.11124 AU	direct	11071 Mar 04 06:07	29°II14'53	
morning rise	11064 Jun 15 03:52	16°II51'04			11071 Apr 26 00:30	0°00'00	
retrograde	11064 Sep 11 13:27	18°II46'08		evening set	11071 May 31 07:31	1°00'09'32	
opposition	11064 Nov 30 04:50	17°II22'55	-0°22'27				
min. Earth dist.	11064 Nov 30 08:16	17°II22'41	29.10506 AU	conjunction	11071 Jun 15 17:37	1°00'44'22	-0°31'50
direct	11065 Feb 18 08:51	15°II59'01		minimum elong	11071 Jun 15 17:37	1°00'44'22	0°32'29
evening set	11065 May 17 17:19	17°II53'36		max. Earth dist.	11071 Jun 15 17:37	1°00'44'22	31.04003 AU
				morning rise	11071 Jul 01 04:16	2°00'19'15	
conjunction	11065 Jun 02 03:44	18°II28'21	-0°21'52	retrograde	11071 Sep 28 05:55	4°00'15'19	
minimum elong	11065 Jun 02 03:44	18°II28'21	0°22'29	opposition	11071 Dec 16 23:25	2°00'51'53	-0°34'52
max. Earth dist.	11065 Jun 01 23:51	18°II27'59	31.09902 AU	min. Earth dist.	11071 Dec 16 22:09	2°00'51'58	29.03483 AU
morning rise	11065 Jun 17 14:01	19°II03'07		direct	11072 Mar 05 18:33	1°00'28'15	
retrograde	11065 Sep 14 00:43	20°II58'18		evening set	11072 Jun 01 18:12	3°00'22'54	
opposition	11065 Dec 02 17:42	19°II35'01	-0°24'20				
min. Earth dist.	11065 Dec 02 21:13	19°II34'47	29.09345 AU	conjunction	11072 Jun 17 04:24	3°00'57'45	-0°33'20
direct	11066 Feb 20 18:46	18°II11'09		minimum elong	11072 Jun 17 04:24	3°00'57'45	0°33'58
evening set	11066 May 20 03:26	20°II05'43		max. Earth dist.	11072 Jun 17 05:24	3°00'57'51	31.02907 AU
				morning rise	11072 Jul 02 15:00	4°00'32'40	
conjunction	11066 Jun 04 13:50	20°II40'29	-0°23'38	retrograde	11072 Sep 29 16:52	6°00'28'52	
minimum elong	11066 Jun 04 13:50	20°II40'29	0°24'14	opposition	11072 Dec 18 12:33	5°00'05'23	-0°36'28
max. Earth dist.	11066 Jun 04 11:11	20°II40'14	31.08800 AU	min. Earth dist.	11072 Dec 18 11:51	5°00'05'26	29.02331 AU
morning rise	11066 Jun 20 00:05	21°II15'16		direct	11073 Mar 08 06:51	3°00'41'45	
retrograde	11066 Sep 16 12:44	23°II10'36		evening set	11073 Jun 04 04:59	5°00'36'23	
opposition	11066 Dec 05 06:30	21°II47'17	-0°26'12				
min. Earth dist.	11066 Dec 05 08:08	21°II47'10	29.08286 AU	conjunction	11073 Jun 19 15:08	6°00'11'15	-0°34'48
direct	11067 Feb 23 06:19	20°II23'26		minimum elong	11073 Jun 19 15:08	6°00'11'15	0°35'27
evening set	11067 May 22 13:47	22°II18'01		max. Earth dist.	11073 Jun 19 16:10	6°00'11'21	31.01705 AU
				morning rise	11073 Jul 05 01:54	6°00'46'11	
conjunction	11067 Jun 07 00:01	22°II52'48	-0°25'21	retrograde	11073 Oct 02 04:28	8°00'42'28	
minimum elong	11067 Jun 07 00:01	22°II52'48	0°25'59	opposition	11073 Dec 21 01:44	7°00'18'55	-0°38'00
max. Earth dist.	11067 Jun 06 21:32	22°II52'34	31.07786 AU	min. Earth dist.	11073 Dec 20 23:37	7°00'19'04	29.01068 AU
morning rise	11067 Jun 22 10:25	23°II27'36		direct	11074 Mar 10 19:13	5°00'55'16	
retrograde	11067 Sep 19 01:55	25°II23'05		evening set	11074 Jun 06 15:36	7°00'49'52	
opposition	11067 Dec 07 19:19	23°II59'44	-0°28'01				
min. Earth dist.	11067 Dec 07 20:57	23°II59'38	29.07321 AU	conjunction	11074 Jun 22 01:47	8°00'24'44	-0°36'13
direct	11068 Feb 25 17:05	22°II35'56		minimum elong	11074 Jun 22 01:46	8°00'24'44	0°36'51
evening set	11068 May 24 00:01	24°II30'33		max. Earth dist.	11074 Jun 22 03:13	8°00'24'52	31.00386 AU
				morning rise	11074 Jul 07 12:40	8°00'59'41	
conjunction	11068 Jun 08 10:23	25°II05'20	-0°27'02	retrograde	11074 Oct 04 15:48	10°00'56'05	
minimum elong	11068 Jun 08 10:23	25°II05'20	0°27'39	opposition	11074 Dec 23 15:04	9°00'32'25	-0°39'29
max. Earth dist.	11068 Jun 08 09:36	25°II05'16	31.06848 AU	min. Earth dist.	11074 Dec 23 13:29	9°00'32'32	28.99718 AU
morning rise	11068 Jun 23 20:42	25°II40'09		direct	11075 Mar 13 06:02	8°00'08'44	
retrograde	11068 Sep 20 14:51	27°II35'47		evening set	11075 Jun 09 02:13	10°00'03'17	
opposition	11068 Dec 09 08:12	26°II12'25	-0°29'48				
min. Earth dist.	11068 Dec 09 08:45	26°II12'23	29.06389 AU	conjunction	11075 Jun 24 12:32	10°00'38'09	-0°37'34
direct	11069 Feb 27 06:08	24°II48'41		minimum elong	11075 Jun 24 12:32	10°00'38'09	0°38'13
evening set	11069 May 26 10:30	26°II43'18		max. Earth dist.	11075 Jun 24 14:57	10°00'38'23	30.99023 AU
				morning rise	11075 Jul 09 23:31	11°00'13'08	
conjunction	11069 Jun 10 20:37	27°II18'07	-0°28'40	retrograde	11075 Oct 07 03:36	13°00'09'36	

opposition	11075 Dec 26 04:01	11°☾45'50 -0°40'54	max. Earth dist.	11082 Jul 09 23:44	26°☾12'50 30.91831 AU
min. Earth dist.	11075 Dec 26 00:51	11°☾46'03 28.98348 AU	morning rise	11082 Jul 25 04:14	26°☾47'14
direct	11076 Mar 14 18:26	10°☾22'06	retrograde	11082 Oct 22 21:52	28°☾44'28
evening set	11076 Jun 10 12:56	12°☾16'36	opposition	11083 Jan 11 00:08	27°☾20'20 -0°49'04
			min. Earth dist.	11083 Jan 10 15:32	27°☾20'55 28.91486 AU
conjunction	11076 Jun 25 23:10	12°☾51'29 -0°38'52	direct	11083 Mar 31 06:02	25°☾56'40
minimum elong	11076 Jun 25 23:10	12°☾51'29 0°39'30	evening set	11083 Jun 26 16:11	27°☾51'07
max. Earth dist.	11076 Jun 26 01:36	12°☾51'43 30.97667 AU			
morning rise	11076 Jul 11 10:24	13°☾26'29	conjunction	11083 Jul 12 03:10	28°☾26'08 -0°46'17
retrograde	11076 Oct 08 16:03	15°☾23'02	minimum elong	11083 Jul 12 03:10	28°☾26'08 0°46'53
opposition	11076 Dec 27 17:13	13°☾59'09 -0°42'16	max. Earth dist.	11083 Jul 12 11:21	28°☾26'54 30.91093 AU
min. Earth dist.	11076 Dec 27 14:03	13°☾59'22 28.97037 AU	morning rise	11083 Jul 27 15:40	29°☾01'17
direct	11077 Mar 17 05:22	12°☾35'23		11083 Aug 25 09:18	0°♂
evening set	11077 Jun 12 23:26	14°☾29'50	retrograde	11083 Oct 25 10:27	0°♂58'39
				11083 Dec 28 20:01	30°♂☾
conjunction	11077 Jun 28 09:52	15°☾04'44 -0°40'07	opposition	11084 Jan 13 13:24	29°☾34'30 -0°49'57
minimum elong	11077 Jun 28 09:52	15°☾04'44 0°40'45	min. Earth dist.	11084 Jan 13 05:29	29°☾35'03 28.90742 AU
max. Earth dist.	11077 Jun 28 14:10	15°☾05'09 30.96398 AU	direct	11084 Apr 01 16:52	28°☾10'53
morning rise	11077 Jul 13 21:04	15°☾39'44		11084 Jun 25 17:17	0°♂
retrograde	11077 Oct 11 04:07	17°☾36'23	evening set	11084 Jun 28 03:20	0°♂05'21
opposition	11077 Dec 30 06:19	16°☾12'26 -0°43'34			
min. Earth dist.	11077 Dec 30 01:47	16°☾12'45 28.95823 AU	conjunction	11084 Jul 13 14:33	0°♂40'23 -0°47'05
direct	11078 Mar 19 17:49	14°☾48'38	minimum elong	11084 Jul 13 14:33	0°♂40'23 0°47'39
evening set	11078 Jun 15 10:10	16°☾43'04	max. Earth dist.	11084 Jul 13 23:28	0°♂41'14 30.90323 AU
			morning rise	11084 Jul 29 03:12	1°♂15'34
conjunction	11078 Jun 30 20:30	17°☾17'59 -0°41'18	retrograde	11084 Oct 26 23:09	3°♂13'03
minimum elong	11078 Jun 30 20:30	17°☾17'59 0°41'55	opposition	11085 Jan 15 02:42	1°♂48'53 -0°50'46
max. Earth dist.	11078 Jul 01 00:40	17°☾18'22 30.95254 AU	min. Earth dist.	11085 Jan 14 17:26	1°♂49'32 28.89928 AU
morning rise	11078 Jul 16 08:02	17°☾53'00	direct	11085 Apr 04 05:22	0°♂25'17
retrograde	11078 Oct 13 17:44	19°☾49'46	evening set	11085 Jun 30 14:35	2°♂19'46
opposition	11079 Jan 01 19:27	18°☾25'44 -0°44'48			
min. Earth dist.	11079 Jan 01 14:08	18°☾26'06 28.94759 AU	conjunction	11085 Jul 16 01:49	2°♂54'48 -0°47'48
direct	11079 Mar 22 04:13	17°☾01'56	minimum elong	11085 Jul 16 01:49	2°♂54'48 0°48'23
evening set	11079 Jun 17 20:43	18°☾56'21	max. Earth dist.	11085 Jul 16 10:17	2°♂55'37 30.89459 AU
			morning rise	11085 Jul 31 14:49	3°♂30'02
conjunction	11079 Jul 03 07:20	19°☾31'17 -0°42'25	retrograde	11085 Oct 29 11:56	5°♂27'38
minimum elong	11079 Jul 03 07:19	19°☾31'17 0°43'03	opposition	11086 Jan 17 16:14	4°♂03'25 -0°51'30
max. Earth dist.	11079 Jul 03 13:22	19°☾31'51 30.94248 AU	min. Earth dist.	11086 Jan 17 07:27	4°♂04'01 28.89024 AU
morning rise	11079 Jul 18 18:54	20°☾06'20	direct	11086 Apr 06 16:03	2°♂39'49
retrograde	11079 Oct 16 06:11	22°☾03'12	evening set	11086 Jul 03 01:48	4°♂34'17
opposition	11080 Jan 04 08:34	20°☾39'07 -0°45'58			
min. Earth dist.	11080 Jan 04 02:37	20°☾39'32 28.93810 AU	conjunction	11086 Jul 18 13:24	5°♂09'21 -0°48'27
direct	11080 Mar 23 17:38	19°☾15'20	minimum elong	11086 Jul 18 13:24	5°♂09'21 0°49'01
evening set	11080 Jun 19 07:31	21°☾09'46	max. Earth dist.	11086 Jul 18 23:08	5°♂10'16 30.88509 AU
			morning rise	11086 Aug 03 02:30	5°♂44'35
conjunction	11080 Jul 04 18:05	21°☾44'42 -0°43'29	retrograde	11086 Nov 01 00:18	7°♂42'16
minimum elong	11080 Jul 04 18:05	21°☾44'42 0°44'06	opposition	11087 Jan 20 05:31	6°♂18'00 -0°52'10
max. Earth dist.	11080 Jul 04 23:59	21°☾45'16 30.93363 AU	min. Earth dist.	11087 Jan 19 19:56	6°♂18'40 28.88027 AU
morning rise	11080 Jul 20 05:59	22°☾19'47	direct	11087 Apr 09 04:10	4°♂54'23
retrograde	11080 Oct 17 20:50	24°☾16'45	evening set	11087 Jul 05 13:06	6°♂48'49
opposition	11081 Jan 05 21:34	22°☾52'39 -0°47'04			
min. Earth dist.	11081 Jan 05 14:18	22°☾53'09 28.92976 AU	conjunction	11087 Jul 21 00:45	7°♂23'54 -0°49'02
direct	11081 Mar 26 05:38	21°☾28'54	minimum elong	11087 Jul 21 00:46	7°♂23'54 0°49'35
evening set	11081 Jun 21 18:18	23°☾23'20	max. Earth dist.	11087 Jul 21 09:50	7°♂24'46 30.87489 AU
			morning rise	11087 Aug 05 14:20	7°♂59'10
conjunction	11081 Jul 07 05:04	23°☾58'18 -0°44'29	retrograde	11087 Nov 03 14:19	9°♂56'56
minimum elong	11081 Jul 07 05:04	23°☾58'18 0°45'06	opposition	11088 Jan 22 18:51	8°♂32'35 -0°52'44
max. Earth dist.	11081 Jul 07 12:24	23°☾59'00 30.92564 AU	min. Earth dist.	11088 Jan 22 09:04	8°♂33'15 28.86999 AU
morning rise	11081 Jul 22 17:03	24°☾33'24	direct	11088 Apr 10 14:48	7°♂08'55
retrograde	11081 Oct 20 08:36	26°☾30'30	evening set	11088 Jul 07 00:16	9°♂03'20
opposition	11082 Jan 08 10:54	25°☾06'23 -0°48'06			
min. Earth dist.	11082 Jan 08 03:48	25°☾06'52 28.92211 AU	conjunction	11088 Jul 22 12:16	9°♂38'26 -0°49'32
direct	11082 Mar 28 17:40	23°☾42'40	minimum elong	11088 Jul 22 12:16	9°♂38'26 0°50'04
evening set	11082 Jun 24 05:07	25°☾37'07	max. Earth dist.	11088 Jul 22 22:54	9°♂39'26 30.86456 AU
			morning rise	11088 Aug 07 01:56	10°♂13'43
conjunction	11082 Jul 09 15:59	26°☾12'06 -0°45'25	retrograde	11088 Nov 05 03:06	12°♂11'33
minimum elong	11082 Jul 09 15:59	26°☾12'06 0°46'01	opposition	11089 Jan 24 08:01	10°♂47'07 -0°53'15

min. Earth dist.	11089 Jan 23 21:50	10° Ω 47'49	28.85986 AU	conjunction	11095 Aug 07 21:46	25° Ω 21'09	-0°50'57
direct	11089 Apr 13 04:29	9° Ω 23'26		minimum elong	11095 Aug 07 21:46	25° Ω 21'09	0°51'23
evening set	11089 Jul 09 11:35	11° Ω 17'49		max. Earth dist.	11095 Aug 08 12:51	25° Ω 22'35	30.82242 AU
				morning rise	11095 Aug 23 13:38	25° Ω 56'37	
conjunction	11089 Jul 24 23:40	11° Ω 52'56	-0°49'58	retrograde	11095 Nov 21 23:33	27° Ω 54'58	
minimum elong	11089 Jul 24 23:40	11° Ω 52'56	0°50'30	opposition	11096 Feb 10 04:11	26° Ω 30'18	-0°54'27
max. Earth dist.	11089 Jul 25 10:04	11° Ω 53'55	30.85492 AU	min. Earth dist.	11096 Feb 09 13:42	26° Ω 31'19	28.82121 AU
morning rise	11089 Aug 09 13:45	12° Ω 28'14		direct	11096 Apr 28 16:55	25° Ω 06'43	
retrograde	11089 Nov 07 18:05	14° Ω 26'08		evening set	11096 Jul 24 19:51	27° Ω 01'03	
opposition	11090 Jan 26 21:15	13° Ω 01'37	-0°53'40				
min. Earth dist.	11090 Jan 26 09:49	13° Ω 02'24	28.85080 AU	conjunction	11096 Aug 09 09:45	27° Ω 36'20	-0°50'50
direct	11090 Apr 15 16:35	11° Ω 37'55		minimum elong	11096 Aug 09 09:45	27° Ω 36'20	0°51'14
evening set	11090 Jul 11 22:43	13° Ω 32'16		max. Earth dist.	11096 Aug 10 00:01	27° Ω 37'41	30.81928 AU
				morning rise	11096 Aug 25 02:05	28° Ω 11'50	
conjunction	11090 Jul 27 11:07	14° Ω 07'25	-0°50'20		11096 Oct 29 15:20	0° Υ	
minimum elong	11090 Jul 27 11:07	14° Ω 07'25	0°50'49	retrograde	11096 Nov 23 13:36	0° Υ 10'15	
max. Earth dist.	11090 Jul 27 22:57	14° Ω 08'32	30.84636 AU		11096 Dec 18 21:46	30° Υ Ω	
morning rise	11090 Aug 12 01:25	14° Ω 42'45		opposition	11097 Feb 11 17:26	28° Ω 45'35	-0°54'18
	11090 Aug 19 22:37	15° Ω		min. Earth dist.	11097 Feb 11 03:07	28° Ω 46'34	28.81792 AU
retrograde	11090 Nov 10 06:06	16° Ω 40'43		direct	11097 May 01 03:37	27° Ω 22'00	
opposition	11091 Jan 29 10:31	15° Ω 16'09	-0°54'00	evening set	11097 Jul 27 07:43	29° Ω 16'20	
min. Earth dist.	11091 Jan 28 23:10	15° Ω 16'56	28.84294 AU				
	11091 Feb 08 05:36	15° Υ Ω		conjunction	11097 Aug 11 22:04	29° Ω 51'38	-0°50'39
direct	11091 Apr 18 04:42	13° Ω 52'26		minimum elong	11097 Aug 11 22:04	29° Ω 51'38	0°51'02
	11091 Jun 22 00:51	15° Ω		max. Earth dist.	11097 Aug 12 13:28	29° Ω 53'06	30.81556 AU
evening set	11091 Jul 14 10:05	15° Ω 46'47			11097 Aug 15 14:01	0° Υ	
				morning rise	11097 Aug 27 14:35	0° Υ 27'09	
conjunction	11091 Jul 29 22:43	16° Ω 21'57	-0°50'37	retrograde	11097 Nov 26 02:07	2° Υ 25'38	
minimum elong	11091 Jul 29 22:43	16° Ω 21'57	0°51'06	opposition	11098 Feb 14 06:43	1° Υ 00'56	-0°54'03
max. Earth dist.	11091 Jul 30 10:57	16° Ω 23'06	30.83928 AU	min. Earth dist.	11098 Feb 13 16:23	1° Υ 01'56	28.81373 AU
morning rise	11091 Aug 14 13:22	16° Ω 57'18			11098 Mar 27 05:52	30° Υ Ω	
retrograde	11091 Nov 12 20:26	18° Ω 55'20		direct	11098 May 03 16:23	29° Ω 37'22	
opposition	11092 Jan 31 23:28	17° Ω 30'43	-0°54'16		11098 Jun 09 04:24	0° Υ	
min. Earth dist.	11092 Jan 31 10:33	17° Ω 31'37	28.83653 AU	evening set	11098 Jul 29 19:43	1° Υ 31'41	
direct	11092 Apr 19 17:59	16° Ω 07'01					
evening set	11092 Jul 15 21:30	18° Ω 01'22		conjunction	11098 Aug 14 10:17	2° Υ 06'59	-0°50'23
				minimum elong	11098 Aug 14 10:17	2° Υ 06'59	0°50'44
conjunction	11092 Jul 31 10:21	18° Ω 36'33	-0°50'49	max. Earth dist.	11098 Aug 15 00:43	2° Υ 08'22	30.81097 AU
minimum elong	11092 Jul 31 10:21	18° Ω 36'33	0°51'17	morning rise	11098 Aug 30 03:19	2° Υ 42'32	
max. Earth dist.	11092 Jul 31 23:11	18° Ω 37'46	30.83346 AU	retrograde	11098 Nov 28 17:00	4° Υ 41'03	
morning rise	11092 Aug 16 01:19	19° Ω 11'56		opposition	11099 Feb 16 19:57	3° Υ 16'18	-0°53'43
retrograde	11092 Nov 14 09:57	21° Ω 10'03		min. Earth dist.	11099 Feb 16 05:09	3° Υ 17'20	28.80863 AU
opposition	11093 Feb 02 12:44	19° Ω 45'24	-0°54'26	direct	11099 May 06 03:58	1° Υ 52'42	
min. Earth dist.	11093 Feb 02 00:12	19° Ω 46'16	28.83143 AU	evening set	11099 Aug 01 07:45	3° Υ 46'59	
direct	11093 Apr 22 05:49	18° Ω 21'44					
evening set	11093 Jul 18 08:46	20° Ω 16'03		conjunction	11099 Aug 16 22:44	4° Υ 22'20	-0°50'02
				minimum elong	11099 Aug 16 22:44	4° Υ 22'20	0°50'22
conjunction	11093 Aug 02 21:58	20° Ω 51'16	-0°50'56	max. Earth dist.	11099 Aug 17 13:52	4° Υ 23'46	30.80535 AU
minimum elong	11093 Aug 02 21:58	20° Ω 51'16	0°51'24	morning rise	11099 Sep 01 16:02	4° Υ 57'54	
max. Earth dist.	11093 Aug 03 11:53	20° Ω 52'35	30.82901 AU	retrograde	11099 Dec 01 05:31	6° Υ 56'25	
morning rise	11093 Aug 18 13:11	21° Ω 26'41		opposition	11100 Feb 19 09:00	5° Υ 31'37	-0°53'18
retrograde	11093 Nov 16 22:20	23° Ω 24'52		min. Earth dist.	11100 Feb 18 18:54	5° Υ 32'35	28.80268 AU
min. Earth dist.	11094 Feb 04 11:44	22° Ω 01'12	28.82743 AU	direct	11100 May 08 16:24	4° Υ 07'58	
opposition	11094 Feb 05 01:53	22° Ω 00'13	-0°54'32	evening set	11100 Aug 03 19:46	6° Υ 02'13	
direct	11094 Apr 24 18:36	20° Ω 36'34					
evening set	11094 Jul 20 20:24	22° Ω 30'54		conjunction	11100 Aug 19 11:04	6° Υ 37'35	-0°49'37
				minimum elong	11100 Aug 19 11:04	6° Υ 37'35	0°49'56
conjunction	11094 Aug 05 09:44	23° Ω 06'07	-0°50'59	max. Earth dist.	11100 Aug 20 02:04	6° Υ 39'00	30.79937 AU
minimum elong	11094 Aug 05 09:45	23° Ω 06'07	0°51'25	morning rise	11100 Sep 04 04:47	7° Υ 13'10	
max. Earth dist.	11094 Aug 05 23:28	23° Ω 07'26	30.82542 AU	retrograde	11100 Dec 03 20:36	9° Υ 11'41	
morning rise	11094 Aug 21 01:25	23° Ω 41'34		opposition	11101 Feb 21 22:02	7° Υ 46'49	-0°52'49
retrograde	11094 Nov 19 10:58	25° Ω 39'50		min. Earth dist.	11101 Feb 21 06:51	7° Υ 47'52	28.79668 AU
opposition	11095 Feb 07 15:04	24° Ω 15'11	-0°54'32	direct	11101 May 11 06:06	6° Υ 23'08	
min. Earth dist.	11095 Feb 07 01:22	24° Ω 16'08	28.82426 AU	evening set	11101 Aug 06 07:39	8° Υ 17'21	
direct	11095 Apr 27 04:59	22° Ω 51'34					
evening set	11095 Jul 23 07:58	24° Ω 45'54		conjunction	11101 Aug 21 23:15	8° Υ 52'44	-0°49'07
				minimum elong	11101 Aug 21 23:15	8° Υ 52'44	0°49'25

max. Earth dist.	11101 Aug 22 14:39	8° 10 54'11	30.79347 AU
morning rise	11101 Sep 06 17:21	9° 10 28'21	
retrograde	11101 Dec 06 09:49	11° 10 26'53	