

































































































































superior conj	4100 Apr 26 17:33	7°828'32	-1°04'23	morning set	4101 Mar 30 04:42	0°951'56	
minimum elong	4100 Apr 26 21:00	7°845'51	1°03'47	max. Earth dist.	4101 Apr 02 21:37	7°924'42	1.37952 AU
asc. node	4100 May 03 08:50	21°800'07					
evening rise	4100 May 04 18:14	23°850'41		superior conj	4101 Apr 09 22:34	20°929'36	-1°31'36
	4100 May 07 19:49	0°II		minimum elong	4101 Apr 10 03:11	20°951'42	1°31'00
evening max el	4100 May 22 12:28	22°II44'47	20°01'38		4101 Apr 14 19:42	0°8	
retrograde	4100 Jun 01 21:06	27°II47'52		evening rise	4101 Apr 18 17:59	7°846'19	
evening set	4100 Jun 03 19:56	27°II37'53		asc. node	4101 Apr 20 05:54	10°842'49	
desc. node	4100 Jun 09 08:03	25°II38'00			4101 May 01 09:14	0°II	
inferior conj	4100 Jun 12 19:57	23°II37'59	-1°02'16	evening max el	4101 May 05 07:43	4°II37'18	19°03'43
minimum elong	4100 Jun 12 17:03	23°II42'21	1°01'11	retrograde	4101 May 14 01:05	8°II52'39	
min. Earth dist.	4100 Jun 14 17:13	22°II30'02	0.55239 AU	evening set	4101 May 16 02:33	8°II39'22	
morning rise	4100 Jun 21 12:27	19°II17'10		inferior conj	4101 May 24 08:14	4°II25'58	0°49'41
direct	4100 Jun 25 16:03	18°II39'37		minimum elong	4101 May 24 10:10	4°II22'36	0°48'59
morning max el	4100 Jul 09 09:25	25°II24'46	24°04'42	desc. node	4101 May 27 05:06	2°II27'25	
	4100 Jul 13 16:38	0°☾		min. Earth dist.	4101 May 27 08:37	2°II21'34	0.56534 AU
asc. node	4100 Jul 30 08:06	26°☾49'07			4101 May 31 10:17	30°R8	
	4100 Jul 31 21:46	0°♂		morning rise	4101 Jun 01 14:34	29°829'24	
morning set	4100 Aug 03 00:05	4°♂22'19		direct	4101 Jun 06 17:10	28°828'01	
					4101 Jun 13 00:23	0°II	
superior conj	4100 Aug 09 23:34	19°♂26'39	1°31'12	morning max el	4101 Jun 20 23:48	5°II49'02	25°42'37
minimum elong	4100 Aug 09 21:31	19°♂15'34	1°31'00		4101 Jul 08 14:25	0°☾	
max. Earth dist.	4100 Aug 12 00:47	23°♂51'55	1.33118 AU	asc. node	4101 Jul 17 05:09	16°☾35'04	
	4100 Aug 14 22:26	0°♍		morning set	4101 Jul 18 11:32	19°☾14'30	
evening rise	4100 Aug 17 09:04	5°♍00'48			4101 Jul 23 10:47	0°♂	
	4100 Aug 31 02:24	0°♎					
desc. node	4100 Sep 05 07:21	8°♎02'04		superior conj	4101 Jul 25 10:16	4°♂20'58	1°16'41
evening max el	4100 Sep 19 22:50	26°♎00'59	27°26'05	minimum elong	4101 Jul 25 07:56	4°♂08'08	1°16'20
	4100 Sep 24 18:23	0°♏		max. Earth dist.	4101 Jul 26 08:33	6°♂23'15	1.32365 AU
retrograde	4100 Oct 03 13:42	3°♏18'07		evening rise	4101 Aug 01 11:03	19°♂28'18	
evening set	4100 Oct 10 17:10	0°♏40'26			4101 Aug 06 17:35	0°♍	
	4100 Oct 11 14:07	30°R♎		desc. node	4101 Aug 23 04:23	26°♍57'34	
min. Earth dist.	4100 Oct 14 09:37	27°♎26'17	0.63728 AU		4101 Aug 25 11:48	0°♎	
inferior conj	4100 Oct 16 23:20	24°♎48'51	-2°59'29	evening max el	4101 Sep 02 06:37	8°♎41'55	27°16'26
minimum elong	4100 Oct 17 04:20	24°♎36'02	2°57'44	retrograde	4101 Sep 16 02:37	15°♎56'13	
morning rise	4100 Oct 23 16:52	19°♎29'52		evening set	4101 Sep 23 06:20	13°♎33'58	
direct	4100 Oct 26 04:22	18°♎59'45		min. Earth dist.	4101 Sep 26 21:01	10°♎45'55	0.61869 AU
asc. node	4100 Oct 26 07:19	18°♎59'49		inferior conj	4101 Sep 29 21:32	8°♎01'37	-3°57'26
morning max el	4100 Nov 01 17:41	22°♎24'48	17°51'38	minimum elong	4101 Sep 30 03:30	7°♎48'03	3°55'48
	4100 Nov 07 15:18	0°♏		morning rise	4101 Oct 07 02:27	3°♎01'59	
morning set	4100 Nov 18 09:02	17°♏55'31		direct	4101 Oct 09 11:02	2°♎38'08	
	4100 Nov 25 10:35	0°♐		asc. node	4101 Oct 13 04:23	3°♎39'44	
				morning max el	4101 Oct 16 09:14	6°♎07'56	17°53'32
superior conj	4100 Nov 30 21:03	9°♐02'02	0°09'43		4101 Oct 31 16:50	0°♏	
minimum elong	4100 Nov 30 22:07	9°♐06'21	0°09'34	morning set	4101 Nov 01 05:51	0°♏58'59	
behind sun begin	4100 Nov 30 14:10	8°♐33'48					
behind sun end	4100 Dec 01 06:03	9°♐38'52		superior conj	4101 Nov 11 23:18	20°♏02'55	0°48'57
desc. node	4100 Dec 02 06:38	11°♐19'10		minimum elong	4101 Nov 12 03:10	20°♏19'35	0°48'26
max. Earth dist.	4100 Dec 06 17:48	18°♐30'38	1.44333 AU		4101 Nov 17 20:55	0°♐	
	4100 Dec 14 01:15	0°♑		desc. node	4101 Nov 19 03:40	2°♐06'28	
evening rise	4100 Dec 16 15:39	4°♑00'59		max. Earth dist.	4101 Nov 19 07:46	2°♐23'14	1.42908 AU
	4101 Jan 03 01:11	0°♒		evening rise	4101 Nov 26 05:17	13°♐25'40	
evening max el	4101 Jan 14 02:52	14°♒08'11	20°38'39		4101 Dec 07 02:27	0°♑	
retrograde	4101 Jan 22 07:02	18°♒57'29		evening max el	4101 Dec 27 23:07	27°♑41'36	21°51'22
asc. node	4101 Jan 22 06:36	18°♒57'29			4101 Dec 30 10:24	0°♒	
evening set	4101 Jan 26 05:38	17°♒28'12		retrograde	4102 Jan 06 04:15	3°♒10'30	
inferior conj	4101 Jan 31 14:21	11°♒18'51	2°44'41	asc. node	4102 Jan 09 03:39	2°♒22'52	
minimum elong	4101 Jan 31 11:53	11°♒27'17	2°44'02	evening set	4102 Jan 10 13:24	1°♒25'46	
min. Earth dist.	4101 Feb 01 04:11	10°♒31'30	0.67538 AU		4102 Jan 12 01:54	30°R♑	
morning rise	4101 Feb 05 17:58	5°♒05'15		inferior conj	4102 Jan 15 21:39	25°♑07'11	2°07'33
direct	4101 Feb 11 06:43	2°♒38'04		minimum elong	4102 Jan 15 19:18	25°♑15'21	2°06'46
morning max el	4101 Feb 22 09:37	9°♒16'25	24°14'06	min. Earth dist.	4102 Jan 15 23:32	25°♑00'41	0.67950 AU
desc. node	4101 Feb 28 05:54	15°♒52'11		morning rise	4102 Jan 21 01:03	18°♑55'35	
	4101 Mar 10 17:54	0°♒		direct	4102 Jan 25 23:03	16°♑49'31	
	4101 Mar 29 16:42	0°♓		morning max el	4102 Feb 04 19:32	22°♑39'27	22°44'59

	4102 Feb 11 05:06	0°♊	morning set	4103 Feb 18 16:14	20°♊03'40	
desc. node	4102 Feb 15 02:55	5°♊06'09		4103 Feb 24 20:43	0°♊	
	4102 Mar 04 02:26	0°♊	max. Earth dist.	4103 Feb 25 17:57	1°♊27'01	1.42195 AU
morning set	4102 Mar 11 00:52	11°♊08'29				
max. Earth dist.	4102 Mar 15 16:59	18°♊59'05	1.40130 AU	superior conj	4103 Mar 05 03:45	13°♊55'01 -2°06'32
	4102 Mar 21 23:43	0°♋	minimum elong	4103 Mar 05 05:36	14°♊02'57	2°06'29
				4103 Mar 14 05:49	0°♋	
superior conj	4102 Mar 23 11:40	2°♋42'36	-1°53'47	evening rise	4103 Mar 16 09:15	3°♋53'05
minimum elong	4102 Mar 23 16:09	3°♋02'58	1°53'26	asc. node	4103 Mar 24 23:59	19°♋07'47
evening rise	4102 Apr 02 08:17	21°♋10'23			4103 Apr 01 21:32	0°♌
asc. node	4102 Apr 07 02:57	0°♌07'44		evening max el	4103 Apr 01 22:27	0°♌02'15 18°08'28
	4102 Apr 07 01:15	0°♌		retrograde	4103 Apr 08 15:53	3°♌27'14
evening max el	4102 Apr 18 12:15	17°♌06'41	18°26'10	evening set	4103 Apr 11 06:33	2°♌56'44
retrograde	4102 Apr 25 23:44	20°♌48'34			4103 Apr 15 20:02	30°♌♋
evening set	4102 Apr 28 07:49	20°♌27'58		inferior conj	4103 Apr 17 23:43	28°♋03'05 3°06'00
inferior conj	4102 May 05 17:49	15°♌55'11	2°13'43	minimum elong	4103 Apr 18 02:37	27°♋56'15 3°05'29
minimum elong	4102 May 05 21:28	15°♌47'46	2°12'42	min. Earth dist.	4103 Apr 21 06:12	25°♋00'14 0.60627 AU
min. Earth dist.	4102 May 09 04:20	13°♌09'37	0.58448 AU	morning rise	4103 Apr 24 20:33	22°♋12'13
morning rise	4102 May 13 08:02	10°♌26'29		desc. node	4103 Apr 30 23:10	20°♋03'34
desc. node	4102 May 14 02:08	10°♌04'27		direct	4103 May 01 12:18	20°♋02'43
direct	4102 May 19 08:51	8°♌51'25		morning max el	4103 May 15 18:52	27°♋57'16 27°43'26
morning max el	4102 Jun 02 18:15	16°♌34'32	26°59'22		4103 May 17 18:17	0°♍
	4102 Jun 13 18:33	0°♎			4103 Jun 07 12:05	0°♎
	4102 Jun 30 22:53	0°♏		morning set	4103 Jun 17 03:06	18°♎31'32
morning set	4102 Jul 02 21:09	3°♏59'52		asc. node	4103 Jun 20 23:14	26°♎38'42
asc. node	4102 Jul 04 02:12	6°♏33'29			4103 Jun 22 12:21	0°♏
			max. Earth dist.	4103 Jun 23 06:48	1°♏40'49	1.32104 AU
superior conj	4102 Jul 09 22:06	19°♏16'25	0°57'50			
minimum elong	4102 Jul 09 19:57	19°♏04'33	0°57'25	superior conj	4103 Jun 24 09:16	4°♏06'01 0°35'13
max. Earth dist.	4102 Jul 09 19:46	19°♏03'33	1.32031 AU	minimum elong	4103 Jun 24 07:45	3°♏57'43 0°34'53
	4102 Jul 14 19:35	0°♐		evening rise	4103 Jul 01 05:04	18°♏58'57
evening rise	4102 Jul 16 18:30	4°♐10'27			4103 Jul 06 14:20	0°♐
	4102 Jul 30 12:13	0°♑			4103 Jul 26 07:58	0°♑
desc. node	4102 Aug 10 01:25	14°♑57'01		desc. node	4103 Jul 27 22:26	1°♑37'06
evening max el	4102 Aug 15 08:27	20°♑38'58	26°33'20	evening max el	4103 Jul 28 02:54	1°♑47'49 25°20'03
retrograde	4102 Aug 29 07:26	27°♑49'11		retrograde	4103 Aug 11 02:02	8°♑52'38
evening set	4102 Sep 05 00:54	25°♑55'27		evening set	4103 Aug 16 20:12	7°♑36'08
min. Earth dist.	4102 Sep 08 22:09	23°♑19'48	0.59825 AU	min. Earth dist.	4103 Aug 21 14:43	4°♑55'08 0.57799 AU
inferior conj	4102 Sep 12 04:25	20°♑44'45	-4°44'50	inferior conj	4103 Aug 24 16:36	2°♑48'17 -5°10'17
minimum elong	4102 Sep 12 09:34	20°♑34'30	4°43'58	minimum elong	4103 Aug 24 18:00	2°♑45'52 5°10'15
morning rise	4102 Sep 19 20:19	16°♑07'01			4103 Aug 29 03:17	30°♑♒
direct	4102 Sep 22 05:16	15°♑46'33		morning rise	4103 Sep 01 18:07	28°♒033'16
morning max el	4102 Sep 29 20:19	19°♑29'54	18°14'51	direct	4103 Sep 04 06:47	28°♒13'57
asc. node	4102 Sep 30 01:25	19°♑42'22			4103 Sep 09 23:52	0°♑
	4102 Oct 07 14:36	0°♒		morning max el	4103 Sep 12 23:34	2°♑20'59 18°57'05
morning set	4102 Oct 15 17:11	14°♒43'38		asc. node	4103 Sep 16 22:26	6°♑52'38
	4102 Oct 23 20:31	0°♓		morning set	4103 Sep 29 14:35	28°♑57'03
					4103 Sep 30 03:22	0°♓
superior conj	4102 Oct 25 02:08	2°♓15'12	1°17'20			
minimum elong	4102 Oct 25 06:02	2°♓32'55	1°16'54	superior conj	4103 Oct 08 00:17	15°♓24'11 1°34'57
max. Earth dist.	4102 Nov 01 16:29	15°♓37'12	1.41041 AU	minimum elong	4103 Oct 08 02:50	15°♓36'23 1°34'46
desc. node	4102 Nov 06 00:42	22°♓52'09		max. Earth dist.	4103 Oct 14 21:41	28°♓10'13 1.38960 AU
evening rise	4102 Nov 06 12:19	23°♓39'41			4103 Oct 15 22:21	0°♓
	4102 Nov 10 11:02	0°♔		evening rise	4103 Oct 18 18:29	4°♓57'01
	4102 Dec 01 01:31	0°♕		desc. node	4103 Oct 23 21:44	13°♓32'32
evening max el	4102 Dec 10 14:55	11°♕17'59	23°10'25		4103 Nov 03 13:18	0°♔
retrograde	4102 Dec 20 22:50	17°♕25'04		evening max el	4103 Nov 23 04:09	24°♔58'33 24°29'42
evening set	4102 Dec 25 20:11	15°♕24'21			4103 Nov 29 09:23	0°♕
asc. node	4102 Dec 27 00:41	14°♕17'43		retrograde	4103 Dec 04 13:37	1°♕37'53
inferior conj	4102 Dec 31 05:31	9°♕00'19	1°23'10		4103 Dec 09 04:51	30°♕♎
minimum elong	4102 Dec 31 03:44	9°♕06'27	1°22'29	evening set	4103 Dec 10 00:28	29°♔21'26
min. Earth dist.	4102 Dec 30 20:19	9°♕31'59	0.67995 AU	asc. node	4103 Dec 13 21:41	25°♔03'43
morning rise	4103 Jan 05 11:11	2°♕52'34		min. Earth dist.	4103 Dec 14 16:09	24°♔02'55 0.67683 AU
direct	4103 Jan 09 18:49	1°♕09'21		inferior conj	4103 Dec 15 12:09	22°♔56'07 0°32'38
morning max el	4103 Jan 18 10:17	6°♕10'51	21°20'37	minimum elong	4103 Dec 15 11:22	22°♔58'44 0°32'19
desc. node	4103 Feb 01 23:56	24°♕51'23		morning rise	4103 Dec 20 22:21	16°♔54'20
	4103 Feb 05 12:46	0°♖		direct	4103 Dec 24 16:46	15°♔33'02

morning max el	4104 Jan 01 08:39	19°  54'29	20°07'17	direct	4104 Dec 07 15:25	29°  55'25	
	4104 Jan 09 13:53	0° 			4104 Dec 08 13:13	0° 	
desc. node	4104 Jan 19 20:58	14°  59'37		morning max el	4104 Dec 14 14:51	3°  48'13	19°08'13
morning set	4104 Jan 28 13:21	28°  14'09			4105 Jan 02 06:31	0° 	
	4104 Jan 29 16:44	0° 		desc. node	4105 Jan 05 17:58	5°  23'52	
max. Earth dist.	4104 Feb 08 03:14	14°  50'46	1.43863 AU	morning set	4105 Jan 06 16:19	6°  35'04	
				max. Earth dist.	4105 Jan 20 18:38	28°  52'37	1.44924 AU
superior conj	4104 Feb 13 18:38	23°  58'52	-2°04'26		4105 Jan 21 11:44	0° 	
minimum elong	4104 Feb 13 14:57	23°  43'49	2°04'17				
	4104 Feb 17 10:00	0° 		superior conj	4105 Jan 23 09:08	2°  59'19	-1°43'09
evening rise	4104 Feb 26 16:39	15°  46'46		minimum elong	4105 Jan 23 00:21	2°  43'36	1°42'24
	4104 Mar 06 00:13	0° 		evening rise	4105 Feb 07 02:23	26°  44'07	
asc. node	4104 Mar 10 21:00	7°  35'37			4105 Feb 09 02:01	0° 	
evening max el	4104 Mar 15 11:04	13°  09'15	18°10'01	asc. node	4105 Feb 25 18:01	25°  40'55	
retrograde	4104 Mar 21 21:28	16°  39'03		evening max el	4105 Feb 26 23:14	26°  39'37	18°30'13
evening set	4104 Mar 24 18:03	15°  57'20			4105 Mar 03 21:20	0° 	
inferior conj	4104 Mar 30 22:23	10°  43'36	3°31'19	retrograde	4105 Mar 05 11:55	0°  41'14	
minimum elong	4104 Mar 30 23:35	10°  40'22	3°31'13		4105 Mar 07 02:08	30°  48'14	
min. Earth dist.	4104 Apr 02 16:37	7°  47'46	0.62750 AU	evening set	4105 Mar 08 14:25	29°  48'27	3°35'58
morning rise	4104 Apr 06 03:55	4°  39'36		inferior conj	4105 Mar 14 09:40	23°  49'44	3°35'57
direct	4104 Apr 13 01:08	2°  03'51		minimum elong	4105 Mar 14 09:14	21°  18'07	0.64601 AU
desc. node	4104 Apr 16 20:11	2°  45'58		min. Earth dist.	4105 Mar 16 12:38	17°  37'38	
morning max el	4104 Apr 27 01:13	10°  02'22	27°49'57	morning rise	4105 Mar 20 03:25	14°  48'27	
	4104 May 12 14:53	0° 		direct	4105 Mar 26 21:50	17°  46'04	
	4104 May 29 18:37	0° 		desc. node	4105 Apr 03 17:12	22°  42'16	27°20'46
morning set	4104 May 31 03:15	2°  43'15		morning max el	4105 Apr 09 10:47	0° 	
max. Earth dist.	4104 Jun 05 13:42	14°  02'29	1.32594 AU		4105 Apr 15 21:29	0° 	
asc. node	4104 Jun 06 20:16	16°  46'38			4105 May 05 21:01	0° 	
				morning set	4105 May 14 18:58	16°  26'45	
superior conj	4104 Jun 07 18:01	18°  44'18	0°09'30	max. Earth dist.	4105 May 19 12:30	25°  56'47	1.33522 AU
minimum elong	4104 Jun 07 17:34	18°  41'50	0°09'24		4105 May 21 11:18	0° 	
behind sun begin	4104 Jun 07 13:19	18°  18'50					
behind sun end	4104 Jun 07 21:49	19°  18'52		superior conj	4105 May 22 22:27	3°  10'51	-0°18'33
	4104 Jun 12 22:24	0° 		minimum elong	4105 May 22 23:24	3°  10'16	0°18'20
evening rise	4104 Jun 14 16:53	3°  47'31		asc. node	4105 May 24 17:19	6°  53'13	
	4104 Jun 28 19:33	0° 		evening rise	4105 May 30 04:03	18°  29'54	
evening max el	4104 Jul 08 16:04	12°  19'47	23°47'15		4105 Jun 04 20:33	0° 	
desc. node	4104 Jul 13 19:27	16°  27'26		evening max el	4105 Jun 20 07:04	22°  44'48	22°10'43
retrograde	4104 Jul 22 08:35	19°  12'24		desc. node	4105 Jun 30 16:27	28°  53'27	
evening set	4104 Jul 26 16:17	18°  31'19		retrograde	4105 Jul 03 03:39	29°  07'33	
min. Earth dist.	4104 Aug 02 02:13	15°  27'57	0.56090 AU	evening set	4105 Jul 06 00:52	28°  49'04	
inferior conj	4104 Aug 04 08:33	14°  05'51	-4°58'25	min. Earth dist.	4105 Jul 14 12:46	25°  09'41	0.55029 AU
minimum elong	4104 Aug 04 03:53	14°  12'55	4°57'54	inferior conj	4105 Jul 15 07:49	24°  42'51	-3°56'51
morning rise	4104 Aug 12 18:02	10°  09'37		minimum elong	4105 Jul 14 23:19	24°  54'50	3°54'39
direct	4104 Aug 15 12:54	9°  49'59		morning rise	4105 Jul 23 23:34	20°  52'18	
morning max el	4104 Aug 25 16:11	14°  32'26	20°01'05	direct	4105 Jul 27 02:41	20°  30'25	
asc. node	4104 Sep 02 19:28	24°  06'08		morning max el	4105 Aug 07 21:06	25°  59'49	21°25'33
	4104 Sep 05 19:10	0° 			4105 Aug 11 15:13	0° 	
morning set	4104 Sep 12 18:48	13°  30'03		asc. node	4105 Aug 20 16:31	13°  40'33	
				morning set	4105 Aug 28 03:28	28°  16'09	
superior conj	4104 Sep 20 12:34	29°  15'03	1°43'10		4105 Aug 28 23:24	0° 	
minimum elong	4104 Sep 20 13:27	29°  19'25	1°43'09				
	4104 Sep 20 21:34	0° 		superior conj	4105 Sep 04 10:53	13°  36'00	1°43'31
max. Earth dist.	4104 Sep 26 03:09	10°  41'17	1.36922 AU	minimum elong	4105 Sep 04 10:17	13°  32'52	1°43'31
evening rise	4104 Sep 29 22:35	17°  41'50		max. Earth dist.	4105 Sep 08 14:11	22°  03'16	1.35141 AU
	4104 Oct 07 07:13	0° 		evening rise	4105 Sep 12 20:47	0° 	
desc. node	4104 Oct 09 18:44	4°  02'53			4105 Sep 12 15:44	0° 	
	4104 Oct 27 22:03	0° 		desc. node	4105 Sep 26 15:46	24°  18'06	
evening max el	4104 Nov 04 16:26	8°  40'43	25°42'13		4105 Sep 30 09:15	0° 	
retrograde	4104 Nov 16 23:49	15°  43'18		evening max el	4105 Oct 18 04:55	22°  20'07	26°40'31
evening set	4104 Nov 23 00:32	13°  13'08		retrograde	4105 Oct 31 04:57	29°  35'22	
min. Earth dist.	4104 Nov 27 08:44	8°  29'33	0.67023 AU	evening set	4105 Nov 06 18:30	26°  56'03	
inferior conj	4104 Nov 28 15:46	6°  50'57	-0°23'04	min. Earth dist.	4105 Nov 10 19:48	22°  48'06	0.66015 AU
minimum elong	4104 Nov 28 16:22	6°  49'02	0°22'49	inferior conj	4105 Nov 12 14:25	20°  41'46	-1°22'38
asc. node	4104 Nov 29 18:42	5°  42'20		minimum elong	4105 Nov 12 16:42	20°  34'59	1°21'41
morning rise	4104 Dec 04 08:33	0° 		asc. node	4105 Nov 16 15:43	16°  22'58	
	4104 Dec 06 17:52	30° 		morning rise	4105 Nov 18 15:40	14°  59'10	

direct	4105 Nov 21 13:02	14°♄12'36		morning rise	4106 Nov 02 17:05	28°♄54'34	
morning max el	4105 Nov 28 03:12	17°♄47'40	18°25'03	asc. node	4106 Nov 03 12:47	28°♄36'00	
	4105 Dec 07 07:16	0°♄		direct	4106 Nov 05 07:21	28°♄19'32	
morning set	4105 Dec 17 20:48	16°♄46'55			4106 Nov 09 18:10	0°♄	
desc. node	4105 Dec 23 15:01	25°♄59'32		morning max el	4106 Nov 11 19:06	1°♄46'06	17°58'45
	4105 Dec 26 03:35	0°♄		morning set	4106 Nov 29 06:38	28°♄09'57	
					4106 Nov 30 08:53	0°♄	
superior conj	4106 Jan 02 11:36	11°♄33'37	-1°04'07	desc. node	4106 Dec 10 12:04	16°♄42'30	
minimum elong	4106 Jan 02 03:48	11°♄03'00	1°03'10				
max. Earth dist.	4106 Jan 03 13:08	13°♄13'46	1.45271 AU	superior conj	4106 Dec 12 22:38	20°♄38'18	-0°16'46
	4106 Jan 14 05:49	0°♄		minimum elong	4106 Dec 12 20:37	20°♄30'10	0°16'28
evening rise	4106 Jan 18 12:51	6°♄45'23		max. Earth dist.	4106 Dec 17 08:02	27°♄37'32	1.44877 AU
greatest brilliancy	4106 Jan 28 16:26	22°♄42'08	-0.8m		4106 Dec 18 20:11	0°♄	
	4106 Feb 02 12:00	0°♄		evening rise	4106 Dec 29 04:33	16°♄05'22	
evening max el	4106 Feb 10 08:38	10°♄09'09	19°08'02		4107 Jan 07 06:56	0°♄	
asc. node	4106 Feb 12 15:03	12°♄11'37		greatest brilliancy	4107 Jan 12 14:00	7°♄55'11	-0.6m
retrograde	4106 Feb 17 07:31	14°♄06'03		evening max el	4107 Jan 24 13:34	23°♄41'28	20°01'45
evening set	4106 Feb 20 16:43	12°♄59'24		asc. node	4107 Jan 30 12:04	27°♄53'28	
inferior conj	4106 Feb 26 06:00	7°♄11'07	3°25'05	retrograde	4107 Feb 01 05:23	28°♄09'29	
minimum elong	4106 Feb 26 04:22	7°♄16'22	3°24'53	evening set	4107 Feb 04 22:38	26°♄48'51	
min. Earth dist.	4106 Feb 27 17:38	5°♄17'32	0.66070 AU	inferior conj	4107 Feb 10 08:26	20°♄46'38	3°02'16
morning rise	4106 Mar 03 15:40	0°♄57'30		minimum elong	4107 Feb 10 06:08	20°♄54'24	3°01'47
	4106 Mar 04 20:00	30°♄		min. Earth dist.	4107 Feb 11 05:51	19°♄34'44	0.67121 AU
direct	4106 Mar 10 01:19	28°♄08'23		morning rise	4107 Feb 15 13:24	14°♄32'39	
	4106 Mar 15 21:08	0°♄		direct	4107 Feb 21 10:30	11°♄54'57	
desc. node	4106 Mar 21 14:14	4°♄29'39		morning max el	4107 Mar 05 05:32	18°♄57'55	25°04'08
morning max el	4106 Mar 22 20:44	5°♄44'29	26°22'23	desc. node	4107 Mar 08 11:16	22°♄27'43	
	4106 Apr 10 12:29	0°♄			4107 Mar 14 13:58	0°♄	
morning set	4106 Apr 27 22:37	29°♄31'07			4107 Apr 03 14:36	0°♄	
	4106 Apr 28 04:46	0°♄		morning set	4107 Apr 10 09:24	11°♄42'52	
max. Earth dist.	4106 May 02 00:02	7°♄18'25	1.34918 AU	max. Earth dist.	4107 Apr 14 00:40	18°♄20'25	1.36752 AU
superior conj	4106 May 06 20:14	17°♄01'56	-0°47'42	superior conj	4107 Apr 20 08:28	0°♄26'46	-1°16'18
minimum elong	4106 May 06 22:47	17°♄15'01	0°47'12	minimum elong	4107 Apr 20 12:30	0°♄46'37	1°15'40
asc. node	4106 May 11 14:22	26°♄54'01			4107 Apr 20 03:01	0°♄	
	4106 May 13 02:02	0°♄		asc. node	4107 Apr 28 11:26	16°♄45'04	
evening rise	4106 May 14 12:38	2°♄59'28		evening rise	4107 Apr 28 16:23	17°♄10'03	
	4106 May 30 02:09	0°♄			4107 May 05 07:43	0°♄	
evening max el	4106 Jun 02 07:30	3°♄34'14	20°43'57	evening max el	4107 May 15 20:17	15°♄04'02	19°34'34
retrograde	4106 Jun 13 16:27	9°♄07'56		retrograde	4107 May 25 11:12	19°♄44'52	
evening set	4106 Jun 15 18:13	8°♄57'35		evening set	4107 May 27 10:22	19°♄34'01	
desc. node	4106 Jun 17 13:29	8°♄32'46		desc. node	4107 Jun 04 10:30	15°♄56'19	
inferior conj	4106 Jun 25 01:11	5°♄00'23	-2°11'34	inferior conj	4107 Jun 05 03:15	15°♄29'52	-0°12'22
minimum elong	4106 Jun 24 19:04	5°♄09'08	2°09'24	minimum elong	4107 Jun 05 02:42	15°♄30'45	0°12'10
min. Earth dist.	4106 Jun 26 00:33	4°♄26'58	0.54880 AU	transit middle	4107 Jun 05 02:42	15°♄30'45	0°12'10
morning rise	4106 Jul 03 19:25	0°♄55'30		transit begin	4107 Jun 05 00:10	15°♄34'46	
direct	4106 Jul 07 12:03	0°♄26'06		transit end	4107 Jun 05 05:14	15°♄26'43	
morning max el	4106 Jul 20 15:58	6°♄46'11	23°04'55	min. Earth dist.	4107 Jun 07 14:15	13°♄56'43	0.55699 AU
	4106 Aug 06 00:47	0°♄		morning rise	4107 Jun 13 16:27	10°♄54'23	
asc. node	4106 Aug 07 13:36	2°♄55'01		direct	4107 Jun 18 05:46	10°♄07'54	
morning set	4106 Aug 12 14:32	13°♄08'40		morning max el	4107 Jul 02 05:56	17°♄09'57	24°47'47
					4107 Jul 12 17:31	0°♄	
superior conj	4106 Aug 19 15:55	28°♄15'58	1°37'20	asc. node	4107 Jul 25 10:41	22°♄31'36	
minimum elong	4106 Aug 19 14:15	28°♄07'07	1°37'13	morning set	4107 Jul 28 02:20	28°♄02'31	
	4106 Aug 20 11:24	0°♄			4107 Jul 29 00:25	0°♄	
max. Earth dist.	4106 Aug 22 10:04	4°♄06'42	1.33739 AU				
evening rise	4106 Aug 27 08:37	14°♄12'00		superior conj	4107 Aug 04 01:09	13°♄07'03	1°25'37
	4106 Sep 04 20:03	0°♄		minimum elong	4107 Aug 03 22:55	12°♄54'54	1°25'20
desc. node	4106 Sep 13 12:48	14°♄10'25		max. Earth dist.	4107 Aug 05 14:21	16°♄29'22	1.32754 AU
	4106 Sep 25 06:42	0°♄		evening rise	4107 Aug 11 06:22	28°♄28'03	
evening max el	4106 Sep 30 17:13	5°♄47'16	27°17'20		4107 Aug 12 00:27	0°♄	
retrograde	4106 Oct 14 04:18	13°♄05'37			4107 Aug 29 00:24	0°♄	
evening set	4106 Oct 21 03:53	10°♄24'43		desc. node	4107 Aug 31 09:49	3°♄30'16	
min. Earth dist.	4106 Oct 24 23:10	6°♄51'35	0.64657 AU	evening max el	4107 Sep 13 03:36	18°♄49'42	27°26'02
inferior conj	4106 Oct 27 05:50	4°♄23'19	-2°24'15	retrograde	4107 Sep 26 21:02	26°♄05'15	
minimum elong	4106 Oct 27 09:54	4°♄12'14	2°22'41	evening set	4107 Oct 04 01:32	23°♄32'59	
	4106 Oct 31 20:32	30°♄		min. Earth dist.	4107 Oct 07 16:47	20°♄30'49	0.62971 AU

inferior conj	4107 Oct 10 11:14	17° Ω 49'09	-3°24'52	evening set	4108 Sep 15 07:24	6° Ω 14'01	
minimum elong	4107 Oct 10 16:47	17° Ω 35'36	3°23'05	min. Earth dist.	4108 Sep 18 23:34	3° Ω 33'24	0.61018 AU
morning rise	4107 Oct 17 09:34	12° Ω 37'39		inferior conj	4108 Sep 22 03:24	0° Ω 51'03	-4°19'23
direct	4107 Oct 19 19:28	12° Ω 10'31		minimum elong	4108 Sep 22 09:19	0° Ω 38'20	4°18'01
asc. node	4107 Oct 21 09:51	12° Ω 22'45			4108 Sep 23 03:22	30° \mathcal{R} \mathcal{M}	
morning max el	4107 Oct 26 11:37	15° Ω 36'43	17°50'05	morning rise	4108 Sep 29 13:05	26° \mathcal{M} 00'23	
	4107 Nov 05 13:12	0° \mathcal{M}		direct	4108 Oct 01 21:35	25° \mathcal{M} 38'08	
morning set	4107 Nov 11 16:34	10° \mathcal{M} 42'40		asc. node	4108 Oct 07 06:55	27° \mathcal{M} 39'59	
	4107 Nov 22 20:34	0° \mathcal{X}		morning max el	4108 Oct 09 01:40	29° \mathcal{M} 12'14	18°00'09
					4108 Oct 09 20:22	0° Ω	
superior conj	4107 Nov 23 09:16	0° \mathcal{X} 53'10	0°27'37	morning set	4108 Oct 24 20:14	24° Ω 06'13	
minimum elong	4107 Nov 23 11:56	1° \mathcal{X} 04'19	0°27'14		4108 Oct 28 00:56	0° \mathcal{M}	
desc. node	4107 Nov 27 09:05	7° \mathcal{X} 29'07					
max. Earth dist.	4107 Nov 30 00:52	11° \mathcal{X} 47'42	1.43797 AU	superior conj	4108 Nov 03 22:35	12° \mathcal{M} 26'42	1°02'22
evening rise	4107 Dec 08 14:12	25° \mathcal{X} 16'55		minimum elong	4108 Nov 04 02:43	12° \mathcal{M} 44'56	1°01'51
	4107 Dec 11 15:54	0° \mathcal{Z}		max. Earth dist.	4108 Nov 11 13:18	25° \mathcal{M} 28'04	1.42158 AU
	4108 Jan 01 09:45	0° \approx		desc. node	4108 Nov 13 06:07	28° \mathcal{M} 16'31	
evening max el	4108 Jan 07 13:02	7° \approx 14'32	21°08'35		4108 Nov 14 07:28	0° \mathcal{X}	
retrograde	4108 Jan 16 03:14	12° \approx 19'57		evening rise	4108 Nov 17 10:02	5° \mathcal{X} 00'04	
asc. node	4108 Jan 17 09:07	12° \approx 11'30			4108 Dec 03 23:33	0° \mathcal{Z}	
evening set	4108 Jan 20 06:11	10° \approx 44'08		evening max el	4108 Dec 20 07:12	20° \mathcal{Z} 49'17	22°24'30
inferior conj	4108 Jan 25 14:32	4° \approx 30'42	2°29'52	retrograde	4108 Dec 29 23:28	26° \mathcal{Z} 34'34	
minimum elong	4108 Jan 25 12:03	4° \approx 39'14	2°29'09	asc. node	4109 Jan 03 06:09	24° \mathcal{Z} 57'53	
min. Earth dist.	4108 Jan 25 23:08	4° \approx 00'58	0.67762 AU	evening set	4109 Jan 03 13:43	24° \mathcal{Z} 42'49	
	4108 Jan 29 01:45	30° \mathcal{R} \mathcal{Z}		inferior conj	4109 Jan 08 22:16	18° \mathcal{Z} 21'23	1°49'32
morning rise	4108 Jan 30 17:45	28° \mathcal{Z} 17'59		minimum elong	4109 Jan 08 20:06	18° \mathcal{Z} 28'53	1°48'46
direct	4108 Feb 05 00:20	25° \mathcal{Z} 59'17		min. Earth dist.	4109 Jan 08 19:16	18° \mathcal{Z} 31'47	0.68016 AU
	4108 Feb 13 03:56	0° \approx		morning rise	4109 Jan 14 02:22	12° \mathcal{Z} 11'28	
morning max el	4108 Feb 15 14:09	2° \approx 16'55	23°36'09	direct	4109 Jan 18 18:08	10° \mathcal{Z} 15'17	
desc. node	4108 Feb 23 08:18	11° \approx 18'16		morning max el	4109 Jan 28 01:48	15° \mathcal{Z} 43'39	22°08'08
	4108 Mar 07 15:42	0° \mathcal{X}			4109 Feb 08 15:48	0° \approx	
morning set	4108 Mar 21 21:13	22° \mathcal{X} 44'49		desc. node	4109 Feb 09 05:20	0° \approx 46'49	
max. Earth dist.	4108 Mar 25 20:05	29° \mathcal{X} 34'40	1.38878 AU		4109 Feb 28 16:42	0° \mathcal{X}	
	4108 Mar 26 01:51	0° \mathcal{Y}		morning set	4109 Mar 02 04:52	2° \mathcal{X} 25'22	
				max. Earth dist.	4109 Mar 07 17:44	11° \mathcal{X} 32'20	1.41043 AU
superior conj	4108 Apr 02 07:16	13° \mathcal{Y} 08'54	-1°41'51				
minimum elong	4108 Apr 02 12:03	13° \mathcal{Y} 31'19	1°41'19	superior conj	4109 Mar 15 11:59	24° \mathcal{X} 57'06	-2°00'39
	4108 Apr 11 01:32	0° \mathcal{B}		minimum elong	4109 Mar 15 15:42	25° \mathcal{X} 13'42	2°00'27
evening rise	4108 Apr 11 12:29	0° \mathcal{B} 53'13			4109 Mar 18 07:27	0° \mathcal{Y}	
asc. node	4108 Apr 14 08:27	6° \mathcal{B} 20'55		evening rise	4109 Mar 25 21:36	14° \mathcal{Y} 00'51	
evening max el	4108 Apr 27 19:51	27° \mathcal{B} 13'05	18°45'14	asc. node	4109 Apr 01 05:28	25° \mathcal{Y} 36'02	
	4108 May 01 11:37	0° \mathcal{I}			4109 Apr 03 19:18	0° \mathcal{B}	
retrograde	4108 May 05 22:52	1° \mathcal{I} 12'05		evening max el	4109 Apr 11 03:06	9° \mathcal{B} 54'05	18°16'11
evening set	4108 May 08 03:12	0° \mathcal{I} 55'57		retrograde	4109 Apr 18 05:37	13° \mathcal{B} 27'12	
	4108 May 10 16:13	30° \mathcal{R} \mathcal{B}		evening set	4109 Apr 20 16:29	13° \mathcal{B} 02'40	
inferior conj	4108 May 16 00:17	26° \mathcal{B} 34'23	1°29'15	inferior conj	4109 Apr 27 18:50	8° \mathcal{B} 20'41	2°39'36
minimum elong	4108 May 16 03:21	26° \mathcal{B} 28'42	1°28'15	minimum elong	4109 Apr 27 22:22	8° \mathcal{B} 13'01	2°38'45
min. Earth dist.	4108 May 19 06:54	24° \mathcal{B} 10'17	0.57299 AU	min. Earth dist.	4109 May 01 04:50	5° \mathcal{B} 24'47	0.59360 AU
desc. node	4108 May 21 07:31	22° \mathcal{B} 49'45		morning rise	4109 May 05 01:32	2° \mathcal{B} 41'03	
morning rise	4108 May 24 00:17	21° \mathcal{B} 23'30		desc. node	4109 May 08 04:32	1° \mathcal{B} 19'26	
direct	4108 May 29 12:57	20° \mathcal{B} 08'45		direct	4109 May 11 09:34	0° \mathcal{B} 51'10	
morning max el	4108 Jun 12 21:25	27° \mathcal{B} 39'40	26°18'40	morning max el	4109 May 25 18:36	8° \mathcal{B} 40'15	27°22'41
	4108 Jun 15 04:09	0° \mathcal{I}			4109 Jun 11 00:24	0° \mathcal{I}	
	4108 Jul 05 03:27	0° \mathcal{E}		morning set	4109 Jun 25 21:30	27° \mathcal{I} 33'07	
asc. node	4108 Jul 11 07:44	12° \mathcal{E} 23'38			4109 Jun 27 01:26	0° \mathcal{E}	
morning set	4108 Jul 11 13:14	12° \mathcal{E} 52'35		asc. node	4109 Jun 28 04:45	2° \mathcal{E} 25'34	
				max. Earth dist.	4109 Jul 02 11:56	11° \mathcal{E} 48'03	1.32011 AU
superior conj	4108 Jul 18 12:32	28° \mathcal{E} 02'28	1°09'11				
minimum elong	4108 Jul 18 10:14	27° \mathcal{E} 49'43	1°08'48	superior conj	4109 Jul 03 00:16	12° \mathcal{E} 56'04	0°48'39
max. Earth dist.	4108 Jul 19 00:14	29° \mathcal{E} 06'54	1.32179 AU	minimum elong	4109 Jul 02 22:20	12° \mathcal{E} 45'25	0°48'16
	4108 Jul 19 09:52	0° \mathcal{O}		evening rise	4109 Jul 09 19:59	27° \mathcal{E} 48'29	
evening rise	4108 Jul 25 10:59	13° \mathcal{O} 02'54			4109 Jul 10 20:57	0° \mathcal{O}	
	4108 Aug 03 02:51	0° \mathcal{M}			4109 Jul 27 16:48	0° \mathcal{M}	
desc. node	4108 Aug 17 06:50	22° \mathcal{M} 04'25		desc. node	4109 Aug 04 03:52	9° \mathcal{M} 33'34	
	4108 Aug 24 03:05	0° Ω		evening max el	4109 Aug 07 07:48	12° \mathcal{M} 49'31	26°05'20
evening max el	4108 Aug 25 09:19	1° Ω 13'51	27°02'09	retrograde	4109 Aug 21 07:07	19° \mathcal{M} 58'14	
retrograde	4108 Sep 08 06:22	8° Ω 25'34		evening set	4109 Aug 27 16:33	18° \mathcal{M} 19'18	

min. Earth dist.	4109 Aug 31 20:27	15° \mathbb{M} 44'00	0.58944 AU	evening set	4110 Aug 08 01:33	29° \mathcal{Q} 41'52	
inferior conj	4109 Sep 04 02:40	13° \mathbb{M} 18'22	-4°59'09	min. Earth dist.	4110 Aug 13 10:37	26° \mathcal{Q} 52'59	0.57011 AU
minimum elong	4109 Sep 04 06:37	13° \mathbb{M} 10'58	4°58'42	inferior conj	4110 Aug 16 06:16	25° \mathcal{Q} 03'12	-5°10'49
morning rise	4109 Sep 11 22:55	8° \mathbb{M} 50'48		minimum elong	4110 Aug 16 05:12	25° \mathcal{Q} 04'55	5°10'47
direct	4109 Sep 14 09:05	8° \mathbb{M} 31'05		morning rise	4110 Aug 24 11:23	20° \mathcal{Q} 57'11	
morning max el	4109 Sep 22 09:52	12° \mathbb{M} 22'47	18°30'15	direct	4110 Aug 27 02:12	20° \mathcal{Q} 38'04	
asc. node	4109 Sep 24 03:57	14° \mathbb{M} 13'31		morning max el	4110 Sep 05 09:01	24° \mathcal{Q} 58'56	19°21'36
	4109 Oct 04 06:14	0° \mathcal{Q}			4110 Sep 09 18:00	0° \mathbb{M}	
morning set	4109 Oct 08 12:18	8° \mathcal{Q} 04'29		asc. node	4110 Sep 11 00:59	1° \mathbb{M} 48'31	
				morning set	4110 Sep 22 12:57	22° \mathbb{M} 27'11	
					4110 Sep 26 07:17	0° \mathcal{Q}	
superior conj	4109 Oct 17 10:22	25° \mathcal{Q} 05'40	1°26'03				
minimum elong	4109 Oct 17 13:47	25° \mathcal{Q} 21'34	1°25'43				
	4109 Oct 20 02:28	0° \mathbb{M}		superior conj	4110 Sep 30 15:08	8° \mathcal{Q} 34'23	1°39'28
max. Earth dist.	4109 Oct 24 20:05	8° \mathbb{M} 24'15	1.40163 AU	minimum elong	4110 Sep 30 16:58	8° \mathcal{Q} 43'21	1°39'23
evening rise	4109 Oct 29 02:40	15° \mathbb{M} 40'23		max. Earth dist.	4110 Oct 07 00:12	20° \mathcal{Q} 39'18	1.38075 AU
desc. node	4109 Oct 31 03:09	19° \mathbb{M} 00'36		evening rise	4110 Oct 10 18:35	27° \mathcal{Q} 24'45	
	4109 Nov 07 01:20	0° \mathcal{X}			4110 Oct 12 06:14	0° \mathbb{M}	
	4109 Nov 28 19:07	0° \mathcal{Z}		desc. node	4110 Oct 18 00:11	9° \mathbb{M} 37'19	
evening max el	4109 Dec 02 21:27	4° \mathcal{Z} 26'42	23°44'24		4110 Oct 31 12:48	0° \mathcal{X}	
retrograde	4109 Dec 13 16:39	10° \mathcal{Z} 49'07		evening max el	4110 Nov 15 10:03	18° \mathcal{X} 08'11	25°01'47
evening set	4109 Dec 18 19:39	8° \mathcal{Z} 41'23		retrograde	4110 Nov 27 05:45	24° \mathcal{X} 59'15	
asc. node	4109 Dec 21 03:09	6° \mathcal{Z} 19'30		evening set	4110 Dec 02 22:22	22° \mathcal{X} 36'44	
min. Earth dist.	4109 Dec 23 15:56	3° \mathcal{Z} 03'17	0.67905 AU	min. Earth dist.	4110 Dec 07 10:47	17° \mathcal{X} 32'41	0.67443 AU
inferior conj	4109 Dec 24 05:48	2° \mathcal{Z} 16'00	1°02'27	inferior conj	4110 Dec 08 11:24	16° \mathcal{X} 11'56	0°09'34
minimum elong	4109 Dec 24 04:24	2° \mathcal{Z} 20'48	1°01'52	minimum elong	4110 Dec 08 11:09	16° \mathcal{X} 12'43	0°09'28
	4109 Dec 25 22:31	30° \mathcal{R} \mathcal{X}		transit middle	4110 Dec 08 11:09	16° \mathcal{X} 12'43	0°09'28
morning rise	4109 Dec 29 13:08	26° \mathcal{X} 10'32		transit begin	4110 Dec 08 08:54	16° \mathcal{X} 20'06	
direct	4110 Jan 02 14:51	24° \mathcal{X} 37'07		transit end	4110 Dec 08 13:24	16° \mathcal{X} 05'20	
morning max el	4110 Jan 10 19:42	29° \mathcal{X} 20'39	20°47'48	asc. node	4110 Dec 08 00:11	16° \mathcal{X} 48'47	
	4110 Jan 11 11:04	0° \mathcal{Z}		morning rise	4110 Dec 14 00:08	10° \mathcal{X} 13'09	
desc. node	4110 Jan 27 02:22	20° \mathcal{Z} 42'43		direct	4110 Dec 17 13:21	9° \mathcal{X} 00'28	
	4110 Feb 02 07:45	0° \approx		morning max el	4110 Dec 24 21:27	13° \mathcal{X} 08'43	19°40'09
morning set	4110 Feb 09 10:12	10° \approx 54'37			4111 Jan 06 16:44	0° \mathcal{Z}	
max. Earth dist.	4110 Feb 17 21:52	24° \approx 23'50	1.42962 AU	greatest brilliancy	4111 Jan 07 00:24	0° \mathcal{Z} 28'23	-0.7m
	4110 Feb 21 08:00	0° \mathcal{H}		desc. node	4111 Jan 13 23:24	10° \mathcal{Z} 58'26	
				morning set	4111 Jan 19 06:27	19° \mathcal{Z} 06'18	
superior conj	4110 Feb 24 17:37	5° \mathcal{H} 40'30	-2°07'47		4111 Jan 26 06:41	0° \approx	
minimum elong	4110 Feb 24 17:24	5° \mathcal{H} 39'35	2°07'46	max. Earth dist.	4111 Jan 31 09:29	8° \approx 03'45	1.44394 AU
evening rise	4110 Mar 08 15:37	26° \mathcal{H} 23'48					
	4110 Mar 10 16:16	0° \mathcal{Y}		superior conj	4111 Feb 04 21:28	15° \approx 15'15	-1°57'50
asc. node	4110 Mar 19 02:28	14° \mathcal{Y} 23'38		minimum elong	4111 Feb 04 15:13	14° \approx 50'03	1°57'29
evening max el	4110 Mar 25 14:39	22° \mathcal{Y} 58'14	18°06'51		4111 Feb 13 21:24	0° \mathcal{H}	
retrograde	4110 Apr 01 04:03	26° \mathcal{Y} 21'04		evening rise	4111 Feb 18 14:10	7° \mathcal{H} 53'34	
evening set	4110 Apr 03 21:09	25° \mathcal{Y} 46'05			4111 Mar 04 02:46	0° \mathcal{Y}	
inferior conj	4110 Apr 10 08:23	20° \mathcal{Y} 43'55	3°19'39	asc. node	4111 Mar 05 23:29	2° \mathcal{Y} 34'47	
minimum elong	4110 Apr 10 10:36	20° \mathcal{Y} 38'23	3°19'21	evening max el	4111 Mar 09 03:26	6° \mathcal{Y} 17'04	18°16'29
min. Earth dist.	4110 Apr 13 10:24	17° \mathcal{Y} 40'59	0.61544 AU	retrograde	4111 Mar 15 13:44	9° \mathcal{Y} 43'29	
morning rise	4110 Apr 16 22:17	14° \mathcal{Y} 46'13		evening set	4111 Mar 18 12:47	8° \mathcal{Y} 56'48	
direct	4110 Apr 23 17:24	12° \mathcal{Y} 23'57		inferior conj	4111 Mar 24 12:52	3° \mathcal{Y} 35'24	3°35'28
desc. node	4110 Apr 25 01:33	12° \mathcal{Y} 29'10		minimum elong	4111 Mar 24 13:20	3° \mathcal{Y} 34'05	3°35'26
morning max el	4110 May 07 22:01	20° \mathcal{Y} 22'12	27°50'53	min. Earth dist.	4111 Mar 27 00:54	0° \mathcal{Y} 48'18	0.63579 AU
	4110 May 16 04:36	0° \mathcal{B}			4111 Mar 27 19:09	30° \mathcal{R} \mathcal{H}	
	4110 Jun 03 22:58	0° \mathbb{I}		morning rise	4111 Mar 30 12:56	27° \mathcal{H} 28'01	
morning set	4110 Jun 10 01:18	11° \mathbb{I} 57'58		direct	4111 Apr 06 10:02	24° \mathcal{H} 44'29	
asc. node	4110 Jun 15 01:46	22° \mathbb{I} 32'56		desc. node	4111 Apr 11 22:35	26° \mathcal{H} 13'59	
max. Earth dist.	4110 Jun 15 21:36	24° \mathbb{I} 20'20	1.32252 AU		4111 Apr 17 08:16	0° \mathcal{Y}	
				morning max el	4111 Apr 20 05:52	2° \mathcal{Y} 42'35	27°41'34
superior conj	4110 Jun 17 10:39	27° \mathbb{I} 42'15	0°24'39		4111 May 10 13:09	0° \mathcal{B}	
minimum elong	4110 Jun 17 09:32	27° \mathbb{I} 36'11	0°24'25	morning set	4111 May 24 22:13	25° \mathcal{B} 58'33	
	4110 Jun 18 11:48	0° \mathcal{G}			4111 May 26 22:05	0° \mathbb{I}	
evening rise	4110 Jun 24 07:19	12° \mathcal{G} 38'10		max. Earth dist.	4111 May 30 01:15	6° \mathbb{I} 30'10	1.32928 AU
	4110 Jul 03 01:25	0° \mathcal{Q}					
evening max el	4110 Jul 19 23:19	23° \mathcal{Q} 40'23	24°42'09	superior conj	4111 Jun 01 17:49	12° \mathbb{I} 13'58	-0°02'11
desc. node	4110 Jul 22 00:51	25° \mathcal{Q} 31'46		minimum elong	4111 Jun 01 17:55	12° \mathbb{I} 14'32	0°02'10
	4110 Jul 29 14:27	0° \mathbb{M}		behind sun begin	4111 Jun 01 12:38	11° \mathbb{I} 46'10	
retrograde	4110 Aug 02 21:17	0° \mathbb{M} 42'19		behind sun end	4111 Jun 01 23:12	12° \mathbb{I} 42'56	
	4110 Aug 07 04:51	30° \mathcal{R} \mathcal{Q}		asc. node	4111 Jun 01 22:48	12° \mathbb{I} 40'42	

evening rise	4111 Jun 08 19:03	27° Π 24'37		evening rise	4112 May 23 05:23	12° Π 02'15	
	4111 Jun 10 00:35	0° \mathfrak{C}			4112 Jun 01 12:20	0° \mathfrak{C}	
	4111 Jun 27 18:10	0° Ω		evening max el	4112 Jun 12 06:42	14° \mathfrak{C} 37'30	21°31'56
evening max el	4111 Jul 01 12:24	4° Ω 05'43	23°05'51	retrograde	4112 Jun 24 13:15	20° \mathfrak{C} 40'28	
desc. node	4111 Jul 08 21:51	9° Ω 24'51		desc. node	4112 Jun 24 18:53	20° \mathfrak{C} 40'21	
retrograde	4111 Jul 14 22:36	10° Ω 47'43		evening set	4112 Jun 27 00:09	20° \mathfrak{C} 26'45	
evening set	4111 Jul 18 14:25	10° Ω 18'27		inferior conj	4112 Jul 06 09:11	16° \mathfrak{C} 26'24	-3°16'05
min. Earth dist.	4111 Jul 25 21:33	7° Ω 01'20	0.55542 AU	minimum elong	4112 Jul 06 00:57	16° \mathfrak{C} 37'55	3°13'35
inferior conj	4111 Jul 27 14:16	6° Ω 02'08	-4°38'41	min. Earth dist.	4112 Jul 06 08:08	16° \mathfrak{C} 27'53	0.54852 AU
minimum elong	4111 Jul 27 07:21	6° Ω 12'14	4°37'27	morning rise	4112 Jul 15 02:43	12° \mathfrak{C} 32'32	
morning rise	4111 Aug 05 02:36	2° Ω 10'01		direct	4112 Jul 18 11:02	12° \mathfrak{C} 08'11	
direct	4111 Aug 08 00:40	1° Ω 49'41		morning max el	4112 Jul 30 20:33	17° \mathfrak{C} 58'52	22°06'36
morning max el	4111 Aug 18 20:35	6° Ω 51'31	20°34'38		4112 Aug 09 11:02	0° Ω	
asc. node	4111 Aug 28 22:03	20° Ω 10'48		asc. node	4112 Aug 14 19:06	9° Ω 08'53	
	4111 Sep 03 06:31	0° \mathfrak{M}		morning set	4112 Aug 21 05:15	21° Ω 55'52	
morning set	4111 Sep 06 19:20	7° \mathfrak{M} 06'27			4112 Aug 25 00:46	0° \mathfrak{M}	
superior conj	4111 Sep 14 08:07	22° \mathfrak{M} 39'08	1°44'11	superior conj	4112 Aug 28 09:35	7° \mathfrak{M} 08'48	1°41'38
minimum elong	4111 Sep 14 08:19	22° \mathfrak{M} 40'11	1°44'11	minimum elong	4112 Aug 28 08:29	7° \mathfrak{M} 02'59	1°41'35
	4111 Sep 18 00:04	0° \mathfrak{L}		max. Earth dist.	4112 Aug 31 22:28	14° \mathfrak{M} 29'57	1.34497 AU
max. Earth dist.	4111 Sep 19 07:31	2° \mathfrak{L} 33'41	1.36130 AU	evening rise	4112 Sep 05 11:26	23° \mathfrak{M} 32'49	
evening rise	4111 Sep 23 06:58	10° \mathfrak{L} 06'06			4112 Sep 08 21:16	0° \mathfrak{L}	
desc. node	4111 Oct 04 21:12	0° \mathfrak{M} 02'03		desc. node	4112 Sep 20 18:13	20° \mathfrak{L} 08'32	
	4111 Oct 04 20:41	0° \mathfrak{M}			4112 Sep 27 11:35	0° \mathfrak{M}	
	4111 Oct 27 02:31	0° \mathfrak{X}		evening max el	4112 Oct 10 11:17	15° \mathfrak{M} 27'00	26°59'15
evening max el	4111 Oct 28 22:37	1° \mathfrak{X} 51'03	26°09'16	retrograde	4112 Oct 23 16:19	22° \mathfrak{M} 43'42	
retrograde	4111 Nov 10 13:48	8° \mathfrak{X} 59'49		evening set	4112 Oct 30 10:45	20° \mathfrak{M} 02'43	
evening set	4111 Nov 16 20:07	6° \mathfrak{X} 25'24		min. Earth dist.	4112 Nov 03 09:25	16° \mathfrak{M} 09'57	0.65483 AU
min. Earth dist.	4111 Nov 21 01:26	1° \mathfrak{X} 56'42	0.66637 AU	inferior conj	4112 Nov 05 09:05	13° \mathfrak{M} 53'37	-1°48'41
inferior conj	4111 Nov 22 13:12	0° \mathfrak{X} 06'03	-0°47'57	minimum elong	4112 Nov 05 12:09	13° \mathfrak{M} 44'53	1°47'26
minimum elong	4111 Nov 22 14:29	0° \mathfrak{X} 02'04	0°47'24	asc. node	4112 Nov 10 18:19	8° \mathfrak{M} 44'56	
	4111 Nov 22 15:09	30° \mathfrak{R} \mathfrak{M}		morning rise	4112 Nov 11 14:25	8° \mathfrak{M} 16'34	
asc. node	4111 Nov 24 21:15	27° \mathfrak{M} 19'34		direct	4112 Nov 14 08:35	7° \mathfrak{M} 35'14	
morning rise	4111 Nov 28 09:21	24° \mathfrak{M} 16'36		morning max el	4112 Nov 20 20:42	11° \mathfrak{M} 05'14	18°11'46
direct	4111 Dec 01 11:57	23° \mathfrak{M} 21'27			4112 Dec 04 02:47	0° \mathfrak{X}	
morning max el	4111 Dec 08 06:29	27° \mathfrak{M} 05'25	18°47'47	morning set	4112 Dec 09 12:15	8° \mathfrak{X} 48'33	
	4111 Dec 10 21:03	0° \mathfrak{X}		desc. node	4112 Dec 17 17:28	22° \mathfrak{X} 07'33	
morning set	4111 Dec 29 18:56	28° \mathfrak{X} 13'47			4112 Dec 22 16:03	0° \mathfrak{Z}	
	4111 Dec 30 21:58	0° \mathfrak{Z}		superior conj	4112 Dec 24 08:13	2° \mathfrak{Z} 38'48	-0°44'19
desc. node	4111 Dec 31 20:27	1° \mathfrak{Z} 28'22		minimum elong	4112 Dec 24 02:39	2° \mathfrak{Z} 16'49	0°43'33
max. Earth dist.	4112 Jan 14 02:50	22° \mathfrak{Z} 17'17	1.45166 AU	max. Earth dist.	4112 Dec 26 22:28	6° \mathfrak{Z} 43'53	1.45197 AU
superior conj	4112 Jan 15 04:43	23° \mathfrak{Z} 58'56	-1°28'22	evening rise	4113 Jan 09 15:27	28° \mathfrak{Z} 07'52	
minimum elong	4112 Jan 14 19:27	23° \mathfrak{Z} 22'32	1°27'25		4113 Jan 10 20:17	0° \mathfrak{A}	
	4112 Jan 19 00:24	0° \mathfrak{A}		greatest brilliancy	4113 Jan 21 19:36	16° \mathfrak{A} 55'46	-0.7m
evening rise	4112 Jan 30 13:57	18° \mathfrak{A} 26'44			4113 Jan 31 01:52	0° \mathfrak{H}	
	4112 Feb 06 17:58	0° \mathfrak{H}		evening max el	4113 Feb 02 22:28	3° \mathfrak{H} 15'24	19°29'02
evening max el	4112 Feb 20 14:48	19° \mathfrak{H} 44'38	18°44'16	asc. node	4113 Feb 06 17:36	6° \mathfrak{H} 22'19	
asc. node	4112 Feb 20 20:32	19° \mathfrak{H} 59'01		retrograde	4113 Feb 10 03:40	7° \mathfrak{H} 24'30	
retrograde	4112 Feb 27 06:44	23° \mathfrak{H} 27'03		evening set	4113 Feb 13 16:12	6° \mathfrak{H} 11'50	
evening set	4112 Mar 01 12:04	22° \mathfrak{H} 27'47		inferior conj	4113 Feb 19 03:41	0° \mathfrak{H} 17'04	3°16'40
inferior conj	4112 Mar 07 04:26	16° \mathfrak{H} 48'37	3°32'58	minimum elong	4113 Feb 19 01:42	0° \mathfrak{H} 23'35	3°16'21
minimum elong	4112 Mar 07 03:25	16° \mathfrak{H} 51'43	3°32'54		4113 Feb 19 08:54	30° \mathfrak{R} \mathfrak{A}	
min. Earth dist.	4112 Mar 09 00:45	14° \mathfrak{H} 33'11	0.65282 AU	min. Earth dist.	4113 Feb 20 08:59	28° \mathfrak{A} 41'16	0.66572 AU
morning rise	4112 Mar 12 18:20	10° \mathfrak{H} 36'32		morning rise	4113 Feb 24 10:58	24° \mathfrak{A} 03'08	
direct	4112 Mar 19 09:45	7° \mathfrak{H} 45'54		direct	4113 Mar 02 15:32	21° \mathfrak{A} 18'04	
desc. node	4112 Mar 28 19:38	12° \mathfrak{H} 02'23		morning max el	4113 Mar 15 01:22	28° \mathfrak{A} 41'22	25°50'56
morning max el	4112 Apr 01 15:42	15° \mathfrak{H} 33'01	26°58'57	desc. node	4113 Mar 15 16:40	29° \mathfrak{A} 20'34	
	4112 Apr 13 12:42	0° \mathfrak{Y}			4113 Mar 16 07:40	0° \mathfrak{H}	
	4112 May 02 07:39	0° \mathfrak{B}			4113 Apr 07 07:35	0° \mathfrak{Y}	
morning set	4112 May 07 09:15	9° \mathfrak{B} 26'20		morning set	4113 Apr 20 06:21	22° \mathfrak{Y} 09'51	
max. Earth dist.	4112 May 11 19:29	18° \mathfrak{B} 10'06	1.34066 AU	max. Earth dist.	4113 Apr 24 02:26	29° \mathfrak{Y} 22'15	1.35656 AU
					4113 Apr 24 10:18	0° \mathfrak{B}	
superior conj	4112 May 15 19:44	26° \mathfrak{B} 25'21	-0°30'51	superior conj	4113 Apr 29 13:49	10° \mathfrak{B} 09'13	-1°00'02
minimum elong	4112 May 15 21:21	26° \mathfrak{B} 33'50	0°30'31	minimum elong	4113 Apr 29 17:03	10° \mathfrak{B} 25'30	0°59'27
	4112 May 17 12:36	0° \mathfrak{I}		asc. node	4113 May 05 16:54	22° \mathfrak{B} 42'23	
asc. node	4112 May 18 19:50	2° \mathfrak{I} 45'11					

evening rise	4113 May 07 12:13	26°♄24'42		superior conj	4114 Apr 12 20:49	23°♄16'43	-1°27'43
	4113 May 09 06:39	0°♄		minimum elong	4114 Apr 13 01:18	23°♄38'24	1°27'06
evening max el	4113 May 25 12:12	25°♄42'36	20°11'58		4114 Apr 16 07:23	0°♄	
	4113 May 31 16:27	0°♄		evening rise	4114 Apr 21 13:05	10°♄24'25	
retrograde	4113 Jun 05 03:15	0°♄53'49		asc. node	4114 Apr 22 13:56	12°♄27'26	
evening set	4113 Jun 07 02:21	0°♄43'57			4114 May 02 07:26	0°♄	
	4113 Jun 09 19:55	30°♄		evening max el	4114 May 08 05:51	7°♄29'33	19°11'05
desc. node	4113 Jun 11 15:53	29°♄14'00		retrograde	4114 May 17 04:36	11°♄51'05	
inferior conj	4113 Jun 16 04:32	26°♄45'08	-1°20'30	evening set	4114 May 19 05:15	11°♄38'37	
minimum elong	4113 Jun 16 00:45	26°♄50'44	1°19'07	inferior conj	4114 May 27 13:56	7°♄27'58	0°34'09
min. Earth dist.	4113 Jun 17 20:25	25°♄46'06	0.55113 AU	minimum elong	4114 May 27 15:19	7°♄25'37	0°33'39
morning rise	4113 Jun 24 21:44	22°♄28'52		desc. node	4114 May 29 12:54	6°♄08'28	
direct	4113 Jun 28 22:11	21°♄53'52		min. Earth dist.	4114 May 30 11:27	5°♄31'11	0.56292 AU
morning max el	4113 Jul 12 12:40	28°♄32'55	23°49'19	morning rise	4114 Jun 04 22:15	2°♄36'45	
	4113 Jul 14 00:02	0°♄		direct	4114 Jun 09 21:24	1°♄39'30	
asc. node	4113 Aug 01 16:10	28°♄33'47		morning max el	4114 Jun 24 02:45	8°♄56'21	25°28'59
	4113 Aug 02 09:26	0°♄			4114 Jul 09 20:46	0°♄	
morning set	4113 Aug 05 16:51	6°♄50'05		asc. node	4114 Jul 19 13:12	18°♄17'26	
				morning set	4114 Jul 21 04:26	21°♄42'50	
superior conj	4113 Aug 12 16:42	21°♄54'48	1°33'00		4114 Jul 25 00:37	0°♄	
minimum elong	4113 Aug 12 14:45	21°♄44'14	1°32'48				
max. Earth dist.	4113 Aug 14 22:15	26°♄42'11	1.33262 AU	superior conj	4114 Jul 28 03:05	6°♄48'33	1°19'12
	4113 Aug 16 11:38	0°♄		minimum elong	4114 Jul 28 00:46	6°♄35'49	1°18'52
evening rise	4113 Aug 20 03:54	7°♄34'03		max. Earth dist.	4114 Jul 29 05:05	9°♄11'00	1.32451 AU
	4113 Sep 01 09:11	0°♄		evening rise	4114 Aug 04 04:52	21°♄58'52	
desc. node	4113 Sep 07 15:15	9°♄48'52			4114 Aug 08 04:37	0°♄	
evening max el	4113 Sep 22 22:53	28°♄45'02	27°24'45	desc. node	4114 Aug 25 12:15	28°♄51'09	
	4113 Sep 24 07:33	0°♄			4114 Aug 26 08:27	0°♄	
retrograde	4113 Oct 06 12:55	6°♄02'52		evening max el	4114 Sep 05 07:22	11°♄31'44	27°19'59
evening set	4113 Oct 13 15:35	3°♄23'51		retrograde	4114 Sep 19 02:55	18°♄46'37	
	4113 Oct 17 10:39	30°♄		evening set	4114 Sep 26 07:04	16°♄21'25	
min. Earth dist.	4113 Oct 17 08:39	0°♄05'04	0.63980 AU	min. Earth dist.	4114 Sep 29 21:41	13°♄29'59	0.62161 AU
inferior conj	4113 Oct 19 20:36	27°♄29'34	-2°50'19	inferior conj	4114 Oct 02 20:44	10°♄45'51	-3°49'09
minimum elong	4113 Oct 20 01:23	27°♄17'08	2°48'35	minimum elong	4114 Oct 03 02:39	10°♄32'10	3°47'29
morning rise	4113 Oct 26 12:30	22°♄08'02		morning rise	4114 Oct 09 23:57	5°♄43'03	
asc. node	4113 Oct 28 15:22	21°♄37'34		direct	4114 Oct 12 08:44	5°♄18'28	
direct	4113 Oct 29 00:35	21°♄36'49		asc. node	4114 Oct 15 12:24	6°♄03'32	
morning max el	4113 Nov 04 13:20	25°♄02'00	17°52'54	morning max el	4114 Oct 19 05:12	8°♄47'13	17°52'02
	4113 Nov 08 15:53	0°♄			4114 Nov 02 02:22	0°♄	
morning set	4113 Nov 21 09:09	20°♄43'52		morning set	4114 Nov 04 03:20	3°♄39'57	
	4113 Nov 26 19:50	0°♄					
superior conj	4113 Dec 04 04:18	12°♄11'11	0°02'58	superior conj	4114 Nov 15 02:30	23°♄00'17	0°43'41
minimum elong	4113 Dec 04 04:38	12°♄12'31	0°02'56	minimum elong	4114 Nov 15 06:10	23°♄15'54	0°43'10
behind sun begin	4113 Dec 03 18:48	11°♄32'29			4114 Nov 19 06:09	0°♄	
behind sun end	4113 Dec 04 14:27	12°♄52'28		desc. node	4114 Nov 21 11:34	3°♄40'13	
desc. node	4113 Dec 04 14:32	12°♄52'47		max. Earth dist.	4114 Nov 22 07:23	5°♄01'09	1.43154 AU
max. Earth dist.	4113 Dec 09 16:53	21°♄04'19	1.44497 AU	evening rise	4114 Nov 29 14:45	16°♄39'45	
	4113 Dec 15 09:05	0°♄			4114 Dec 08 08:21	0°♄	
evening rise	4113 Dec 20 02:40	7°♄19'29			4114 Dec 30 13:51	0°♄	
	4114 Jan 04 04:27	0°♄		evening max el	4114 Dec 30 22:04	0°♄21'06	21°40'03
evening max el	4114 Jan 17 01:00	16°♄47'27	20°28'42	retrograde	4115 Jan 08 23:18	5°♄43'54	
asc. node	4114 Jan 24 14:38	21°♄30'03		asc. node	4115 Jan 11 11:38	5°♄09'44	
retrograde	4114 Jan 25 01:53	21°♄31'15		evening set	4115 Jan 13 06:45	4°♄01'36	
evening set	4114 Jan 28 23:01	20°♄04'17			4115 Jan 16 23:13	30°♄	
inferior conj	4114 Feb 03 07:57	13°♄56'38	2°49'34	inferior conj	4115 Jan 18 15:00	27°♄44'18	2°13'42
minimum elong	4114 Feb 03 05:31	14°♄04'57	2°48'58	minimum elong	4115 Jan 18 12:36	27°♄52'37	2°12'55
min. Earth dist.	4114 Feb 03 23:43	13°♄02'54	0.67443 AU	min. Earth dist.	4115 Jan 18 18:37	27°♄31'43	0.67914 AU
morning rise	4114 Feb 08 11:49	7°♄42'47		morning rise	4115 Jan 23 18:15	21°♄32'19	
direct	4114 Feb 14 02:44	5°♄12'39		direct	4115 Jan 28 18:31	19°♄22'47	
morning max el	4114 Feb 25 10:02	11°♄58'02	24°27'13	morning max el	4115 Feb 07 19:26	25°♄19'59	22°58'06
	4114 Mar 02 13:42	17°♄43'03			4115 Feb 12 00:44	0°♄	
desc. node	4114 Mar 11 21:11	0°♄		desc. node	4115 Feb 17 10:45	6°♄51'37	
	4114 Mar 31 02:03	0°♄			4115 Mar 05 09:28	0°♄	
morning set	4114 Apr 02 08:09	3°♄53'59		morning set	4115 Mar 14 08:30	14°♄22'44	
max. Earth dist.	4114 Apr 05 23:55	10°♄24'45	1.37630 AU	max. Earth dist.	4115 Mar 18 18:54	21°♄52'35	1.39807 AU
					4115 Mar 23 09:59	0°♄	

superior conj	4115 Mar 26 12:34	5° Υ 37'48	-1°50'56	minimum elong	4116 Mar 07 10:32	17° Υ 10'37	2°05'21
minimum elong	4115 Mar 26 17:12	5° Υ 59'01	1°50'31		4116 Mar 14 15:40	0° Υ	
evening rise	4115 Apr 05 04:58	23° Υ 53'40		evening rise	4116 Mar 18 08:10	6° Υ 43'09	
	4115 Apr 08 10:12	0° Υ		asc. node	4116 Mar 26 07:58	20° Υ 59'35	
asc. node	4115 Apr 09 10:58	1° Υ 55'22			4116 Apr 01 07:45	0° Υ	
evening max el	4115 Apr 21 09:13	19° Υ 54'03	18°30'29	evening max el	4116 Apr 03 18:46	2° Υ 46'09	18°09'50
retrograde	4115 Apr 29 00:17	23° Υ 39'42		retrograde	4116 Apr 10 14:08	6° Υ 12'41	
evening set	4115 May 01 07:26	23° Υ 20'19		evening set	4116 Apr 13 03:53	5° Υ 43'44	
inferior conj	4115 May 08 20:14	18° Υ 50'33	2°03'03	inferior conj	4116 Apr 19 23:18	0° Υ 52'59	2°59'57
minimum elong	4115 May 08 23:50	18° Υ 43'26	2°02'00	minimum elong	4116 Apr 20 02:24	0° Υ 45'49	2°59'20
min. Earth dist.	4115 May 12 06:17	16° Υ 09'50	0.58141 AU		4116 Apr 20 22:11	30° Υ	
desc. node	4115 May 16 09:55	13° Υ 30'13		min. Earth dist.	4116 Apr 23 06:57	27° Υ 51'15	0.60301 AU
morning rise	4115 May 16 13:04	13° Υ 26'16		morning rise	4116 Apr 26 22:39	25° Υ 04'46	
direct	4115 May 22 11:02	11° Υ 56'30		desc. node	4116 May 02 06:57	23° Υ 04'37	
morning max el	4115 Jun 05 20:14	19° Υ 36'40	26°49'46	direct	4116 May 03 12:42	23° Υ 00'17	
	4115 Jun 14 16:21	0° Υ			4116 May 16 21:54	0° Υ	
	4115 Jul 02 10:44	0° Υ		morning max el	4116 May 17 19:58	0° Υ 53'19	27°39'15
morning set	4115 Jul 05 14:23	6° Υ 29'10			4116 Jun 07 19:55	0° Υ	
asc. node	4115 Jul 06 10:14	8° Υ 14'09		morning set	4116 Jun 18 20:59	21° Υ 03'18	
				asc. node	4116 Jun 22 07:16	28° Υ 18'36	
superior conj	4115 Jul 12 14:49	21° Υ 43'51	1°00'56		4116 Jun 23 02:02	0° Υ	
minimum elong	4115 Jul 12 12:37	21° Υ 31'40	1°00'33	max. Earth dist.	4116 Jun 25 03:25	4° Υ 29'30	1.32068 AU
max. Earth dist.	4115 Jul 12 16:02	21° Υ 50'32	1.32058 AU				
	4115 Jul 16 09:09	0° Υ		superior conj	4116 Jun 26 02:11	6° Υ 34'38	0°38'51
evening rise	4115 Jul 19 11:36	6° Υ 39'05		minimum elong	4116 Jun 26 00:33	6° Υ 25'38	0°38'31
	4115 Jul 31 17:50	0° Υ		evening rise	4116 Jul 02 21:51	21° Υ 27'09	
desc. node	4115 Aug 12 09:15	17° Υ 00'00			4116 Jul 07 01:09	0° Υ	
evening max el	4115 Aug 18 10:20	23° Υ 35'59	26°41'50		4116 Jul 25 17:06	0° Υ	
	4115 Aug 28 00:41	0° Υ		desc. node	4116 Jul 29 06:14	3° Υ 53'59	
retrograde	4115 Sep 01 08:53	0° Υ 46'20		evening max el	4116 Jul 30 05:52	4° Υ 51'56	25°32'33
	4115 Sep 05 14:46	30° Υ		retrograde	4116 Aug 13 05:01	11° Υ 57'41	
evening set	4115 Sep 08 04:40	28° Υ 47'45		evening set	4116 Aug 19 03:41	10° Υ 35'14	
min. Earth dist.	4115 Sep 12 00:16	26° Υ 11'17	0.60135 AU	min. Earth dist.	4116 Aug 23 17:48	7° Υ 56'24	0.58089 AU
inferior conj	4115 Sep 15 06:06	23° Υ 33'53	-4°38'46	inferior conj	4116 Aug 26 21:17	5° Υ 44'10	-5°08'31
minimum elong	4115 Sep 15 11:32	23° Υ 22'50	4°37'47	minimum elong	4116 Aug 26 23:28	5° Υ 40'20	5°08'24
morning rise	4115 Sep 22 20:25	18° Υ 52'36		morning rise	4116 Sep 03 21:29	1° Υ 25'58	
direct	4115 Sep 25 05:08	18° Υ 31'44		direct	4116 Sep 06 09:29	1° Υ 06'34	
asc. node	4115 Oct 02 09:26	21° Υ 54'21		morning max el	4116 Sep 14 21:43	5° Υ 09'06	18°49'27
morning max el	4115 Oct 02 17:04	22° Υ 12'29	18°10'23	asc. node	4116 Sep 18 06:29	8° Υ 55'43	
	4115 Oct 08 18:36	0° Υ			4116 Sep 30 14:39	0° Υ	
morning set	4115 Oct 18 12:48	17° Υ 19'18		morning set	4116 Oct 01 08:57	1° Υ 29'28	
	4115 Oct 25 07:30	0° Υ					
superior conj	4115 Oct 28 01:55	5° Υ 02'32	1°13'45	superior conj	4116 Oct 09 21:36	18° Υ 04'32	1°32'55
minimum elong	4115 Oct 28 05:57	5° Υ 20'39	1°13'18	minimum elong	4116 Oct 10 00:24	18° Υ 17'48	1°32'42
max. Earth dist.	4115 Nov 04 17:08	18° Υ 22'27	1.41338 AU		4116 Oct 16 08:52	0° Υ	
desc. node	4115 Nov 08 08:35	24° Υ 26'20		max. Earth dist.	4116 Oct 16 22:52	1° Υ 02'17	1.39272 AU
evening rise	4115 Nov 09 18:36	26° Υ 44'59		evening rise	4116 Oct 20 21:18	7° Υ 52'56	
	4115 Nov 11 19:06	0° Υ		desc. node	4116 Oct 25 05:36	15° Υ 07'48	
	4115 Dec 02 02:05	0° Υ			4116 Nov 03 18:34	0° Υ	
evening max el	4115 Dec 13 14:28	13° Υ 57'12	22°58'30	evening max el	4116 Nov 25 03:54	27° Υ 37'01	24°18'05
retrograde	4115 Dec 23 18:16	19° Υ 58'35			4116 Nov 27 17:45	0° Υ	
evening set	4115 Dec 28 13:45	18° Υ 00'13		retrograde	4116 Dec 06 09:41	4° Υ 12'10	
asc. node	4115 Dec 29 08:39	17° Υ 17'39		evening set	4116 Dec 11 18:32	1° Υ 57'50	
inferior conj	4116 Jan 02 22:51	11° Υ 36'50	1°30'22		4116 Dec 13 17:52	30° Υ	
minimum elong	4116 Jan 02 20:57	11° Υ 43'23	1°29'38	asc. node	4116 Dec 15 05:41	28° Υ 11'43	
min. Earth dist.	4116 Jan 02 15:15	12° Υ 03'04	0.68012 AU	min. Earth dist.	4116 Dec 16 11:21	26° Υ 34'19	0.67754 AU
morning rise	4116 Jan 08 04:02	5° Υ 28'31		inferior conj	4116 Dec 17 05:47	25° Υ 32'23	0°40'41
direct	4116 Jan 12 13:47	3° Υ 41'53		minimum elong	4116 Dec 17 04:49	25° Υ 35'37	0°40'17
morning max el	4116 Jan 21 09:13	8° Υ 49'57	21°32'39	morning rise	4116 Dec 22 15:10	19° Υ 29'41	
desc. node	4116 Feb 04 07:47	26° Υ 32'53		direct	4116 Dec 26 11:27	18° Υ 05'21	
	4116 Feb 06 17:22	0° Υ		morning max el	4117 Jan 03 06:27	22° Υ 32'02	20°17'22
morning set	4116 Feb 22 03:54	23° Υ 29'01			4117 Jan 09 13:42	0° Υ	
	4116 Feb 26 05:15	0° Υ		desc. node	4117 Jan 21 04:50	16° Υ 38'08	
max. Earth dist.	4116 Feb 28 19:06	4° Υ 13'24	1.41911 AU		4117 Jan 29 23:57	0° Υ	
				morning set	4117 Jan 31 02:26	1° Υ 42'13	
superior conj	4116 Mar 07 08:05	16° Υ 59'59	-2°05'26	max. Earth dist.	4117 Feb 10 03:12	17° Υ 29'39	1.43650 AU

superior conj	4117 Feb 16 02:50	27° \approx 13'57	-2°05'54	morning set	4118 Jan 10 02:54	10° \approx 10'02	
minimum elong	4117 Feb 16 00:06	27° \approx 02'42	2°05'50		4118 Jan 22 19:50	0° \approx	
	4117 Feb 17 18:54	0° \approx		max. Earth dist.	4118 Jan 23 17:36	1° \approx 25'47	1.44806 AU
evening rise	4117 Feb 28 18:28	18° \approx 44'44					
	4117 Mar 07 06:31	0° \approx		superior conj	4118 Jan 26 20:32	6° \approx 22'21	-1°47'38
asc. node	4117 Mar 13 04:59	9° \approx 32'47		minimum elong	4118 Jan 26 12:14	5° \approx 49'25	1°47'00
evening max el	4117 Mar 18 07:11	15° \approx 57'13	18°08'33	evening rise	4118 Feb 10 07:38	29° \approx 50'38	
retrograde	4117 Mar 24 18:05	19° \approx 20'03			4118 Feb 10 09:54	0° \approx	
evening set	4117 Mar 27 13:44	18° \approx 40'08		asc. node	4118 Feb 28 02:01	27° \approx 25'28	
inferior conj	4117 Apr 02 19:44	13° \approx 29'14	3°28'54	evening max el	4118 Mar 01 19:36	29° \approx 20'09	18°26'06
minimum elong	4117 Apr 02 21:13	13° \approx 25'21	3°28'46		4118 Mar 02 12:03	0° \approx	
min. Earth dist.	4117 Apr 05 16:04	10° \approx 30'56	0.62446 AU	retrograde	4118 Mar 08 07:29	2° \approx 52'23	
morning rise	4117 Apr 09 03:20	7° \approx 26'33		evening set	4118 Mar 11 09:01	2° \approx 00'33	
direct	4117 Apr 16 00:13	4° \approx 53'59			4118 Mar 14 00:19	30° \approx	
desc. node	4117 Apr 19 04:00	5° \approx 23'08		inferior conj	4118 Mar 17 05:26	26° \approx 31'16	3°36'19
morning max el	4117 Apr 30 01:42	12° \approx 52'43	27°51'23	minimum elong	4118 Mar 17 05:13	26° \approx 31'53	3°36'19
	4117 May 13 17:27	0° \approx		min. Earth dist.	4118 Mar 19 10:48	23° \approx 56'04	0.64344 AU
	4117 May 31 06:10	0° \approx		morning rise	4118 Mar 23 00:41	20° \approx 21'07	
morning set	4117 Jun 02 22:12	5° \approx 18'40		direct	4118 Mar 29 19:59	17° \approx 32'54	
max. Earth dist.	4117 Jun 08 11:14	16° \approx 54'30	1.32490 AU	desc. node	4118 Apr 06 01:03	20° \approx 04'54	
asc. node	4117 Jun 09 04:18	18° \approx 26'21		morning max el	4118 Apr 12 11:01	25° \approx 28'34	27°27'11
					4118 Apr 16 14:37	0° \approx	
superior conj	4117 Jun 10 11:26	21° \approx 15'01	0°13'34		4118 May 07 05:19	0° \approx	
minimum elong	4117 Jun 10 10:48	21° \approx 11'33	0°13'26	morning set	4118 May 17 15:26	19° \approx 07'28	
behind sun begin	4117 Jun 10 08:00	20° \approx 56'19		max. Earth dist.	4118 May 22 11:27	28° \approx 53'30	1.33352 AU
behind sun end	4117 Jun 10 13:36	21° \approx 26'48			4118 May 23 00:15	0° \approx	
	4117 Jun 14 11:46	0° \approx					
evening rise	4117 Jun 17 09:37	6° \approx 16'08		superior conj	4118 May 25 16:42	5° \approx 39'25	-0°14'10
	4117 Jun 29 21:39	0° \approx		minimum elong	4118 May 25 17:26	5° \approx 43'15	0°14'01
evening max el	4117 Jul 11 19:22	15° \approx 27'36	24°01'44	behind sun begin	4118 May 25 14:48	5° \approx 29'15	
desc. node	4117 Jul 16 03:15	19° \approx 03'16		behind sun end	4118 May 25 20:04	5° \approx 57'16	
retrograde	4117 Jul 25 13:42	22° \approx 23'25		asc. node	4118 May 27 01:21	8° \approx 33'30	
evening set	4117 Jul 30 02:55	21° \approx 37'35		evening rise	4118 Jun 01 21:03	21° \approx 00'05	
min. Earth dist.	4117 Aug 05 05:48	18° \approx 38'26	0.56308 AU		4118 Jun 06 06:26	0° \approx	
inferior conj	4117 Aug 07 16:12	17° \approx 08'40	-5°03'20	evening max el	4118 Jun 23 09:38	25° \approx 51'48	22°24'45
minimum elong	4117 Aug 07 12:28	17° \approx 14'27	5°03'00		4118 Jun 28 15:31	0° \approx	
morning rise	4117 Aug 16 00:37	13° \approx 10'24		desc. node	4118 Jul 03 00:16	1° \approx 53'17	
direct	4117 Aug 18 18:23	12° \approx 50'59		retrograde	4118 Jul 06 10:26	2° \approx 20'20	
morning max el	4117 Aug 28 16:10	17° \approx 27'21	19°50'13	evening set	4118 Jul 09 11:58	1° \approx 59'37	
asc. node	4117 Sep 05 03:32	26° \approx 52'08			4118 Jul 14 19:06	30° \approx	
	4117 Sep 07 01:40	0° \approx		min. Earth dist.	4118 Jul 17 16:30	28° \approx 26'23	0.55134 AU
morning set	4117 Sep 15 12:22	16° \approx 00'03		inferior conj	4118 Jul 18 17:30	27° \approx 50'59	-4°09'27
	4117 Sep 22 10:02	0° \approx		minimum elong	4118 Jul 18 09:12	28° \approx 02'45	4°07'30
				morning rise	4118 Jul 27 08:25	24° \approx 00'33	
superior conj	4117 Sep 23 08:08	1° \approx 50'14	1°42'28	direct	4118 Jul 30 10:02	23° \approx 39'13	
minimum elong	4117 Sep 23 09:15	1° \approx 55'49	1°42'25	morning max el	4118 Aug 10 22:50	29° \approx 01'27	21°11'47
max. Earth dist.	4117 Sep 29 03:45	13° \approx 06'00	1.37212 AU		4118 Aug 11 23:05	0° \approx	
evening rise	4117 Oct 02 22:24	20° \approx 02'19		asc. node	4118 Aug 23 00:37	15° \approx 31'02	
	4117 Oct 08 16:00	0° \approx			4118 Aug 30 11:56	0° \approx	
desc. node	4117 Oct 12 02:36	5° \approx 39'48		morning set	4118 Aug 30 20:31	0° \approx 44'21	
	4117 Oct 28 20:00	0° \approx					
evening max el	4117 Nov 07 16:11	11° \approx 18'46	25°32'05	superior conj	4118 Sep 07 05:11	16° \approx 07'10	1°43'55
retrograde	4117 Nov 19 20:44	18° \approx 18'56		minimum elong	4118 Sep 07 04:47	16° \approx 05'06	1°43'54
evening set	4117 Nov 25 19:23	15° \approx 50'32		max. Earth dist.	4118 Sep 11 13:34	24° \approx 57'02	1.35387 AU
min. Earth dist.	4117 Nov 30 04:36	11° \approx 01'39	0.67143 AU		4118 Sep 14 03:30	0° \approx	
inferior conj	4117 Dec 01 09:59	9° \approx 27'25	-0°14'21	evening rise	4118 Sep 15 18:12	3° \approx 04'31	
minimum elong	4117 Dec 01 10:21	9° \approx 26'14	0°14'11	desc. node	4118 Sep 28 23:36	25° \approx 57'16	
transit middle	4117 Dec 01 10:21	9° \approx 26'14	0°14'11		4118 Oct 01 14:17	0° \approx	
transit begin	4117 Dec 01 09:00	9° \approx 30'33		evening max el	4118 Oct 21 04:40	24° \approx 58'57	26°33'03
transit end	4117 Dec 01 11:42	9° \approx 21'55			4118 Oct 27 10:37	0° \approx	
asc. node	4117 Dec 02 02:44	8° \approx 33'58		retrograde	4118 Nov 03 02:42	2° \approx 13'02	
morning rise	4117 Dec 07 01:40	3° \approx 32'33			4118 Nov 09 01:39	30° \approx	
direct	4117 Dec 10 10:05	2° \approx 27'55		evening set	4118 Nov 09 14:24	29° \approx 34'48	
morning max el	4117 Dec 17 11:35	6° \approx 24'26	19°15'59	min. Earth dist.	4118 Nov 13 16:44	25° \approx 21'23	0.66186 AU
greatest brilliancy	4117 Dec 31 01:50	24° \approx 42'54	-0.7m	inferior conj	4118 Nov 15 09:32	23° \approx 18'56	-1°13'28
	4118 Jan 03 12:57	0° \approx		minimum elong	4118 Nov 15 11:34	23° \approx 12'52	1°12'36
desc. node	4118 Jan 08 01:53	7° \approx 00'09		asc. node	4118 Nov 18 23:49	19° \approx 21'45	

morning rise	4118 Nov 21 09:24	17° \mathbb{M} 34'24	direct	4119 Nov 08 03:06	0° \mathbb{M} 54'45	
direct	4118 Nov 24 08:01	16° \mathbb{M} 45'46	morning max el	4119 Nov 14 14:42	4° \mathbb{M} 21'57	18°01'32
morning max el	4118 Nov 30 23:09	20° \mathbb{M} 22'59		4119 Dec 01 17:23	0° \mathbb{M}	
	4118 Dec 08 10:47	0° \mathbb{M}	morning set	4119 Dec 02 08:42	1° \mathbb{M} 03'48	
morning set	4118 Dec 21 02:58	19° \mathbb{M} 52'32	desc. node	4119 Dec 12 19:55	18° \mathbb{M} 15'57	
desc. node	4118 Dec 25 22:54	27° \mathbb{M} 34'00				
	4118 Dec 27 11:44	0° \mathbb{B}	superior conj	4119 Dec 16 08:03	23° \mathbb{M} 53'34	-0°23'57
			minimum elong	4119 Dec 16 05:06	23° \mathbb{M} 41'47	0°23'32
superior conj	4119 Jan 05 23:33	14° \mathbb{B} 56'52		4119 Dec 20 04:27	0° \mathbb{B}	
minimum elong	4119 Jan 05 15:09	14° \mathbb{B} 23'57	max. Earth dist.	4119 Dec 20 06:57	0° \mathbb{B} 09'48	1.44983 AU
max. Earth dist.	4119 Jan 06 11:41	15° \mathbb{B} 44'30	evening rise	4120 Jan 01 15:19	19° \mathbb{B} 23'49	
	4119 Jan 15 13:40	0° \mathbb{B}		4120 Jan 08 12:58	0° \mathbb{B}	
evening rise	4119 Jan 21 21:25	9° \mathbb{B} 59'15	greatest brilliancy	4120 Jan 15 13:46	10° \mathbb{B} 36'54	-0.6m
greatest brilliancy	4119 Jan 31 06:31	24° \mathbb{B} 49'13	evening max el	4120 Jan 27 11:18	26° \mathbb{B} 21'01	19°52'51
	4119 Feb 03 15:02	0° \mathbb{H}		4120 Feb 01 03:07	0° \mathbb{H}	
evening max el	4119 Feb 13 05:36	12° \mathbb{H} 49'08	asc. node	4120 Feb 01 20:08	0° \mathbb{H} 18'28	
asc. node	4119 Feb 14 23:04	14° \mathbb{H} 25'22	retrograde	4120 Feb 04 00:06	0° \mathbb{H} 43'44	
retrograde	4119 Feb 20 02:28	16° \mathbb{H} 41'57		4120 Feb 06 17:51	30° \mathbb{R}	
evening set	4119 Feb 23 10:38	15° \mathbb{H} 37'17	evening set	4120 Feb 07 16:07	29° \mathbb{B} 25'07	
inferior conj	4119 Mar 01 00:37	9° \mathbb{H} 51'25	inferior conj	4120 Feb 13 02:18	23° \mathbb{B} 24'50	3°06'22
minimum elong	4119 Feb 28 23:08	9° \mathbb{H} 56'07	minimum elong	4120 Feb 13 00:03	23° \mathbb{B} 32'19	3°05'55
min. Earth dist.	4119 Mar 02 14:31	7° \mathbb{H} 51'51	min. Earth dist.	4120 Feb 14 01:42	22° \mathbb{B} 06'42	0.66994 AU
morning rise	4119 Mar 06 11:16	3° \mathbb{H} 38'08	morning rise	4120 Feb 18 07:46	17° \mathbb{B} 10'53	
direct	4119 Mar 12 22:36	0° \mathbb{H} 48'07	direct	4120 Feb 24 06:54	14° \mathbb{B} 31'00	
desc. node	4119 Mar 23 22:07	6° \mathbb{H} 34'45	morning max el	4120 Mar 07 05:50	21° \mathbb{B} 39'22	25°16'39
morning max el	4119 Mar 25 20:56	8° \mathbb{H} 27'41	desc. node	4120 Mar 09 19:08	24° \mathbb{B} 22'41	
	4119 Apr 11 16:51	0° \mathbb{Y}		4120 Mar 14 12:12	0° \mathbb{H}	
	4119 Apr 29 15:38	0° \mathbb{B}		4120 Apr 03 22:52	0° \mathbb{Y}	
morning set	4119 Apr 30 21:08	2° \mathbb{B} 18'16	morning set	4120 Apr 12 10:42	14° \mathbb{Y} 38'03	
max. Earth dist.	4119 May 05 00:38	10° \mathbb{B} 19'05	max. Earth dist.	4120 Apr 16 02:45	21° \mathbb{Y} 22'23	1.36458 AU
				4120 Apr 20 14:54	0° \mathbb{B}	
superior conj	4119 May 09 15:39	19° \mathbb{B} 40'10				
minimum elong	4119 May 09 17:57	19° \mathbb{B} 52'04	superior conj	4120 Apr 22 05:27	3° \mathbb{B} 09'45	-1°12'06
asc. node	4119 May 13 22:22	28° \mathbb{B} 35'16	minimum elong	4120 Apr 22 09:18	3° \mathbb{B} 28'46	1°11'28
	4119 May 14 14:32	0° \mathbb{II}	asc. node	4120 Apr 29 19:24	18° \mathbb{B} 27'43	
evening rise	4119 May 17 06:09	5° \mathbb{II} 31'51	evening rise	4120 Apr 30 10:43	19° \mathbb{B} 45'14	
	4119 May 30 19:39	0° \mathbb{B}		4120 May 05 15:54	0° \mathbb{II}	
evening max el	4119 Jun 05 08:24	6° \mathbb{B} 36'10	evening max el	4120 May 17 19:16	17° \mathbb{II} 58'59	19°43'37
retrograde	4119 Jun 16 23:12	12° \mathbb{B} 17'29	retrograde	4120 May 27 16:12	22° \mathbb{II} 47'21	
evening set	4119 Jun 19 02:45	12° \mathbb{B} 06'35	evening set	4120 May 29 15:08	22° \mathbb{II} 36'52	
desc. node	4119 Jun 19 21:19	11° \mathbb{B} 57'32	desc. node	4120 Jun 05 18:20	19° \mathbb{II} 36'06	
inferior conj	4119 Jun 28 10:48	8° \mathbb{B} 09'13	inferior conj	4120 Jun 07 10:40	18° \mathbb{II} 34'26	-0°29'52
minimum elong	4119 Jun 28 03:58	8° \mathbb{B} 18'53	minimum elong	4120 Jun 07 09:18	18° \mathbb{II} 36'32	0°29'22
min. Earth dist.	4119 Jun 29 04:02	7° \mathbb{B} 44'48	min. Earth dist.	4120 Jun 09 17:09	17° \mathbb{II} 10'01	0.55523 AU
morning rise	4119 Jul 07 05:03	4° \mathbb{B} 07'43	morning rise	4120 Jun 16 01:11	14° \mathbb{II} 04'19	
direct	4119 Jul 10 19:22	3° \mathbb{B} 39'50	direct	4120 Jun 20 11:06	13° \mathbb{II} 21'10	
morning max el	4119 Jul 23 18:50	9° \mathbb{B} 52'29	morning max el	4120 Jul 04 09:02	20° \mathbb{II} 17'23	24°32'54
	4119 Aug 07 09:06	0° \mathbb{Q}		4120 Jul 12 15:57	0° \mathbb{B}	
asc. node	4119 Aug 09 21:40	4° \mathbb{Q} 41'14	asc. node	4120 Jul 26 18:41	24° \mathbb{B} 14'33	
morning set	4119 Aug 15 07:20	15° \mathbb{Q} 36'03	morning set	4120 Jul 29 19:06	0° \mathbb{Q} 29'52	
				4120 Jul 29 13:27	0° \mathbb{Q}	
superior conj	4119 Aug 22 09:22	0° \mathbb{P} 44'33				
minimum elong	4119 Aug 22 07:51	0° \mathbb{P} 36'26	superior conj	4120 Aug 05 18:05	15° \mathbb{Q} 34'09	1°27'43
	4119 Aug 22 01:01	0° \mathbb{P}	minimum elong	4120 Aug 05 15:55	15° \mathbb{Q} 22'20	1°27'28
max. Earth dist.	4119 Aug 25 08:10	6° \mathbb{P} 58'08	max. Earth dist.	4120 Aug 07 11:26	19° \mathbb{Q} 18'23	1.32874 AU
evening rise	4119 Aug 30 04:16	16° \mathbb{P} 47'20		4120 Aug 12 13:04	0° \mathbb{P}	
	4119 Sep 06 05:27	0° \mathbb{Q}	evening rise	4120 Aug 13 00:43	0° \mathbb{P} 59'33	
desc. node	4119 Sep 15 20:37	15° \mathbb{Q} 53'30		4120 Aug 29 04:24	0° \mathbb{Q}	
	4119 Sep 26 00:55	0° \mathbb{M}	desc. node	4120 Sep 01 17:39	5° \mathbb{Q} 18'59	
evening max el	4119 Oct 03 17:12	8° \mathbb{M} 29'07	evening max el	4120 Sep 15 04:02	21° \mathbb{Q} 36'01	27°26'44
retrograde	4119 Oct 17 02:53	15° \mathbb{M} 47'04	retrograde	4120 Sep 28 20:32	28° \mathbb{Q} 51'57	
evening set	4119 Oct 24 01:14	13° \mathbb{M} 06'00	evening set	4120 Oct 06 00:51	26° \mathbb{Q} 17'35	
min. Earth dist.	4119 Oct 27 21:25	9° \mathbb{M} 27'47	min. Earth dist.	4120 Oct 09 16:28	23° \mathbb{Q} 11'24	0.63243 AU
inferior conj	4119 Oct 30 02:13	7° \mathbb{M} 02'28	inferior conj	4120 Oct 12 09:17	20° \mathbb{Q} 31'03	-3°15'55
minimum elong	4119 Oct 30 06:02	6° \mathbb{M} 51'56	minimum elong	4120 Oct 12 14:40	20° \mathbb{Q} 17'42	3°14'09
morning rise	4119 Nov 05 11:53	1° \mathbb{M} 31'19	morning rise	4120 Oct 19 05:56	15° \mathbb{Q} 16'49	
asc. node	4119 Nov 05 20:53	1° \mathbb{M} 21'44	direct	4120 Oct 21 16:21	14° \mathbb{Q} 48'41	

asc. node	4120 Oct 22 17:55	14°♌54'11			4121 Sep 29 18:52	30°♏♏	
morning max el	4120 Oct 28 07:19	18°♌14'15	17°50'14	morning rise	4121 Oct 02 11:39	28°♏43'07	
	4120 Nov 05 19:42	0°♎		direct	4121 Oct 04 20:07	28°♏20'22	
morning set	4120 Nov 13 15:29	13°♎27'31		asc. node	4121 Oct 09 14:56	29°♏58'22	
	4120 Nov 23 06:02	0°♏			4121 Oct 09 15:53	0°♏	
				morning max el	4121 Oct 11 21:57	1°♏52'39	17°57'26
superior conj	4120 Nov 25 14:45	3°♏56'57	0°21'24	morning set	4121 Oct 27 16:52	26°♏44'18	
minimum elong	4120 Nov 25 16:55	4°♏05'55	0°21'06		4121 Oct 29 11:32	0°♎	
desc. node	4120 Nov 28 16:56	9°♏02'09					
max. Earth dist.	4120 Dec 02 00:31	14°♏24'02	1.44000 AU	superior conj	4121 Nov 07 00:18	15°♎19'23	0°57'48
evening rise	4120 Dec 11 00:53	28°♏34'10		minimum elong	4121 Nov 07 04:23	15°♎37'16	0°57'16
	4120 Dec 11 23:11	0°♏		max. Earth dist.	4121 Nov 14 13:28	28°♎08'48	1.42432 AU
	4121 Jan 01 09:05	0°♏		desc. node	4121 Nov 15 13:58	29°♎49'35	
evening max el	4121 Jan 09 11:32	9°♏53'32	20°57'52		4121 Nov 15 16:31	0°♏	
retrograde	4121 Jan 17 22:05	14°♏53'09		evening rise	4121 Nov 20 18:18	8°♏10'11	
asc. node	4121 Jan 18 17:10	14°♏49'42			4121 Dec 05 04:03	0°♏	
evening set	4121 Jan 21 23:31	13°♏19'34		evening max el	4121 Dec 23 06:20	23°♏27'28	22°12'44
inferior conj	4121 Jan 27 07:57	7°♏07'26	2°35'20	retrograde	4122 Jan 01 18:41	29°♏07'09	
minimum elong	4121 Jan 27 05:28	7°♏15'59	2°34'37	asc. node	4122 Jan 05 14:11	27°♏49'48	
min. Earth dist.	4121 Jan 27 18:20	6°♏31'41	0.67695 AU	evening set	4122 Jan 06 07:08	27°♏17'49	
morning rise	4121 Feb 01 11:15	0°♏54'28		inferior conj	4122 Jan 11 15:33	20°♏57'14	1°56'08
	4121 Feb 02 14:27	30°♏♏		minimum elong	4122 Jan 11 13:18	21°♏05'00	1°55'21
direct	4121 Feb 06 20:01	28°♏32'44		min. Earth dist.	4122 Jan 11 14:13	21°♏01'50	0.68004 AU
	4121 Feb 11 12:40	0°♏		morning rise	4122 Jan 16 19:21	14°♏46'39	
morning max el	4121 Feb 17 14:25	4°♏57'38	23°49'26	direct	4122 Jan 21 13:15	12°♏47'04	
desc. node	4121 Feb 24 16:09	13°♏06'02		morning max el	4122 Jan 31 01:24	18°♏22'57	22°20'50
	4121 Mar 08 21:06	0°♏			4122 Feb 09 17:10	0°♏	
morning set	4121 Mar 25 02:18	25°♏50'59		desc. node	4122 Feb 11 13:12	2°♏29'30	
	4121 Mar 27 11:53	0°♏			4122 Mar 02 00:43	0°♏	
max. Earth dist.	4121 Mar 28 22:33	2°♏32'35	1.38549 AU	morning set	4122 Mar 05 14:19	5°♏43'48	
				max. Earth dist.	4122 Mar 10 19:12	14°♏21'15	1.40726 AU
superior conj	4121 Apr 05 06:29	15°♏58'22	-1°38'20				
minimum elong	4121 Apr 05 11:14	16°♏20'50	1°37'46	superior conj	4122 Mar 18 14:11	27°♏54'58	-1°58'27
	4121 Apr 12 12:40	0°♏		minimum elong	4122 Mar 18 18:15	28°♏13'10	1°58'11
evening rise	4121 Apr 14 08:08	3°♏32'43			4122 Mar 19 17:58	0°♏	
asc. node	4121 Apr 16 16:26	8°♏06'04		evening rise	4122 Mar 28 19:07	16°♏45'53	
evening max el	4121 Apr 30 17:21	0°♏02'14	18°51'19	asc. node	4122 Apr 03 13:28	27°♏24'34	
	4121 Apr 30 16:27	0°♏			4122 Apr 05 00:47	0°♏	
retrograde	4121 May 09 01:12	4°♏06'47		evening max el	4122 Apr 13 23:40	12°♏38'46	18°19'18
evening set	4121 May 11 04:28	3°♏51'44		retrograde	4122 Apr 21 05:09	16°♏14'44	
	4121 May 18 13:31	30°♏♏		evening set	4122 Apr 23 15:00	15°♏51'40	
inferior conj	4121 May 19 04:33	29°♏33'01	1°15'46	inferior conj	4122 Apr 30 19:58	11°♏12'57	2°31'01
minimum elong	4121 May 19 07:17	29°♏28'05	1°14'50	minimum elong	4122 Apr 30 23:35	11°♏05'17	2°30'05
min. Earth dist.	4121 May 22 09:16	27°♏15'34	0.57014 AU	min. Earth dist.	4122 May 04 06:25	8°♏20'04	0.59030 AU
desc. node	4121 May 23 15:20	26°♏25'28		morning rise	4122 May 08 05:16	5°♏36'51	
morning rise	4121 May 27 06:51	24°♏27'04		desc. node	4122 May 10 12:22	4°♏34'07	
direct	4121 Jun 01 16:00	23°♏17'16		direct	4122 May 14 10:54	3°♏52'07	
	4121 Jun 15 05:03	0°♏		morning max el	4122 May 28 20:16	11°♏39'35	27°15'22
morning max el	4121 Jun 16 00:04	0°♏44'55	26°06'38		4122 Jun 12 04:04	0°♏	
	4121 Jul 06 12:49	0°♏		morning set	4122 Jun 28 15:00	0°♏03'15	
asc. node	4121 Jul 13 15:42	14°♏04'41			4122 Jun 28 14:23	0°♏	
morning set	4121 Jul 14 06:14	15°♏21'10		asc. node	4122 Jun 30 12:43	4°♏05'14	
	4121 Jul 20 23:54	0°♏					
superior conj	4121 Jul 21 05:16	0°♏29'37	1°11'58	superior conj	4122 Jul 05 17:03	15°♏23'44	0°52'01
minimum elong	4121 Jul 21 02:56	0°♏16'47	1°11'36	minimum elong	4122 Jul 05 15:02	15°♏12'35	0°51'38
max. Earth dist.	4121 Jul 21 20:42	1°♏54'33	1.32236 AU	max. Earth dist.	4122 Jul 05 08:15	14°♏35'13	1.32004 AU
evening rise	4121 Jul 28 04:28	15°♏32'16			4122 Jul 12 09:49	0°♏	
	4121 Aug 04 12:14	0°♏		evening rise	4122 Jul 12 12:55	0°♏16'24	
desc. node	4121 Aug 19 14:39	24°♏01'14			4122 Jul 28 17:41	0°♏	
	4121 Aug 24 11:39	0°♏		desc. node	4122 Aug 06 11:39	11°♏41'36	
evening max el	4121 Aug 28 10:28	4°♏06'13	27°07'47	evening max el	4122 Aug 10 10:05	15°♏49'11	26°15'44
retrograde	4121 Sep 11 07:04	11°♏18'50		retrograde	4122 Aug 24 09:25	22°♏58'37	
evening set	4121 Sep 18 09:21	9°♏03'11		evening set	4122 Aug 30 21:56	21°♏14'16	
min. Earth dist.	4121 Sep 22 00:48	6°♏20'18	0.61323 AU	min. Earth dist.	4122 Sep 03 23:06	18°♏39'14	0.59253 AU
inferior conj	4121 Sep 25 03:36	3°♏36'55	-4°11'49	inferior conj	4122 Sep 07 05:37	16°♏09'49	-4°54'38
minimum elong	4121 Sep 25 09:35	3°♏23'48	4°10'21	minimum elong	4122 Sep 07 10:04	16°♏01'18	4°54'02
				morning rise	4122 Sep 15 00:24	11°♏38'43	




























































































































direct	4122 Sep 17 10:02	11° \mathbb{M} 18'49		morning rise	4123 Aug 27 16:08	23° Ω 52'03	
morning max el	4122 Sep 25 07:15	15° \mathbb{M} 07'25	18°24'23	direct	4123 Aug 30 06:07	23° Ω 32'55	
asc. node	4122 Sep 26 11:58	16° \mathbb{M} 21'04		morning max el	4123 Sep 08 07:54	27° Ω 48'49	19°12'32
	4122 Oct 05 15:02	0° \mathbb{L}			4123 Sep 10 10:06	0° \mathbb{M}	
morning set	4122 Oct 11 07:20	10° \mathbb{L} 37'51		asc. node	4123 Sep 13 09:01	3° \mathbb{M} 47'27	
				morning set	4123 Sep 25 06:55	24° \mathbb{M} 57'24	
					4123 Sep 27 19:37	0° \mathbb{L}	
superior conj	4122 Oct 20 09:03	27° \mathbb{L} 49'12	1°23'08				
minimum elong	4122 Oct 20 12:40	28° \mathbb{L} 05'51	1°22'46				
	4122 Oct 21 13:34	0° \mathbb{M}		superior conj	4123 Oct 03 11:36	11° \mathbb{L} 11'10	1°38'02
max. Earth dist.	4122 Oct 27 20:45	11° \mathbb{M} 10'32	1.40475 AU	minimum elong	4123 Oct 03 13:41	11° \mathbb{L} 21'19	1°37'54
evening rise	4122 Nov 01 07:29	18° \mathbb{M} 40'59		max. Earth dist.	4123 Oct 10 01:10	23° \mathbb{L} 31'37	1.38385 AU
desc. node	4122 Nov 02 11:00	20° \mathbb{M} 34'11		evening rise	4123 Oct 13 20:03	0° \mathbb{M} 16'03	
	4122 Nov 08 08:45	0° \mathbb{X}			4123 Oct 13 16:22	0° \mathbb{M}	
	4122 Nov 29 14:17	0° \mathbb{Z}		desc. node	4123 Oct 20 08:00	11° \mathbb{M} 12'09	
evening max el	4122 Dec 05 21:06	7° \mathbb{Z} 04'39	23°32'32		4123 Nov 01 16:16	0° \mathbb{X}	
retrograde	4122 Dec 16 12:28	13° \mathbb{Z} 22'01		evening max el	4123 Nov 18 09:56	20° \mathbb{X} 45'55	24°50'46
evening set	4122 Dec 21 13:26	11° \mathbb{Z} 16'46		retrograde	4123 Nov 30 02:10	27° \mathbb{X} 33'04	
asc. node	4122 Dec 23 11:12	9° \mathbb{Z} 23'05		evening set	4123 Dec 05 16:45	25° \mathbb{X} 12'42	
inferior conj	4122 Dec 26 23:16	4° \mathbb{Z} 51'43	1°10'00	asc. node	4123 Dec 10 08:16	19° \mathbb{X} 57'08	
minimum elong	4122 Dec 26 21:43	4° \mathbb{Z} 57'01	1°09'23	min. Earth dist.	4123 Dec 10 06:20	20° \mathbb{X} 03'31	0.67535 AU
min. Earth dist.	4122 Dec 26 11:02	5° \mathbb{Z} 33'37	0.67942 AU	inferior conj	4123 Dec 11 05:18	18° \mathbb{X} 47'38	0°17'55
	4122 Dec 30 20:58	30° \mathbb{R} \mathbb{X}		minimum elong	4123 Dec 11 04:51	18° \mathbb{X} 49'06	0°17'45
morning rise	4123 Jan 01 05:58	28° \mathbb{X} 45'22		morning rise	4123 Dec 16 17:06	12° \mathbb{X} 47'42	
direct	4123 Jan 05 09:43	27° \mathbb{X} 08'32		direct	4123 Dec 20 08:06	11° \mathbb{X} 32'02	
	4123 Jan 11 14:47	0° \mathbb{Z}		morning max el	4123 Dec 27 18:45	15° \mathbb{X} 44'38	19°49'18
morning max el	4123 Jan 13 18:12	1° \mathbb{Z} 58'18	20°59'01		4124 Jan 07 20:44	0° \mathbb{Z}	
desc. node	4123 Jan 29 10:16	22° \mathbb{Z} 22'04		greatest brilliancy	4124 Jan 10 04:29	3° \mathbb{Z} 24'05	-0.6m
	4123 Feb 03 14:03	0° \approx		desc. node	4124 Jan 16 07:17	12° \mathbb{Z} 35'07	
morning set	4123 Feb 12 22:57	14° \approx 21'42		morning set	4124 Jan 22 18:56	22° \mathbb{Z} 31'10	
max. Earth dist.	4123 Feb 20 22:13	27° \approx 04'51	1.42704 AU		4124 Jan 27 14:39	0° \approx	
	4123 Feb 22 17:00	0° \mathbb{H}		max. Earth dist.	4124 Feb 03 09:04	10° \approx 39'25	1.44224 AU
superior conj	4123 Feb 27 23:37	8° \mathbb{H} 49'06	-2°07'41	superior conj	4124 Feb 08 07:19	18° \approx 33'55	-2°00'37
minimum elong	4123 Feb 28 00:12	8° \mathbb{H} 51'33	2°07'41	minimum elong	4124 Feb 08 01:56	18° \approx 12'08	2°00'21
evening rise	4123 Mar 11 15:43	29° \mathbb{H} 16'13			4124 Feb 15 06:17	0° \mathbb{H}	
	4123 Mar 12 01:29	0° \mathbb{Y}		evening rise	4124 Feb 21 17:27	10° \mathbb{H} 54'28	
asc. node	4123 Mar 21 10:30	16° \mathbb{Y} 16'57			4124 Mar 04 04:24	0° \mathbb{Y}	
evening max el	4123 Mar 28 10:52	25° \mathbb{Y} 40'15	18°07'01	asc. node	4124 Mar 07 07:34	4° \mathbb{Y} 34'23	
retrograde	4123 Apr 04 01:27	29° \mathbb{Y} 03'28		evening max el	4124 Mar 10 23:42	8° \mathbb{Y} 57'33	18°13'49
evening set	4123 Apr 06 17:42	28° \mathbb{Y} 30'06		retrograde	4124 Mar 17 09:47	12° \mathbb{Y} 22'28	
inferior conj	4123 Apr 13 06:57	23° \mathbb{Y} 30'58	3°15'14	evening set	4124 Mar 20 08:00	11° \mathbb{Y} 37'30	
minimum elong	4123 Apr 13 09:25	23° \mathbb{Y} 24'55	3°14'52	inferior conj	4124 Mar 26 09:30	6° \mathbb{Y} 18'45	3°34'16
min. Earth dist.	4123 Apr 16 10:43	20° \mathbb{Y} 27'29	0.61226 AU	minimum elong	4124 Mar 26 10:14	6° \mathbb{Y} 16'44	3°34'15
morning rise	4123 Apr 19 23:13	17° \mathbb{Y} 35'27		min. Earth dist.	4124 Mar 28 23:45	3° \mathbb{Y} 28'18	0.63300 AU
direct	4123 Apr 26 17:24	15° \mathbb{Y} 17'22		morning rise	4124 Apr 01 11:25	0° \mathbb{Y} 12'29	
desc. node	4123 Apr 27 09:25	15° \mathbb{Y} 18'39			4124 Apr 01 17:56	30° \mathbb{R} \mathbb{H}	
morning max el	4123 May 10 22:45	23° \mathbb{Y} 14'37	27°49'04	direct	4124 Apr 08 08:46	27° \mathbb{H} 31'24	
	4123 May 16 23:21	0° \mathbb{B}		desc. node	4124 Apr 13 06:28	28° \mathbb{H} 41'58	
	4123 Jun 05 08:58	0° \mathbb{I}			4124 Apr 15 15:24	0° \mathbb{Y}	
morning set	4123 Jun 12 19:35	14° \mathbb{I} 30'13		morning max el	4124 Apr 22 06:05	5° \mathbb{Y} 29'37	27°45'11
asc. node	4123 Jun 17 09:47	24° \mathbb{I} 11'44			4124 May 10 19:01	0° \mathbb{B}	
max. Earth dist.	4123 Jun 18 18:24	27° \mathbb{I} 08'40	1.32187 AU	morning set	4124 May 26 17:43	28° \mathbb{B} 34'38	
					4124 May 27 10:41	0° \mathbb{I}	
superior conj	4123 Jun 20 03:45	0° \mathbb{O} 10'53	0°28'30	max. Earth dist.	4124 May 31 23:15	9° \mathbb{I} 22'28	1.32801 AU
minimum elong	4123 Jun 20 02:29	0° \mathbb{O} 03'58	0°28'14				
	4123 Jun 20 01:46	0° \mathbb{O}		superior conj	4124 Jun 03 11:33	14° \mathbb{I} 44'54	0°02'04
evening rise	4123 Jun 27 00:01	15° \mathbb{O} 05'25		minimum elong	4124 Jun 03 11:27	14° \mathbb{I} 44'23	0°02'02
	4123 Jul 04 10:04	0° Ω		behind sun begin	4124 Jun 03 06:12	14° \mathbb{I} 16'06	
evening max el	4123 Jul 23 02:36	26° Ω 45'54	24°55'50	behind sun end	4124 Jun 03 16:42	15° \mathbb{I} 12'41	
desc. node	4123 Jul 24 08:40	27° Ω 55'11		asc. node	4124 Jun 03 06:49	14° \mathbb{I} 19'28	
	4123 Jul 26 22:27	0° \mathbb{M}		evening rise	4124 Jun 10 11:51	29° \mathbb{I} 52'40	
retrograde	4123 Aug 06 01:14	3° \mathbb{M} 49'01			4124 Jun 10 13:15	0° \mathbb{O}	
evening set	4123 Aug 11 10:32	2° \mathbb{M} 43'04			4124 Jun 27 10:16	0° Ω	
min. Earth dist.	4123 Aug 16 14:07	29° Ω 57'15	0.57277 AU	evening max el	4124 Jul 03 15:35	7° Ω 12'48	23°20'23
	4123 Aug 16 12:24	30° \mathbb{R} Ω		desc. node	4124 Jul 10 05:40	12° Ω 09'25	
inferior conj	4123 Aug 19 12:15	28° Ω 01'12	-5°11'37	retrograde	4124 Jul 17 04:15	13° Ω 58'50	
minimum elong	4123 Aug 19 12:07	28° Ω 01'26	5°11'36	evening set	4124 Jul 21 01:36	13° Ω 25'46	

min. Earth dist.	4124 Jul 28 01:11	10°♎13'48	0.55714 AU	minimum elong	4125 Jul 09 10:34	19°♏46'07	3°29'01
inferior conj	4124 Jul 29 22:57	9°♎06'30	-4°46'53	min. Earth dist.	4125 Jul 09 11:35	19°♏44'42	0.54891 AU
minimum elong	4124 Jul 29 16:45	9°♎15'39	4°45'56	morning rise	4125 Jul 18 12:03	15°♏42'07	
morning rise	4124 Aug 07 10:17	5°♎13'16		direct	4125 Jul 21 18:28	15°♏18'46	
direct	4124 Aug 10 07:16	4°♎53'11		morning max el	4125 Aug 02 22:51	21°♏01'54	21°52'05
morning max el	4124 Aug 20 21:14	9°♎48'02	20°22'31		4125 Aug 10 11:43	0°♎	
asc. node	4124 Aug 30 06:05	22°♎03'24		asc. node	4125 Aug 17 03:08	10°♎56'33	
	4124 Sep 03 16:46	0°♎		morning set	4125 Aug 23 22:10	24°♎23'16	
morning set	4124 Sep 08 12:40	9°♎35'03			4125 Aug 26 14:09	0°♎	
superior conj	4124 Sep 16 03:04	25°♎11'39	1°43'58	superior conj	4125 Aug 31 03:29	9°♎38'16	1°42'26
minimum elong	4124 Sep 16 03:31	25°♎13'52	1°43'58	minimum elong	4125 Aug 31 02:33	9°♎33'23	1°42'24
	4124 Sep 18 12:36	0°♎		max. Earth dist.	4125 Sep 03 21:26	17°♎23'04	1.34709 AU
max. Earth dist.	4124 Sep 21 07:54	5°♎28'48	1.36400 AU	evening rise	4125 Sep 08 08:00	26°♎10'19	
evening rise	4124 Sep 25 05:41	12°♎49'50			4125 Sep 10 08:23	0°♎	
	4124 Oct 05 04:21	0°♎		desc. node	4125 Sep 23 02:01	21°♎48'51	
desc. node	4124 Oct 06 05:00	1°♎39'12			4125 Sep 28 13:42	0°♎	
	4124 Oct 26 16:27	0°♎		evening max el	4125 Oct 13 11:03	18°♎06'24	26°53'10
evening max el	4124 Oct 30 22:29	4°♎29'12	26°00'06	retrograde	4125 Oct 26 14:23	25°♎22'46	
retrograde	4124 Nov 12 10:59	11°♎35'47		evening set	4125 Nov 02 07:12	22°♎42'08	
evening set	4124 Nov 18 15:22	9°♎02'46		min. Earth dist.	4125 Nov 06 06:45	18°♎44'10	0.65679 AU
min. Earth dist.	4124 Nov 22 21:42	4°♎28'52	0.66784 AU	inferior conj	4125 Nov 08 04:41	16°♎31'08	-1°39'19
inferior conj	4124 Nov 24 07:48	2°♎42'22	-0°38'58	minimum elong	4125 Nov 08 07:28	16°♎23'04	1°38'10
minimum elong	4124 Nov 24 08:50	2°♎39'08	0°38'31	asc. node	4125 Nov 13 02:22	11°♎38'27	
asc. node	4124 Nov 26 05:19	0°♎24'10		morning rise	4125 Nov 14 08:34	10°♎52'09	
	4124 Nov 26 13:48	30°♎		direct	4125 Nov 17 03:48	10°♎09'05	
morning rise	4124 Nov 30 02:44	26°♎51'28		morning max el	4125 Nov 23 16:29	13°♎40'34	18°16'03
direct	4124 Dec 03 06:49	25°♎53'56			4125 Dec 05 09:30	0°♎	
morning max el	4124 Dec 10 02:51	29°♎40'37	18°54'33	morning set	4125 Dec 12 16:36	11°♎48'30	
	4124 Dec 10 10:29	0°♎		desc. node	4125 Dec 20 01:19	23°♎41'06	
	4124 Dec 31 05:32	0°♎			4125 Dec 24 00:30	0°♎	
morning set	4125 Jan 01 03:46	1°♎27'02		superior conj	4125 Dec 27 19:27	5°♎59'11	-0°51'28
desc. node	4125 Jan 02 04:19	3°♎03'08		minimum elong	4125 Dec 27 13:01	5°♎33'51	0°50'38
max. Earth dist.	4125 Jan 16 01:55	24°♎49'37	1.45101 AU	max. Earth dist.	4125 Dec 29 21:15	9°♎14'55	1.45240 AU
superior conj	4125 Jan 17 16:46	27°♎22'25	-1°33'59		4126 Jan 12 03:45	0°♎	
minimum elong	4125 Jan 17 07:31	26°♎46'01	1°33'05	evening rise	4126 Jan 13 01:13	1°♎23'52	
	4125 Jan 19 08:44	0°♎		greatest brilliancy	4126 Jan 24 13:00	19°♎14'39	-0.7m
evening rise	4125 Feb 01 20:44	21°♎36'00			4126 Jan 31 22:16	0°♎	
	4125 Feb 07 00:52	0°♎		evening max el	4126 Feb 05 19:40	5°♎54'14	19°21'22
asc. node	4125 Feb 22 04:37	22°♎06'21		asc. node	4126 Feb 09 01:38	8°♎39'49	
evening max el	4125 Feb 22 11:24	22°♎23'50	18°38'57	retrograde	4126 Feb 12 22:33	9°♎58'58	
retrograde	4125 Mar 01 02:00	26°♎03'17		evening set	4126 Feb 16 09:52	8°♎48'27	
evening set	4125 Mar 04 06:20	25°♎05'54		inferior conj	4126 Feb 21 21:56	2°♎55'51	3°19'55
inferior conj	4125 Mar 09 23:38	19°♎29'08	3°34'17	minimum elong	4126 Feb 21 20:04	3°♎01'56	3°19'37
minimum elong	4125 Mar 09 22:50	19°♎31'35	3°34'14	min. Earth dist.	4126 Feb 23 05:24	1°♎13'46	0.66403 AU
min. Earth dist.	4125 Mar 11 22:15	17°♎08'21	0.65055 AU		4126 Feb 24 04:48	30°♎	
morning rise	4125 Mar 15 14:49	13°♎17'26		morning rise	4126 Feb 27 05:59	26°♎41'55	
direct	4125 Mar 22 07:22	10°♎27'07		direct	4126 Mar 05 12:21	23°♎55'17	
desc. node	4125 Mar 31 03:32	14°♎13'55			4126 Mar 16 15:34	0°♎	
morning max el	4125 Apr 04 15:54	18°♎16'40	27°07'08	morning max el	4126 Mar 18 01:46	1°♎23'36	26°02'20
	4125 Apr 14 12:48	0°♎		desc. node	4126 Mar 18 00:34	1°♎20'34	
	4125 May 03 17:30	0°♎			4126 Apr 08 14:08	0°♎	
morning set	4125 May 10 06:28	12°♎08'09		morning set	4126 Apr 23 05:59	24°♎59'42	
max. Earth dist.	4125 May 14 19:14	21°♎07'58	1.33868 AU		4126 Apr 25 21:53	0°♎	
				max. Earth dist.	4126 Apr 27 03:51	2°♎23'51	1.35389 AU
superior conj	4125 May 18 14:24	28°♎59'47	-0°26'25	superior conj	4126 May 02 09:50	12°♎48'38	-0°55'39
minimum elong	4125 May 18 15:47	29°♎07'01	0°26'09	minimum elong	4126 May 02 12:50	13°♎03'49	0°55'05
	4125 May 19 01:51	0°♎		asc. node	4126 May 08 00:55	24°♎23'36	
asc. node	4125 May 21 03:53	4°♎24'48		evening rise	4126 May 10 06:03	28°♎57'39	
evening rise	4125 May 25 22:33	14°♎32'11			4126 May 10 18:13	0°♎	
	4125 Jun 02 18:50	0°♎		evening max el	4126 May 28 12:13	28°♎40'55	20°22'44
evening max el	4125 Jun 15 08:32	17°♎41'14	21°45'10		4126 May 29 22:51	0°♎	
desc. node	4125 Jun 27 02:43	23°♎50'18		retrograde	4126 Jun 08 09:41	4°♎00'06	
retrograde	4125 Jun 27 20:15	23°♎51'33		evening set	4126 Jun 10 09:19	3°♎50'14	
evening set	4125 Jun 30 10:26	23°♎36'25		desc. node	4126 Jun 13 23:45	2°♎46'51	
inferior conj	4125 Jul 09 19:03	19°♎34'15	-3°31'28				

	4126 Jun 19 08:08	30° RII		retrograde	4127 May 20 08:27	14° II 49'52	
inferior conj	4126 Jun 19 13:27	29° II 52'14 -1°38'50		evening set	4127 May 22 08:27	14° II 38'04	
minimum elong	4126 Jun 19 08:48	29° II 59'02 1°37'08		inferior conj	4127 May 30 20:06	10° II 29'58 0°18'05	
min. Earth dist.	4126 Jun 20 23:44	29° II 02'10 0.55013 AU		minimum elong	4127 May 30 20:51	10° II 28'42 0°17'47	
morning rise	4126 Jun 28 07:10	25° II 40'13		desc. node	4127 May 31 20:47	9° II 49'03	
direct	4126 Jul 02 04:40	25° II 07'25		min. Earth dist.	4127 Jun 02 14:20	8° II 41'10 0.56071 AU	
	4126 Jul 13 18:20	0° ☿		morning rise	4127 Jun 08 06:15	5° II 44'13	
morning max el	4126 Jul 15 15:51	1° ☿ 40'05 23°33'47		direct	4127 Jun 13 01:57	4° II 50'55	
	4126 Aug 03 20:33	0° ♊		morning max el	4127 Jun 27 05:44	12° II 02'59 25°14'51	
asc. node	4126 Aug 04 00:10	0° ♊ 17'44			4127 Jul 11 01:43	0° ☿	
morning set	4126 Aug 08 09:35	9° ♊ 16'45		asc. node	4127 Jul 21 21:11	19° ☿ 58'50	
				morning set	4127 Jul 23 21:14	24° ☿ 09'48	
					4127 Jul 26 14:27	0° ♊	
superior conj	4126 Aug 15 09:53	24° ♊ 22'08 1°34'39					
minimum elong	4126 Aug 15 08:02	24° ♊ 12'08 1°34'29		superior conj	4127 Jul 30 19:53	9° ♊ 15'00 1°21'35	
max. Earth dist.	4126 Aug 17 19:44	29° ♊ 31'23 1.33418 AU		minimum elong	4127 Jul 30 17:35	9° ♊ 02'25 1°21'17	
	4126 Aug 18 01:09	0° ♊		max. Earth dist.	4127 Aug 01 01:40	11° ♊ 57'48 1.32549 AU	
evening rise	4126 Aug 22 22:53	10° ♊ 06'48		evening rise	4127 Aug 06 22:46	24° ♊ 28'41	
	4126 Sep 02 17:03	0° ♋			4127 Aug 09 16:20	0° ♊	
desc. node	4126 Sep 09 23:01	11° ♋ 33'25			4127 Aug 27 08:01	0° ♋	
	4126 Sep 24 11:20	0° ♌		desc. node	4127 Aug 27 20:03	0° ♋ 42'17	
evening max el	4126 Sep 25 22:49	1° ♌ 27'18 27°22'47		evening max el	4127 Sep 08 08:04	14° ♋ 19'52 27°22'51	
retrograde	4126 Oct 09 11:58	8° ♌ 45'40		retrograde	4127 Sep 22 03:00	21° ♋ 35'05	
evening set	4126 Oct 16 13:40	6° ♌ 05'43		evening set	4127 Sep 29 07:24	19° ♋ 07'13	
min. Earth dist.	4126 Oct 20 07:26	2° ♌ 42'02 0.64221 AU		min. Earth dist.	4127 Oct 02 22:08	16° ♋ 12'11 0.62445 AU	
inferior conj	4126 Oct 22 17:34	0° ♌ 08'47 -2°41'03		inferior conj	4127 Oct 05 19:37	13° ♋ 28'39 -3°40'43	
minimum elong	4126 Oct 22 22:07	29° ♋ 56'48 2°39'23		minimum elong	4127 Oct 06 01:25	13° ♋ 14'56 3°38'59	
	4126 Oct 22 20:54	30° $\text{R}\text{♋}$		morning rise	4127 Oct 12 21:07	8° ♋ 22'42	
morning rise	4126 Oct 29 07:51	24° ♋ 44'44		direct	4127 Oct 15 06:12	7° ♋ 57'19	
asc. node	4126 Oct 30 23:23	24° ♋ 16'18		asc. node	4127 Oct 17 20:24	8° ♋ 28'23	
direct	4126 Oct 31 20:36	24° ♋ 12'18		morning max el	4127 Oct 22 01:02	11° ♋ 25'09 17°50'59	
morning max el	4126 Nov 07 08:53	27° ♋ 37'51 17°54'35			4127 Nov 03 11:28	0° ♌	
	4126 Nov 09 11:56	0° ♌		morning set	4127 Nov 07 01:10	6° ♌ 21'13	
morning set	4126 Nov 24 09:42	23° ♌ 32'39					
	4126 Nov 28 05:08	0° ♍		superior conj	4127 Nov 18 06:16	25° ♌ 58'36 0°38'09	
desc. node	4126 Dec 06 22:19	14° ♍ 25'22		minimum elong	4127 Nov 18 09:38	26° ♌ 12'52 0°37'41	
					4127 Nov 20 15:39	0° ♍	
superior conj	4126 Dec 07 12:05	15° ♍ 21'10 -0°03'59		desc. node	4127 Nov 23 19:20	5° ♍ 12'45	
minimum elong	4126 Dec 07 11:37	15° ♍ 19'18 0°03'54		max. Earth dist.	4127 Nov 25 07:05	7° ♍ 38'18 1.43388 AU	
behind sun begin	4126 Dec 07 01:44	14° ♍ 39'16		evening rise	4127 Dec 03 00:37	19° ♍ 54'19	
behind sun end	4126 Dec 07 21:30	15° ♍ 59'17			4127 Dec 09 14:51	0° ☿	
max. Earth dist.	4126 Dec 12 15:43	23° ♍ 36'14 1.44643 AU			4127 Dec 31 03:14	0° ☿	
	4126 Dec 16 17:11	0° ☿		evening max el	4128 Jan 02 20:56	3° ☿ 00'10 21°28'51	
evening rise	4126 Dec 23 13:39	10° ☿ 37'27		retrograde	4128 Jan 11 18:14	8° ☿ 16'43	
	4127 Jan 05 08:49	0° ☿		asc. node	4128 Jan 13 19:40	7° ☿ 53'44	
evening max el	4127 Jan 19 23:00	19° ☿ 26'13 20°19'01		evening set	4128 Jan 16 00:04	6° ☿ 36'46	
asc. node	4127 Jan 26 22:39	23° ☿ 59'56		inferior conj	4128 Jan 21 08:19	0° ☿ 20'48 2°19'39	
retrograde	4127 Jan 27 20:39	24° ☿ 04'31		minimum elong	4128 Jan 21 05:53	0° ☿ 29'14 2°18'53	
evening set	4127 Jan 31 16:23	22° ☿ 39'48		min. Earth dist.	4128 Jan 21 13:41	0° ☿ 02'13 0.67872 AU	
inferior conj	4127 Feb 06 01:35	16° ☿ 34'01 2°54'19			4128 Jan 21 14:19	30° $\text{R}\text{☿}$	
minimum elong	4127 Feb 05 23:10	16° ☿ 42'10 2°53'44		morning rise	4128 Jan 26 11:31	24° ☿ 08'31	
min. Earth dist.	4127 Feb 06 19:18	15° ☿ 33'51 0.67339 AU		direct	4128 Jan 31 14:02	21° ☿ 55'38	
morning rise	4127 Feb 11 05:45	10° ☿ 20'01		morning max el	4128 Feb 10 19:24	27° ☿ 59'57 23°11'20	
direct	4127 Feb 16 22:51	7° ☿ 47'02			4128 Feb 12 16:54	0° ☿	
morning max el	4127 Feb 28 10:24	14° ☿ 38'59 24°40'15		desc. node	4128 Feb 19 18:36	8° ☿ 37'10	
desc. node	4127 Mar 04 21:35	19° ☿ 34'36			4128 Mar 05 16:15	0° ♈	
	4127 Mar 12 23:33	0° ♈		morning set	4128 Mar 16 15:26	17° ♈ 34'11	
	4127 Apr 01 11:16	0° ♈		max. Earth dist.	4128 Mar 20 21:03	24° ♈ 46'59 1.39486 AU	
morning set	4127 Apr 05 10:59	6° ♈ 53'37			4128 Mar 23 20:20	0° ♈	
max. Earth dist.	4127 Apr 09 02:07	13° ♈ 24'42 1.37317 AU					
				superior conj	4128 Mar 28 13:00	8° ♈ 30'50 -1°47'52	
superior conj	4127 Apr 15 18:41	26° ♈ 02'05 -1°23'45		minimum elong	4128 Mar 28 17:43	8° ♈ 52'41 1°47'25	
minimum elong	4127 Apr 15 23:02	26° ♈ 23'14 1°23'06		evening rise	4128 Apr 07 01:20	26° ♈ 35'13	
	4127 Apr 17 19:17	0° ♉			4128 Apr 08 20:05	0° ♉	
evening rise	4127 Apr 24 07:55	13° ♉ 01'00		asc. node	4128 Apr 10 18:58	3° ♉ 41'42	
asc. node	4127 Apr 24 21:56	14° ♉ 10'47		evening max el	4128 Apr 23 06:19	22° ♉ 41'07 18°35'14	
	4127 May 03 09:58	0° ♊		retrograde	4128 May 01 01:15	26° ♉ 30'58	
evening max el	4127 May 11 04:12	10° ♊ 21'52 19°18'54					

evening set	4128 May 03 07:26	26°♄12'46		evening set	4129 Apr 16 01:31	8°♄30'52	
inferior conj	4128 May 10 23:06	21°♄45'55	1°51'41	inferior conj	4129 Apr 22 23:16	3°♄43'05	2°53'14
minimum elong	4128 May 11 02:34	21°♄39'13	1°50'37	minimum elong	4129 Apr 23 02:33	3°♄35'40	2°52'33
min. Earth dist.	4128 May 14 08:16	19°♄10'36	0.57841 AU	min. Earth dist.	4129 Apr 26 07:55	0°♄42'56	0.59970 AU
desc. node	4128 May 17 17:49	16°♄57'59			4129 Apr 27 04:35	30°♄	
morning rise	4128 May 18 18:30	16°♄26'13		morning rise	4129 Apr 30 01:10	27°♄57'41	
direct	4128 May 24 13:25	15°♄01'47		desc. node	4129 May 04 14:50	26°♄08'47	
morning max el	4128 Jun 07 22:22	22°♄38'48	26°39'31	direct	4129 May 06 13:16	25°♄58'18	
	4128 Jun 14 11:05	0°♄			4129 May 16 12:01	0°♄	
	4128 Jul 02 22:10	0°♄		morning max el	4129 May 20 21:15	3°♄49'59	27°34'18
morning set	4128 Jul 07 07:32	8°♄57'31			4129 Jun 09 02:54	0°♄	
asc. node	4128 Jul 07 18:13	9°♄53'56		morning set	4129 Jun 21 14:50	23°♄34'34	
				asc. node	4129 Jun 24 15:17	29°♄58'02	
					4129 Jun 24 15:39	0°♄	
superior conj	4128 Jul 14 07:32	24°♄10'29	1°03'59		4129 Jun 28 00:03	7°♄17'54	1.32038 AU
minimum elong	4128 Jul 14 05:17	23°♄58'02	1°03'35				
max. Earth dist.	4128 Jul 14 12:22	24°♄37'07	1.32094 AU				
	4128 Jul 16 23:03	0°♄		superior conj	4129 Jun 28 19:07	9°♄02'50	0°42'27
evening rise	4128 Jul 21 04:49	9°♄07'18		minimum elong	4129 Jun 28 17:21	8°♄53'12	0°42'05
	4128 Aug 01 00:52	0°♄		evening rise	4129 Jul 05 14:43	23°♄55'09	
desc. node	4128 Aug 13 17:05	19°♄00'40			4129 Jul 08 12:45	0°♄	
evening max el	4128 Aug 20 12:05	26°♄31'27	26°49'38		4129 Jul 26 08:48	0°♄	
	4128 Aug 24 16:04	0°♄		desc. node	4129 Jul 31 14:07	6°♄08'14	
retrograde	4128 Sep 03 10:06	3°♄42'02		evening max el	4129 Aug 02 08:41	7°♄54'41	25°44'31
evening set	4128 Sep 10 07:59	1°♄38'46		retrograde	4129 Aug 16 07:51	15°♄01'28	
	4128 Sep 12 19:29	30°♄		evening set	4129 Aug 22 10:41	13°♄33'08	
min. Earth dist.	4128 Sep 14 02:11	29°♄01'08	0.60444 AU	min. Earth dist.	4129 Aug 26 20:47	10°♄55'59	0.58387 AU
inferior conj	4128 Sep 17 07:26	26°♄21'46	-4°32'19	inferior conj	4129 Aug 30 01:34	8°♄38'40	-5°05'55
minimum elong	4128 Sep 17 13:06	26°♄10'01	4°31'11	minimum elong	4129 Aug 30 04:26	8°♄33'29	5°05'42
morning rise	4128 Sep 24 20:08	21°♄37'04		morning rise	4129 Sep 07 00:26	4°♄17'16	
direct	4128 Sep 27 04:43	21°♄15'45		direct	4129 Sep 09 11:46	3°♄57'46	
asc. node	4128 Oct 03 17:27	24°♄07'25		morning max el	4129 Sep 17 19:44	7°♄56'09	18°42'15
morning max el	4128 Oct 04 13:43	24°♄54'01	18°06'24	asc. node	4129 Sep 20 14:30	10°♄59'29	
	4128 Oct 08 19:27	0°♄			4129 Oct 02 01:35	0°♄	
morning set	4128 Oct 20 08:42	19°♄55'20		morning set	4129 Oct 04 03:32	4°♄01'47	
	4128 Oct 25 18:34	0°♄					
				superior conj	4129 Oct 12 19:18	20°♄45'23	1°30'39
superior conj	4128 Oct 30 02:15	7°♄50'56	1°09'55	minimum elong	4129 Oct 12 22:19	20°♄59'39	1°30'23
minimum elong	4128 Oct 30 06:21	8°♄09'15	1°09'25		4129 Oct 17 19:42	0°♄	
max. Earth dist.	4128 Nov 06 17:51	21°♄06'40	1.41630 AU	max. Earth dist.	4129 Oct 19 23:56	3°♄52'25	1.39587 AU
desc. node	4128 Nov 09 16:22	25°♄59'17		evening rise	4129 Oct 24 00:39	10°♄49'36	
evening rise	4128 Nov 12 01:28	29°♄51'21		desc. node	4129 Oct 27 13:24	16°♄41'49	
	4128 Nov 12 03:37	0°♄			4129 Nov 05 00:40	0°♄	
	4128 Dec 02 04:12	0°♄			4129 Nov 27 21:45	0°♄	
evening max el	4128 Dec 15 13:57	16°♄35'53	22°46'33	evening max el	4129 Nov 28 03:37	0°♄14'42	24°06'23
retrograde	4128 Dec 25 13:39	22°♄31'36		retrograde	4129 Dec 09 05:45	6°♄45'36	
evening set	4128 Dec 30 07:19	20°♄35'30		evening set	4129 Dec 14 12:33	4°♄33'28	
asc. node	4128 Dec 30 16:43	20°♄15'11		asc. node	4129 Dec 17 13:45	1°♄18'11	
inferior conj	4129 Jan 04 16:11	14°♄12'48	1°37'21		4129 Dec 18 14:02	30°♄	
minimum elong	4129 Jan 04 14:11	14°♄19'43	1°36'37	inferior conj	4129 Dec 19 23:24	28°♄07'55	0°48'34
min. Earth dist.	4129 Jan 04 10:11	14°♄33'34	0.68023 AU	minimum elong	4129 Dec 19 22:16	28°♄11'44	0°48'07
morning rise	4129 Jan 09 20:57	8°♄03'56		min. Earth dist.	4129 Dec 19 06:32	29°♄04'54	0.67814 AU
direct	4129 Jan 14 08:49	6°♄13'56		morning rise	4129 Dec 25 08:02	22°♄04'18	
morning max el	4129 Jan 23 08:23	11°♄28'49	21°44'53	direct	4129 Dec 29 06:10	20°♄36'53	
desc. node	4129 Feb 05 15:38	28°♄14'08		morning max el	4130 Jan 06 04:28	25°♄09'10	20°27'44
	4129 Feb 06 21:27	0°♄			4130 Jan 10 11:06	0°♄	
morning set	4129 Feb 24 15:06	26°♄52'25		desc. node	4130 Jan 23 12:39	18°♄16'02	
	4129 Feb 26 13:49	0°♄			4130 Jan 31 07:06	0°♄	
max. Earth dist.	4129 Mar 02 20:25	7°♄00'16	1.41617 AU	morning set	4130 Feb 03 15:34	5°♄09'58	
				max. Earth dist.	4130 Feb 13 03:15	20°♄08'29	1.43419 AU
superior conj	4129 Mar 10 11:53	20°♄02'41	-2°04'00	superior conj	4130 Feb 19 10:29	0°♄27'00	-2°06'58
minimum elong	4129 Mar 10 14:51	20°♄15'42	2°03'54	minimum elong	4130 Feb 19 08:41	0°♄19'30	2°06'56
	4129 Mar 16 01:51	0°♄			4130 Feb 19 03:59	0°♄	
evening rise	4129 Mar 21 06:43	9°♄31'33		evening rise	4130 Mar 03 19:51	21°♄41'00	
asc. node	4129 Mar 28 16:01	22°♄50'14			4130 Mar 08 13:58	0°♄	
	4129 Apr 02 03:46	0°♄		asc. node	4130 Mar 15 13:04	11°♄29'01	
evening max el	4129 Apr 06 15:08	5°♄29'42	18°11'38	evening max el	4130 Mar 21 03:19	18°♄38'38	18°07'33
retrograde	4129 Apr 13 12:45	8°♄58'15					

retrograde	4130 Mar 27 14:56	22°♄01'17			4131 Mar 02 20:20	0°♄	
evening set	4130 Mar 30 09:40	21°♄23'08		evening max el	4131 Mar 04 15:57	2°♄00'38	18°22'22
inferior conj	4130 Apr 05 17:25	16°♄15'14	3°26'00	retrograde	4131 Mar 11 03:08	5°♄30'38	
minimum elong	4130 Apr 05 19:10	16°♄10'44	3°25'49	evening set	4131 Mar 14 03:47	4°♄40'39	
min. Earth dist.	4130 Apr 08 15:50	13°♄14'50	0.62133 AU		4131 Mar 19 09:21	30°♄	
morning rise	4130 Apr 12 03:09	10°♄14'02		inferior conj	4131 Mar 20 01:24	29°♄14'10	3°36'18
direct	4130 Apr 18 23:32	7°♄44'51		minimum elong	4131 Mar 20 01:25	29°♄14'05	3°36'18
desc. node	4130 Apr 21 11:53	8°♄03'20		min. Earth dist.	4131 Mar 22 09:08	26°♄34'25	0.64083 AU
morning max el	4130 May 03 02:19	15°♄43'46	27°52'01	morning rise	4131 Mar 25 22:16	23°♄04'49	
	4130 May 14 18:29	0°♄		direct	4131 Apr 01 18:20	20°♄17'52	
	4130 Jun 01 17:21	0°♄		desc. node	4131 Apr 08 08:54	22°♄25'48	
morning set	4130 Jun 05 17:00	7°♄53'27		morning max el	4131 Apr 15 11:12	28°♄14'51	27°32'51
max. Earth dist.	4130 Jun 11 08:37	19°♄45'46	1.32396 AU		4131 Apr 17 03:36	0°♄	
asc. node	4130 Jun 11 12:20	20°♄05'48			4131 May 08 13:04	0°♄	
				morning set	4131 May 20 11:35	21°♄46'42	
superior conj	4130 Jun 13 04:48	23°♄45'20	0°17'36		4131 May 24 13:09	0°♄	
minimum elong	4130 Jun 13 03:59	23°♄40'53	0°17'25	max. Earth dist.	4131 May 25 10:01	1°♄48'25	1.33195 AU
	4130 Jun 16 01:24	0°♄					
evening rise	4130 Jun 20 02:22	8°♄44'26		superior conj	4131 May 28 10:46	8°♄12'31	-0°09'50
	4130 Jul 01 02:08	0°♄		minimum elong	4131 May 28 11:16	8°♄15'10	0°09'44
evening max el	4130 Jul 14 22:43	18°♄34'59	24°16'05	behind sun begin	4131 May 28 06:57	7°♄52'09	
desc. node	4130 Jul 18 11:09	21°♄35'44		behind sun end	4131 May 28 15:35	8°♄38'12	
retrograde	4130 Jul 28 18:38	25°♄33'26		asc. node	4131 May 29 09:23	10°♄13'27	
evening set	4130 Aug 02 13:13	24°♄42'40		evening rise	4131 Jun 04 13:57	23°♄29'22	
min. Earth dist.	4130 Aug 08 09:27	21°♄47'25	0.56542 AU		4131 Jun 07 17:20	0°♄	
inferior conj	4130 Aug 10 23:30	20°♄10'17	-5°07'03	evening max el	4131 Jun 26 12:21	28°♄58'41	22°38'58
minimum elong	4130 Aug 10 20:43	20°♄14'40	5°06'52		4131 Jun 27 14:34	0°♄	
morning rise	4130 Aug 19 06:49	16°♄09'35		desc. node	4131 Jul 05 08:09	4°♄48'38	
direct	4130 Aug 21 23:27	15°♄50'20		retrograde	4131 Jul 09 16:52	5°♄32'21	
morning max el	4130 Aug 31 15:54	20°♄21'02	19°39'44	evening set	4131 Jul 12 23:06	5°♄09'01	
asc. node	4130 Sep 07 11:34	28°♄48'32		min. Earth dist.	4131 Jul 20 20:14	1°♄41'38	0.55259 AU
	4130 Sep 08 05:58	0°♄		inferior conj	4131 Jul 22 02:54	0°♄57'52	-4°20'57
morning set	4130 Sep 18 06:02	18°♄29'49		minimum elong	4131 Jul 21 18:57	1°♄09'13	4°19'15
	4130 Sep 23 22:36	0°♄			4131 Jul 23 19:52	30°♄	
				morning rise	4131 Jul 30 16:56	27°♄07'08	
superior conj	4130 Sep 26 03:54	4°♄25'35	1°41'33	direct	4131 Aug 02 17:12	26°♄46'14	
minimum elong	4130 Sep 26 05:17	4°♄32'23	1°41'29		4131 Aug 11 13:43	0°♄	
max. Earth dist.	4130 Oct 02 04:24	15°♄59'34	1.37511 AU	morning max el	4131 Aug 14 00:13	2°♄01'20	20°58'26
evening rise	4130 Oct 05 22:37	22°♄50'29		asc. node	4131 Aug 25 08:36	17°♄21'33	
	4130 Oct 10 01:17	0°♄			4131 Sep 01 00:01	0°♄	
desc. node	4130 Oct 14 10:26	7°♄15'43		morning set	4131 Sep 02 13:35	3°♄12'20	
	4130 Oct 29 19:58	0°♄					
evening max el	4130 Nov 10 15:57	13°♄56'22	25°21'45	superior conj	4131 Sep 09 23:35	18°♄38'23	1°44'08
retrograde	4130 Nov 22 17:35	20°♄53'49		minimum elong	4131 Sep 09 23:24	18°♄37'24	1°44'08
evening set	4130 Nov 28 14:07	18°♄27'22		max. Earth dist.	4131 Sep 14 13:08	27°♄50'52	1.35639 AU
min. Earth dist.	4130 Dec 03 00:25	13°♄33'10	0.67253 AU		4131 Sep 15 15:31	0°♄	
inferior conj	4130 Dec 04 04:09	12°♄03'29	-0°05'42	evening rise	4131 Sep 18 15:54	5°♄45'42	
minimum elong	4130 Dec 04 04:17	12°♄03'02	0°05'38	desc. node	4131 Oct 01 07:27	27°♄36'02	
transit middle	4130 Dec 04 04:17	12°♄03'02	0°05'38		4131 Oct 02 20:11	0°♄	
transit begin	4130 Dec 04 01:40	12°♄11'30		evening max el	4131 Oct 24 04:27	27°♄37'44	26°25'10
transit end	4130 Dec 04 06:54	11°♄54'34			4131 Oct 26 19:24	0°♄	
asc. node	4130 Dec 04 10:48	11°♄41'58		retrograde	4131 Nov 06 00:18	4°♄50'16	
morning rise	4130 Dec 09 18:45	6°♄07'12		evening set	4131 Nov 12 10:06	2°♄13'21	
direct	4130 Dec 13 04:46	4°♄59'53			4131 Nov 14 17:39	30°♄	
morning max el	4130 Dec 20 08:28	9°♄00'23	19°24'06	min. Earth dist.	4131 Nov 16 13:29	27°♄54'29	0.66350 AU
greatest brilliancy	4131 Jan 02 14:54	26°♄43'25	-0.7m	inferior conj	4131 Nov 18 04:30	25°♄56'04	-1°04'16
	4131 Jan 04 18:57	0°♄		minimum elong	4131 Nov 18 06:16	25°♄50'45	1°03'32
desc. node	4131 Jan 10 09:41	8°♄35'57		asc. node	4131 Nov 21 07:51	22°♄22'38	
morning set	4131 Jan 13 14:02	13°♄30'48		morning rise	4131 Nov 24 03:02	20°♄09'42	
	4131 Jan 24 03:55	0°♄		direct	4131 Nov 27 02:59	19°♄18'53	
max. Earth dist.	4131 Jan 26 16:37	3°♄59'09	1.44673 AU	morning max el	4131 Dec 03 19:10	22°♄58'17	18°36'04
					4131 Dec 09 12:15	0°♄	
superior conj	4131 Jan 30 07:36	9°♄44'24	-1°51'42	morning set	4131 Dec 24 09:49	23°♄00'21	
minimum elong	4131 Jan 29 23:56	9°♄13'49	1°51'09	desc. node	4131 Dec 28 06:42	29°♄08'23	
	4131 Feb 11 18:10	0°♄			4131 Dec 28 19:45	0°♄	
evening rise	4131 Feb 13 12:23	2°♄55'37					
asc. node	4131 Mar 02 10:07	29°♄28'54		superior conj	4132 Jan 09 11:37	18°♄20'44	-1°17'21

minimum elong	4132 Jan 09 02:46	17°  46'00	1°16'21	max. Earth dist.	4132 Dec 22 05:56	2°  42'33	1.45078 AU
max. Earth dist.	4132 Jan 09 10:20	18°  15'42	1.45245 AU	evening rise	4133 Jan 04 01:54	22°  42'09	
	4132 Jan 16 21:36	0°  ≈			4133 Jan 08 19:23	0°  ≈	
evening rise	4132 Jan 25 05:33	13°  ≈12'12		greatest brilliancy	4133 Jan 17 10:35	13°  ≈08'19	-0.7m
greatest brilliancy	4132 Feb 02 18:31	26°  ≈48'02	-0.8m	evening max el	4133 Jan 29 08:50	29°  ≈00'29	19°44'13
	4132 Feb 04 19:28	0°  ✕			4133 Jan 30 09:07	0°  ✕	
evening max el	4132 Feb 16 02:27	15°  ✕29'02	18°55'06	asc. node	4133 Feb 03 04:09	2°  ✕41'35	
asc. node	4132 Feb 17 07:09	16°  ✕37'35		retrograde	4133 Feb 05 18:48	3°  ✕18'08	
retrograde	4132 Feb 22 21:25	19°  ✕17'56		evening set	4133 Feb 09 09:36	2°  ✕01'34	
evening set	4132 Feb 26 04:35	18°  ✕15'09			4133 Feb 11 15:34	30°  ≈	
inferior conj	4132 Mar 02 19:21	12°  ✕31'41	3°29'43	inferior conj	4133 Feb 14 20:12	26°  ≈03'09	3°10'14
minimum elong	4132 Mar 02 18:01	12°  ✕35'50	3°29'35	minimum elong	4133 Feb 14 18:02	26°  ≈10'19	3°09'50
min. Earth dist.	4132 Mar 04 11:29	10°  ✕26'22	0.65678 AU	min. Earth dist.	4133 Feb 15 21:37	24°  ≈38'52	0.66858 AU
morning rise	4132 Mar 08 07:04	6°  ✕18'48		morning rise	4133 Feb 20 02:14	19°  ≈49'14	
direct	4132 Mar 14 19:57	3°  ✕28'16		direct	4133 Feb 26 03:19	17°  ≈07'24	
desc. node	4132 Mar 25 05:55	8°  ✕41'14		morning max el	4133 Mar 10 06:09	24°  ≈21'06	25°28'54
morning max el	4132 Mar 27 21:01	11°  ✕10'43	26°42'17	desc. node	4133 Mar 12 02:57	26°  ≈18'51	
	4132 Apr 11 20:15	0°  Υ			4133 Mar 15 08:04	0°  ✕	
	4132 Apr 30 02:14	0°  ♄			4133 Apr 05 06:40	0°  Υ	
morning set	4132 May 02 19:12	5°  ♄03'40		morning set	4133 Apr 15 11:29	17°  Υ31'48	
max. Earth dist.	4132 May 07 00:56	13°  ♄18'47	1.34457 AU	max. Earth dist.	4133 Apr 19 04:41	24°  Υ24'40	1.36169 AU
					4133 Apr 22 02:41	0°  ♄	
superior conj	4132 May 11 10:47	22°  ♄17'13	-0°38'49				
minimum elong	4132 May 11 12:51	22°  ♄27'55	0°38'24	superior conj	4133 Apr 25 02:08	5°  ♄51'52	-1°07'51
asc. node	4132 May 15 06:25	0°  ♄16'27		minimum elong	4133 Apr 25 05:46	6°  ♄09'59	1°07'13
	4132 May 15 03:18	0°  ♄		asc. node	4133 May 02 03:27	20°  ♄10'41	
evening rise	4132 May 18 23:29	8°  ♄03'22		evening rise	4133 May 03 04:53	22°  ♄20'01	
	4132 May 30 18:35	0°  ♄			4133 May 07 01:16	0°  ♄	
evening max el	4132 Jun 07 09:29	9°  ♄38'25	21°08'08	evening max el	4133 May 20 18:28	20°  ♄55'02	19°53'09
retrograde	4132 Jun 19 05:55	15°  ♄27'23		retrograde	4133 May 30 21:40	25°  ♄51'18	
evening set	4132 Jun 21 11:42	15°  ♄15'41		evening set	4133 Jun 01 20:27	25°  ♄41'08	
desc. node	4132 Jun 21 05:09	15°  ♄18'19		desc. node	4133 Jun 08 02:11	23°  ♄15'07	
inferior conj	4132 Jun 30 20:27	11°  ♄17'43	-2°46'33	inferior conj	4133 Jun 10 18:29	21°  ♄40'09	-0°47'42
minimum elong	4132 Jun 30 13:00	11°  ♄28'11	2°44'04	minimum elong	4133 Jun 10 16:16	21°  ♄43'31	0°46'54
min. Earth dist.	4132 Jul 01 07:23	11°  ♄02'20	0.54828 AU	min. Earth dist.	4133 Jun 12 20:05	20°  ♄24'38	0.55360 AU
morning rise	4132 Jul 09 14:33	7°  ♄19'18		morning rise	4133 Jun 19 10:07	17°  ♄15'13	
direct	4132 Jul 13 02:43	6°  ♄52'45		direct	4133 Jun 23 16:39	16°  ♄35'11	
morning max el	4132 Jul 25 21:28	12°  ♄57'49	22°34'22	morning max el	4133 Jul 07 12:11	23°  ♄25'27	24°17'49
	4132 Aug 07 15:50	0°  ♄			4133 Jul 13 10:16	0°  ♄	
asc. node	4132 Aug 11 05:38	6°  ♄27'50		asc. node	4133 Jul 29 02:40	25°  ♄58'28	
morning set	4132 Aug 17 00:07	18°  ♄03'35			4133 Jul 31 01:56	0°  ♄	
	4132 Aug 22 14:34	0°  ♄		morning set	4133 Aug 01 11:51	2°  ♄57'45	
superior conj	4132 Aug 24 02:53	3°  ♄13'29	1°39'49	superior conj	4133 Aug 08 11:03	18°  ♄01'55	1°29'43
minimum elong	4132 Aug 24 01:30	3°  ♄06'08	1°39'45	minimum elong	4133 Aug 08 08:57	17°  ♄50'30	1°29'29
max. Earth dist.	4132 Aug 27 06:30	9°  ♄50'34	1.34115 AU	max. Earth dist.	4133 Aug 10 08:39	22°  ♄08'25	1.33001 AU
evening rise	4132 Sep 01 00:05	19°  ♄23'26			4133 Aug 14 01:52	0°  ♄	
	4132 Sep 06 15:17	0°  ♄		evening rise	4133 Aug 15 19:11	3°  ♄31'58	
desc. node	4132 Sep 17 04:28	17°  ♄36'22			4133 Aug 30 09:28	0°  ♄	
	4132 Sep 25 21:58	0°  ♄		desc. node	4133 Sep 04 01:29	7°  ♄07'26	
evening max el	4132 Oct 05 17:08	11°  ♄10'47	27°09'05	evening max el	4133 Sep 18 04:16	24°  ♄21'45	27°26'40
retrograde	4132 Oct 19 01:15	18°  ♄28'14			4133 Sep 25 17:47	0°  ♄	
evening set	4132 Oct 25 22:18	15°  ♄47'05		retrograde	4133 Oct 01 19:52	1°  ♄38'16	
min. Earth dist.	4132 Oct 29 19:22	12°  ♄03'48	0.65100 AU		4133 Oct 07 12:17	30°  ≈	
inferior conj	4132 Oct 31 22:21	9°  ♄41'33	-2°05'30	evening set	4133 Oct 08 23:48	29°  ♄02'02	
minimum elong	4132 Nov 01 01:53	9°  ♄31'38	2°04'06	min. Earth dist.	4133 Oct 12 15:52	25°  ♄51'37	0.63508 AU
morning rise	4132 Nov 07 06:28	4°  ♄08'11		inferior conj	4133 Oct 15 07:01	23°  ♄12'46	-3°06'53
asc. node	4132 Nov 07 04:51	4°  ♄10'06		minimum elong	4133 Oct 15 12:12	22°  ♄59'42	3°05'06
direct	4132 Nov 09 22:40	3°  ♄30'00		morning rise	4133 Oct 22 02:00	17°  ♄55'58	
morning max el	4132 Nov 16 10:17	6°  ♄57'57	18°04'45	direct	4133 Oct 24 12:58	17°  ♄26'47	
	4132 Dec 02 01:27	0°  ♄		asc. node	4133 Oct 25 01:53	17°  ♄28'13	
morning set	4132 Dec 04 11:20	3°  ♄59'37		morning max el	4133 Oct 31 02:58	20°  ♄51'57	17°50'49
desc. node	4132 Dec 14 03:44	19°  ♄49'40			4133 Nov 07 00:29	0°  ♄	
				morning set	4133 Nov 16 14:48	16°  ♄13'55	
superior conj	4132 Dec 18 18:00	27° ♄10'40	-0°31'13		4133 Nov 24 15:22	0° ♄	
minimum elong	4132 Dec 18 14:06	26° ♄55'12	0°30'40				
	4132 Dec 20 12:44	0° ♄		superior conj	4133 Nov 28 20:52	7° ♄03'04	0°15'00

minimum elong	4133 Nov 28 22:27	7°♄09'34	0°14'47	superior conj	4134 Nov 10 02:28	18°♄13'45	0°53'00
behind sun begin	4133 Nov 28 18:34	6°♄53'36		minimum elong	4134 Nov 10 06:28	18°♄31'02	0°52'27
behind sun end	4133 Nov 29 02:19	7°♄25'31			4134 Nov 17 01:36	0°♄	
desc. node	4133 Dec 01 00:45	10°♄35'40		max. Earth dist.	4134 Nov 17 13:22	0°♄48'26	1.42692 AU
max. Earth dist.	4133 Dec 04 23:58	16°♄59'47	1.44189 AU	desc. node	4134 Nov 17 21:48	1°♄22'59	
	4133 Dec 13 06:36	0°♄		evening rise	4134 Nov 24 02:57	11°♄21'49	
evening rise	4133 Dec 14 11:44	1°♄52'24			4134 Dec 06 09:05	0°♄	
	4134 Jan 02 10:08	0°♄		evening max el	4134 Dec 26 05:26	26°♄06'40	22°01'12
evening max el	4134 Jan 12 09:52	12°♄33'00	20°47'25		4134 Dec 30 19:12	0°♄	
retrograde	4134 Jan 20 16:57	17°♄27'02		retrograde	4135 Jan 04 13:55	1°♄40'39	
asc. node	4134 Jan 21 01:10	17°♄26'24		asc. node	4135 Jan 07 22:12	0°♄40'43	
evening set	4134 Jan 24 16:51	15°♄55'44			4135 Jan 08 21:28	30°♄♄	
inferior conj	4134 Jan 30 01:25	9°♄45'03	2°40'35	evening set	4135 Jan 09 00:34	29°♄53'47	
minimum elong	4134 Jan 29 22:57	9°♄53'32	2°39'55	inferior conj	4135 Jan 14 08:53	23°♄34'12	2°02'33
min. Earth dist.	4134 Jan 30 13:38	9°♄03'05	0.67616 AU	minimum elong	4135 Jan 14 06:35	23°♄42'13	2°01'47
morning rise	4134 Feb 04 04:52	3°♄31'45		min. Earth dist.	4135 Jan 14 09:16	23°♄32'53	0.67979 AU
direct	4134 Feb 09 15:46	1°♄07'03		morning rise	4135 Jan 19 12:26	17°♄23'03	
morning max el	4134 Feb 20 14:47	7°♄39'17	24°02'44	direct	4135 Jan 24 08:32	15°♄19'59	
desc. node	4134 Feb 26 24:00	14°♄55'19		morning max el	4135 Feb 03 01:10	21°♄03'26	22°33'45
	4134 Mar 10 01:41	0°♄			4135 Feb 10 16:36	0°♄	
morning set	4134 Mar 28 06:49	28°♄56'17		desc. node	4135 Feb 13 21:02	4°♄13'40	
	4134 Mar 28 21:34	0°♄			4135 Mar 03 08:15	0°♄	
max. Earth dist.	4134 Apr 01 01:01	5°♄32'03	1.38223 AU	morning set	4135 Mar 08 23:13	9°♄01'44	
				max. Earth dist.	4135 Mar 13 20:56	17°♄12'44	1.40408 AU
superior conj	4134 Apr 08 05:21	18°♄47'29	-1°34'39		4135 Mar 21 04:18	0°♄	
minimum elong	4134 Apr 08 10:03	19°♄09'49	1°34'04				
	4134 Apr 13 23:59	0°♄		superior conj	4135 Mar 21 15:59	0°♄52'42	-1°55'59
evening rise	4134 Apr 17 03:36	6°♄12'16		minimum elong	4135 Mar 21 20:18	1°♄12'14	1°55'41
asc. node	4134 Apr 19 00:29	9°♄51'42		evening rise	4135 Mar 31 16:24	19°♄31'06	
	4134 May 01 00:48	0°♄		asc. node	4135 Apr 05 21:32	29°♄13'34	
evening max el	4134 May 03 15:05	2°♄52'51	18°57'52		4135 Apr 06 07:50	0°♄	
retrograde	4134 May 12 04:01	7°♄03'13		evening max el	4135 Apr 16 20:25	15°♄25'03	18°22'48
evening set	4134 May 14 06:15	6°♄49'11		retrograde	4135 Apr 24 05:03	19°♄04'05	
inferior conj	4134 May 22 09:21	2°♄33'21	1°01'30	evening set	4135 Apr 26 13:56	18°♄42'23	
minimum elong	4134 May 22 11:41	2°♄29'14	1°00'42	inferior conj	4135 May 03 21:34	14°♄06'55	2°21'38
min. Earth dist.	4134 May 25 11:51	0°♄22'51	0.56746 AU	minimum elong	4135 May 04 01:14	13°♄59'21	2°20'40
desc. node	4134 May 25 23:12	0°♄03'54		min. Earth dist.	4135 May 07 08:13	11°♄17'41	0.58713 AU
	4134 May 26 01:35	30°♄♄		morning rise	4135 May 11 09:31	8°♄34'39	
morning rise	4134 May 30 13:52	27°♄32'26		desc. node	4135 May 12 20:15	7°♄53'30	
direct	4134 Jun 04 19:28	26°♄27'17		direct	4135 May 17 12:37	6°♄55'07	
	4134 Jun 14 12:00	0°♄		morning max el	4135 May 31 22:06	14°♄40'28	27°07'08
morning max el	4134 Jun 19 02:53	3°♄51'27	25°53'55		4135 Jun 13 05:49	0°♄	
	4134 Jul 07 21:08	0°♄			4135 Jun 30 02:56	0°♄	
asc. node	4134 Jul 15 23:44	15°♄46'38		morning set	4135 Jul 01 08:26	2°♄33'22	
morning set	4134 Jul 16 23:11	17°♄49'52		asc. node	4135 Jul 02 20:48	5°♄45'50	
	4134 Jul 22 13:50	0°♄					
superior conj	4134 Jul 23 22:01	2°♄57'05	1°14'39	superior conj	4135 Jul 08 09:51	17°♄51'38	0°55'18
minimum elong	4134 Jul 23 19:41	2°♄44'14	1°14'17	minimum elong	4135 Jul 08 07:45	17°♄40'04	0°54'54
max. Earth dist.	4134 Jul 24 17:09	4°♄42'15	1.32303 AU	max. Earth dist.	4135 Jul 08 04:32	17°♄22'17	1.32012 AU
evening rise	4134 Jul 30 22:02	18°♄02'07			4135 Jul 13 23:00	0°♄	
	4134 Aug 05 22:18	0°♄		evening rise	4135 Jul 15 05:57	2°♄44'52	
desc. node	4134 Aug 21 22:31	25°♄57'10			4135 Jul 29 20:40	0°♄	
	4134 Aug 25 02:09	0°♄		desc. node	4135 Aug 08 19:32	13°♄48'12	
evening max el	4134 Aug 31 11:25	6°♄57'39	27°12'41	evening max el	4135 Aug 13 12:16	18°♄48'15	26°25'31
retrograde	4134 Sep 14 07:40	14°♄11'09		retrograde	4135 Aug 27 11:28	25°♄58'09	
evening set	4134 Sep 21 10:52	11°♄51'48		evening set	4135 Sep 03 02:46	24°♄08'38	
min. Earth dist.	4134 Sep 25 01:48	9°♄06'15	0.61622 AU	min. Earth dist.	4135 Sep 07 01:40	21°♄33'27	0.59559 AU
inferior conj	4134 Sep 28 03:26	6°♄22'12	-4°04'03	inferior conj	4135 Sep 10 08:08	19°♄00'49	-4°49'33
minimum elong	4134 Sep 28 09:26	6°♄08'48	4°02'28	minimum elong	4135 Sep 10 13:00	18°♄51'17	4°48'48
morning rise	4134 Oct 05 09:50	1°♄25'16		morning rise	4135 Sep 18 01:24	14°♄26'08	
direct	4134 Oct 07 18:19	1°♄01'58		direct	4135 Sep 20 10:35	14°♄05'59	
asc. node	4134 Oct 11 22:56	2°♄18'46		morning max el	4135 Sep 28 04:27	17°♄51'43	18°19'02
morning max el	4134 Oct 14 18:07	4°♄32'48	17°55'07	asc. node	4135 Sep 28 20:00	18°♄30'35	
morning set	4134 Oct 30 13:44	29°♄23'23			4135 Oct 06 22:20	0°♄	
	4134 Oct 30 21:46	0°♄		morning set	4135 Oct 14 02:36	13°♄12'28	
				superior conj	4135 Oct 23 08:07	0°♄34'30	1°19'59

minimum elong	4135 Oct 23 11:54	0° \mathbb{M} 51'48	1°19'35	morning set	4136 Sep 27 01:04	27° \mathbb{M} 28'59	
	4135 Oct 23 00:35	0° \mathbb{M}			4136 Sep 28 07:33	0° \mathbb{A}	
max. Earth dist.	4135 Oct 30 21:27	13° \mathbb{M} 57'05	1.40780 AU				
evening rise	4135 Nov 04 12:50	21° \mathbb{M} 43'47		superior conj	4136 Oct 05 08:22	13° \mathbb{A} 49'42	1°36'22
desc. node	4135 Nov 04 18:50	22° \mathbb{M} 08'21		minimum elong	4136 Oct 05 10:43	14° \mathbb{A} 01'00	1°36'13
	4135 Nov 09 16:21	0° \mathbb{Z}		max. Earth dist.	4136 Oct 12 02:16	26° \mathbb{A} 24'37	1.38694 AU
	4135 Nov 30 11:52	0° \mathbb{Z}			4136 Oct 14 02:36	0° \mathbb{M}	
evening max el	4135 Dec 08 20:46	9° \mathbb{Z} 43'41	23°20'39	evening rise	4136 Oct 15 22:00	3° \mathbb{M} 09'31	
retrograde	4135 Dec 19 08:11	15° \mathbb{Z} 55'39		desc. node	4136 Oct 21 15:50	12° \mathbb{M} 47'40	
evening set	4135 Dec 24 07:10	13° \mathbb{Z} 52'51			4136 Nov 01 20:24	0° \mathbb{Z}	
asc. node	4135 Dec 25 19:14	12° \mathbb{Z} 26'05		evening max el	4136 Nov 20 09:48	23° \mathbb{Z} 24'29	24°39'30
inferior conj	4135 Dec 29 16:43	7° \mathbb{Z} 28'17	1°17'25		4136 Nov 30 13:37	0° \mathbb{Z}	
minimum elong	4135 Dec 29 15:02	7° \mathbb{Z} 34'04	1°16'46	retrograde	4136 Dec 01 22:26	0° \mathbb{Z} 07'28	
min. Earth dist.	4135 Dec 29 06:07	8° \mathbb{Z} 04'43	0.67974 AU		4136 Dec 03 06:14	30° \mathbb{R} \mathbb{Z}	
morning rise	4136 Jan 03 22:50	1° \mathbb{Z} 21'09		evening set	4136 Dec 07 11:01	27° \mathbb{Z} 49'14	
	4136 Jan 06 07:37	30° \mathbb{R} \mathbb{Z}		asc. node	4136 Dec 11 16:17	23° \mathbb{Z} 06'05	
direct	4136 Jan 08 04:40	29° \mathbb{Z} 40'51		min. Earth dist.	4136 Dec 12 01:44	22° \mathbb{Z} 35'00	0.67621 AU
	4136 Jan 10 03:42	0° \mathbb{Z}		inferior conj	4136 Dec 12 23:06	21° \mathbb{Z} 23'59	0°26'11
morning max el	4136 Jan 16 16:51	4° \mathbb{Z} 36'55	21°10'32	minimum elong	4136 Dec 12 22:27	21° \mathbb{Z} 26'06	0°25'55
desc. node	4136 Jan 31 18:04	24° \mathbb{Z} 02'24		morning rise	4136 Dec 18 10:00	15° \mathbb{Z} 23'01	
	4136 Feb 04 19:40	0° \approx		direct	4136 Dec 22 02:51	14° \mathbb{Z} 04'19	
morning set	4136 Feb 16 11:25	17° \approx 48'56		morning max el	4136 Dec 29 16:12	18° \mathbb{Z} 21'28	19°58'46
max. Earth dist.	4136 Feb 23 22:51	29° \approx 48'11	1.42437 AU		4137 Jan 07 23:22	0° \mathbb{Z}	
	4136 Feb 24 01:44	0° \mathbb{H}		desc. node	4137 Jan 17 15:04	14° \mathbb{Z} 12'31	
				morning set	4137 Jan 25 07:41	25° \mathbb{Z} 57'41	
superior conj	4136 Mar 02 05:05	11° \mathbb{H} 57'05	-2°07'13		4137 Jan 27 22:17	0° \approx	
minimum elong	4136 Mar 02 06:24	12° \mathbb{H} 02'41	2°07'12	max. Earth dist.	4137 Feb 05 08:46	13° \approx 16'31	1.44038 AU
	4136 Mar 12 10:56	0° \mathbb{Y}					
evening rise	4136 Mar 13 15:26	2° \mathbb{Y} 08'25		superior conj	4137 Feb 10 16:34	21° \approx 51'40	-2°02'56
asc. node	4136 Mar 22 18:35	18° \mathbb{Y} 10'21		minimum elong	4137 Feb 10 12:07	21° \approx 33'32	2°02'44
evening max el	4136 Mar 30 07:09	28° \mathbb{Y} 23'33	18°07'34		4137 Feb 15 15:05	0° \mathbb{H}	
	4136 Apr 01 03:55	0° \mathbb{B}		evening rise	4137 Feb 23 20:11	13° \mathbb{H} 54'37	
retrograde	4136 Apr 05 23:08	1° \mathbb{B} 47'29			4137 Mar 05 08:15	0° \mathbb{Y}	
evening set	4136 Apr 08 14:32	1° \mathbb{B} 15'41		asc. node	4137 Mar 09 15:36	6° \mathbb{Y} 33'30	
	4136 Apr 10 22:13	30° \mathbb{R} \mathbb{Y}		evening max el	4137 Mar 13 19:54	11° \mathbb{Y} 38'47	18°11'36
inferior conj	4136 Apr 15 05:52	26° \mathbb{Y} 19'29	3°10'16	retrograde	4137 Mar 20 06:02	15° \mathbb{Y} 02'39	
minimum elong	4136 Apr 15 08:35	26° \mathbb{Y} 12'59	3°09'48	evening set	4137 Mar 23 03:23	14° \mathbb{Y} 19'25	
min. Earth dist.	4136 Apr 18 11:10	23° \mathbb{Y} 16'05	0.60908 AU	inferior conj	4137 Mar 29 06:22	9° \mathbb{Y} 03'20	3°32'44
morning rise	4136 Apr 22 00:35	20° \mathbb{Y} 26'22		minimum elong	4137 Mar 29 07:21	9° \mathbb{Y} 00'38	3°32'40
direct	4136 Apr 28 17:35	18° \mathbb{Y} 12'47		min. Earth dist.	4137 Mar 31 22:47	6° \mathbb{Y} 09'49	0.63007 AU
desc. node	4136 Apr 28 17:17	18° \mathbb{Y} 12'47		morning rise	4137 Apr 04 10:12	2° \mathbb{Y} 58'14	
morning max el	4136 May 12 23:35	26° \mathbb{Y} 08'39	27°46'24	direct	4137 Apr 11 07:33	0° \mathbb{Y} 19'56	
	4136 May 16 13:56	0° \mathbb{B}		desc. node	4137 Apr 15 14:17	1° \mathbb{Y} 13'39	
	4136 Jun 05 18:10	0° \mathbb{H}		morning max el	4137 Apr 25 06:23	8° \mathbb{Y} 18'19	27°48'08
morning set	4136 Jun 14 13:46	17° \mathbb{H} 02'42			4137 May 11 23:36	0° \mathbb{B}	
asc. node	4136 Jun 18 17:51	25° \mathbb{H} 51'30			4137 May 28 22:48	0° \mathbb{H}	
max. Earth dist.	4136 Jun 20 15:08	29° \mathbb{H} 57'23	1.32136 AU	morning set	4137 May 29 13:02	1° \mathbb{H} 11'16	
	4136 Jun 20 15:37	0° \mathbb{E}		max. Earth dist.	4137 Jun 03 21:11	12° \mathbb{H} 15'55	1.32682 AU
				asc. node	4137 Jun 05 14:54	15° \mathbb{H} 59'31	
superior conj	4136 Jun 21 20:50	2° \mathbb{E} 40'00	0°32'17				
minimum elong	4136 Jun 21 19:26	2° \mathbb{E} 32'18	0°31'59	superior conj	4137 Jun 06 05:11	17° \mathbb{H} 16'35	0°06'14
evening rise	4136 Jun 28 16:48	17° \mathbb{E} 33'30		minimum elong	4137 Jun 06 04:53	17° \mathbb{H} 14'57	0°06'11
	4136 Jul 04 19:38	0° \mathbb{Q}		behind sun begin	4137 Jun 06 00:01	16° \mathbb{H} 48'38	
evening max el	4136 Jul 25 05:49	29° \mathbb{Q} 51'24	25°09'06	behind sun end	4137 Jun 06 09:45	17° \mathbb{H} 41'17	
	4136 Jul 25 09:26	0° \mathbb{M}			4137 Jun 12 02:06	0° \mathbb{E}	
desc. node	4136 Jul 25 16:34	0° \mathbb{M} 16'45		evening rise	4137 Jun 13 04:39	2° \mathbb{E} 21'46	
retrograde	4136 Aug 08 04:48	6° \mathbb{M} 55'29			4137 Jun 28 07:07	0° \mathbb{Q}	
evening set	4136 Aug 13 19:00	5° \mathbb{M} 43'53		evening max el	4137 Jul 06 18:52	10° \mathbb{Q} 20'59	23°34'55
min. Earth dist.	4136 Aug 18 17:31	3° \mathbb{M} 00'51	0.57551 AU	desc. node	4137 Jul 12 13:34	14° \mathbb{Q} 51'35	
inferior conj	4136 Aug 21 17:48	0° \mathbb{M} 58'53	-5°11'24	retrograde	4137 Jul 20 09:42	17° \mathbb{Q} 10'44	
minimum elong	4136 Aug 21 18:32	0° \mathbb{M} 57'38	5°11'24	evening set	4137 Jul 24 12:41	16° \mathbb{Q} 33'28	
	4136 Aug 23 05:00	30° \mathbb{R} \mathbb{Q}		min. Earth dist.	4137 Jul 31 04:46	13° \mathbb{Q} 26'20	0.55908 AU
morning rise	4136 Aug 29 20:25	26° \mathbb{Q} 46'36		inferior conj	4137 Aug 02 07:19	12° \mathbb{Q} 10'57	-4°53'54
direct	4136 Sep 01 09:39	26° \mathbb{Q} 27'24		minimum elong	4137 Aug 02 01:56	12° \mathbb{Q} 19'01	4°53'12
	4136 Sep 09 13:35	0° \mathbb{M}		morning rise	4137 Aug 10 17:39	8° \mathbb{Q} 16'18	
morning max el	4136 Sep 10 06:32	0° \mathbb{M} 38'29	19°04'00	direct	4137 Aug 13 13:32	7° \mathbb{Q} 56'27	
asc. node	4136 Sep 14 17:04	5° \mathbb{M} 48'16		morning max el	4137 Aug 23 21:40	12° \mathbb{Q} 44'31	20°10'47

asc. node	4137 Sep 01 14:07	23°♎57'29		asc. node	4138 Aug 19 11:08	12°♎45'25	
	4137 Sep 05 01:46	0°♎		morning set	4138 Aug 26 15:05	26°♎51'06	
morning set	4137 Sep 11 06:03	12°♎04'27			4138 Aug 28 03:11	0°♎	
superior conj	4137 Sep 18 22:12	27°♎45'19	1°43'34	superior conj	4138 Sep 02 21:29	12°♎08'32	1°43'05
minimum elong	4137 Sep 18 22:53	27°♎48'44	1°43'34	minimum elong	4138 Sep 02 20:44	12°♎04'37	1°43'04
	4137 Sep 20 01:05	0°♎		max. Earth dist.	4138 Sep 06 20:29	20°♎16'27	1.34938 AU
max. Earth dist.	4137 Sep 24 08:22	8°♎24'10	1.36680 AU	evening rise	4138 Sep 11 04:50	28°♎49'00	
evening rise	4137 Sep 28 04:45	15°♎35'00			4138 Sep 11 19:45	0°♎	
	4137 Oct 06 12:26	0°♎		desc. node	4138 Sep 25 09:55	23°♎29'16	
desc. node	4137 Oct 08 12:52	3°♎16'45			4138 Sep 29 17:03	0°♎	
	4137 Oct 27 10:16	0°♎		evening max el	4138 Oct 16 10:43	20°♎45'25	26°46'33
evening max el	4137 Nov 02 22:15	7°♎07'19	25°50'33	retrograde	4138 Oct 29 12:19	28°♎01'20	
retrograde	4137 Nov 15 07:59	14°♎11'42		evening set	4138 Nov 05 03:25	25°♎21'19	
evening set	4137 Nov 21 10:26	11°♎40'10		min. Earth dist.	4138 Nov 09 03:54	21°♎18'00	0.65864 AU
min. Earth dist.	4137 Nov 25 17:45	7°♎01'05	0.66922 AU	inferior conj	4138 Nov 11 00:04	19°♎08'29	-1°30'02
inferior conj	4137 Nov 27 02:13	5°♎18'45	-0°30'03	minimum elong	4138 Nov 11 02:34	19°♎01'07	1°28'59
minimum elong	4137 Nov 27 03:00	5°♎16'15	0°29'43	asc. node	4138 Nov 15 10:19	14°♎33'57	
asc. node	4137 Nov 28 13:18	3°♎30'05		morning rise	4138 Nov 17 02:31	13°♎27'34	
	4137 Dec 02 00:31	30°♎		direct	4138 Nov 19 22:51	12°♎42'40	
morning rise	4137 Dec 02 19:59	29°♎26'28		morning max el	4138 Nov 26 12:17	16°♎15'58	18°20'43
direct	4137 Dec 06 01:33	28°♎26'30			4138 Dec 06 15:11	0°♎	
	4137 Dec 10 07:34	0°♎		morning set	4138 Dec 15 21:32	14°♎50'30	
morning max el	4137 Dec 12 23:18	2°♎16'15	19°01'39	desc. node	4138 Dec 22 09:08	25°♎15'09	
	4138 Jan 01 12:39	0°♎			4138 Dec 25 08:46	0°♎	
morning set	4138 Jan 04 13:08	4°♎42'23		superior conj	4138 Dec 31 06:58	9°♎21'00	-0°58'32
desc. node	4138 Jan 04 12:05	4°♎38'19		minimum elong	4138 Dec 30 23:45	8°♎52'36	0°57'37
max. Earth dist.	4138 Jan 19 00:55	27°♎22'24	1.45015 AU	max. Earth dist.	4139 Jan 01 19:51	11°♎45'47	1.45263 AU
	4138 Jan 20 16:56	0°♎			4139 Jan 13 11:20	0°♎	
superior conj	4138 Jan 21 04:32	0°♎45'47	-1°39'12	evening rise	4139 Jan 16 10:35	4°♎39'28	
minimum elong	4138 Jan 20 19:29	0°♎10'02	1°38'23	greatest brilliancy	4139 Jan 27 05:26	21°♎30'38	-0.8m
evening rise	4138 Feb 05 02:53	24°♎44'17			4139 Feb 01 21:55	0°♎	
	4138 Feb 08 08:07	0°♎		evening max el	4139 Feb 08 16:43	8°♎33'34	19°14'02
asc. node	4138 Feb 24 12:37	24°♎12'48		asc. node	4139 Feb 11 09:37	10°♎56'01	
evening max el	4138 Feb 25 07:50	25°♎03'35	18°34'07	retrograde	4139 Feb 15 17:24	12°♎34'03	
retrograde	4138 Mar 03 21:20	28°♎40'20		evening set	4139 Feb 19 03:34	11°♎25'37	
evening set	4138 Mar 07 00:41	27°♎44'54		inferior conj	4139 Feb 24 16:15	5°♎35'19	3°22'50
inferior conj	4138 Mar 12 18:59	22°♎10'37	3°35'17	minimum elong	4139 Feb 24 14:31	5°♎40'56	3°22'36
minimum elong	4138 Mar 12 18:23	22°♎12'27	3°35'16	min. Earth dist.	4139 Feb 26 01:58	3°♎46'58	0.66228 AU
min. Earth dist.	4138 Mar 14 19:56	19°♎44'37	0.64812 AU		4139 Mar 01 08:46	30°♎	
morning rise	4138 Mar 18 11:31	15°♎59'20		morning rise	4139 Mar 02 01:08	29°♎21'28	
direct	4138 Mar 25 05:06	13°♎09'34		direct	4139 Mar 08 09:17	26°♎33'24	
desc. node	4138 Apr 02 11:18	16°♎28'06			4139 Mar 16 12:00	0°♎	
morning max el	4138 Apr 07 16:06	21°♎01'37	27°14'47	desc. node	4139 Mar 20 08:19	3°♎22'09	
	4138 Apr 15 10:39	0°♎		morning max el	4139 Mar 21 02:02	4°♎06'09	26°13'18
	4138 May 05 02:40	0°♎			4139 Apr 09 19:55	0°♎	
morning set	4138 May 13 03:22	14°♎50'03		morning set	4139 Apr 26 05:07	27°♎48'27	
max. Earth dist.	4138 May 17 18:44	24°♎06'14	1.33676 AU		4139 Apr 27 09:09	0°♎	
	4138 May 20 14:54	0°♎		max. Earth dist.	4139 Apr 30 04:51	5°♎24'48	1.35132 AU
superior conj	4138 May 21 08:52	1°♎34'33	-0°22'01	superior conj	4139 May 05 05:34	15°♎27'26	-0°51'14
minimum elong	4138 May 21 10:00	1°♎40'34	0°21'47	minimum elong	4139 May 05 08:19	15°♎41'29	0°50'43
asc. node	4138 May 23 11:55	6°♎05'19		asc. node	4139 May 10 08:57	26°♎05'07	
evening rise	4138 May 28 15:36	17°♎02'42			4139 May 12 06:12	0°♎	
	4138 Jun 04 02:45	0°♎		evening rise	4139 May 12 23:41	1°♎30'12	
evening max el	4138 Jun 18 10:38	20°♎46'48	21°58'48		4139 May 29 22:00	0°♎	
desc. node	4138 Jun 29 10:35	26°♎57'21		evening max el	4139 May 31 12:30	1°♎40'27	20°33'57
retrograde	4138 Jul 01 03:16	27°♎04'02		retrograde	4139 Jun 11 16:13	7°♎07'30	
evening set	4138 Jul 03 21:06	26°♎47'13		evening set	4139 Jun 13 16:49	6°♎57'27	
min. Earth dist.	4138 Jul 12 15:08	23°♎02'17	0.54957 AU	desc. node	4139 Jun 16 07:34	6°♎16'58	
inferior conj	4138 Jul 13 04:56	22°♎42'57	-3°45'57	inferior conj	4139 Jun 22 22:36	3°♎00'00	-1°57'00
minimum elong	4138 Jul 12 20:22	22°♎54'58	3°43'37	minimum elong	4139 Jun 22 17:07	3°♎07'54	1°55'02
morning rise	4138 Jul 21 21:17	18°♎51'54		min. Earth dist.	4139 Jun 24 03:06	2°♎18'51	0.54934 AU
direct	4138 Jul 25 01:53	18°♎29'23			4139 Jun 28 13:04	30°♎	
morning max el	4138 Aug 06 00:59	24°♎05'03	21°37'41	morning rise	4139 Jul 01 16:38	28°♎51'54	
	4138 Aug 11 07:59	0°♎		direct	4139 Jul 05 11:27	28°♎21'01	

	4139 Jul 12 03:15	0°☿		transit begin	4140 Jun 01 22:52	13°♊38'56	
morning max el	4139 Jul 18 18:54	4°☿47'01 23°18'16		transit end	4140 Jun 02 06:36	13°♊26'25	
	4139 Aug 05 06:45	0°♊		desc. node	4140 Jun 02 04:35	13°♊29'41	
asc. node	4139 Aug 06 08:11	2°♊02'37		min. Earth dist.	4140 Jun 04 17:12	11°♊52'17	0.55862 AU
morning set	4139 Aug 11 02:18	11°♊43'39		morning rise	4140 Jun 10 14:30	8°♊52'35	
				direct	4140 Jun 15 06:49	8°♊03'00	
superior conj	4139 Aug 18 03:09	26°♊49'58 1°36'12		morning max el	4140 Jun 29 08:45	15°♊09'54	25°00'31
minimum elong	4139 Aug 18 01:24	26°♊40'36 1°36'03			4140 Jul 11 04:37	0°☿	
	4139 Aug 19 14:42	0°♊		asc. node	4140 Jul 23 05:16	21°☿41'17	
max. Earth dist.	4139 Aug 20 17:23	2°♊21'14 1.33585 AU		morning set	4140 Jul 25 14:03	26°☿37'13	
evening rise	4139 Aug 25 18:05	12°♊40'34			4140 Jul 27 04:01	0°♊	
	4139 Sep 04 01:34	0°♊					
desc. node	4139 Sep 12 06:56	13°♊17'56		superior conj	4140 Aug 01 12:46	11°♊42'01	1°23'53
	4139 Sep 24 22:29	0°♊		minimum elong	4140 Aug 01 10:30	11°♊29'39	1°23'36
evening max el	4139 Sep 28 22:47	4°♊09'32 27°20'09		max. Earth dist.	4140 Aug 02 22:30	14°♊45'57	1.32651 AU
retrograde	4139 Oct 12 10:55	11°♊28'04		evening rise	4140 Aug 08 16:52	26°♊59'31	
evening set	4139 Oct 19 11:29	8°♊47'33			4140 Aug 10 04:23	0°♊	
min. Earth dist.	4139 Oct 23 06:02	5°♊18'50 0.64455 AU			4140 Aug 27 09:31	0°♊	
inferior conj	4139 Oct 25 14:19	2°♊48'07 -2°31'47		desc. node	4140 Aug 29 03:56	2°♊33'02	
minimum elong	4139 Oct 25 18:37	2°♊36'37 2°30'10		evening max el	4140 Sep 10 08:44	17°♊07'56	27°24'57
	4139 Oct 28 08:29	30°♊		retrograde	4140 Sep 24 02:54	24°♊23'20	
morning rise	4139 Nov 01 02:58	27°♊21'32		evening set	4140 Oct 01 07:25	21°♊53'02	
asc. node	4139 Nov 02 07:22	26°♊57'37		min. Earth dist.	4140 Oct 04 22:24	18°♊54'13	0.62728 AU
direct	4139 Nov 03 16:30	26°♊47'45		inferior conj	4140 Oct 07 18:15	16°♊11'36	-3°32'03
	4139 Nov 09 22:49	0°♊		minimum elong	4140 Oct 07 23:56	15°♊57'56	3°30'17
morning max el	4139 Nov 10 04:27	0°♊13'50 17°56'40		morning rise	4140 Oct 14 18:03	11°♊02'34	
morning set	4139 Nov 27 10:48	26°♊23'29		direct	4140 Oct 17 03:31	10°♊36'18	
	4139 Nov 29 14:11	0°♊		asc. node	4140 Oct 19 04:26	10°♊55'52	
desc. node	4139 Dec 09 06:11	15°♊58'41		morning max el	4140 Oct 23 20:52	14°♊03'13	17°50'20
					4140 Nov 03 19:46	0°♊	
superior conj	4139 Dec 10 20:31	18°♊33'26 -0°11'01		morning set	4140 Nov 08 23:24	9°♊03'59	
minimum elong	4139 Dec 10 19:12	18°♊28'10 0°10'49					
behind sun begin	4139 Dec 10 11:28	17°♊57'01		superior conj	4140 Nov 20 10:41	28°♊59'00	0°32'23
behind sun end	4139 Dec 11 02:56	18°♊59'17		minimum elong	4140 Nov 20 13:41	29°♊11'38	0°31'56
max. Earth dist.	4139 Dec 15 14:33	26°♊08'22 1.44775 AU			4140 Nov 21 01:12	0°♊	
	4139 Dec 18 01:20	0°♊		desc. node	4140 Nov 25 03:14	6°♊45'46	
evening rise	4139 Dec 27 00:40	13°♊56'06		max. Earth dist.	4140 Nov 27 06:49	10°♊15'22	1.43616 AU
	4140 Jan 06 13:54	0°♊		evening rise	4140 Dec 05 10:51	23°♊10'09	
greatest brilliancy	4140 Jan 10 15:35	6°♊02'51 -0.6m			4140 Dec 09 21:41	0°♊	
evening max el	4140 Jan 22 20:56	22°♊05'37 20°09'35			4140 Dec 30 21:48	0°♊	
asc. node	4140 Jan 29 06:39	26°♊28'11		evening max el	4141 Jan 04 19:44	5°♊39'19	21°17'48
retrograde	4140 Jan 30 15:24	26°♊38'17		retrograde	4141 Jan 13 13:10	10°♊49'45	
evening set	4140 Feb 03 09:46	25°♊15'47		asc. node	4141 Jan 15 03:41	10°♊35'45	
inferior conj	4140 Feb 08 19:17	19°♊11'55 2°58'47		evening set	4141 Jan 17 17:26	9°♊12'02	
minimum elong	4140 Feb 08 16:55	19°♊19'52 2°58'15		inferior conj	4141 Jan 23 01:43	2°♊57'25	2°25'25
min. Earth dist.	4140 Feb 09 15:00	18°♊05'22 0.67229 AU		minimum elong	4141 Jan 22 23:16	3°♊05'54	2°24'40
morning rise	4140 Feb 13 23:51	12°♊57'52		min. Earth dist.	4141 Jan 23 08:50	2°♊32'50	0.67823 AU
direct	4140 Feb 19 19:07	10°♊22'15			4141 Jan 25 06:14	30°♊	
morning max el	4140 Mar 02 10:44	17°♊20'15 24°53'06		morning rise	4141 Jan 28 04:55	26°♊44'53	
desc. node	4140 Mar 06 05:22	21°♊27'14		direct	4141 Feb 02 09:39	24°♊28'48	
	4140 Mar 13 00:33	0°♊			4141 Feb 12 03:17	0°♊	
	4140 Apr 01 20:09	0°♊		morning max el	4141 Feb 12 19:31	0°♊40'12	23°24'36
morning set	4140 Apr 07 13:16	9°♊51'38		desc. node	4141 Feb 21 02:26	10°♊23'19	
max. Earth dist.	4140 Apr 11 04:16	16°♊25'14 1.37011 AU			4141 Mar 06 22:34	0°♊	
				morning set	4141 Mar 19 21:45	20°♊43'47	
superior conj	4140 Apr 17 16:14	28°♊46'37 -1°19'40		max. Earth dist.	4141 Mar 23 23:22	27°♊42'43	1.39162 AU
minimum elong	4140 Apr 17 20:25	29°♊07'06 1°19'02			4141 Mar 25 06:37	0°♊	
	4140 Apr 18 07:12	0°♊					
evening rise	4140 Apr 26 02:33	15°♊36'58		superior conj	4141 Mar 31 13:02	11°♊22'40	-1°44'37
asc. node	4140 Apr 26 05:59	15°♊54'05		minimum elong	4141 Mar 31 17:49	11°♊44'56	1°44'08
	4140 May 03 15:18	0°♊		evening rise	4141 Apr 09 21:29	29°♊16'03	
evening max el	4140 May 13 02:45	13°♊15'04 19°27'09			4141 Apr 10 06:35	0°♊	
retrograde	4140 May 22 12:40	17°♊49'51		asc. node	4141 Apr 13 03:01	5°♊27'37	
evening set	4140 May 24 12:09	17°♊38'36		evening max el	4141 Apr 26 03:34	25°♊28'52	18°40'25
inferior conj	4140 Jun 02 02:40	13°♊32'47 0°01'24		retrograde	4141 May 04 02:43	29°♊23'27	
minimum elong	4140 Jun 02 02:44	13°♊32'41 0°01'23		evening set	4141 May 06 07:53	29°♊06'23	
transit middle	4140 Jun 02 02:44	13°♊32'41 0°01'23		inferior conj	4141 May 14 02:27	24°♊42'23	1°39'31

minimum elong	4141 May 14 05:44	24°♄36'12	1°38'29	minimum elong	4142 Apr 26 03:08	6°♄26'36	2°45'05
min. Earth dist.	4141 May 17 10:24	22°♄12'57	0.57542 AU	min. Earth dist.	4142 Apr 29 09:10	3°♄36'05	0.59640 AU
desc. node	4141 May 20 01:37	20°♄28'53		morning rise	4142 May 03 04:10	0°♄51'46	
morning rise	4141 May 22 00:22	19°♄27'26			4142 May 04 20:27	30°♄16'54	
direct	4141 May 27 16:00	18°♄08'15		desc. node	4142 May 06 22:39	29°♄16'54	
morning max el	4141 Jun 11 00:42	25°♄42'01	26°28'41	direct	4142 May 09 14:07	28°♄57'31	
	4141 Jun 15 01:16	0°♄			4142 May 14 12:03	0°♄	
	4141 Jul 04 08:55	0°♄		morning max el	4142 May 23 22:45	6°♄47'49	27°28'27
morning set	4141 Jul 10 00:42	11°♄26'09			4142 Jun 10 08:49	0°♄	
asc. node	4141 Jul 10 02:18	11°♄34'39		morning set	4142 Jun 24 08:33	26°♄05'13	
					4142 Jun 26 05:06	0°♄	
superior conj	4141 Jul 17 00:17	26°♄37'26	1°06'55	asc. node	4142 Jun 26 23:21	1°♄37'36	
minimum elong	4141 Jul 16 22:00	26°♄24'47	1°06'32				
max. Earth dist.	4141 Jul 17 08:48	27°♄24'24	1.32133 AU	superior conj	4142 Jul 01 11:59	11°♄30'30	0°45'57
	4141 Jul 18 13:03	0°♄		minimum elong	4142 Jul 01 10:07	11°♄20'16	0°45'35
evening rise	4141 Jul 23 22:09	11°♄36'06		max. Earth dist.	4142 Jun 30 20:34	10°♄05'38	1.32018 AU
	4141 Aug 02 08:53	0°♄		evening rise	4142 Jul 08 07:36	26°♄22'47	
desc. node	4141 Aug 16 00:57	21°♄00'11			4142 Jul 10 00:59	0°♄	
evening max el	4141 Aug 23 13:41	29°♄26'13	26°56'44		4142 Jul 27 04:58	0°♄	
	4141 Aug 24 04:13	0°♄		desc. node	4142 Aug 02 21:57	8°♄19'42	
retrograde	4141 Sep 06 11:10	6°♄37'19		evening max el	4142 Aug 05 11:16	10°♄55'53	25°55'57
evening set	4141 Sep 13 10:54	4°♄29'29		retrograde	4142 Aug 19 10:32	18°♄03'40	
min. Earth dist.	4141 Sep 17 03:54	1°♄50'24	0.60754 AU	evening set	4142 Aug 25 17:05	16°♄29'30	
	4141 Sep 19 08:38	30°♄		min. Earth dist.	4142 Aug 29 23:38	13°♄53'35	0.58688 AU
inferior conj	4141 Sep 20 08:27	29°♄09'17	-4°25'23	inferior conj	4142 Sep 02 05:20	11°♄31'35	-5°02'35
minimum elong	4141 Sep 20 14:17	28°♄56'57	4°24'07	minimum elong	4142 Sep 02 08:51	11°♄25'08	5°02'14
morning rise	4141 Sep 27 19:33	24°♄21'20		morning rise	4142 Sep 10 02:50	7°♄06'53	
direct	4141 Sep 30 04:04	23°♄59'32		direct	4142 Sep 12 13:31	6°♄47'17	
asc. node	4141 Oct 06 01:31	26°♄22'36		morning max el	4142 Sep 20 17:31	10°♄41'55	18°35'33
morning max el	4141 Oct 07 10:18	27°♄35'26	18°02'49	asc. node	4142 Sep 22 22:35	13°♄04'18	
	4141 Oct 09 14:54	0°♄			4142 Oct 03 11:56	0°♄	
morning set	4141 Oct 23 04:53	22°♄32'12		morning set	4142 Oct 06 22:14	6°♄33'59	
	4141 Oct 27 05:30	0°♄					
superior conj	4141 Nov 02 03:04	10°♄40'51	1°05'48	superior conj	4142 Oct 15 17:18	23°♄26'45	1°28'09
minimum elong	4141 Nov 02 07:12	10°♄59'12	1°05'18	minimum elong	4142 Oct 15 20:33	23°♄41'57	1°27'52
max. Earth dist.	4141 Nov 09 18:27	23°♄49'55	1.41920 AU		4142 Oct 19 06:44	0°♄	
desc. node	4141 Nov 12 00:16	27°♄32'31		max. Earth dist.	4142 Oct 23 00:52	6°♄40'52	1.39899 AU
	4141 Nov 13 12:26	0°♄		evening rise	4142 Oct 27 04:28	13°♄47'09	
evening rise	4141 Nov 15 08:53	2°♄59'03		desc. node	4142 Oct 29 21:16	18°♄15'33	
	4141 Dec 03 07:24	0°♄			4142 Nov 06 07:25	0°♄	
evening max el	4141 Dec 18 13:22	19°♄14'20	22°34'38		4142 Nov 28 10:07	0°♄	
retrograde	4141 Dec 28 09:02	25°♄04'26		evening max el	4142 Dec 01 03:18	2°♄52'01	23°54'38
evening set	4142 Jan 02 00:53	23°♄10'38		retrograde	4142 Dec 12 01:44	9°♄18'31	
asc. node	4142 Jan 02 00:44	23°♄10'56		evening set	4142 Dec 17 06:29	7°♄08'43	
inferior conj	4142 Jan 07 09:33	16°♄48'36	1°44'14	asc. node	4142 Dec 19 21:47	4°♄23'36	
minimum elong	4142 Jan 07 07:28	16°♄55'51	1°43'28	min. Earth dist.	4142 Dec 22 01:40	1°♄35'03	0.67865 AU
min. Earth dist.	4142 Jan 07 05:09	17°♄03'50	0.68025 AU	inferior conj	4142 Dec 22 16:57	0°♄43'10	0°56'22
morning rise	4142 Jan 12 13:56	10°♄39'11		minimum elong	4142 Dec 22 15:39	0°♄47'33	0°55'50
direct	4142 Jan 17 03:54	8°♄45'51			4142 Dec 23 05:42	30°♄	
morning max el	4142 Jan 26 07:46	14°♄07'52	21°57'18	morning rise	4142 Dec 28 00:51	24°♄38'35	
desc. node	4142 Feb 07 23:29	29°♄55'42		direct	4143 Jan 01 00:53	23°♄07'58	
	4142 Feb 08 00:42	0°♄		morning max el	4143 Jan 09 02:40	27°♄46'14	20°38'24
	4142 Feb 27 22:12	0°♄			4143 Jan 11 04:39	0°♄	
morning set	4142 Feb 28 01:47	0°♄14'26		desc. node	4143 Jan 25 20:30	19°♄54'08	
max. Earth dist.	4142 Mar 05 21:56	9°♄48'20	1.41311 AU		4143 Feb 01 14:03	0°♄	
				morning set	4143 Feb 07 04:40	8°♄37'32	
superior conj	4142 Mar 13 15:11	23°♄03'54	-2°02'18	max. Earth dist.	4143 Feb 16 03:23	22°♄47'47	1.43177 AU
minimum elong	4142 Mar 13 18:36	23°♄19'03	2°02'08		4143 Feb 20 13:06	0°♄	
	4142 Mar 17 12:12	0°♄		superior conj	4143 Feb 22 17:35	3°♄38'21	-2°07'37
evening rise	4142 Mar 24 04:59	12°♄19'06		minimum elong	4143 Feb 22 16:40	3°♄34'34	2°07'36
asc. node	4142 Mar 31 00:03	24°♄40'07		evening rise	4143 Mar 06 20:48	24°♄35'49	
	4142 Apr 03 04:47	0°♄			4143 Mar 09 22:14	0°♄	
evening max el	4142 Apr 09 11:37	8°♄13'49	18°13'51	asc. node	4143 Mar 17 21:05	13°♄23'51	
retrograde	4142 Apr 16 11:46	11°♄44'43		evening max el	4143 Mar 23 23:30	21°♄20'08	18°06'57
evening set	4142 Apr 18 23:30	11°♄18'54		retrograde	4143 Mar 30 11:58	24°♄42'44	
inferior conj	4142 Apr 25 23:41	6°♄34'12	2°45'52	evening set	4143 Apr 02 05:49	24°♄06'20	

inferior conj	4143 Apr 08 15:24	19° Υ 01'32	3°22'36	retrograde	4144 Mar 12 22:52	8° Υ 08'23	
minimum elong	4143 Apr 08 17:25	18° Υ 56'26	3°22'20	evening set	4144 Mar 15 22:38	7° Υ 20'12	
min. Earth dist.	4143 Apr 11 15:48	15° Υ 59'31	0.61819 AU	inferior conj	4144 Mar 21 21:32	1° Υ 56'27	3°35'53
morning rise	4143 Apr 15 03:21	13° Υ 02'02		minimum elong	4144 Mar 21 21:49	1° Υ 55'40	3°35'53
direct	4143 Apr 21 23:07	10° Υ 36'30			4144 Mar 23 14:33	30° \Re \Im	
desc. node	4143 Apr 23 19:41	10° Υ 46'33		min. Earth dist.	4144 Mar 24 07:37	29° \Re 12'35	0.63817 AU
morning max el	4143 May 06 02:59	18° Υ 35'15	27°51'45	morning rise	4144 Mar 27 20:06	25° \Re 48'06	
	4143 May 15 17:37	0° \Im		direct	4144 Apr 03 16:48	23° \Re 02'49	
	4143 Jun 03 04:10	0° Π		desc. node	4144 Apr 09 16:42	24° \Re 48'23	
morning set	4143 Jun 08 11:36	10° Π 27'02			4144 Apr 16 10:36	0° Υ	
asc. node	4143 Jun 13 20:22	21° Π 44'51		morning max el	4144 Apr 17 11:17	1° Υ 00'32	27°37'48
max. Earth dist.	4143 Jun 14 05:43	22° Π 35'24	1.32315 AU		4144 May 08 20:18	0° \Im	
				morning set	4144 May 22 07:27	24° \Im 24'16	
superior conj	4143 Jun 15 22:03	26° Π 14'41	0°21'34		4144 May 25 02:00	0° Π	
minimum elong	4143 Jun 15 21:04	26° Π 09'19	0°21'21	max. Earth dist.	4144 May 27 08:20	4° Π 41'47	1.33048 AU
	4143 Jun 17 15:14	0° \Im					
evening rise	4143 Jun 22 19:05	11° \Im 11'54		superior conj	4144 May 30 04:41	10° Π 44'23	-0°05'33
	4143 Jul 02 08:34	0° Ω		minimum elong	4144 May 30 04:57	10° Π 45'51	0°05'30
evening max el	4143 Jul 18 01:59	21° Ω 41'03	24°30'10	behind sun begin	4144 May 29 23:54	10° Π 18'46	
desc. node	4143 Jul 20 18:57	24° Ω 04'05		behind sun end	4144 May 30 10:01	11° Π 12'58	
retrograde	4143 Jul 31 23:08	28° Ω 41'34		asc. node	4144 May 30 17:23	11° Π 52'30	
evening set	4143 Aug 05 23:00	27° Ω 45'39		evening rise	4144 Jun 06 06:46	25° Π 57'43	
min. Earth dist.	4143 Aug 11 13:03	24° Ω 53'57	0.56787 AU		4144 Jun 08 05:05	0° \Im	
inferior conj	4143 Aug 14 06:15	23° Ω 09'55	-5°09'44		4144 Jun 26 14:53	0° Ω	
minimum elong	4143 Aug 14 04:25	23° Ω 12'51	5°09'38	evening max el	4144 Jun 28 15:15	2° Ω 05'20	22°53'21
morning rise	4143 Aug 22 12:24	19° Ω 06'28		desc. node	4144 Jul 06 15:58	7° Ω 39'36	
direct	4143 Aug 25 04:01	18° Ω 47'20		retrograde	4144 Jul 11 23:00	8° Ω 43'38	
morning max el	4143 Sep 03 15:17	23° Ω 12'41	19°29'49	evening set	4144 Jul 15 10:17	8° Ω 17'17	
	4143 Sep 09 07:12	0° \P		min. Earth dist.	4144 Jul 22 23:55	4° Ω 55'32	0.55402 AU
asc. node	4143 Sep 09 19:37	0° \P 45'29		inferior conj	4144 Jul 24 12:03	4° Ω 03'29	-4°31'18
morning set	4143 Sep 20 23:45	20° \P 59'12		minimum elong	4144 Jul 24 04:37	4° Ω 14'14	4°29'52
	4143 Sep 25 11:12	0° Ω		morning rise	4144 Aug 02 01:10	0° Ω 12'09	
					4144 Aug 03 03:03	30° \Re \Im	
superior conj	4143 Sep 28 23:53	7° Ω 00'58	1°40'27	direct	4144 Aug 05 00:15	29° \Im 51'33	
minimum elong	4143 Sep 29 01:31	7° Ω 08'58	1°40'23		4144 Aug 06 20:40	0° Ω	
max. Earth dist.	4143 Oct 05 05:05	18° Ω 52'08	1.37810 AU	morning max el	4144 Aug 16 01:19	4° Ω 59'34	20°45'29
evening rise	4143 Oct 08 23:13	25° Ω 39'22		asc. node	4144 Aug 26 16:38	19° Ω 12'35	
	4143 Oct 11 11:00	0° \P			4144 Sep 01 11:36	0° \P	
desc. node	4143 Oct 16 18:17	8° \P 51'06		morning set	4144 Sep 04 06:42	5° \P 40'01	
	4143 Oct 30 21:32	0° \Re					
evening max el	4143 Nov 13 15:43	16° \Re 33'41	25°11'09	superior conj	4144 Sep 11 18:08	21° \P 09'31	1°44'13
retrograde	4143 Nov 25 14:15	23° \Re 27'58		minimum elong	4144 Sep 11 18:10	21° \P 09'39	1°44'13
evening set	4143 Dec 01 08:40	21° \Re 03'36			4144 Sep 16 03:50	0° Ω	
min. Earth dist.	4143 Dec 05 20:07	16° \Re 04'04	0.67357 AU	max. Earth dist.	4144 Sep 16 12:58	0° Ω 44'43	1.35897 AU
inferior conj	4143 Dec 06 22:10	14° \Re 39'07	0°02'52	evening rise	4144 Sep 20 13:54	8° Ω 27'16	
minimum elong	4143 Dec 06 22:05	14° \Re 39'22	0°02'50	desc. node	4144 Oct 02 15:18	29° Ω 13'56	
transit middle	4143 Dec 06 22:05	14° \Re 39'22	0°02'50		4144 Oct 03 02:55	0° \P	
transit begin	4143 Dec 06 19:21	14° \Re 48'18			4144 Oct 25 21:41	0° \Re	
transit end	4143 Dec 07 00:49	14° \Re 30'26		evening max el	4144 Oct 26 04:16	0° \Re 16'01	26°16'48
asc. node	4143 Dec 06 18:49	14° \Re 50'02		retrograde	4144 Nov 07 21:42	7° \Re 26'35	
morning rise	4143 Dec 12 11:44	8° \Re 41'28		evening set	4144 Nov 14 05:36	4° \Re 51'02	
direct	4143 Dec 15 23:27	7° \Re 31'18		min. Earth dist.	4144 Nov 18 10:02	0° \Re 26'51	0.66508 AU
morning max el	4143 Dec 23 05:28	11° \Re 35'54	19°32'34		4144 Nov 18 18:52	30° \Re \P	
greatest brilliancy	4144 Jan 05 08:28	29° \Re 00'27	-0.7m	inferior conj	4144 Nov 19 23:18	28° \P 32'34	-0°55'10
	4144 Jan 06 00:25	0° \Im		minimum elong	4144 Nov 20 00:47	28° \P 27'58	0°54'31
desc. node	4144 Jan 12 17:31	10° \Im 11'43		asc. node	4144 Nov 22 15:51	25° \P 24'38	
morning set	4144 Jan 17 01:39	16° \Im 52'38		morning rise	4144 Nov 25 20:32	22° \P 44'28	
	4144 Jan 25 12:05	0° \approx		direct	4144 Nov 28 21:54	21° \P 51'21	
max. Earth dist.	4144 Jan 29 15:41	6° \approx 32'15	1.44529 AU	morning max el	4144 Dec 05 15:15	25° \P 33'04	18°42'10
					4144 Dec 09 10:57	0° \Re	
superior conj	4144 Feb 02 18:14	13° \approx 04'49	-1°55'18	morning set	4144 Dec 26 17:22	26° \Re 09'45	
minimum elong	4144 Feb 02 11:18	12° \approx 37'01	1°54'52		4144 Dec 29 03:44	0° \Im	
	4144 Feb 13 02:49	0° \Re		desc. node	4144 Dec 29 14:33	0° \Im 42'40	
evening rise	4144 Feb 16 16:34	5° \Re 58'27					
	4144 Mar 02 14:55	0° Υ		superior conj	4145 Jan 11 23:44	21° \Im 44'10	-1°23'34
asc. node	4144 Mar 03 18:06	1° Υ 30'07		minimum elong	4145 Jan 11 14:35	21° \Im 08'15	1°22'34
evening max el	4144 Mar 06 12:13	4° Υ 40'26	18°19'01	max. Earth dist.	4145 Jan 11 09:10	20° \Im 47'00	1.45213 AU

	4145 Jan 17 05:48	0°♊			4146 Jan 10 02:22	0°♊	
evening rise	4145 Jan 27 13:11	16°♊23'17		greatest brilliancy	4146 Jan 20 05:51	15°♊33'35	-0.7m
greatest brilliancy	4145 Feb 04 02:51	28°♊31'21	-0.9m		4146 Jan 30 17:49	0°♋	
	4145 Feb 05 01:09	0°♋		evening max el	4146 Feb 01 06:15	1°♋39'12	19°35'55
evening max el	4145 Feb 17 23:10	18°♋08'05	18°49'09	asc. node	4146 Feb 05 12:09	5°♋02'10	
asc. node	4145 Feb 18 15:08	18°♋47'17		retrograde	4146 Feb 08 13:35	5°♋52'08	
retrograde	4145 Feb 24 16:25	21°♋53'20		evening set	4146 Feb 12 03:10	4°♋37'38	
evening set	4145 Feb 27 22:37	20°♋52'26			4146 Feb 16 14:02	30°♌	
inferior conj	4145 Mar 05 14:12	15°♋11'18	3°31'33	inferior conj	4146 Feb 17 14:13	28°♌41'08	3°13'52
minimum elong	4145 Mar 05 13:03	15°♋14'52	3°31'28	minimum elong	4146 Feb 17 12:09	28°♌47'56	3°13'31
min. Earth dist.	4145 Mar 07 08:36	13°♋00'26	0.65469 AU	min. Earth dist.	4146 Feb 18 17:42	27°♌10'40	0.66709 AU
morning rise	4145 Mar 11 03:04	8°♋58'50		morning rise	4146 Feb 22 20:54	22°♌27'12	
direct	4145 Mar 17 17:21	6°♋08'08		direct	4146 Feb 28 23:53	19°♌43'35	
desc. node	4145 Mar 27 13:44	10°♋48'44		morning max el	4146 Mar 13 06:31	27°♌02'34	25°40'54
morning max el	4145 Mar 30 21:06	13°♋53'15	26°51'30	desc. node	4146 Mar 14 10:47	28°♌15'48	
	4145 Apr 12 22:43	0°♍			4146 Mar 16 00:56	0°♋	
	4145 May 01 12:41	0°♌			4146 Apr 06 14:08	0°♍	
morning set	4145 May 05 16:58	7°♌47'19		morning set	4146 Apr 18 11:52	20°♍23'40	
max. Earth dist.	4145 May 10 01:04	16°♌17'39	1.34238 AU	max. Earth dist.	4146 Apr 22 06:30	27°♍26'32	1.35886 AU
					4146 Apr 23 14:32	0°♎	
superior conj	4145 May 14 05:45	24°♌53'01	-0°34'22				
minimum elong	4145 May 14 07:34	25°♌02'29	0°34'00	superior conj	4146 Apr 27 22:35	8°♎32'31	-1°03'31
	4145 May 16 16:19	0°♏		minimum elong	4146 Apr 28 02:00	8°♎49'39	1°02'56
asc. node	4145 May 17 14:26	1°♏56'36		asc. node	4146 May 04 11:28	21°♎52'25	
evening rise	4145 May 21 16:45	10°♏34'02		evening rise	4146 May 05 22:57	24°♎53'45	
	4145 May 31 21:13	0°♐			4146 May 08 11:44	0°♏	
evening max el	4145 Jun 10 10:54	12°♐41'21	21°20'51	evening max el	4146 May 23 17:59	23°♏51'28	20°03'08
retrograde	4145 Jun 22 12:52	18°♐37'58		retrograde	4146 Jun 03 03:35	28°♏55'50	
desc. node	4145 Jun 23 12:58	18°♐35'37		evening set	4146 Jun 05 02:25	28°♏45'53	
evening set	4145 Jun 24 21:17	18°♐25'16		desc. node	4146 Jun 10 10:00	26°♏52'11	
inferior conj	4145 Jul 04 06:19	14°♐26'11	-3°03'14	inferior conj	4146 Jun 14 02:46	24°♏46'09	-1°05'52
minimum elong	4145 Jul 03 22:23	14°♐37'19	3°00'43	minimum elong	4146 Jun 13 23:41	24°♏50'46	1°04'43
min. Earth dist.	4145 Jul 04 10:46	14°♐19'59	0.54831 AU	min. Earth dist.	4146 Jun 15 23:12	23°♏39'34	0.55217 AU
morning rise	4145 Jul 13 00:08	10°♐30'28		morning rise	4146 Jun 22 19:18	20°♏26'05	
direct	4145 Jul 16 10:15	10°♐05'09		direct	4146 Jun 26 22:29	19°♏48'52	
morning max el	4145 Jul 29 00:03	16°♐02'24	22°19'17	morning max el	4146 Jul 10 15:26	26°♏33'06	24°02'31
	4145 Aug 08 20:48	0°♑			4146 Jul 13 23:06	0°♐	
asc. node	4145 Aug 13 13:40	8°♑14'45		asc. node	4146 Jul 31 10:44	27°♐42'13	
morning set	4145 Aug 19 16:57	20°♑30'46			4146 Aug 01 14:04	0°♑	
	4145 Aug 24 04:11	0°♒		morning set	4146 Aug 04 04:38	5°♑24'58	
superior conj	4145 Aug 26 20:31	5°♒42'10	1°40'53	superior conj	4146 Aug 11 04:09	20°♑29'16	1°31'36
minimum elong	4145 Aug 26 19:17	5°♒35'40	1°40'49	minimum elong	4146 Aug 11 02:07	20°♑18'18	1°31'23
max. Earth dist.	4145 Aug 30 05:08	12°♒43'10	1.34319 AU	max. Earth dist.	4146 Aug 13 06:01	24°♑57'52	1.33140 AU
evening rise	4145 Sep 03 20:11	21°♒59'36			4146 Aug 15 15:05	0°♓	
	4145 Sep 08 01:47	0°♓		evening rise	4146 Aug 18 13:53	6°♓04'08	
desc. node	4145 Sep 19 12:20	19°♓17'56			4146 Aug 31 15:52	0°♓	
	4145 Sep 26 21:30	0°♔		desc. node	4146 Sep 06 09:21	8°♓54'03	
evening max el	4145 Oct 08 17:00	13°♔50'57	27°03'59	evening max el	4146 Sep 21 04:23	27°♓05'34	27°25'51
retrograde	4145 Oct 21 23:27	21°♔07'55			4146 Sep 24 12:53	0°♕	
evening set	4145 Oct 28 19:07	18°♔26'48		retrograde	4146 Oct 04 19:07	4°♕22'46	
min. Earth dist.	4145 Nov 01 17:04	14°♔38'24	0.65313 AU	evening set	4146 Oct 11 22:28	1°♕44'57	
inferior conj	4145 Nov 03 18:16	12°♔19'20	-1°56'09		4146 Oct 14 01:21	30°♌	
minimum elong	4145 Nov 03 21:32	12°♔10'03	1°54'49	min. Earth dist.	4146 Oct 15 15:02	28°♓30'05	0.63767 AU
asc. node	4145 Nov 09 12:52	6°♕59'40		inferior conj	4146 Oct 18 04:29	25°♓52'56	-2°57'45
morning rise	4145 Nov 10 00:52	6°♕43'55		minimum elong	4146 Oct 18 09:27	25°♓40'11	2°56'00
direct	4145 Nov 12 18:07	6°♕04'03		morning rise	4146 Oct 24 21:49	20°♓33'36	
morning max el	4145 Nov 19 05:55	9°♕32'58	18°08'20	direct	4146 Oct 27 09:22	20°♓03'22	
	4145 Dec 03 09:14	0°♖		asc. node	4146 Oct 27 09:56	20°♓03'22	
morning set	4145 Dec 07 14:31	6°♖56'07		morning max el	4146 Nov 02 22:36	23°♓28'24	17°51'46
desc. node	4145 Dec 16 11:37	21°♖23'00			4146 Nov 08 03:12	0°♕	
	4145 Dec 21 21:15	0°♗		morning set	4146 Nov 19 14:31	19°♕00'24	
					4146 Nov 26 00:51	0°♖	
superior conj	4145 Dec 22 04:25	0°♗28'20	-0°38'27				
minimum elong	4145 Dec 21 23:35	0°♗09'14	0°37'48	superior conj	4146 Dec 02 03:35	10°♖09'57	0°08'25
max. Earth dist.	4145 Dec 25 04:54	5°♗14'16	1.45153 AU	minimum elong	4146 Dec 02 04:29	10°♖13'42	0°08'16
evening rise	4146 Jan 07 12:14	25°♗59'11		behind sun begin	4146 Dec 01 20:00	9°♖38'55	

behind sun end	4146 Dec 02 12:59	10° ♊ 48'24			4147 Nov 18 10:57	0° ♊	
desc. node	4146 Dec 03 08:40	12° ♊ 08'42		desc. node	4147 Nov 20 05:41	2° ♊ 56'02	
max. Earth dist.	4146 Dec 07 23:10	19° ♊ 33'29	1.44359 AU	max. Earth dist.	4147 Nov 20 13:10	3° ♊ 26'40	1.42944 AU
	4146 Dec 14 14:28	0° ♋		evening rise	4147 Nov 27 12:04	14° ♊ 34'11	
evening rise	4146 Dec 17 22:42	5° ♋ 10'07			4147 Dec 07 14:51	0° ♋	
	4147 Jan 03 12:48	0° ♌		evening max el	4147 Dec 29 04:28	28° ♋ 45'26	21°49'46
evening max el	4147 Jan 15 08:07	15° ♌ 11'51	20°37'13		4147 Dec 30 11:01	0° ♌	
retrograde	4147 Jan 23 11:49	20° ♌ 00'24		retrograde	4148 Jan 07 09:04	4° ♌ 13'30	
asc. node	4147 Jan 23 09:11	20° ♌ 00'20		asc. node	4148 Jan 10 06:14	3° ♌ 28'46	
evening set	4147 Jan 27 10:14	18° ♌ 31'24		evening set	4148 Jan 11 17:58	2° ♌ 29'07	
inferior conj	4147 Feb 01 18:58	12° ♌ 22'18	2°45'41		4148 Jan 14 04:52	30° ♌	
minimum elong	4147 Feb 01 16:30	12° ♌ 30'43	2°45'02	inferior conj	4148 Jan 17 02:13	26° ♌ 10'42	2°08'50
min. Earth dist.	4147 Feb 02 09:04	11° ♌ 34'01	0.67526 AU	minimum elong	4148 Jan 16 23:52	26° ♌ 18'53	2°08'03
morning rise	4147 Feb 06 22:36	6° ♌ 08'40		min. Earth dist.	4148 Jan 17 04:20	26° ♌ 03'22	0.67948 AU
direct	4147 Feb 12 11:39	3° ♌ 41'01		morning rise	4148 Jan 22 05:35	19° ♌ 59'03	
morning max el	4147 Feb 23 15:12	10° ♌ 20'26	24°15'57	direct	4148 Jan 27 03:55	17° ♌ 52'28	
desc. node	4147 Mar 01 07:52	16° ♌ 45'05		morning max el	4148 Feb 06 01:01	23° ♌ 43'25	22°46'47
	4147 Mar 11 05:41	0° ♍			4148 Feb 11 14:04	0° ♍	
	4147 Mar 30 07:12	0° ♎		desc. node	4148 Feb 16 04:54	5° ♍ 58'08	
morning set	4147 Mar 31 10:46	1° ♎ 59'06			4148 Mar 03 15:36	0° ♍	
max. Earth dist.	4147 Apr 04 03:28	8° ♎ 31'19	1.37903 AU	morning set	4148 Mar 11 07:27	12° ♍ 17'09	
				max. Earth dist.	4148 Mar 15 22:45	20° ♍ 04'43	1.40088 AU
superior conj	4147 Apr 11 03:53	21° ♎ 34'41	-1°30'53		4148 Mar 21 14:43	0° ♎	
minimum elong	4147 Apr 11 08:29	21° ♎ 56'44	1°30'15				
	4147 Apr 15 11:42	0° ♏		superior conj	4148 Mar 23 17:18	3° ♎ 48'29	-1°53'18
evening rise	4147 Apr 19 22:52	8° ♏ 50'11		minimum elong	4148 Mar 23 21:49	4° ♎ 09'04	1°52'56
asc. node	4147 Apr 21 08:31	11° ♏ 35'48		evening rise	4148 Apr 02 13:21	22° ♎ 14'39	
	4147 May 01 19:38	0° ♐			4148 Apr 06 16:16	0° ♏	
evening max el	4147 May 06 12:59	5° ♐ 43'10	19°04'46	asc. node	4148 Apr 07 05:33	1° ♏ 01'06	
retrograde	4147 May 15 07:09	9° ♐ 59'29		evening max el	4148 Apr 18 17:17	18° ♏ 11'15	18°26'43
evening set	4147 May 17 08:27	9° ♐ 46'21		retrograde	4148 Apr 26 05:15	21° ♏ 53'38	
inferior conj	4147 May 25 14:35	5° ♐ 33'21	0°46'35	evening set	4148 Apr 28 13:11	21° ♏ 33'14	
minimum elong	4147 May 25 16:25	5° ♐ 30'11	0°45'56	inferior conj	4148 May 05 23:36	17° ♏ 00'53	2°11'36
desc. node	4147 May 28 07:01	3° ♐ 42'39		minimum elong	4148 May 06 03:14	16° ♏ 53'31	2°10'34
min. Earth dist.	4147 May 28 14:34	3° ♐ 30'05	0.56495 AU	min. Earth dist.	4148 May 09 10:04	14° ♏ 15'57	0.58403 AU
morning rise	4147 Jun 02 21:11	0° ♐ 37'36		morning rise	4148 May 13 14:10	11° ♏ 32'47	
	4147 Jun 04 20:17	30° ♑		desc. node	4148 May 14 04:03	11° ♏ 15'44	
direct	4147 Jun 07 23:17	29° ♑ 36'48		direct	4148 May 19 14:37	9° ♏ 58'28	
	4147 Jun 11 02:33	0° ♒		morning max el	4148 Jun 03 00:00	17° ♏ 41'15	26°58'12
morning max el	4147 Jun 22 05:45	6° ♒ 57'14	25°40'45		4148 Jun 13 05:32	0° ♒	
	4147 Jul 09 04:34	0° ♓			4148 Jun 30 15:12	0° ♓	
asc. node	4147 Jul 18 07:48	17° ♓ 27'54		morning set	4148 Jul 03 01:46	5° ♓ 02'30	
morning set	4147 Jul 19 16:07	20° ♓ 17'19		asc. node	4148 Jul 04 04:51	7° ♓ 25'49	
	4147 Jul 24 03:55	0° ♈					
superior conj	4147 Jul 26 14:49	5° ♈ 23'37	1°17'13	superior conj	4148 Jul 10 02:37	20° ♓ 18'47	0°58'29
minimum elong	4147 Jul 26 12:29	5° ♈ 10'49	1°16'53	minimum elong	4148 Jul 10 00:27	20° ♓ 06'51	0°58'06
max. Earth dist.	4147 Jul 27 13:38	7° ♈ 28'49	1.32377 AU	max. Earth dist.	4148 Jul 10 00:46	20° ♓ 08'36	1.32027 AU
evening rise	4147 Aug 02 15:44	20° ♈ 31'18		evening rise	4148 Jul 14 12:33	0° ♈	
	4147 Aug 07 09:12	0° ♉			4148 Jul 16 23:02	5° ♈ 12'56	
desc. node	4147 Aug 24 06:21	27° ♉ 50'51		desc. node	4148 Jul 30 01:30	0° ♉	
	4147 Aug 25 21:04	0° ♊		evening max el	4148 Aug 10 03:20	15° ♉ 52'21	
evening max el	4147 Sep 03 12:17	9° ♊ 47'30	27°16'56	retrograde	4148 Aug 15 14:19	21° ♉ 46'06	26°34'43
retrograde	4147 Sep 17 08:12	17° ♊ 01'48		evening set	4148 Aug 29 13:14	28° ♉ 56'20	
evening set	4147 Sep 24 11:59	14° ♊ 39'08		min. Earth dist.	4148 Sep 05 07:05	27° ♉ 01'51	
min. Earth dist.	4147 Sep 28 02:40	11° ♊ 50'34	0.61914 AU	inferior conj	4148 Sep 09 04:04	24° ♉ 26'09	0.59866 AU
inferior conj	4147 Oct 01 02:58	9° ♊ 06'18	-3°55'57	minimum elong	4148 Sep 12 10:16	21° ♉ 50'47	-4°43'55
minimum elong	4147 Oct 01 08:56	8° ♊ 52'42	3°54'20	morning rise	4148 Sep 12 15:29	21° ♉ 40'21	4°43'01
morning rise	4147 Oct 08 07:40	4° ♊ 06'12		direct	4148 Sep 20 01:58	17° ♉ 12'32	
direct	4147 Oct 10 16:15	3° ♊ 42'16		morning max el	4148 Sep 22 10:50	16° ♉ 52'03	
asc. node	4147 Oct 14 07:01	4° ♊ 40'33		asc. node	4148 Sep 30 01:27	20° ♉ 35'04	18°14'09
morning max el	4147 Oct 17 14:12	7° ♊ 11'56	17°53'15		4148 Sep 30 04:04	20° ♉ 41'27	
	4147 Nov 01 07:47	0° ♋		morning set	4148 Oct 07 03:49	0° ♊	
morning set	4147 Nov 02 10:57	2° ♋ 02'52			4148 Oct 15 22:05	15° ♊ 47'35	
					4148 Oct 23 11:41	0° ♋	
superior conj	4147 Nov 13 05:13	21° ♋ 09'07	0°47'55	superior conj	4148 Oct 25 07:37	3° ♋ 20'47	1°16'35
minimum elong	4147 Nov 13 09:02	21° ♋ 25'35	0°47'24	minimum elong	4148 Oct 25 11:33	3° ♋ 38'35	1°16'09

max. Earth dist.	4148 Nov 01 22:10	16° \mathbb{M} 42'49	1.41086 AU	minimum elong	4149 Oct 08 08:02	16° \mathbb{A} 41'26	1°34'19
desc. node	4148 Nov 06 02:41	23° \mathbb{M} 42'11		max. Earth dist.	4149 Oct 15 03:28	29° \mathbb{A} 17'05	1.39008 AU
evening rise	4148 Nov 06 18:45	24° \mathbb{M} 47'52			4149 Oct 15 13:06	0° \mathbb{M}	
	4148 Nov 10 00:20	0° \mathbb{A}		evening rise	4149 Oct 19 00:26	6° \mathbb{M} 04'07	
	4148 Nov 30 11:35	0° \mathbb{B}		desc. node	4149 Oct 23 23:41	14° \mathbb{M} 22'46	
evening max el	4148 Dec 10 20:23	12° \mathbb{B} 22'19	23°08'41		4149 Nov 03 01:21	0° \mathbb{A}	
retrograde	4148 Dec 21 03:43	18° \mathbb{B} 28'37		evening max el	4149 Nov 23 09:38	26° \mathbb{A} 02'44	24°27'59
evening set	4148 Dec 26 00:48	16° \mathbb{B} 28'13			4149 Nov 27 23:33	0° \mathbb{B}	
asc. node	4148 Dec 27 03:17	15° \mathbb{B} 26'46		retrograde	4149 Dec 04 18:35	2° \mathbb{B} 41'27	
inferior conj	4148 Dec 31 10:06	10° \mathbb{B} 04'16	1°24'42	evening set	4149 Dec 10 05:09	0° \mathbb{B} 25'18	
minimum elong	4148 Dec 31 08:18	10° \mathbb{B} 10'29	1°24'00		4149 Dec 10 16:33	30° \mathbb{R} \mathbb{A}	
min. Earth dist.	4148 Dec 31 01:07	10° \mathbb{B} 35'12	0.68003 AU	asc. node	4149 Dec 14 00:18	26° \mathbb{A} 14'07	
morning rise	4149 Jan 05 15:41	3° \mathbb{B} 56'27		min. Earth dist.	4149 Dec 14 21:00	25° \mathbb{A} 06'05	0.67702 AU
direct	4149 Jan 09 23:38	2° \mathbb{B} 12'43		inferior conj	4149 Dec 15 16:47	23° \mathbb{A} 59'54	0°34'19
morning max el	4149 Jan 18 15:38	7° \mathbb{B} 15'05	21°22'14	minimum elong	4149 Dec 15 15:58	24° \mathbb{A} 02'39	0°33'58
desc. node	4149 Feb 02 01:56	25° \mathbb{B} 42'55		morning rise	4149 Dec 21 02:52	17° \mathbb{A} 58'01	
	4149 Feb 05 00:50	0° \approx		direct	4149 Dec 24 21:33	16° \mathbb{A} 36'17	
morning set	4149 Feb 18 23:23	21° \approx 14'16		morning max el	4150 Jan 01 13:49	20° \mathbb{A} 58'20	20°08'33
	4149 Feb 24 10:28	0° \mathbb{H}			4150 Jan 09 00:32	0° \mathbb{B}	
max. Earth dist.	4149 Feb 25 23:36	2° \mathbb{H} 31'57	1.42160 AU	desc. node	4150 Jan 19 22:57	15° \mathbb{B} 50'26	
				morning set	4150 Jan 28 20:37	29° \mathbb{B} 24'44	
superior conj	4149 Mar 05 09:52	15° \mathbb{H} 02'36	-2°06'24		4150 Jan 29 05:45	0° \approx	
minimum elong	4149 Mar 05 11:50	15° \mathbb{H} 11'06	2°06'21	max. Earth dist.	4150 Feb 08 08:38	15° \approx 54'20	1.43835 AU
	4149 Mar 13 20:45	0° \mathbb{Y}					
evening rise	4149 Mar 16 14:38	4° \mathbb{Y} 58'38		superior conj	4150 Feb 14 01:14	25° \approx 07'40	-2°04'46
asc. node	4149 Mar 25 02:34	20° \mathbb{Y} 02'11		minimum elong	4150 Feb 13 21:44	24° \approx 53'17	2°04'40
	4149 Apr 01 01:59	0° \mathbb{B}			4150 Feb 17 00:00	0° \mathbb{H}	
evening max el	4149 Apr 02 03:25	1° \mathbb{B} 06'36	18°08'36	evening rise	4150 Feb 26 22:24	16° \mathbb{H} 53'20	
retrograde	4149 Apr 08 21:06	4° \mathbb{B} 31'44			4150 Mar 06 13:48	0° \mathbb{Y}	
evening set	4149 Apr 11 11:37	4° \mathbb{B} 01'29		asc. node	4150 Mar 11 23:35	8° \mathbb{Y} 31'18	
	4149 Apr 17 06:43	30° \mathbb{R} \mathbb{Y}		evening max el	4150 Mar 16 16:01	14° \mathbb{Y} 20'00	18°09'48
inferior conj	4149 Apr 18 05:06	29° \mathbb{Y} 08'11	3°04'43	retrograde	4150 Mar 23 02:28	17° \mathbb{Y} 43'13	
minimum elong	4149 Apr 18 08:02	29° \mathbb{Y} 01'18	3°04'10	evening set	4150 Mar 25 22:54	17° \mathbb{Y} 01'45	
min. Earth dist.	4149 Apr 21 11:45	26° \mathbb{Y} 05'27	0.60582 AU	inferior conj	4150 Apr 01 03:28	11° \mathbb{Y} 48'25	3°30'42
morning rise	4149 Apr 25 02:18	23° \mathbb{Y} 17'39		minimum elong	4150 Apr 01 04:43	11° \mathbb{Y} 45'04	3°30'36
desc. node	4149 May 01 01:05	21° \mathbb{Y} 10'15		min. Earth dist.	4150 Apr 03 22:01	8° \mathbb{Y} 52'10	0.62704 AU
direct	4149 May 01 17:49	21° \mathbb{Y} 08'52		morning rise	4150 Apr 07 09:18	5° \mathbb{Y} 44'33	
morning max el	4149 May 16 00:29	29° \mathbb{Y} 03'13	27°42'59	direct	4150 Apr 14 06:26	3° \mathbb{Y} 09'18	
	4149 May 16 22:56	0° \mathbb{B}		desc. node	4150 Apr 17 22:07	3° \mathbb{Y} 48'23	
	4149 Jun 07 02:36	0° \mathbb{II}		morning max el	4150 Apr 28 06:46	11° \mathbb{Y} 07'57	27°50'18
morning set	4149 Jun 17 07:47	19° \mathbb{II} 34'32			4150 May 13 02:58	0° \mathbb{B}	
asc. node	4149 Jun 21 01:52	27° \mathbb{II} 30'53			4150 May 30 10:32	0° \mathbb{II}	
	4149 Jun 22 05:24	0° \mathbb{E}		morning set	4150 Jun 01 08:06	3° \mathbb{II} 47'10	
max. Earth dist.	4149 Jun 23 11:49	2° \mathbb{E} 45'59	1.32091 AU	max. Earth dist.	4150 Jun 06 18:55	15° \mathbb{II} 08'45	1.32575 AU
				asc. node	4150 Jun 07 22:52	17° \mathbb{II} 39'01	
superior conj	4149 Jun 24 13:48	5° \mathbb{E} 08'38	0°35'59				
minimum elong	4149 Jun 24 12:16	5° \mathbb{E} 00'11	0°35'40	superior conj	4150 Jun 08 22:39	19° \mathbb{II} 47'37	0°10'22
evening rise	4149 Jul 01 09:34	20° \mathbb{E} 01'27		minimum elong	4150 Jun 08 22:09	19° \mathbb{II} 44'57	0°10'15
	4149 Jul 06 06:04	0° \mathbb{Q}		behind sun begin	4150 Jun 08 18:08	19° \mathbb{II} 23'10	
	4149 Jul 25 12:42	0° \mathbb{M}		behind sun end	4150 Jun 09 02:11	20° \mathbb{II} 06'46	
desc. node	4149 Jul 28 00:21	2° \mathbb{M} 35'23			4150 Jun 13 15:16	0° \mathbb{E}	
evening max el	4149 Jul 28 08:55	2° \mathbb{M} 56'04	25°21'59	evening rise	4150 Jun 15 21:23	4° \mathbb{E} 50'31	
retrograde	4149 Aug 11 08:03	10° \mathbb{M} 01'03			4150 Jun 29 07:32	0° \mathbb{Q}	
evening set	4149 Aug 17 02:57	8° \mathbb{M} 43'39		evening max el	4150 Jul 09 22:07	13° \mathbb{Q} 28'42	23°49'23
min. Earth dist.	4149 Aug 21 20:45	6° \mathbb{M} 03'05	0.57836 AU	desc. node	4150 Jul 14 21:21	17° \mathbb{Q} 29'47	
inferior conj	4149 Aug 24 22:53	3° \mathbb{M} 55'27	-5°10'20	retrograde	4150 Jul 23 14:55	20° \mathbb{Q} 21'48	
minimum elong	4149 Aug 25 00:26	3° \mathbb{M} 52'45	5°10'15	evening set	4150 Jul 27 23:28	19° \mathbb{Q} 40'00	
	4149 Aug 31 21:32	30° \mathbb{R} \mathbb{Q}		min. Earth dist.	4150 Aug 03 08:17	16° \mathbb{Q} 37'19	0.56119 AU
morning rise	4149 Sep 02 00:14	29° \mathbb{Q} 40'00		inferior conj	4150 Aug 05 15:14	15° \mathbb{Q} 14'05	-4°59'42
direct	4149 Sep 04 12:47	29° \mathbb{Q} 20'42		minimum elong	4150 Aug 05 10:44	15° \mathbb{Q} 20'56	4°59'13
	4149 Sep 08 00:29	0° \mathbb{M}		morning rise	4150 Aug 14 00:32	11° \mathbb{Q} 17'37	
morning max el	4149 Sep 13 04:54	3° \mathbb{M} 27'08	18°55'57	direct	4150 Aug 16 19:17	10° \mathbb{Q} 58'00	
asc. node	4149 Sep 17 01:06	7° \mathbb{M} 50'07		morning max el	4150 Aug 26 21:47	15° \mathbb{Q} 39'36	19°59'32
morning set	4149 Sep 29 19:21	0° \mathbb{A} 00'52		asc. node	4150 Sep 03 22:08	25° \mathbb{Q} 52'13	
	4149 Sep 29 19:10	0° \mathbb{A}			4150 Sep 06 09:23	0° \mathbb{M}	
superior conj	4149 Oct 08 05:26	16° \mathbb{A} 29'02	1°34'31	morning set	4150 Sep 13 23:29	14° \mathbb{M} 33'41	

superior conj	4150 Sep 21 17:31	0°♌19'21	1°43'00		4151 Aug 29 15:56	0°♏	
minimum elong	4150 Sep 21 18:26	0°♌23'58	1°42'58				
	4150 Sep 21 13:39	0°♌		superior conj	4151 Sep 05 15:37	14°♏39'15	1°43'36
max. Earth dist.	4150 Sep 27 08:52	11°♌18'39	1.36965 AU	minimum elong	4151 Sep 05 15:04	14°♏36'21	1°43'35
evening rise	4150 Oct 01 04:09	18°♌20'55		max. Earth dist.	4151 Sep 09 19:38	23°♏09'44	1.35172 AU
	4150 Oct 07 21:04	0°♍			4151 Sep 13 07:23	0°♌	
desc. node	4150 Oct 10 20:41	4°♍53'27		evening rise	4151 Sep 14 01:57	1°♌28'38	
	4150 Oct 28 06:58	0°♎		desc. node	4151 Sep 27 17:43	25°♌08'56	
evening max el	4150 Nov 05 21:57	9°♎45'04	25°40'44		4151 Sep 30 21:27	0°♍	
retrograde	4150 Nov 18 04:56	16°♎47'17		evening max el	4151 Oct 19 10:25	23°♍24'38	26°39'32
evening set	4150 Nov 24 05:21	14°♎17'23			4151 Oct 28 21:09	0°♎	
min. Earth dist.	4150 Nov 28 13:41	9°♎33'03	0.67046 AU	retrograde	4151 Nov 01 10:13	0°♎39'51	
inferior conj	4150 Nov 29 20:30	7°♎54'59	-0°21'17		4151 Nov 04 18:03	30°♍	
minimum elong	4150 Nov 29 21:03	7°♎53'14	0°21'02	evening set	4151 Nov 07 23:29	28°♍00'44	
asc. node	4150 Nov 30 21:21	6°♎36'44		min. Earth dist.	4151 Nov 12 00:57	23°♍52'01	0.66037 AU
morning rise	4150 Dec 05 13:08	2°♎01'21		inferior conj	4151 Nov 13 19:19	21°♍46'10	-1°20'47
direct	4150 Dec 08 20:13	0°♎58'55		minimum elong	4151 Nov 13 21:33	21°♍39'31	1°19'50
morning max el	4150 Dec 15 19:54	4°♎52'08	19°09'11	asc. node	4151 Nov 17 18:24	17°♍31'43	
	4151 Jan 02 19:24	0°♏		morning rise	4151 Nov 19 20:22	16°♍03'19	
desc. node	4151 Jan 06 19:59	6°♏14'20		direct	4151 Nov 22 17:54	15°♍16'29	
morning set	4151 Jan 07 23:13	8°♏00'10		morning max el	4151 Nov 29 08:11	18°♍51'48	18°25'47
max. Earth dist.	4151 Jan 21 23:57	29°♏55'40	1.44911 AU		4151 Dec 07 19:33	0°♎	
	4151 Jan 22 01:03	0°♐		morning set	4151 Dec 19 03:12	17°♎55'07	
				desc. node	4151 Dec 24 17:01	26°♎49'52	
superior conj	4151 Jan 24 16:11	4°♐09'20	-1°44'03		4151 Dec 26 16:53	0°♏	
minimum elong	4151 Jan 24 07:29	3°♐34'52	1°43'19	superior conj	4152 Jan 03 18:50	12°♏44'24	-1°05'26
evening rise	4151 Feb 08 08:36	27°♐51'54		minimum elong	4152 Jan 03 10:55	12°♏13'19	1°04'28
	4151 Feb 09 15:44	0°♑		max. Earth dist.	4152 Jan 04 18:28	14°♏17'05	1.45272 AU
asc. node	4151 Feb 26 20:37	26°♑18'14			4152 Jan 14 19:00	0°♐	
evening max el	4151 Feb 28 04:14	27°♑43'48	18°29'38	evening rise	4152 Jan 19 19:37	7°♐54'46	
	4151 Mar 02 20:54	0°♒		greatest brilliancy	4152 Jan 29 20:41	23°♐42'27	-0.8m
retrograde	4151 Mar 06 16:48	1°♒18'03			4152 Feb 02 23:46	0°♑	
evening set	4151 Mar 09 19:09	0°♒24'35		evening max el	4152 Feb 11 13:45	11°♑13'35	19°07'03
	4151 Mar 10 10:55	30°♒		asc. node	4152 Feb 13 17:40	13°♑11'10	
inferior conj	4151 Mar 15 14:33	24°♒52'57	3°35'55	retrograde	4152 Feb 18 12:19	15°♑09'51	
minimum elong	4151 Mar 15 14:10	24°♒54'06	3°35'55	evening set	4152 Feb 21 21:24	14°♑03'27	
min. Earth dist.	4151 Mar 17 17:52	22°♒21'52	0.64563 AU	inferior conj	4152 Feb 27 10:46	8°♑15'32	3°25'31
morning rise	4151 Mar 21 08:31	18°♒42'10		minimum elong	4152 Feb 27 09:10	8°♑20'39	3°25'19
direct	4151 Mar 28 03:03	15°♒53'09		min. Earth dist.	4152 Feb 28 22:44	6°♒21'02	0.66047 AU
desc. node	4151 Apr 04 19:10	18°♒45'00		morning rise	4152 Mar 03 20:34	2°♒01'55	
morning max el	4151 Apr 10 16:19	23°♒47'23	27°21'45		4152 Mar 06 19:54	30°♒	
	4151 Apr 16 05:50	0°♓		direct	4152 Mar 10 06:27	29°♒12'40	
	4151 May 06 11:17	0°♔			4152 Mar 13 23:15	0°♑	
morning set	4151 May 15 24:00	17°♔31'12		desc. node	4152 Mar 21 16:14	5°♑26'02	
max. Earth dist.	4151 May 20 17:52	27°♔03'29	1.33497 AU	morning max el	4152 Mar 23 02:17	6°♑49'16	26°23'47
	4151 May 22 03:53	0°♕			4152 Apr 10 00:51	0°♓	
superior conj	4151 May 24 03:10	4°♕08'50	-0°17'37		4152 Apr 27 20:10	0°♔	
minimum elong	4151 May 24 04:05	4°♕13'38	0°17'27	morning set	4152 Apr 28 03:54	0°♔36'17	
asc. node	4151 May 25 19:54	7°♕45'28		max. Earth dist.	4152 May 02 05:36	8°♔25'24	1.34887 AU
evening rise	4151 May 31 08:35	19°♕32'53		superior conj	4152 May 07 01:06	18°♔05'54	-0°46'48
	4151 Jun 05 11:58	0°♖		minimum elong	4152 May 07 03:37	18°♔18'46	0°46'20
evening max el	4151 Jun 21 12:55	23°♖52'55	22°12'39	asc. node	4152 May 11 16:56	27°♔46'23	
desc. node	4151 Jul 01 18:23	0°♗00'09			4152 May 12 18:32	0°♕	
	4151 Jul 01 18:06	0°♗		evening rise	4152 May 14 17:14	4°♕02'35	
retrograde	4151 Jul 04 10:06	0°♗16'29			4152 May 29 10:35	0°♖	
evening set	4151 Jul 07 07:57	29°♖57'41		evening max el	4152 Jun 02 13:06	4°♖41'21	20°45'34
	4151 Jul 07 03:26	30°♗		retrograde	4152 Jun 13 22:52	10°♖16'09	
min. Earth dist.	4151 Jul 15 18:48	26°♖19'08	0.55044 AU	evening set	4152 Jun 16 00:51	10°♖05'44	
inferior conj	4151 Jul 16 14:40	25°♖51'08	-3°59'24	desc. node	4152 Jun 17 15:25	9°♖44'15	
minimum elong	4151 Jul 16 06:11	26°♖03'06	3°57'16	inferior conj	4152 Jun 25 08:00	6°♖08'31	-2°15'01
morning rise	4151 Jul 25 06:15	22°♖00'36		minimum elong	4152 Jun 25 01:45	6°♖17'27	2°12'48
direct	4151 Jul 28 09:13	21°♖38'47		min. Earth dist.	4152 Jun 26 06:32	5°♖36'21	0.54875 AU
morning max el	4151 Aug 09 02:52	27°♖07'11	21°23'40	morning rise	4152 Jul 04 02:11	2°♖04'08	
	4151 Aug 11 21:54	0°♘		direct	4152 Jul 07 18:34	1°♖34'55	
asc. node	4151 Aug 21 19:10	14°♘35'00		morning max el	4152 Jul 20 21:51	7°♖53'55	23°02'49
morning set	4151 Aug 29 08:03	29°♘19'03					

	4152 Aug 05 15:46	0°♎		morning rise	4153 Jun 13 23:06	12°♐02'51	
asc. node	4152 Aug 07 16:13	3°♎48'26		direct	4153 Jun 18 11:59	11°♐16'49	
morning set	4152 Aug 12 19:03	14°♎11'12		morning max el	4153 Jul 02 11:51	18°♐18'04	24°45'49
					4153 Jul 12 04:46	0°♐	
superior conj	4152 Aug 19 20:30	29°♎18'38	1°37'36	asc. node	4153 Jul 25 13:16	23°♐24'36	
minimum elong	4152 Aug 19 18:52	29°♎09'56	1°37'29	morning set	4153 Jul 28 06:52	29°♐05'28	
	4152 Aug 20 04:15	0°♐			4153 Jul 28 17:09	0°♎	
max. Earth dist.	4152 Aug 22 15:17	5°♐12'33	1.33760 AU				
evening rise	4152 Aug 27 13:31	15°♐15'38		superior conj	4153 Aug 04 05:41	14°♎09'54	1°26'04
	4152 Sep 04 10:34	0°♑		minimum elong	4153 Aug 04 03:28	13°♎57'50	1°25'48
desc. node	4152 Sep 13 14:44	15°♑01'54		max. Earth dist.	4153 Aug 05 19:31	17°♎35'35	1.32766 AU
	4152 Sep 24 14:18	0°♒		evening rise	4153 Aug 11 11:06	29°♎31'34	
evening max el	4152 Sep 30 22:47	6°♒52'13	27°16'55		4153 Aug 11 16:40	0°♐	
retrograde	4152 Oct 14 09:42	14°♒10'34			4153 Aug 28 12:31	0°♑	
evening set	4152 Oct 21 09:05	11°♒29'41		desc. node	4153 Aug 31 11:45	4°♑23'07	
min. Earth dist.	4152 Oct 25 04:30	7°♒55'52	0.64684 AU	evening max el	4153 Sep 13 09:16	19°♑55'36	27°26'13
inferior conj	4152 Oct 27 10:54	5°♒27'58	-2°22'25	retrograde	4153 Sep 27 02:32	27°♑11'10	
minimum elong	4152 Oct 27 14:56	5°♒16'59	2°20'52	evening set	4153 Oct 04 07:02	24°♑38'37	
morning rise	4152 Nov 02 21:56	29°♑58'52		min. Earth dist.	4153 Oct 07 22:21	21°♑35'51	0.63010 AU
	4152 Nov 02 20:56	30°♑♑		inferior conj	4153 Oct 10 16:34	18°♑54'23	-3°23'11
asc. node	4152 Nov 03 15:28	29°♑41'57		minimum elong	4153 Oct 10 22:05	18°♑40'52	3°21'24
direct	4152 Nov 05 12:20	29°♑23'38		morning rise	4153 Oct 17 14:40	13°♑42'28	
	4152 Nov 08 03:51	0°♒		direct	4153 Oct 20 00:37	13°♑15'13	
morning max el	4152 Nov 12 00:03	2°♒50'18	17°59'07	asc. node	4153 Oct 21 12:30	13°♑25'56	
morning set	4152 Nov 29 12:27	29°♒16'30		morning max el	4153 Oct 26 16:35	16°♑41'18	17°50'04
	4152 Nov 29 22:50	0°♓			4153 Nov 05 02:58	0°♒	
desc. node	4152 Dec 10 14:02	17°♓32'29		morning set	4153 Nov 11 21:57	11°♒48'03	
					4153 Nov 22 10:40	0°♓	
superior conj	4152 Dec 13 05:31	21°♓47'57	-0°18'09				
minimum elong	4152 Dec 13 03:19	21°♓39'07	0°17'51	superior conj	4153 Nov 23 15:36	2°♓01'18	0°26'22
max. Earth dist.	4152 Dec 17 13:29	28°♓41'17	1.44896 AU	minimum elong	4153 Nov 23 18:10	2°♓12'01	0°26'01
	4152 Dec 18 09:27	0°♔		desc. node	4153 Nov 27 11:04	8°♓18'59	
evening rise	4152 Dec 29 11:37	17°♔15'20		max. Earth dist.	4153 Nov 30 06:25	12°♓52'00	1.43831 AU
	4153 Jan 06 19:29	0°♕		evening rise	4153 Dec 08 21:17	26°♓26'53	
greatest brilliancy	4153 Jan 12 19:37	9°♕00'13	-0.6m		4153 Dec 11 04:43	0°♔	
evening max el	4153 Jan 24 18:48	24°♕45'43	20°00'25		4153 Dec 31 19:33	0°♕	
asc. node	4153 Jan 30 14:44	28°♕55'11		evening max el	4154 Jan 07 18:22	8°♕18'49	21°06'59
retrograde	4153 Feb 01 10:09	29°♕12'52		retrograde	4154 Jan 16 08:02	13°♕23'21	
evening set	4153 Feb 05 03:15	27°♕52'29		asc. node	4154 Jan 17 11:47	13°♕16'04	
inferior conj	4153 Feb 10 13:05	21°♕50'33	3°03'04	evening set	4154 Jan 20 10:47	11°♕47'49	
minimum elong	4153 Feb 10 10:48	21°♕58'14	3°02'34	inferior conj	4154 Jan 25 19:08	5°♕34'32	2°31'00
min. Earth dist.	4153 Feb 11 10:48	20°♕37'43	0.67112 AU	minimum elong	4154 Jan 25 16:39	5°♕43'04	2°30'17
morning rise	4153 Feb 15 18:07	15°♕36'31		min. Earth dist.	4154 Jan 26 03:59	5°♕03'58	0.67760 AU
direct	4153 Feb 21 15:31	12°♕58'30			4154 Jan 30 06:11	30°♕♔	
morning max el	4153 Mar 05 11:06	20°♕02'11	25°05'47	morning rise	4154 Jan 30 22:21	29°♔21'47	
desc. node	4153 Mar 08 13:16	23°♕21'50		direct	4154 Feb 05 05:16	27°♔02'37	
	4153 Mar 13 23:49	0°♕			4154 Feb 12 02:11	0°♕	
	4153 Apr 03 04:33	0°♖		morning max el	4154 Feb 15 19:43	3°♕21'14	23°37'57
morning set	4153 Apr 10 15:04	12°♖48'48		desc. node	4154 Feb 23 10:18	12°♕11'02	
max. Earth dist.	4153 Apr 14 06:23	19°♖27'01	1.36711 AU		4154 Mar 08 04:09	0°♕	
	4153 Apr 19 18:59	0°♗		morning set	4154 Mar 23 03:28	23°♕52'31	
					4154 Mar 26 16:35	0°♖	
superior conj	4153 Apr 20 13:32	1°♗31'04	-1°15'31	max. Earth dist.	4154 Mar 27 01:53	0°♖40'51	1.38833 AU
minimum elong	4153 Apr 20 17:32	1°♗50'47	1°14'52				
evening rise	4153 Apr 28 21:05	18°♗13'16		superior conj	4154 Apr 03 12:41	14°♖14'14	-1°41'13
asc. node	4153 Apr 28 14:00	17°♗37'36		minimum elong	4154 Apr 03 17:28	14°♖36'42	1°40'40
	4153 May 04 22:27	0°♗			4154 Apr 11 17:20	0°♗	
evening max el	4153 May 16 01:36	16°♗10'06	19°35'50	evening rise	4154 Apr 12 17:25	1°♗57'11	
retrograde	4153 May 25 17:24	20°♗52'06		asc. node	4154 Apr 15 11:03	7°♗13'59	
evening set	4153 May 27 16:29	20°♗41'19		evening max el	4154 Apr 29 00:58	28°♗18'12	18°46'03
desc. node	4153 Jun 04 12:27	17°♗10'57			4154 May 01 00:15	0°♗	
inferior conj	4153 Jun 05 09:46	16°♗37'28	-0°15'46	retrograde	4154 May 07 04:41	2°♗18'02	
minimum elong	4153 Jun 05 09:04	16°♗38'34	0°15'30	evening set	4154 May 09 08:48	2°♗02'05	
transit middle	4153 Jun 05 09:04	16°♗38'34	0°15'30		4154 May 13 21:52	30°♗♓	
transit begin	4153 Jun 05 08:07	16°♗40'05		inferior conj	4154 May 17 06:20	27°♗40'55	1°26'38
transit end	4153 Jun 05 10:01	16°♗37'04		minimum elong	4154 May 17 09:20	27°♗35'23	1°25'38
min. Earth dist.	4153 Jun 07 20:08	15°♗05'35	0.55668 AU	min. Earth dist.	4154 May 20 12:42	25°♗17'46	0.57254 AU

desc. node	4154 May 22 09:29	24°♄03'23		morning rise	4155 May 06 07:34	3°♄47'23	
morning rise	4154 May 25 06:38	22°♄30'47		desc. node	4155 May 09 06:31	2°♄29'16	
direct	4154 May 30 18:49	21°♄16'44		direct	4155 May 12 15:15	1°♄58'16	
morning max el	4154 Jun 14 03:15	28°♄47'13	26°17'08	morning max el	4155 May 27 00:22	9°♄47'08	27°21'44
	4154 Jun 15 08:23	0°♄			4155 Jun 11 13:19	0°♄	
	4154 Jul 05 18:42	0°♄		morning set	4155 Jun 27 02:08	28°♄35'56	
asc. node	4154 Jul 12 10:18	13°♄16'01			4155 Jun 27 18:10	0°♄	
morning set	4154 Jul 12 17:47	13°♄55'26		asc. node	4155 Jun 29 07:20	3°♄17'33	
				max. Earth dist.	4155 Jul 03 16:57	12°♄53'13	1.32008 AU
superior conj	4154 Jul 19 17:02	29°♄05'05	1°09'47				
minimum elong	4154 Jul 19 14:43	28°♄52'19	1°09'24	superior conj	4155 Jul 04 04:47	13°♄58'31	0°49'23
max. Earth dist.	4154 Jul 20 05:16	0°♄12'31	1.32183 AU	minimum elong	4155 Jul 04 02:50	13°♄47'45	0°48'59
	4154 Jul 20 03:00	0°♄		evening rise	4155 Jul 11 00:29	28°♄50'51	
evening rise	4154 Jul 26 15:34	14°♄05'47			4155 Jul 11 13:34	0°♄	
	4154 Aug 03 17:40	0°♄			4155 Jul 28 04:10	0°♄	
desc. node	4154 Aug 18 08:45	22°♄58'33		desc. node	4155 Aug 05 05:46	10°♄29'37	
	4154 Aug 24 07:07	0°♄		evening max el	4155 Aug 08 13:39	13°♄56'30	26°06'51
evening max el	4154 Aug 26 15:00	2°♄20'02	27°02'59	retrograde	4155 Aug 22 12:59	21°♄05'15	
retrograde	4154 Sep 09 11:59	9°♄31'49		evening set	4155 Aug 28 22:53	19°♄25'29	
evening set	4154 Sep 16 13:14	7°♄19'40		min. Earth dist.	4155 Sep 02 02:21	16°♄50'16	0.58989 AU
min. Earth dist.	4154 Sep 20 05:17	4°♄38'43	0.61064 AU	inferior conj	4155 Sep 05 08:37	14°♄24'06	-4°58'36
inferior conj	4154 Sep 23 08:58	1°♄56'13	-4°18'06	minimum elong	4155 Sep 05 12:41	14°♄16'28	4°58'06
minimum elong	4154 Sep 23 14:55	1°♄43'24	4°16'43	morning rise	4155 Sep 13 04:42	9°♄56'01	
	4154 Sep 25 16:53	30°♄		direct	4155 Sep 15 14:45	9°♄36'18	
morning rise	4154 Sep 30 18:28	27°♄05'06		morning max el	4155 Sep 23 15:03	13°♄27'35	18°29'21
direct	4154 Oct 03 02:56	26°♄42'48		asc. node	4155 Sep 25 06:34	15°♄11'05	
asc. node	4154 Oct 08 09:32	28°♄39'55			4155 Oct 04 21:16	0°♄	
	4154 Oct 09 23:44	0°♄		morning set	4155 Oct 09 17:04	9°♄07'24	
morning max el	4154 Oct 10 06:41	0°♄16'38	17°59'42				
morning set	4154 Oct 26 01:14	25°♄09'57		superior conj	4155 Oct 18 15:38	26°♄09'56	1°25'27
	4154 Oct 28 16:08	0°♄		minimum elong	4155 Oct 18 19:05	26°♄25'58	1°25'06
					4155 Oct 20 17:39	0°♄	
superior conj	4154 Nov 05 04:18	13°♄32'29	1°01'27	max. Earth dist.	4155 Oct 26 01:40	9°♄28'59	1.40209 AU
minimum elong	4154 Nov 05 08:25	13°♄50'39	1°00'56	evening rise	4155 Oct 30 08:47	16°♄47'01	
max. Earth dist.	4154 Nov 12 18:47	26°♄32'07	1.42198 AU	desc. node	4155 Nov 01 05:04	19°♄49'44	
desc. node	4154 Nov 14 08:04	29°♄05'54			4155 Nov 07 14:24	0°♄	
	4154 Nov 14 21:17	0°♄			4155 Nov 29 02:59	0°♄	
evening rise	4154 Nov 18 16:40	6°♄08'16		evening max el	4155 Dec 04 02:54	5°♄30'15	23°42'48
	4154 Dec 04 11:17	0°♄		retrograde	4155 Dec 14 21:35	11°♄52'03	
evening max el	4154 Dec 21 12:36	21°♄53'12	22°22'52	evening set	4155 Dec 20 00:18	9°♄44'39	
retrograde	4154 Dec 31 04:20	27°♄37'46		asc. node	4155 Dec 22 05:49	7°♄28'35	
asc. node	4155 Jan 04 08:48	26°♄05'07		inferior conj	4155 Dec 25 10:25	3°♄19'17	1°04'00
evening set	4155 Jan 04 18:20	25°♄46'20		minimum elong	4155 Dec 25 08:58	3°♄24'11	1°03'26
inferior conj	4155 Jan 10 02:51	19°♄25'00	1°50'56	min. Earth dist.	4155 Dec 24 20:45	4°♄05'52	0.67909 AU
minimum elong	4155 Jan 10 00:40	19°♄32'33	1°50'10		4155 Dec 27 23:23	30°♄	
min. Earth dist.	4155 Jan 10 00:05	19°♄34'37	0.68014 AU	morning rise	4155 Dec 30 17:38	27°♄13'43	
morning rise	4155 Jan 15 06:53	13°♄15'00		direct	4156 Jan 03 19:39	25°♄39'47	
direct	4155 Jan 19 22:58	11°♄18'19			4156 Jan 11 15:11	0°♄	
morning max el	4155 Jan 29 07:16	16°♄47'46	22°09'56	morning max el	4156 Jan 12 01:00	0°♄24'11	20°49'21
	4155 Feb 09 02:40	0°♄		desc. node	4156 Jan 28 04:19	21°♄33'21	
desc. node	4155 Feb 10 07:20	1°♄38'33			4156 Feb 02 20:27	0°♄	
	4155 Mar 01 06:09	0°♄		morning set	4156 Feb 10 17:32	12°♄05'19	
morning set	4155 Mar 03 11:50	3°♄35'24		max. Earth dist.	4156 Feb 19 03:28	25°♄28'04	1.42926 AU
max. Earth dist.	4155 Mar 08 23:31	12°♄38'02	1.40998 AU		4156 Feb 21 21:59	0°♄	
superior conj	4155 Mar 16 17:53	26°♄04'05	-2°00'17	superior conj	4156 Feb 26 00:00	6°♄48'32	-2°07'50
minimum elong	4155 Mar 16 21:42	26°♄21'04	2°00'05	minimum elong	4156 Feb 25 23:56	6°♄48'16	2°07'50
	4155 Mar 18 22:29	0°♄		evening rise	4156 Mar 08 21:13	27°♄29'41	
evening rise	4155 Mar 27 02:51	15°♄06'05			4156 Mar 10 06:59	0°♄	
asc. node	4155 Apr 02 08:05	26°♄30'09		asc. node	4156 Mar 19 05:07	15°♄18'33	
	4155 Apr 04 08:44	0°♄		evening max el	4156 Mar 25 19:39	24°♄02'24	18°06'49
evening max el	4155 Apr 12 08:08	10°♄58'54	18°16'32	retrograde	4156 Apr 01 09:11	27°♄25'13	
retrograde	4155 Apr 19 11:03	14°♄32'24		evening set	4156 Apr 04 02:09	26°♄50'29	
evening set	4155 Apr 21 21:45	14°♄08'06		inferior conj	4156 Apr 10 13:41	21°♄48'44	3°18'36
inferior conj	4155 Apr 29 00:29	9°♄26'35	2°37'48	minimum elong	4156 Apr 10 15:57	21°♄43'05	3°18'18
minimum elong	4155 Apr 29 04:02	9°♄18'55	2°36'56	min. Earth dist.	4156 Apr 13 15:57	18°♄45'41	0.61501 AU
min. Earth dist.	4155 May 02 10:35	6°♄31'03	0.59313 AU	morning rise	4156 Apr 17 03:56	15°♄51'15	

direct	4156 Apr 23 22:55	13°♄29'35		inferior conj	4157 Mar 24 17:54	4°♄39'28	3°35'04
desc. node	4156 Apr 25 03:32	13°♄33'43		minimum elong	4157 Mar 24 18:26	4°♄38'00	3°35'04
morning max el	4156 May 08 03:38	21°♄27'42	27°50'39	min. Earth dist.	4157 Mar 27 06:16	1°♄51'50	0.63540 AU
	4156 May 15 14:06	0°♄			4157 Mar 29 02:07	30°♄	
	4156 Jun 03 14:20	0°♄		morning rise	4157 Mar 30 18:15	28°♄32'11	
morning set	4156 Jun 10 06:02	13°♄00'34		direct	4157 Apr 06 15:22	25°♄49'01	
asc. node	4156 Jun 15 04:22	23°♄24'23		desc. node	4157 Apr 12 00:35	27°♄14'10	
max. Earth dist.	4156 Jun 16 02:38	25°♄24'53	1.32241 AU		4157 Apr 16 06:29	0°♄	
				morning max el	4157 Apr 20 11:24	3°♄47'08	27°42'08
superior conj	4156 Jun 17 15:13	28°♄44'23	0°25'29		4157 May 10 02:35	0°♄	
minimum elong	4156 Jun 17 14:04	28°♄38'07	0°25'13	morning set	4157 May 25 03:08	27°♄01'43	
	4156 Jun 18 05:02	0°♄			4157 May 26 14:34	0°♄	
evening rise	4156 Jun 24 11:48	13°♄39'59		max. Earth dist.	4157 May 30 06:30	7°♄35'30	1.32907 AU
	4156 Jul 02 16:18	0°♄					
evening max el	4156 Jul 20 05:19	24°♄47'52	24°44'08	superior conj	4157 Jun 01 22:30	13°♄16'29	-0°01'17
desc. node	4156 Jul 22 02:47	26°♄30'39		minimum elong	4157 Jun 01 22:34	13°♄16'51	0°01'17
	4156 Jul 27 04:41	0°♄		behind sun begin	4157 Jun 01 17:16	12°♄48'22	
retrograde	4156 Aug 03 03:24	1°♄49'59		behind sun end	4157 Jun 02 03:52	13°♄45'21	
evening set	4156 Aug 08 08:26	0°♄48'44		asc. node	4157 Jun 02 01:25	13°♄32'13	
	4156 Aug 10 04:52	30°♄		evening rise	4157 Jun 08 23:35	28°♄26'41	
min. Earth dist.	4156 Aug 13 16:40	28°♄00'20	0.57043 AU		4157 Jun 09 17:16	0°♄	
inferior conj	4156 Aug 16 12:39	26°♄09'43	-5°11'19		4157 Jun 27 02:09	0°♄	
minimum elong	4156 Aug 16 11:46	26°♄11'10	5°11'18	evening max el	4157 Jul 01 18:24	5°♄13'28	23°07'55
morning rise	4156 Aug 24 17:36	22°♄03'18		desc. node	4157 Jul 08 23:49	10°♄28'08	
direct	4156 Aug 27 08:17	21°♄44'12		retrograde	4157 Jul 15 04:57	11°♄56'02	
morning max el	4156 Sep 05 14:25	26°♄04'27	19°20'20	evening set	4157 Jul 18 21:37	11°♄26'13	
	4156 Sep 09 03:20	0°♄		min. Earth dist.	4157 Jul 26 03:37	8°♄09'53	0.55563 AU
asc. node	4156 Sep 11 03:36	2°♄44'18		inferior conj	4157 Jul 27 21:04	7°♄09'33	-4°40'31
morning set	4156 Sep 22 17:39	23°♄30'04		minimum elong	4157 Jul 27 14:15	7°♄19'30	4°39'21
	4156 Sep 25 23:29	0°♄		morning rise	4157 Aug 05 09:12	3°♄17'19	
				direct	4157 Aug 08 07:11	2°♄57'00	
superior conj	4156 Sep 30 20:09	9°♄38'07	1°39'10	morning max el	4157 Aug 19 02:15	7°♄57'53	20°32'56
minimum elong	4156 Sep 30 22:03	9°♄47'20	1°39'03	asc. node	4157 Aug 29 00:38	21°♄05'06	
max. Earth dist.	4156 Oct 07 05:56	21°♄45'35	1.38117 AU		4157 Sep 02 22:16	0°♄	
evening rise	4156 Oct 11 00:20	28°♄30'40		morning set	4157 Sep 06 23:58	8°♄09'00	
	4156 Oct 11 20:48	0°♄					
desc. node	4156 Oct 18 02:05	10°♄26'55		superior conj	4157 Sep 14 12:57	23°♄42'11	1°44'08
	4156 Oct 31 00:06	0°♄		minimum elong	4157 Sep 14 13:13	23°♄43'29	1°44'07
evening max el	4156 Nov 15 15:34	19°♄12'02	25°00'13		4157 Sep 17 16:12	0°♄	
retrograde	4156 Nov 27 10:47	26°♄02'34		max. Earth dist.	4157 Sep 19 13:11	3°♄40'15	1.36167 AU
evening set	4156 Dec 03 03:06	23°♄40'24		evening rise	4157 Sep 23 12:21	11°♄10'50	
min. Earth dist.	4156 Dec 07 15:42	18°♄35'36	0.67461 AU		4157 Oct 04 10:09	0°♄	
asc. node	4156 Dec 08 02:50	17°♄59'07		desc. node	4157 Oct 04 23:07	0°♄51'56	
inferior conj	4156 Dec 08 16:06	17°♄15'29	0°11'19		4157 Oct 26 08:05	0°♄	
minimum elong	4156 Dec 08 15:49	17°♄16'25	0°11'12	evening max el	4157 Oct 29 04:10	2°♄54'51	26°07'56
transit middle	4156 Dec 08 15:49	17°♄16'25	0°11'12	retrograde	4157 Nov 10 18:57	10°♄03'15	
transit begin	4156 Dec 08 13:49	17°♄23'00		evening set	4157 Nov 17 00:58	7°♄29'04	
transit end	4156 Dec 08 17:49	17°♄09'51		min. Earth dist.	4157 Nov 21 06:27	2°♄59'38	0.66664 AU
morning rise	4156 Dec 14 04:41	11°♄16'32		inferior conj	4157 Nov 22 18:00	1°♄09'31	-0°46'05
direct	4156 Dec 17 18:10	10°♄03'26		minimum elong	4157 Nov 22 19:14	1°♄05'41	0°45'33
morning max el	4156 Dec 25 02:35	14°♄12'10	19°41'21		4157 Nov 23 16:38	30°♄	
	4157 Jan 06 04:53	0°♄		asc. node	4157 Nov 24 23:52	28°♄28'50	
greatest brilliancy	4157 Jan 07 05:58	1°♄32'36	-0.7m	morning rise	4157 Nov 28 13:58	25°♄19'51	
desc. node	4157 Jan 14 01:22	11°♄48'26		direct	4157 Dec 01 16:48	24°♄24'22	
morning set	4157 Jan 19 13:42	20°♄16'21		morning max el	4157 Dec 08 11:30	28°♄08'36	18°48'38
	4157 Jan 25 20:01	0°♄			4157 Dec 10 04:47	0°♄	
max. Earth dist.	4157 Jan 31 14:54	9°♄06'44	1.44375 AU	morning set	4157 Dec 30 01:38	29°♄21'48	
					4157 Dec 30 11:21	0°♄	
superior conj	4157 Feb 05 04:22	16°♄24'24	-1°58'27	desc. node	4157 Dec 31 22:25	2°♄17'43	
minimum elong	4157 Feb 04 22:15	15°♄59'46	1°58'06	max. Earth dist.	4158 Jan 14 08:11	23°♄19'30	1.45163 AU
	4157 Feb 13 11:31	0°♄					
evening rise	4157 Feb 18 20:10	9°♄00'14		superior conj	4158 Jan 15 11:53	25°♄08'21	-1°29'27
	4157 Mar 03 14:25	0°♄		minimum elong	4158 Jan 15 02:36	24°♄31'53	1°28'31
asc. node	4157 Mar 06 02:09	3°♄30'45			4158 Jan 18 13:58	0°♄	
evening max el	4157 Mar 09 08:27	7°♄20'48	18°16'05	evening rise	4158 Jan 30 20:23	19°♄34'05	
retrograde	4157 Mar 15 18:42	10°♄46'58			4158 Feb 06 07:30	0°♄	
evening set	4157 Mar 18 17:39	10°♄00'30		asc. node	4158 Feb 20 23:10	20°♄56'14	

evening max el	4158 Feb 20 19:50	20° H 47'49	18°43'32	retrograde	4159 Feb 11 08:26	8° H 26'54	
retrograde	4158 Feb 27 11:34	24° H 29'47		evening set	4159 Feb 14 20:48	7° H 14'31	
evening set	4158 Mar 02 16:46	23° H 30'45		inferior conj	4159 Feb 20 08:22	1° H 20'03	3°17'18
inferior conj	4158 Mar 08 09:15	17° H 51'57	3°33'10	minimum elong	4159 Feb 20 06:24	1° H 26'28	3°16'58
minimum elong	4158 Mar 08 08:17	17° H 54'54	3°33'06		4159 Feb 21 08:50	30° R \approx	
min. Earth dist.	4158 Mar 10 05:55	15° H 35'40	0.65248 AU	min. Earth dist.	4159 Feb 21 13:59	29° \approx 43'19	0.66550 AU
morning rise	4158 Mar 13 23:20	11° H 39'53		morning rise	4159 Feb 25 15:45	25° \approx 06'05	
direct	4158 Mar 20 14:53	8° H 49'19		direct	4159 Mar 03 20:34	22° \approx 20'47	
desc. node	4158 Mar 29 21:39	12° H 59'07		morning max el	4159 Mar 16 06:56	29° \approx 44'53	25°52'34
morning max el	4158 Apr 02 21:16	16° H 36'57	27°00'14	desc. node	4159 Mar 16 18:41	0° H 14'54	
	4158 Apr 13 23:39	0° Y			4159 Mar 16 12:53	0° H	
	4158 May 02 22:40	0° B			4159 Apr 07 20:59	0° Y	
morning set	4158 May 08 14:26	10° B 30'31		morning set	4159 Apr 21 11:50	23° Y 14'34	
max. Earth dist.	4158 May 13 01:02	19° B 16'34	1.34031 AU		4159 Apr 25 02:11	0° B	
				max. Earth dist.	4159 Apr 25 08:08	0° B 28'32	1.35616 AU
superior conj	4158 May 17 00:34	27° B 28'37	-0°29'56	superior conj	4159 Apr 30 18:48	11° B 12'32	-0°59'10
minimum elong	4158 May 17 02:09	27° B 36'50	0°29'36	minimum elong	4159 Apr 30 21:59	11° B 28'37	0°58'35
	4158 May 18 05:24	0° II		asc. node	4159 May 06 19:31	23° B 34'05	
asc. node	4158 May 19 22:28	3° II 37'00		evening rise	4159 May 08 16:52	27° B 27'07	
evening rise	4158 May 24 09:59	13° II 04'50			4159 May 09 22:55	0° II	
	4158 Jun 02 02:22	0° E		evening max el	4159 May 26 17:42	26° II 48'38	20°13'29
evening max el	4158 Jun 13 12:34	15° E 45'11	21°33'52		4159 May 30 17:55	0° E	
retrograde	4158 Jun 25 19:53	21° E 49'18		retrograde	4159 Jun 06 09:43	2° E 01'04	
desc. node	4158 Jun 25 20:51	21° E 49'17		evening set	4159 Jun 08 08:51	1° E 51'13	
evening set	4158 Jun 28 07:16	21° E 35'22		desc. node	4159 Jun 12 17:54	0° E 26'41	
inferior conj	4158 Jul 07 16:14	17° E 34'45	-3°19'17		4159 Jun 13 16:07	30° R II	
minimum elong	4158 Jul 07 07:55	17° E 46'21	3°16'45	inferior conj	4159 Jun 17 11:20	27° II 52'31	-1°24'05
min. Earth dist.	4158 Jul 07 14:11	17° E 37'36	0.54856 AU	minimum elong	4159 Jun 17 07:23	27° II 58'22	1°22'37
morning rise	4158 Jul 16 09:37	13° E 41'11		min. Earth dist.	4159 Jun 19 02:24	26° II 54'49	0.55097 AU
direct	4158 Jul 19 17:44	13° E 16'57		morning rise	4159 Jun 26 04:33	23° II 36'55	
morning max el	4158 Aug 01 02:29	19° E 06'27	22°04'29	direct	4159 Jun 30 04:37	23° II 02'12	
	4158 Aug 09 23:16	0° O		morning max el	4159 Jul 13 18:39	29° II 40'18	23°47'09
asc. node	4158 Aug 15 21:43	10° O 02'20			4159 Jul 14 02:56	0° E	
morning set	4158 Aug 22 09:50	22° O 58'18		asc. node	4159 Aug 02 18:46	29° E 26'02	
	4158 Aug 25 17:39	0° P			4159 Aug 03 01:37	0° O	
superior conj	4158 Aug 29 14:18	8° P 11'25	1°41'47	morning set	4159 Aug 06 21:23	7° O 51'50	
minimum elong	4158 Aug 29 13:14	8° P 05'49	1°41'45	superior conj	4159 Aug 13 21:17	22° O 56'33	1°33'20
max. Earth dist.	4158 Sep 02 03:57	15° P 36'11	1.34529 AU	minimum elong	4159 Aug 13 19:21	22° O 46'07	1°33'10
evening rise	4158 Sep 06 16:32	24° P 36'37		max. Earth dist.	4159 Aug 16 03:26	27° O 47'02	1.33282 AU
	4158 Sep 09 12:40	0° A			4159 Aug 17 04:31	0° P	
desc. node	4158 Sep 21 20:08	20° A 58'49		evening rise	4159 Aug 21 08:43	8° P 36'31	
	4158 Sep 27 22:44	0° M			4159 Sep 01 23:12	0° A	
evening max el	4158 Oct 11 16:48	16° M 30'42	26°58'21	desc. node	4159 Sep 08 17:10	10° A 39'42	
retrograde	4158 Oct 24 21:35	23° M 47'20		evening max el	4159 Sep 24 04:26	29° A 48'53	27°24'31
evening set	4158 Oct 31 15:46	21° M 06'26			4159 Sep 24 09:08	0° M	
min. Earth dist.	4158 Nov 04 14:35	17° M 12'54	0.65514 AU	retrograde	4159 Oct 07 18:21	7° M 06'50	
inferior conj	4158 Nov 06 14:01	14° M 57'01	-1°46'47	evening set	4159 Oct 14 20:52	4° M 27'42	
minimum elong	4158 Nov 06 17:01	14° M 48'25	1°45'34	min. Earth dist.	4159 Oct 18 14:02	1° M 08'13	0.64013 AU
asc. node	4158 Nov 11 20:56	9° M 51'34			4159 Oct 19 16:31	30° R A	
morning rise	4158 Nov 12 19:09	9° M 19'42		inferior conj	4159 Oct 21 01:44	28° A 33'00	-2°48'32
direct	4158 Nov 15 13:27	8° M 38'08		minimum elong	4159 Oct 21 06:29	28° A 20'39	2°46'50
morning max el	4158 Nov 22 01:38	12° M 08'16	18°12'19	morning rise	4159 Oct 27 17:26	23° A 11'08	
	4158 Dec 04 16:24	0° X		asc. node	4159 Oct 29 17:59	22° A 40'57	
morning set	4158 Dec 10 18:20	9° X 54'42		direct	4159 Oct 30 05:35	22° A 39'46	
desc. node	4158 Dec 18 19:26	22° X 56'32		morning max el	4159 Nov 05 18:14	26° A 05'00	17°53'05
	4158 Dec 23 05:40	0° Z			4159 Nov 09 02:18	0° M	
superior conj	4158 Dec 25 15:18	3° Z 47'53	-0°45'40	morning set	4159 Nov 22 14:42	21° M 48'26	
minimum elong	4158 Dec 25 09:34	3° Z 25'15	0°44'55		4159 Nov 27 10:12	0° X	
max. Earth dist.	4158 Dec 28 03:48	7° Z 46'00	1.45207 AU	superior conj	4159 Dec 05 10:53	13° X 18'50	0°01'37
evening rise	4159 Jan 10 22:20	29° Z 16'15		minimum elong	4159 Dec 05 11:04	13° X 19'36	0°01'36
	4159 Jan 11 09:34	0° \approx		behind sun begin	4159 Dec 05 01:08	12° X 39'08	
greatest brilliancy	4159 Jan 23 00:15	17° \approx 56'21	-0.7m	behind sun end	4159 Dec 05 21:01	14° X 00'00	
	4159 Jan 31 11:00	0° H		desc. node	4159 Dec 05 16:28	13° X 41'33	
evening max el	4159 Feb 04 03:34	4° H 18'27	19°27'55	max. Earth dist.	4159 Dec 10 22:14	22° X 06'42	1.44518 AU
asc. node	4159 Feb 07 20:13	7° H 21'32					

	4159 Dec 15 22:28	0° Z			4160 Dec 29 19:32	0° \approx	
evening rise	4159 Dec 21 09:43	8° Z 28'19		evening max el	4160 Dec 31 03:25	1° \approx 24'14	21°38'26
	4160 Jan 04 16:33	0° \approx		retrograde	4161 Jan 09 04:06	6° \approx 46'08	
evening max el	4160 Jan 18 06:15	17° \approx 50'50	20°27'16	asc. node	4161 Jan 11 14:18	6° \approx 14'21	
asc. node	4160 Jan 25 17:15	22° \approx 32'08		evening set	4161 Jan 13 11:19	5° \approx 04'09	
retrograde	4160 Jan 26 06:40	22° \approx 33'50			4161 Jan 17 22:25	30° R Z	
evening set	4160 Jan 30 03:36	21° \approx 07'09		inferior conj	4161 Jan 18 19:34	28° Z 47'01	2°14'53
inferior conj	4160 Feb 04 12:34	14° \approx 59'48	2°50'32	minimum elong	4161 Jan 18 17:09	28° Z 55'21	2°14'08
minimum elong	4160 Feb 04 10:08	15° \approx 08'04	2°49'56	min. Earth dist.	4161 Jan 18 23:25	28° Z 33'37	0.67915 AU
min. Earth dist.	4160 Feb 05 04:36	14° \approx 05'06	0.67432 AU	morning rise	4161 Jan 23 22:48	22° Z 34'59	
morning rise	4160 Feb 09 16:28	8° \approx 45'53		direct	4161 Jan 28 23:23	20° Z 24'57	
direct	4160 Feb 15 07:42	6° \approx 15'20		morning max el	4161 Feb 08 00:55	26° Z 23'07	22°59'52
morning max el	4160 Feb 26 15:36	13° \approx 01'39	24°29'01		4161 Feb 11 08:42	0° \approx	
desc. node	4160 Mar 02 15:41	18° \approx 35'50		desc. node	4161 Feb 17 12:41	7° \approx 42'47	
	4160 Mar 11 08:42	0° H			4161 Mar 04 22:41	0° H	
	4160 Mar 30 16:33	0° Y		morning set	4161 Mar 14 14:57	15° H 30'07	
morning set	4160 Apr 02 14:04	5° Y 00'00		max. Earth dist.	4161 Mar 19 00:37	22° H 57'16	1.39766 AU
max. Earth dist.	4160 Apr 06 05:44	11° Y 30'44	1.37590 AU		4161 Mar 23 01:06	0° Y	
superior conj	4160 Apr 13 02:01	24° Y 20'41	-1°26'58	superior conj	4161 Mar 26 18:07	6° Y 42'34	-1°50'23
minimum elong	4160 Apr 13 06:30	24° Y 42'18	1°26'21	minimum elong	4161 Mar 26 22:47	7° Y 03'58	1°49'59
	4160 Apr 15 23:33	0° B		evening rise	4161 Apr 05 09:58	24° Y 56'54	
evening rise	4160 Apr 21 17:52	11° B 27'08			4161 Apr 08 01:42	0° B	
asc. node	4160 Apr 22 16:33	13° B 19'25		asc. node	4161 Apr 09 13:35	2° B 47'55	
	4160 May 01 19:56	0° II		evening max el	4161 Apr 21 14:16	20° B 57'51	18°31'06
evening max el	4160 May 08 11:05	8° II 34'13	19°12'07	retrograde	4161 Apr 29 05:52	24° B 44'04	
retrograde	4160 May 17 10:35	12° II 56'41		evening set	4161 May 01 12:49	24° B 24'53	
evening set	4160 May 19 11:07	12° II 44'19		inferior conj	4161 May 09 02:03	19° B 55'31	2°00'47
inferior conj	4160 May 27 20:15	8° II 34'03	0°31'05	minimum elong	4161 May 09 05:37	19° B 48'29	1°59'44
minimum elong	4160 May 27 21:31	8° II 31'55	0°30'36	min. Earth dist.	4161 May 12 11:59	17° B 15'32	0.58095 AU
desc. node	4160 May 29 14:55	7° II 22'01		desc. node	4161 May 16 11:55	14° B 41'10	
min. Earth dist.	4160 May 30 17:19	6° II 38'23	0.56260 AU	morning rise	4161 May 16 19:14	14° B 31'54	
morning rise	4160 Jun 05 04:47	3° II 43'38		direct	4161 May 22 16:47	13° B 02'53	
direct	4160 Jun 10 03:30	2° II 46'55		morning max el	4161 Jun 06 01:59	20° B 42'40	26°48'32
morning max el	4160 Jun 24 08:39	10° II 03'06	25°27'07		4161 Jun 14 02:25	0° II	
	4160 Jul 09 10:36	0° E			4161 Jul 02 02:57	0° E	
asc. node	4160 Jul 19 15:48	19° E 08'59		morning set	4161 Jul 05 18:59	7° E 31'08	
morning set	4160 Jul 21 08:57	22° E 44'22		asc. node	4161 Jul 06 12:50	9° E 05'31	
	4160 Jul 24 17:52	0° O					
superior conj	4160 Jul 28 07:35	7° O 49'59	1°19'42	superior conj	4161 Jul 12 19:20	22° E 45'38	1°01'37
minimum elong	4160 Jul 28 05:16	7° O 37'16	1°19'23	minimum elong	4161 Jul 12 17:07	22° E 33'23	1°01'12
max. Earth dist.	4160 Jul 29 10:07	10° O 15'17	1.32460 AU	max. Earth dist.	4161 Jul 12 21:03	22° E 55'03	1.32055 AU
evening rise	4160 Aug 04 09:31	23° O 00'44			4161 Jul 16 02:20	0° O	
	4160 Aug 07 20:39	0° H		evening rise	4161 Jul 19 16:10	7° O 41'03	
desc. node	4160 Aug 25 14:11	29° H 43'18			4161 Jul 31 07:48	0° H	
	4160 Aug 25 19:02	0° E		desc. node	4161 Aug 12 11:12	17° H 54'31	
evening max el	4160 Sep 05 13:03	12° E 36'33	27°20'31	evening max el	4161 Aug 18 16:12	24° H 42'24	26°43'06
retrograde	4160 Sep 19 08:31	19° E 51'28			4161 Aug 25 18:08	0° E	
evening set	4160 Sep 26 12:42	17° E 25'53		retrograde	4161 Sep 01 14:40	1° E 52'47	
min. Earth dist.	4160 Sep 30 03:20	14° E 33'57	0.62199 AU	evening set	4161 Sep 08 10:48	29° H 53'30	
inferior conj	4160 Oct 03 02:09	11° E 49'54	-3°47'41		4161 Sep 08 06:10	30° R H	
minimum elong	4160 Oct 03 08:04	11° E 36'10	3°45'59	min. Earth dist.	4161 Sep 12 06:09	27° H 16'55	0.60177 AU
morning rise	4160 Oct 10 05:09	6° E 46'38		inferior conj	4161 Sep 15 11:55	24° H 39'14	-4°37'47
direct	4160 Oct 12 13:56	6° E 21'59		minimum elong	4161 Sep 15 17:25	24° H 28'01	4°36'44
asc. node	4160 Oct 15 15:02	7° E 04'10		morning rise	4161 Sep 23 02:02	19° H 57'26	
morning max el	4160 Oct 19 10:10	9° E 50'36	17°51'49	direct	4161 Sep 25 10:42	19° H 36'32	
	4160 Nov 01 17:16	0° M		asc. node	4161 Oct 02 12:03	22° H 52'58	
morning set	4160 Nov 04 08:31	4° M 43'29		morning max el	4161 Oct 02 22:13	23° H 16'57	18°09'45
					4161 Oct 08 06:50	0° E	
				morning set	4161 Oct 18 17:46	18° E 22'45	
superior conj	4160 Nov 15 08:31	24° M 06'15	0°42'34		4161 Oct 24 22:53	0° M	
minimum elong	4160 Nov 15 12:07	24° M 21'35	0°42'05				
	4160 Nov 18 20:25	0° X		superior conj	4161 Oct 28 07:32	6° M 07'40	1°12'57
desc. node	4160 Nov 21 13:26	4° X 28'36		minimum elong	4161 Oct 28 11:34	6° M 25'49	1°12'29
max. Earth dist.	4160 Nov 22 12:54	6° X 04'21	1.43190 AU	max. Earth dist.	4161 Nov 04 22:50	19° M 27'03	1.41386 AU
evening rise	4160 Nov 29 21:38	17° X 47'57		desc. node	4161 Nov 08 10:28	25° M 15'03	
	4160 Dec 07 21:06	0° Z		evening rise	4161 Nov 10 01:09	27° M 52'38	

































































































































	4161 Nov 11 08:46	0°♊			4162 Nov 04 07:11	0°♊	
	4161 Dec 01 13:02	0°♋		evening max el	4162 Nov 26 09:24	28°♊40'11	24°16'27
evening max el	4161 Dec 13 19:55	15°♋00'28	22°56'44		4162 Nov 27 18:45	0°♋	
retrograde	4161 Dec 23 23:07	21°♋01'00		retrograde	4162 Dec 07 14:41	5°♋14'44	
evening set	4161 Dec 28 18:23	19°♋02'55		evening set	4162 Dec 12 23:14	3°♋00'43	
asc. node	4161 Dec 29 11:18	18°♋25'06			4162 Dec 15 19:52	30°♋♊	
inferior conj	4162 Jan 03 03:27	12°♋39'37	1°31'47	asc. node	4162 Dec 16 08:19	29°♊21'03	
minimum elong	4162 Jan 03 01:32	12°♋46'14	1°31'05	min. Earth dist.	4162 Dec 17 16:12	27°♊36'31	0.67765 AU
min. Earth dist.	4162 Jan 02 20:04	13°♋05'06	0.68022 AU	inferior conj	4162 Dec 18 10:26	26°♊35'12	0°42'20
morning rise	4162 Jan 08 08:34	6°♋31'13		minimum elong	4162 Dec 18 09:27	26°♊38'33	0°41'55
direct	4162 Jan 12 18:37	4°♋44'05		morning rise	4162 Dec 23 19:43	20°♊32'25	
morning max el	4162 Jan 21 14:36	9°♋52'59	21°34'14	direct	4162 Dec 27 16:16	19°♊07'38	
desc. node	4162 Feb 04 09:43	27°♋23'07		morning max el	4163 Jan 04 11:42	23°♊35'02	20°18'45
	4162 Feb 06 05:30	0°♌			4163 Jan 09 23:44	0°♋	
morning set	4162 Feb 22 10:57	24°♌38'08		desc. node	4163 Jan 22 06:45	17°♋27'47	
	4162 Feb 25 19:12	0°♍			4163 Jan 30 13:07	0°♌	
max. Earth dist.	4162 Mar 01 00:42	5°♍17'08	1.41872 AU	morning set	4163 Feb 01 09:47	2°♌52'14	
				max. Earth dist.	4163 Feb 11 08:44	18°♌32'51	1.43618 AU
superior conj	4162 Mar 08 14:07	18°♍06'11	-2°05'14				
minimum elong	4162 Mar 08 16:40	18°♍17'18	2°05'09	superior conj	4163 Feb 17 09:25	28°♌21'54	-2°06'12
	4162 Mar 15 06:53	0°♎		minimum elong	4163 Feb 17 06:51	28°♌11'20	2°06'07
evening rise	4162 Mar 19 13:29	7°♎47'27			4163 Feb 18 09:06	0°♍	
asc. node	4162 Mar 27 10:37	21°♎53'09		evening rise	4163 Mar 02 00:13	19°♍50'29	
	4162 Apr 01 17:11	0°♏			4163 Mar 07 20:43	0°♎	
evening max el	4162 Apr 04 23:44	3°♏49'37	18°10'03	asc. node	4163 Mar 14 07:39	10°♎27'50	
retrograde	4162 Apr 11 19:24	7°♏16'27		evening max el	4163 Mar 19 12:10	17°♎00'51	18°08'24
evening set	4162 Apr 14 09:00	6°♏47'44		retrograde	4163 Mar 25 23:10	20°♎23'38	
inferior conj	4162 Apr 21 04:44	1°♏57'24	2°58'30	evening set	4163 Mar 28 18:41	19°♎43'59	
minimum elong	4162 Apr 21 07:52	1°♏50'11	2°57'53	inferior conj	4163 Apr 04 00:55	14°♎33'31	3°28'12
	4162 Apr 23 07:43	30°♏♎		minimum elong	4163 Apr 04 02:26	14°♎29'30	3°28'03
min. Earth dist.	4162 Apr 24 12:33	28°♎55'50	0.60251 AU	min. Earth dist.	4163 Apr 06 21:33	11°♎34'53	0.62399 AU
morning rise	4162 Apr 28 04:27	26°♎09'32		morning rise	4163 Apr 10 08:49	8°♎30'59	
desc. node	4162 May 03 08:57	24°♎11'14		direct	4163 Apr 17 05:36	5°♎58'57	
direct	4162 May 04 18:12	24°♎05'48		desc. node	4163 Apr 20 05:58	6°♎25'34	
	4162 May 16 22:53	0°♐		morning max el	4163 May 01 07:19	13°♎57'49	27°51'33
morning max el	4162 May 19 01:36	1°♐58'43	27°38'43		4163 May 14 05:11	0°♏	
	4162 Jun 08 10:13	0°♑			4163 May 31 22:05	0°♑	
morning set	4162 Jun 20 01:40	22°♑05'36		morning set	4163 Jun 04 03:00	6°♑21'34	
asc. node	4162 Jun 23 09:51	29°♑09'52		max. Earth dist.	4163 Jun 09 16:24	17°♑59'43	1.32477 AU
	4162 Jun 23 19:09	0°♒		asc. node	4163 Jun 10 06:55	19°♑17'54	
max. Earth dist.	4162 Jun 26 08:28	5°♒34'13	1.32059 AU				
				superior conj	4163 Jun 11 16:03	22°♑17'20	0°14'26
superior conj	4162 Jun 27 06:43	7°♒36'31	0°39'38	minimum elong	4163 Jun 11 15:22	22°♑13'39	0°14'17
minimum elong	4162 Jun 27 05:03	7°♒27'23	0°39'17	behind sun begin	4163 Jun 11 13:04	22°♑01'08	
evening rise	4162 Jul 04 02:21	22°♒28'58		behind sun end	4163 Jun 11 17:40	22°♑26'11	
	4162 Jul 07 17:20	0°♓			4163 Jun 15 04:54	0°♒	
	4162 Jul 26 00:52	0°♑		evening rise	4163 Jun 18 14:07	7°♒18'05	
desc. node	4162 Jul 30 08:14	4°♑51'01			4163 Jun 30 10:53	0°♓	
evening max el	4162 Jul 31 11:50	5°♑58'58	25°34'19	evening max el	4163 Jul 13 01:22	16°♓35'07	24°03'45
retrograde	4162 Aug 14 10:58	13°♑04'49		desc. node	4163 Jul 17 05:15	20°♓03'48	
evening set	4162 Aug 20 10:18	11°♑41'29		retrograde	4163 Jul 26 19:55	23°♓31'16	
min. Earth dist.	4162 Aug 24 23:46	9°♑02'58	0.58131 AU	evening set	4163 Jul 31 09:58	22°♓44'41	
inferior conj	4162 Aug 28 03:27	6°♑50'00	-5°08'19	min. Earth dist.	4163 Aug 06 11:51	19°♓46'06	0.56341 AU
minimum elong	4162 Aug 28 05:46	6°♑45'55	5°08'11	inferior conj	4163 Aug 08 22:46	18°♓15'19	-5°04'20
morning rise	4162 Sep 05 03:30	2°♑31'21		minimum elong	4163 Aug 08 19:12	18°♓20'51	5°04'02
direct	4162 Sep 07 15:23	2°♑11'57		morning rise	4163 Aug 17 07:01	14°♓16'43	
morning max el	4162 Sep 16 03:02	6°♑13'56	18°48'24	direct	4163 Aug 20 00:37	13°♓57'19	
asc. node	4162 Sep 19 09:04	9°♑52'01		morning max el	4163 Aug 29 21:40	18°♓32'54	19°48'43
	4162 Oct 01 06:32	0°♒		asc. node	4163 Sep 06 06:07	27°♓46'50	
morning set	4162 Oct 02 13:44	2°♒32'07			4163 Sep 07 15:20	0°♑	
				morning set	4163 Sep 16 17:01	17°♑02'17	
superior conj	4162 Oct 11 02:49	19°♒08'18	1°32'26		4163 Sep 23 02:23	0°♓	
minimum elong	4162 Oct 11 05:39	19°♒21'46	1°32'12				
	4162 Oct 16 23:59	0°♑		superior conj	4163 Sep 24 13:03	2°♒53'12	1°42'15
max. Earth dist.	4162 Oct 18 04:35	2°♑07'30	1.39319 AU	minimum elong	4163 Sep 24 14:13	2°♒59'02	1°42'12
evening rise	4162 Oct 22 03:19	8°♑58'56		max. Earth dist.	4163 Sep 30 09:23	14°♒11'39	1.37254 AU
desc. node	4162 Oct 26 07:31	15°♑56'41		evening rise	4163 Oct 04 03:57	21°♒07'09	

	4163 Oct 09 06:18	0°♄			4164 Aug 30 04:24	0°♄	
desc. node	4163 Oct 13 04:34	6°♄29'14		morning set	4164 Aug 31 01:04	1°♄46'33	
	4163 Oct 29 06:01	0°♄					
evening max el	4163 Nov 08 21:41	12°♄22'07	25°30'40	superior conj	4164 Sep 07 09:55	17°♄09'47	1°43'57
retrograde	4163 Nov 21 01:51	19°♄22'01		minimum elong	4164 Sep 07 09:33	17°♄07'57	1°43'57
evening set	4163 Nov 27 00:11	16°♄53'55		max. Earth dist.	4164 Sep 11 19:03	26°♄02'59	1.35417 AU
min. Earth dist.	4163 Dec 01 09:34	12°♄04'19	0.67159 AU		4164 Sep 13 19:23	0°♄	
inferior conj	4163 Dec 02 14:44	10°♄30'38	-0°12'31	evening rise	4164 Sep 15 23:24	4°♄08'39	
minimum elong	4163 Dec 02 15:03	10°♄29'37	0°12'23	desc. node	4164 Sep 29 01:35	26°♄47'41	
transit middle	4163 Dec 02 15:03	10°♄29'37	0°12'23		4164 Oct 01 02:59	0°♄	
transit begin	4163 Dec 02 13:15	10°♄35'24		evening max el	4164 Oct 21 10:12	26°♄03'03	26°31'59
transit end	4163 Dec 02 16:51	10°♄23'50			4164 Oct 26 01:46	0°♄	
asc. node	4163 Dec 03 05:22	9°♄43'51		retrograde	4164 Nov 03 07:59	3°♄17'00	
morning rise	4163 Dec 08 06:15	4°♄35'35		evening set	4164 Nov 09 19:21	0°♄39'02	
direct	4163 Dec 11 14:53	3°♄30'36			4164 Nov 10 13:20	30°♄	
morning max el	4163 Dec 18 16:41	7°♄27'36	19°17'04	min. Earth dist.	4164 Nov 13 21:50	26°♄24'51	0.66209 AU
greatest brilliancy	4164 Jan 01 05:26	25°♄39'31	-0.7m	inferior conj	4164 Nov 15 14:25	24°♄22'54	-1°11'32
	4164 Jan 04 01:53	0°♄		minimum elong	4164 Nov 15 16:23	24°♄16'59	1°10'43
desc. node	4164 Jan 09 03:48	7°♄49'33		asc. node	4164 Nov 19 02:24	20°♄30'42	
morning set	4164 Jan 11 09:57	11°♄19'16		morning rise	4164 Nov 21 14:05	18°♄38'07	
	4164 Jan 23 09:18	0°♄		direct	4164 Nov 24 12:53	17°♄49'11	
max. Earth dist.	4164 Jan 24 22:59	2°♄28'26	1.44791 AU	morning max el	4164 Dec 01 04:09	21°♄26'40	18°31'09
					4164 Dec 07 22:29	0°♄	
superior conj	4164 Jan 28 03:36	7°♄31'46	-1°48'28	morning set	4164 Dec 21 09:29	21°♄00'37	
minimum elong	4164 Jan 27 19:24	6°♄59'13	1°47'50	desc. node	4164 Dec 26 00:51	28°♄23'38	
	4164 Feb 10 23:55	0°♄			4164 Dec 27 01:10	0°♄	
evening rise	4164 Feb 11 13:51	0°♄57'41					
asc. node	4164 Feb 29 04:42	28°♄21'57		superior conj	4165 Jan 06 06:51	16°♄07'18	-1°12'07
	4164 Mar 01 15:29	0°♄		minimum elong	4165 Jan 05 22:21	15°♄33'59	1°11'08
evening max el	4164 Mar 02 00:37	0°♄23'32	18°25'31	max. Earth dist.	4165 Jan 06 17:05	16°♄47'27	1.45268 AU
retrograde	4164 Mar 08 12:22	3°♄55'25			4165 Jan 15 03:02	0°♄	
evening set	4164 Mar 11 13:48	3°♄03'50		evening rise	4165 Jan 22 04:10	11°♄07'59	
	4164 Mar 15 06:34	30°♄		greatest brilliancy	4165 Jan 31 10:30	25°♄47'50	-0.8m
inferior conj	4164 Mar 17 10:21	27°♄34'57	3°36'12		4165 Feb 03 03:33	0°♄	
minimum elong	4164 Mar 17 10:12	27°♄35'25	3°36'12	evening max el	4165 Feb 13 10:42	13°♄52'48	19°00'25
min. Earth dist.	4164 Mar 19 16:04	24°♄59'02	0.64311 AU	asc. node	4165 Feb 15 01:43	15°♄23'51	
morning rise	4164 Mar 23 05:51	21°♄24'50		retrograde	4165 Feb 20 07:15	17°♄44'56	
direct	4164 Mar 30 01:14	18°♄36'48		evening set	4165 Feb 23 15:17	16°♄40'31	
desc. node	4164 Apr 06 03:00	21°♄03'18		inferior conj	4165 Mar 01 05:23	10°♄55'00	3°27'54
morning max el	4164 Apr 12 16:32	26°♄32'42	27°27'58	minimum elong	4165 Mar 01 03:56	10°♄59'35	3°27'44
	4164 Apr 15 21:52	0°♄		min. Earth dist.	4165 Mar 02 19:36	8°♄54'33	0.65856 AU
	4164 May 06 19:35	0°♄		morning rise	4165 Mar 06 16:11	4°♄41'42	
morning set	4164 May 17 20:23	20°♄10'33		direct	4165 Mar 13 03:45	1°♄51'37	
max. Earth dist.	4164 May 22 16:43	29°♄58'35	1.33329 AU	desc. node	4165 Mar 24 00:03	7°♄30'28	
	4164 May 22 16:59	0°♄		morning max el	4165 Mar 26 02:27	9°♄31'35	26°33'55
					4165 Apr 11 05:04	0°♄	
superior conj	4164 May 25 21:22	6°♄41'42	-0°13'17		4165 Apr 29 07:04	0°♄	
minimum elong	4164 May 25 22:03	6°♄45'18	0°13'08	morning set	4165 May 01 02:21	3°♄22'20	
behind sun begin	4164 May 25 18:56	6°♄28'42		max. Earth dist.	4165 May 05 06:07	11°♄24'53	1.34649 AU
behind sun end	4164 May 26 01:10	7°♄01'55					
asc. node	4164 May 27 03:59	9°♄25'03		superior conj	4165 May 09 20:28	20°♄43'10	-0°42'22
evening rise	4164 Jun 02 01:33	22°♄01'47		minimum elong	4165 May 09 22:44	20°♄54'50	0°41'55
	4164 Jun 05 22:28	0°♄		asc. node	4165 May 14 01:02	29°♄27'17	
evening max el	4164 Jun 23 15:29	26°♄58'53	22°26'45		4165 May 14 07:16	0°♄	
	4164 Jun 27 04:44	0°♄		evening rise	4165 May 17 10:42	6°♄34'01	
desc. node	4164 Jul 03 02:16	2°♄58'12			4165 May 30 06:36	0°♄	
retrograde	4164 Jul 06 16:50	3°♄28'13		evening max el	4165 Jun 05 14:01	7°♄42'45	20°57'35
evening set	4164 Jul 09 19:03	3°♄07'08		retrograde	4165 Jun 17 05:38	13°♄25'14	
	4164 Jul 17 04:31	30°♄		evening set	4165 Jun 19 09:28	13°♄14'14	
min. Earth dist.	4164 Jul 17 22:32	29°♄34'46	0.55148 AU	desc. node	4165 Jun 19 23:17	13°♄07'44	
inferior conj	4164 Jul 19 00:18	28°♄58'13	-4°11'54	inferior conj	4165 Jun 28 17:38	9°♄16'51	-2°32'41
minimum elong	4164 Jul 18 16:03	29°♄09'56	4°09'58	minimum elong	4165 Jun 28 10:40	9°♄26'42	2°30'18
morning rise	4164 Jul 27 15:03	25°♄07'47		min. Earth dist.	4165 Jun 29 09:58	8°♄53'45	0.54837 AU
direct	4164 Jul 30 16:31	24°♄46'30		morning rise	4165 Jul 07 11:47	5°♄15'54	
morning max el	4164 Aug 11 04:32	0°♄07'48	21°09'58	direct	4165 Jul 11 01:53	4°♄48'10	
	4164 Aug 11 01:09	0°♄		morning max el	4165 Jul 24 00:41	10°♄59'48	22°47'27
asc. node	4164 Aug 23 03:12	16°♄24'41			4165 Aug 06 23:34	0°♄	

asc. node	4165 Aug 10 00:15	5°♎34'27		asc. node	4166 Jul 27 21:19	25°♊07'49	
morning set	4165 Aug 15 11:51	16°♎38'23			4166 Jul 30 06:02	0°♎	
	4165 Aug 21 17:55	0°♎		morning set	4166 Jul 30 23:38	1°♎32'44	
superior conj	4165 Aug 22 13:57	1°♎47'02	1°38'53	superior conj	4166 Aug 06 22:37	16°♎36'55	1°28'09
minimum elong	4165 Aug 22 12:28	1°♎39'05	1°38'47	minimum elong	4166 Aug 06 20:28	16°♎25'12	1°27'54
max. Earth dist.	4165 Aug 25 13:29	8°♎04'14	1.33947 AU	max. Earth dist.	4166 Aug 08 16:36	20°♎24'32	1.32890 AU
evening rise	4165 Aug 30 09:10	17°♎50'53			4166 Aug 13 05:28	0°♎	
	4165 Sep 05 20:14	0°♎		evening rise	4166 Aug 14 05:27	2°♎02'58	
desc. node	4165 Sep 15 22:36	16°♏44'48			4166 Aug 29 17:05	0°♏	
	4165 Sep 25 09:52	0°♏		desc. node	4166 Sep 02 19:36	6°♏11'31	
evening max el	4165 Oct 03 22:44	9°♏33'37	27°12'58	evening max el	4166 Sep 16 09:36	22°♏41'14	27°26'44
retrograde	4165 Oct 17 08:12	16°♏51'31		retrograde	4166 Sep 30 01:59	29°♏57'12	
evening set	4165 Oct 24 06:21	14°♏10'29		evening set	4166 Oct 07 06:14	27°♏22'35	
min. Earth dist.	4165 Oct 28 02:41	10°♏31'31	0.64913 AU	min. Earth dist.	4166 Oct 10 21:56	24°♏15'46	0.63284 AU
inferior conj	4165 Oct 30 07:13	8°♏06'37	-2°13'03	inferior conj	4166 Oct 13 14:31	21°♏35'37	-3°14'16
minimum elong	4165 Oct 30 10:59	7°♏56'13	2°11'34	minimum elong	4166 Oct 13 19:52	21°♏22'19	3°12'28
morning rise	4165 Nov 05 16:40	2°♏35'10		morning rise	4166 Oct 20 10:57	16°♏21'02	
asc. node	4165 Nov 05 23:27	2°♏27'47		direct	4166 Oct 22 21:26	15°♏52'46	
direct	4165 Nov 08 08:01	1°♏58'23		asc. node	4166 Oct 23 20:30	15°♏57'16	
morning max el	4165 Nov 14 19:36	5°♏25'39	18°01'56	morning max el	4166 Oct 29 12:13	19°♏18'13	17°50'14
	4165 Dec 01 07:19	0°♏			4166 Nov 06 08:59	0°♏	
morning set	4165 Dec 02 14:33	2°♏10'02		morning set	4166 Nov 14 20:49	14°♏32'20	
desc. node	4165 Dec 12 21:52	19°♏05'28			4166 Nov 23 20:13	0°♏	
superior conj	4165 Dec 16 14:59	25°♏02'54	-0°25'22	superior conj	4166 Nov 26 21:04	5°♏04'35	0°20'10
minimum elong	4165 Dec 16 11:51	24°♏50'24	0°24'55	minimum elong	4166 Nov 26 23:07	5°♏13'05	0°19'53
	4165 Dec 19 17:52	0°♏		desc. node	4166 Nov 29 18:52	9°♏51'37	
max. Earth dist.	4165 Dec 20 12:20	1°♏12'53	1.45001 AU	max. Earth dist.	4166 Dec 03 05:54	15°♏27'21	1.44029 AU
evening rise	4166 Jan 01 22:20	20°♏33'15		evening rise	4166 Dec 12 07:52	29°♏43'28	
	4166 Jan 08 01:46	0°♏			4166 Dec 12 12:09	0°♏	
greatest brilliancy	4166 Jan 15 18:57	11°♏40'05	-0.7m		4167 Jan 01 19:43	0°♏	
evening max el	4166 Jan 27 16:29	27°♏24'57	19°51'35	evening max el	4167 Jan 10 16:49	10°♏57'37	20°56'24
	4166 Jan 30 14:33	0°♏		retrograde	4167 Jan 19 02:53	15°♏56'29	
asc. node	4166 Feb 01 22:44	1°♏19'31		asc. node	4167 Jan 19 19:45	15°♏53'47	
retrograde	4166 Feb 04 04:51	1°♏46'53		evening set	4167 Jan 23 04:06	14°♏23'11	
evening set	4166 Feb 07 20:44	0°♏28'32		inferior conj	4167 Jan 28 12:32	8°♏11'16	2°36'24
	4166 Feb 08 11:32	30°♏		minimum elong	4167 Jan 28 10:04	8°♏19'48	2°35'43
inferior conj	4166 Feb 13 06:57	24°♏28'31	3°07'07	min. Earth dist.	4167 Jan 28 23:11	7°♏34'37	0.67684 AU
minimum elong	4166 Feb 13 04:43	24°♏35'56	3°06'41	morning rise	4167 Feb 02 15:51	1°♏58'14	
min. Earth dist.	4166 Feb 14 06:39	23°♏09'30	0.66978 AU		4167 Feb 05 18:53	30°♏	
morning rise	4166 Feb 18 12:29	18°♏14'34		direct	4167 Feb 08 00:55	29°♏36'05	
direct	4166 Feb 24 11:54	15°♏34'24			4167 Feb 10 10:03	0°♏	
morning max el	4166 Mar 08 11:25	22°♏43'34	25°18'23	morning max el	4167 Feb 18 19:59	6°♏02'03	23°51'20
desc. node	4166 Mar 10 21:05	25°♏16'46		desc. node	4167 Feb 25 18:05	13°♏58'56	
	4166 Mar 14 21:15	0°♏			4167 Mar 09 09:15	0°♏	
	4166 Apr 04 12:39	0°♏		morning set	4167 Mar 26 08:30	26°♏58'57	
morning set	4166 Apr 13 16:22	15°♏44'05			4167 Mar 28 02:27	0°♏	
max. Earth dist.	4166 Apr 17 08:31	22°♏29'19	1.36415 AU	max. Earth dist.	4167 Mar 30 04:28	3°♏39'44	1.38505 AU
	4166 Apr 21 06:49	0°♏		superior conj	4167 Apr 06 11:53	17°♏04'00	-1°37'38
superior conj	4166 Apr 23 10:33	4°♏14'11	-1°11'16	minimum elong	4167 Apr 06 16:38	17°♏26'30	1°37'05
minimum elong	4166 Apr 23 14:21	4°♏33'04	1°10'38		4167 Apr 13 04:31	0°♏	
asc. node	4166 Apr 30 22:04	19°♏20'35		evening rise	4167 Apr 15 13:04	4°♏37'02	
evening rise	4166 May 01 15:27	20°♏48'37		asc. node	4167 Apr 17 19:05	8°♏59'33	
	4166 May 06 07:10	0°♏			4167 Apr 30 20:18	0°♏	
evening max el	4166 May 19 00:40	19°♏05'23	19°44'57	evening max el	4167 May 01 22:32	1°♏07'46	18°52'10
retrograde	4166 May 28 22:32	23°♏54'57		retrograde	4167 May 10 07:05	5°♏13'10	
evening set	4166 May 30 21:22	23°♏44'33		evening set	4167 May 12 10:10	4°♏58'17	
desc. node	4166 Jun 06 20:18	20°♏50'45		inferior conj	4167 May 20 10:42	0°♏39'58	1°12'56
inferior conj	4166 Jun 08 17:17	19°♏42'20	-0°33'21	minimum elong	4167 May 20 13:21	0°♏35'11	1°12'02
minimum elong	4166 Jun 08 15:46	19°♏44'41	0°32'47		4167 May 21 08:48	30°♏	
min. Earth dist.	4166 Jun 10 23:04	18°♏19'15	0.55495 AU	min. Earth dist.	4167 May 23 15:07	28°♏23'28	0.56978 AU
morning rise	4166 Jun 17 07:56	15°♏13'05		desc. node	4167 May 24 17:19	27°♏39'44	
direct	4166 Jun 21 17:23	14°♏30'22		morning rise	4167 May 28 13:19	25°♏34'42	
morning max el	4166 Jul 05 15:00	21°♏25'42	24°30'50	direct	4167 Jun 02 21:57	24°♏25'34	
	4166 Jul 13 01:51	0°♏			4167 Jun 15 04:26	0°♏	

morning max el	4167 Jun 17 05:57	1° Π 52'41	26°04'54	direct	4168 May 14 16:41	4° \mathcal{B} 59'45	
	4167 Jul 07 03:45	0° \mathcal{B}		morning max el	4168 May 29 02:04	12° \mathcal{B} 46'53	27°14'14
asc. node	4167 Jul 14 18:21	14° \mathcal{B} 57'18			4168 Jun 11 16:17	0° Π	
morning set	4167 Jul 15 10:47	16° \mathcal{B} 23'44			4168 Jun 28 06:57	0° \mathcal{B}	
	4167 Jul 21 17:04	0° Ω		morning set	4168 Jun 28 19:38	1° \mathcal{B} 06'09	
				asc. node	4168 Jun 30 15:23	4° \mathcal{B} 57'43	
superior conj	4167 Jul 22 09:46	1° Ω 31'56	1°12'33	superior conj	4168 Jul 05 21:35	16° \mathcal{B} 26'19	0°52'44
minimum elong	4167 Jul 22 07:26	1° Ω 19'06	1°12'10	minimum elong	4168 Jul 05 19:33	16° \mathcal{B} 15'05	0°52'20
max. Earth dist.	4167 Jul 23 01:42	2° Ω 59'40	1.32243 AU	max. Earth dist.	4168 Jul 05 13:14	15° \mathcal{B} 40'15	1.32005 AU
evening rise	4167 Jul 29 09:03	16° Ω 34'52			4168 Jul 12 02:36	0° Ω	
	4167 Aug 05 03:26	0° \mathcal{M}		evening rise	4168 Jul 12 17:28	1° Ω 18'59	
desc. node	4167 Aug 20 16:38	24° \mathcal{M} 55'06			4168 Jul 28 05:54	0° \mathcal{M}	
	4167 Aug 24 18:20	0° \mathcal{A}		desc. node	4168 Aug 06 13:39	12° \mathcal{M} 37'41	
evening max el	4167 Aug 29 16:08	5° \mathcal{A} 12'06	27°08'33	evening max el	4168 Aug 10 15:56	16° \mathcal{M} 56'14	26°17'11
retrograde	4167 Sep 12 12:42	12° \mathcal{A} 24'49		retrograde	4168 Aug 24 15:15	24° \mathcal{M} 05'45	
evening set	4167 Sep 19 15:07	10° \mathcal{A} 08'38		evening set	4168 Aug 31 04:12	22° \mathcal{M} 20'39	
min. Earth dist.	4167 Sep 23 06:28	7° \mathcal{A} 25'25	0.61364 AU	min. Earth dist.	4168 Sep 04 05:02	19° \mathcal{M} 45'37	0.59292 AU
inferior conj	4167 Sep 26 09:08	4° \mathcal{A} 41'55	-4°10'32	inferior conj	4168 Sep 07 11:31	17° \mathcal{M} 15'48	-4°53'56
minimum elong	4167 Sep 26 15:08	4° \mathcal{A} 28'44	4°09'02	minimum elong	4168 Sep 07 16:03	17° \mathcal{M} 07'04	4°53'20
	4167 Oct 03 03:03	30° \mathcal{R} \mathcal{M}		morning rise	4168 Sep 15 06:07	12° \mathcal{M} 44'13	
morning rise	4167 Oct 03 16:58	29° \mathcal{M} 47'41		direct	4168 Sep 17 15:38	12° \mathcal{M} 24'19	
direct	4167 Oct 06 01:24	29° \mathcal{M} 24'54		morning max el	4168 Sep 25 12:25	16° \mathcal{M} 12'34	18°23'38
	4167 Oct 08 21:59	0° \mathcal{A}		asc. node	4168 Sep 26 14:35	17° \mathcal{M} 19'23	
asc. node	4167 Oct 10 17:32	0° \mathcal{A} 58'41			4168 Oct 05 05:28	0° \mathcal{A}	
morning max el	4167 Oct 13 02:57	2° \mathcal{A} 57'00	17°57'03	morning set	4168 Oct 11 12:12	11° \mathcal{A} 41'36	
morning set	4167 Oct 28 21:53	27° \mathcal{A} 48'17					
	4167 Oct 30 02:37	0° \mathcal{M}		superior conj	4168 Oct 20 14:26	28° \mathcal{A} 54'27	1°22'28
superior conj	4167 Nov 08 06:03	16° \mathcal{M} 25'30	0°56'50	minimum elong	4168 Oct 20 18:04	29° \mathcal{A} 11'14	1°22'06
minimum elong	4167 Nov 08 10:08	16° \mathcal{M} 43'16	0°56'18		4168 Oct 21 04:42	0° \mathcal{M}	
max. Earth dist.	4167 Nov 15 18:58	29° \mathcal{M} 13'04	1.42468 AU	max. Earth dist.	4168 Oct 28 02:25	12° \mathcal{M} 16'13	1.40518 AU
	4167 Nov 16 06:22	0° \mathcal{A}		evening rise	4168 Nov 01 13:45	19° \mathcal{M} 48'43	
desc. node	4167 Nov 16 15:53	0° \mathcal{A} 39'07		desc. node	4168 Nov 02 12:56	21° \mathcal{M} 24'05	
evening rise	4167 Nov 22 00:58	9° \mathcal{A} 18'43			4168 Nov 07 21:49	0° \mathcal{A}	
	4167 Dec 05 15:59	0° \mathcal{B}			4168 Nov 28 23:05	0° \mathcal{B}	
evening max el	4167 Dec 24 11:44	24° \mathcal{B} 31'47	22°11'09	evening max el	4168 Dec 06 02:34	8° \mathcal{B} 08'53	23°30'51
	4168 Jan 01 11:38	0° \approx		retrograde	4168 Dec 16 17:23	14° \mathcal{B} 25'31	
retrograde	4168 Jan 02 23:34	0° \approx 10'44		evening set	4168 Dec 21 18:04	12° \mathcal{B} 20'37	
	4168 Jan 04 10:15	30° \mathcal{R} \mathcal{B}		asc. node	4168 Dec 23 13:49	10° \mathcal{B} 32'39	
asc. node	4168 Jan 06 16:47	28° \mathcal{B} 57'07		min. Earth dist.	4168 Dec 26 15:52	6° \mathcal{B} 36'46	0.67952 AU
evening set	4168 Jan 07 11:45	28° \mathcal{B} 21'45		inferior conj	4168 Dec 27 03:53	5° \mathcal{B} 55'36	1°11'33
inferior conj	4168 Jan 12 20:08	22° \mathcal{B} 01'17	1°57'28	minimum elong	4168 Dec 27 02:18	6° \mathcal{B} 01'00	1°10'56
minimum elong	4168 Jan 12 17:53	22° \mathcal{B} 09'06	1°56'42	morning rise	4169 Jan 01 10:29	29° \mathcal{A} 49'08	
min. Earth dist.	4168 Jan 12 19:03	22° \mathcal{B} 05'05	0.68000 AU		4169 Jan 01 05:05	30° \mathcal{R} \mathcal{A}	
morning rise	4168 Jan 17 23:54	15° \mathcal{B} 50'39		direct	4169 Jan 05 14:32	28° \mathcal{A} 11'48	
direct	4168 Jan 22 18:07	13° \mathcal{B} 50'32			4169 Jan 10 10:33	0° \mathcal{B}	
morning max el	4168 Feb 01 06:54	19° \mathcal{B} 27'33	22°22'40	morning max el	4169 Jan 13 23:30	3° \mathcal{B} 02'22	21°00'33
	4168 Feb 10 03:19	0° \approx		desc. node	4169 Jan 29 12:09	23° \mathcal{B} 13'00	
desc. node	4168 Feb 12 15:06	3° \approx 21'31			4169 Feb 03 02:28	0° \approx	
	4168 Mar 01 13:56	0° \mathcal{H}		morning set	4169 Feb 13 06:12	15° \approx 32'28	
morning set	4168 Mar 05 21:11	6° \mathcal{H} 54'00		max. Earth dist.	4169 Feb 21 03:43	28° \approx 09'08	1.42668 AU
max. Earth dist.	4168 Mar 11 01:04	15° \mathcal{H} 27'46	1.40683 AU		4169 Feb 22 06:50	0° \mathcal{H}	
superior conj	4168 Mar 18 20:01	29° \mathcal{H} 02'11	-1°58'02	superior conj	4169 Feb 28 05:53	9° \mathcal{H} 57'07	-2°07'41
minimum elong	4168 Mar 19 00:08	29° \mathcal{H} 20'42	1°57'46	minimum elong	4169 Feb 28 06:36	10° \mathcal{H} 00'12	2°07'40
	4168 Mar 19 08:53	0° \mathcal{Y}		evening rise	4169 Mar 11 21:12	0° \mathcal{Y} 22'10	
evening rise	4168 Mar 29 00:20	17° \mathcal{Y} 51'25			4169 Mar 11 16:15	0° \mathcal{Y}	
asc. node	4168 Apr 03 16:07	28° \mathcal{Y} 19'03		asc. node	4169 Mar 21 13:08	17° \mathcal{Y} 12'08	
	4168 Apr 04 14:52	0° \mathcal{B}		evening max el	4169 Mar 28 15:51	26° \mathcal{Y} 44'57	18°07'06
evening max el	4168 Apr 14 04:45	13° \mathcal{B} 44'07	18°19'44		4169 Apr 02 23:04	0° \mathcal{B}	
retrograde	4168 Apr 21 10:39	17° \mathcal{B} 20'28		retrograde	4169 Apr 04 06:38	0° \mathcal{B} 08'17	
evening set	4168 Apr 23 20:21	16° \mathcal{B} 57'38			4169 Apr 05 14:26	30° \mathcal{R} \mathcal{Y}	
inferior conj	4168 May 01 01:42	12° \mathcal{B} 19'22	2°29'02	evening set	4169 Apr 06 22:45	29° \mathcal{Y} 35'08	
minimum elong	4168 May 01 05:20	12° \mathcal{B} 11'42	2°28'06	inferior conj	4169 Apr 13 12:17	24° \mathcal{Y} 36'26	3°14'08
min. Earth dist.	4168 May 04 12:11	9° \mathcal{B} 26'59	0.58988 AU	minimum elong	4169 Apr 13 14:49	24° \mathcal{Y} 30'17	3°13'44
morning rise	4168 May 08 11:24	6° \mathcal{B} 43'44		min. Earth dist.	4169 Apr 16 16:17	21° \mathcal{Y} 32'55	0.61178 AU
desc. node	4168 May 10 14:20	5° \mathcal{B} 45'06		morning rise	4169 Apr 20 04:55	18° \mathcal{Y} 41'15	

direct	4169 Apr 26 22:54	16° Υ 23'49			4170 Apr 04 14:36	30° \mathbb{R} \mathbb{H}	
desc. node	4169 Apr 27 11:21	16° Υ 24'36		direct	4170 Apr 09 14:03	28° \mathbb{H} 36'40	
morning max el	4169 May 11 04:23	24° Υ 20'57	27°48'49	desc. node	4170 Apr 14 08:24	29° \mathbb{H} 43'18	
	4169 May 16 07:16	0° \mathbb{B}			4170 Apr 14 22:37	0° Υ	
	4169 Jun 04 23:53	0° Π		morning max el	4170 Apr 23 11:37	6° Υ 35'03	27°45'45
morning set	4169 Jun 13 00:21	15° Π 33'58			4170 May 11 07:50	0° \mathbb{B}	
asc. node	4169 Jun 17 12:27	25° Π 04'26		morning set	4170 May 27 22:37	29° \mathbb{B} 38'55	
max. Earth dist.	4169 Jun 18 23:31	28° Π 14'37	1.32176 AU		4170 May 28 02:49	0° Π	
	4169 Jun 19 18:49	0° \mathbb{E}		max. Earth dist.	4170 Jun 02 04:33	10° Π 29'17	1.32779 AU
				asc. node	4170 Jun 04 09:28	15° Π 12'17	
superior conj	4169 Jun 20 08:22	1° \mathbb{E} 14'13	0°29'19	superior conj	4170 Jun 04 16:13	15° Π 48'37	0°02'57
minimum elong	4169 Jun 20 07:04	1° \mathbb{E} 07'07	0°29'03	minimum elong	4170 Jun 04 16:04	15° Π 47'49	0°02'56
evening rise	4169 Jun 27 04:34	16° \mathbb{E} 08'32		behind sun begin	4170 Jun 04 10:52	15° Π 19'46	
	4169 Jul 04 01:11	0° \mathbb{Q}		behind sun end	4170 Jun 04 21:16	16° Π 15'54	
evening max el	4169 Jul 23 08:40	27° \mathbb{Q} 54'37	24°57'47		4170 Jun 11 05:52	0° \mathbb{E}	
desc. node	4169 Jul 24 10:41	28° \mathbb{Q} 54'52		evening rise	4170 Jun 11 16:23	0° \mathbb{E} 55'56	
	4169 Jul 25 17:02	0° \mathbb{M}			4170 Jun 27 20:00	0° \mathbb{Q}	
retrograde	4169 Aug 06 07:21	4° \mathbb{M} 57'50		evening max el	4170 Jul 04 21:39	8° \mathbb{Q} 21'58	23°22'31
evening set	4169 Aug 11 17:25	3° \mathbb{M} 51'02		desc. node	4170 Jul 11 07:42	13° \mathbb{Q} 13'22	
min. Earth dist.	4169 Aug 16 20:13	1° \mathbb{M} 05'41	0.57314 AU	retrograde	4170 Jul 18 10:37	15° \mathbb{Q} 08'31	
	4169 Aug 18 12:06	30° \mathbb{R} \mathbb{Q}		evening set	4170 Jul 22 08:52	14° \mathbb{Q} 34'47	
inferior conj	4169 Aug 19 18:39	29° \mathbb{Q} 08'48	-5°11'53	min. Earth dist.	4170 Jul 29 07:16	11° \mathbb{Q} 23'35	0.55744 AU
minimum elong	4169 Aug 19 18:41	29° \mathbb{Q} 08'45	5°11'53	inferior conj	4170 Jul 31 05:46	10° \mathbb{Q} 15'04	-4°48'32
morning rise	4169 Aug 27 22:22	24° \mathbb{Q} 59'12		minimum elong	4170 Jul 30 23:42	10° \mathbb{Q} 24'03	4°47'37
direct	4169 Aug 30 12:14	24° \mathbb{Q} 40'04		morning rise	4170 Aug 08 16:56	6° \mathbb{Q} 21'39	
morning max el	4169 Sep 08 13:20	28° \mathbb{Q} 55'21	19°11'18	direct	4170 Aug 11 13:48	6° \mathbb{Q} 01'35	
	4169 Sep 09 15:17	0° \mathbb{M}		morning max el	4170 Aug 22 02:54	10° \mathbb{Q} 55'24	20°20'46
asc. node	4169 Sep 13 11:39	4° \mathbb{M} 44'26		asc. node	4170 Aug 31 08:43	22° \mathbb{Q} 58'54	
morning set	4169 Sep 25 11:41	26° \mathbb{M} 01'18			4170 Sep 04 07:56	0° \mathbb{M}	
	4169 Sep 27 11:37	0° \mathbb{L}		morning set	4170 Sep 09 17:17	10° \mathbb{M} 38'20	
superior conj	4169 Oct 03 16:43	12° \mathbb{L} 15'59	1°37'40	superior conj	4170 Sep 17 07:55	26° \mathbb{M} 15'25	1°43'52
minimum elong	4169 Oct 03 18:52	12° \mathbb{L} 26'23	1°37'32	minimum elong	4170 Sep 17 08:24	26° \mathbb{M} 17'53	1°43'51
max. Earth dist.	4169 Oct 10 06:56	24° \mathbb{L} 38'42	1.38431 AU		4170 Sep 19 04:40	0° \mathbb{L}	
	4169 Oct 13 06:56	0° \mathbb{M}		max. Earth dist.	4170 Sep 22 13:32	6° \mathbb{L} 35'46	1.36444 AU
evening rise	4169 Oct 14 01:56	1° \mathbb{M} 23'04		evening rise	4170 Sep 26 11:07	13° \mathbb{L} 55'15	
desc. node	4169 Oct 20 10:00	12° \mathbb{M} 02'44			4170 Oct 05 17:55	0° \mathbb{M}	
	4169 Nov 01 03:46	0° \mathbb{J}		desc. node	4170 Oct 07 07:02	2° \mathbb{M} 29'59	
evening max el	4169 Nov 18 15:28	21° \mathbb{J} 50'27	24°49'06		4170 Oct 26 23:36	0° \mathbb{J}	
retrograde	4169 Nov 30 07:11	28° \mathbb{J} 36'57		evening max el	4170 Nov 01 03:59	5° \mathbb{J} 33'23	25°58'45
evening set	4169 Dec 05 21:28	26° \mathbb{J} 16'55		retrograde	4170 Nov 13 16:06	12° \mathbb{J} 39'40	
asc. node	4169 Dec 10 10:51	21° \mathbb{J} 08'12		evening set	4170 Nov 19 20:12	10° \mathbb{J} 06'53	
min. Earth dist.	4169 Dec 10 11:13	21° \mathbb{J} 07'01	0.67554 AU	min. Earth dist.	4170 Nov 24 02:41	5° \mathbb{J} 32'16	0.66806 AU
inferior conj	4169 Dec 11 09:58	19° \mathbb{J} 51'46	0°19'41	inferior conj	4170 Nov 25 12:34	3° \mathbb{J} 46'19	-0°37'07
minimum elong	4169 Dec 11 09:29	19° \mathbb{J} 53'22	0°19'28	minimum elong	4170 Nov 25 13:33	3° \mathbb{J} 43'14	0°36'41
morning rise	4169 Dec 16 21:38	13° \mathbb{J} 51'42		asc. node	4170 Nov 27 07:54	1° \mathbb{J} 34'15	
direct	4169 Dec 20 12:56	12° \mathbb{J} 35'34			4170 Nov 28 18:23	30° \mathbb{R} \mathbb{M}	
morning max el	4169 Dec 27 23:54	16° \mathbb{J} 48'41	19°50'31	morning rise	4170 Dec 01 07:19	27° \mathbb{M} 55'14	
	4170 Jan 07 08:19	0° \mathbb{Z}		direct	4170 Dec 04 11:37	26° \mathbb{M} 57'22	
desc. node	4170 Jan 16 09:12	13° \mathbb{Z} 25'37			4170 Dec 10 13:21	0° \mathbb{J}	
morning set	4170 Jan 23 02:11	23° \mathbb{Z} 41'43		morning max el	4170 Dec 11 07:51	0° \mathbb{J} 44'24	18°55'29
	4170 Jan 27 03:47	0° \approx			4170 Dec 31 18:37	0° \mathbb{Z}	
max. Earth dist.	4170 Feb 03 14:27	11° \approx 42'52	1.44202 AU	morning set	4171 Jan 02 10:33	2° \mathbb{Z} 36'12	
superior conj	4170 Feb 08 14:04	19° \approx 43'11	-2°01'07	desc. node	4171 Jan 03 06:16	3° \mathbb{Z} 53'20	
minimum elong	4170 Feb 08 08:51	19° \approx 22'02	2°00'52	max. Earth dist.	4171 Jan 17 07:17	25° \mathbb{Z} 52'56	1.45091 AU
	4170 Feb 14 20:16	0° \mathbb{H}		superior conj	4171 Jan 18 23:55	28° \mathbb{Z} 32'49	-1°35'01
evening rise	4170 Feb 21 23:20	12° \mathbb{H} 01'19		minimum elong	4171 Jan 18 14:41	27° \mathbb{Z} 56'27	1°34'08
	4170 Mar 04 16:56	0° Υ			4171 Jan 19 22:03	0° \approx	
asc. node	4170 Mar 08 10:10	5° Υ 30'33		evening rise	4171 Feb 03 03:07	22° \approx 44'19	
evening max el	4170 Mar 12 04:40	10° Υ 01'47	18°13'31		4171 Feb 07 14:19	0° \mathbb{H}	
retrograde	4170 Mar 18 14:44	13° Υ 26'32		asc. node	4171 Feb 23 07:12	23° \mathbb{H} 04'14	
evening set	4170 Mar 21 12:51	12° Υ 41'48		evening max el	4171 Feb 23 16:24	23° \mathbb{H} 28'05	18°38'15
inferior conj	4170 Mar 27 14:32	7° Υ 23'27	3°33'53	retrograde	4171 Mar 02 06:50	27° \mathbb{H} 07'07	
minimum elong	4170 Mar 27 15:19	7° Υ 21'17	3°33'50	evening set	4171 Mar 05 11:02	26° \mathbb{H} 10'00	
min. Earth dist.	4170 Mar 30 05:06	4° Υ 32'28	0.63254 AU	inferior conj	4171 Mar 11 04:28	20° \mathbb{H} 33'34	3°34'23
morning rise	4170 Apr 02 16:44	1° Υ 17'17					

minimum elong	4171 Mar 11 03:41	20°  35'53	3°34'21	min. Earth dist.	4172 Feb 24 10:24	2°  16'47	0.66383 AU
min. Earth dist.	4171 Mar 13 03:25	18°  11'59	0.65020 AU		4172 Feb 26 06:56	30° 	
morning rise	4171 Mar 16 19:51	14°  21'53		morning rise	4172 Feb 28 10:46	27°  45'50	
direct	4171 Mar 23 12:31	11°  31'40		direct	4172 Mar 05 17:22	24°  58'59	
desc. node	4171 Apr 01 05:25	15°  11'55			4172 Mar 15 16:53	0° 	
morning max el	4171 Apr 05 21:26	19°  21'41	27°08'18	desc. node	4172 Mar 18 02:27	2°  15'48	
	4171 Apr 14 22:44	0° 		morning max el	4172 Mar 18 07:17	2°  27'56	26°03'50
	4171 May 04 08:06	0° 			4172 Apr 08 03:04	0° 	
morning set	4171 May 11 11:34	13°  12'59		morning set	4172 Apr 23 11:20	26°  04'44	
max. Earth dist.	4171 May 16 00:42	22°  15'08	1.33837 AU		4172 Apr 25 13:31	0° 	
				max. Earth dist.	4172 Apr 27 09:25	3°  30'23	1.35353 AU
superior conj	4171 May 19 19:09	0°  10'341	-0°25'31				
minimum elong	4171 May 19 20:29	0°  10'41	0°25'14	superior conj	4172 May 02 14:44	13°  52'19	-0°54'46
	4171 May 19 18:27	0° 		minimum elong	4172 May 02 17:41	14°  07'17	0°54'14
asc. node	4171 May 22 06:31	5°  17'37		asc. node	4172 May 08 03:32	25°  16'04	
evening rise	4171 May 27 03:05	15°  11'35'27		evening rise	4172 May 10 10:38	0°  10'26	
	4171 Jun 03 09:22	0° 			4172 May 10 10:33	0° 	
evening max el	4171 Jun 16 14:22	18°  49'37	21°47'08	evening max el	4172 May 28 17:41	29°  14'24	20°24'16
desc. node	4171 Jun 28 04:40	24°  59'02			4172 May 28 22:54	0° 	
retrograde	4171 Jun 29 02:49	25°  01'01		retrograde	4172 Jun 08 16:04	5°  07'48	
evening set	4171 Jul 01 17:32	24°  54'38		evening set	4172 Jun 10 15:47	4°  57'56	
min. Earth dist.	4171 Jul 10 17:38	20°  54'57	0.54900 AU	desc. node	4172 Jun 14 01:39	3°  59'17	
inferior conj	4171 Jul 11 02:02	20°  54'11	-3°34'25	inferior conj	4172 Jun 19 20:10	1°  00'04	-1°42'20
minimum elong	4171 Jul 10 17:31	20°  55'06	3°31'59	minimum elong	4172 Jun 19 15:22	1°  07'05	1°40'34
morning rise	4171 Jul 19 18:53	16°  51'15		min. Earth dist.	4172 Jun 21 05:39	0°  11'15	0.54995 AU
direct	4171 Jul 23 01:05	16°  52'7'59			4172 Jun 21 13:27	30° 	
morning max el	4171 Aug 04 04:43	22°  09'58	21°49'59	morning rise	4172 Jun 28 13:52	26°  14'42	
	4171 Aug 10 22:17	0° 		direct	4172 Jul 02 11:03	26°  16'08	
asc. node	4171 Aug 18 05:46	11°  50'58			4172 Jul 12 13:04	0° 	
morning set	4171 Aug 25 02:43	25°  02'13		morning max el	4172 Jul 15 21:45	2°  47'58	23°31'44
	4171 Aug 27 06:49	0° 			4172 Aug 03 12:12	0° 	
				asc. node	4172 Aug 04 02:48	1°  11'14	
superior conj	4171 Sep 01 08:10	10°  14'27	1°42'34	morning set	4172 Aug 08 14:06	10°  19'31	
minimum elong	4171 Sep 01 07:16	10°  16'47	1°42'31				
max. Earth dist.	4171 Sep 05 02:51	18°  29'36	1.34744 AU	superior conj	4172 Aug 15 14:28	25°  02'45'9	1°34'59
evening rise	4171 Sep 09 13:06	27°  14'43		minimum elong	4172 Aug 15 12:38	25°  01'50'7	1°34'49
	4171 Sep 10 23:49	0° 			4172 Aug 17 17:53	0° 	
desc. node	4171 Sep 24 04:02	22°  40'06		max. Earth dist.	4172 Aug 18 00:58	0°  37'33	1.33435 AU
	4171 Sep 29 01:13	0° 		evening rise	4172 Aug 23 03:44	11°  10'31	
evening max el	4171 Oct 14 16:32	19°  10'36	26°52'14		4172 Sep 02 07:06	0° 	
retrograde	4171 Oct 27 19:38	26°  12'6'55		desc. node	4172 Sep 10 01:01	12°  05'25'36	
evening set	4171 Nov 03 12:12	23°  14'6'24			4172 Sep 23 15:46	0° 	
min. Earth dist.	4171 Nov 07 11:53	19°  14'7'40	0.65706 AU	evening max el	4172 Sep 26 04:24	2°  32'30	27°22'29
inferior conj	4171 Nov 09 09:35	17°  13'5'05	-1°37'29	retrograde	4172 Oct 09 17:26	9°  15'50'56	
minimum elong	4171 Nov 09 12:19	17°  12'7'09	1°36'21	evening set	4172 Oct 16 18:57	7°  10'55	
asc. node	4171 Nov 14 04:57	12°  14'6'05		min. Earth dist.	4172 Oct 20 12:49	3°  14'6'31	0.64255 AU
morning rise	4171 Nov 15 13:16	11°  15'55'51		inferior conj	4172 Oct 22 22:43	1°  13'35	-2°39'16
direct	4171 Nov 18 08:39	11°  16'12'32		minimum elong	4172 Oct 23 03:13	1°  10'01'40	2°37'36
morning max el	4171 Nov 24 21:24	14°  14'44'13	18°16'39		4172 Oct 24 02:54	30° 	
	4171 Dec 05 22:36	0° 		morning rise	4172 Oct 29 12:46	25°  09'49'09	
morning set	4171 Dec 13 22:44	12°  15'55'36		asc. node	4172 Oct 31 02:00	25°  09'21'30	
desc. node	4171 Dec 21 03:17	24°  15'30'59		direct	4172 Nov 01 01:36	25°  09'16'33	
	4171 Dec 24 13:53	0° 		morning max el	4172 Nov 07 13:50	28°  09'42'09	17°54'49
					4172 Nov 08 19:04	0° 	
superior conj	4171 Dec 29 02:33	7°  15'09'13	-0°52'50	morning set	4172 Nov 24 15:22	24°  13'38'40	
minimum elong	4171 Dec 28 19:58	6°  15'43'17	0°51'58		4172 Nov 27 19:14	0° 	
max. Earth dist.	4171 Dec 31 02:33	10°  15'17'50	1.45244 AU	desc. node	4172 Dec 07 00:19	15°  15'15'20	
	4172 Jan 12 16:53	0° 					
evening rise	4172 Jan 14 08:03	2°  15'33'03		superior conj	4172 Dec 07 18:49	16°  15'30'17	-0°05'21
greatest brilliancy	4172 Jan 25 17:42	20°  15'16'25	-0.7m	minimum elong	4172 Dec 07 18:12	16°  15'27'46	0°05'16
	4172 Feb 01 08:38	0° 		behind sun begin	4172 Dec 07 08:31	15°  15'48'37	
evening max el	4172 Feb 07 00:45	6°  15'58'15	19°20'16	behind sun end	4172 Dec 08 03:52	17°  15'06'51	
asc. node	4172 Feb 10 04:14	9°  15'39'37		max. Earth dist.	4172 Dec 12 21:07	24°  15'39'42	1.44667 AU
retrograde	4172 Feb 14 03:18	11°  15'02'21			4172 Dec 16 06:24	0° 	
evening set	4172 Feb 17 14:29	9°  15'52'05		evening rise	4172 Dec 23 20:45	11°  15'34'7'19	
inferior conj	4172 Feb 23 02:36	3°  15'59'49	3°20'24		4173 Jan 04 21:00	0° 	
minimum elong	4172 Feb 23 00:46	4°  15'05'48	3°20'08	evening max el	4173 Jan 20 04:14	20°  15'30'22	20°17'37

asc. node	4173 Jan 27 01:15	25°02'16"		evening max el	4174 Jan 03 02:17	4°03'57"	21°27'16"
retrograde	4173 Jan 28 01:26	25°07'47"		retrograde	4174 Jan 11 23:02	9°19'38"	
evening set	4173 Jan 31 20:58	23°43'22"		asc. node	4174 Jan 13 22:17	8°58'38"	
inferior conj	4173 Feb 06 06:12	17°37'50"	2°55'10"	evening set	4174 Jan 16 04:41	7°39'57"	
minimum elong	4173 Feb 06 03:49	17°45'57"	2°54'37"	inferior conj	4174 Jan 21 12:56	1°24'11"	2°20'50"
min. Earth dist.	4173 Feb 07 00:13	16°36'45"	0.67330 AU	minimum elong	4174 Jan 21 10:29	1°32'37"	2°20'04"
morning rise	4173 Feb 11 10:26	11°23'48"		min. Earth dist.	4174 Jan 21 18:33	1°04'44"	0.67870 AU
direct	4173 Feb 17 03:51	8°50'25"			4174 Jan 22 13:20	30°R	
morning max el	4173 Feb 28 15:57	15°43'14"	24°41'59"	morning rise	4174 Jan 26 16:07	25°31'51"	
desc. node	4173 Mar 04 23:30	20°28'03"		direct	4174 Jan 31 18:57	22°35'30"	
	4173 Mar 12 10:24	0°K		morning max el	4174 Feb 11 00:56	29°34'46"	23°13'07"
	4173 Apr 01 01:28	0°Y			4174 Feb 11 22:44	0°≈	
morning set	4173 Apr 05 16:48	7°Y59'57"		desc. node	4174 Feb 19 20:33	9°29'07"	
max. Earth dist.	4173 Apr 09 07:51	14°Y31'03"	1.37276 AU		4174 Mar 06 05:06	0°K	
				morning set	4174 Mar 17 21:51	18°K42'17"	
superior conj	4173 Apr 15 23:51	27°Y06'33"	-1°22'58"	max. Earth dist.	4174 Mar 22 02:50	25°K52'48"	1.39439 AU
minimum elong	4173 Apr 16 04:10	27°Y27'36"	1°22'20"		4174 Mar 24 11:14	0°Y	
	4173 Apr 17 11:19	0°8					
evening rise	4173 Apr 24 12:40	14°804'15"		superior conj	4174 Mar 29 18:32	9°Y36'27"	-1°47'18"
asc. node	4173 Apr 25 00:34	15°803'28"		minimum elong	4174 Mar 29 23:17	9°Y58'26"	1°46'50"
	4173 May 02 23:31	0°II		evening rise	4174 Apr 08 06:21	27°Y39'22"	
evening max el	4173 May 11 09:26	11°II27'21"	19°20'00"		4174 Apr 09 11:39	0°8	
retrograde	4173 May 20 14:29	15°II56'19"		asc. node	4174 Apr 11 21:35	4°834'58"	
evening set	4173 May 22 14:21	15°II44'37"		evening max el	4174 Apr 24 11:26	23°846'12"	18°35'57"
inferior conj	4173 May 31 02:26	11°II36'51"	0°14'51"	retrograde	4174 May 02 06:58	27°836'46"	
minimum elong	4173 May 31 03:04	11°II35'49"	0°14'37"	evening set	4174 May 04 12:58	27°818'45"	
transit middle	4173 May 31 03:04	11°II35'49"	0°14'37"	inferior conj	4174 May 12 05:04	22°852'17"	1°49'13"
transit begin	4173 May 31 01:29	11°II38'24"		minimum elong	4174 May 12 08:30	22°845'41"	1°48'10"
transit end	4173 May 31 04:38	11°II33'14"		min. Earth dist.	4174 May 15 14:05	20°817'49"	0.57793 AU
desc. node	4173 May 31 22:41	11°II03'24"		desc. node	4174 May 18 19:43	18°810'59"	
min. Earth dist.	4173 Jun 02 20:11	9°II49'12"	0.56036 AU	morning rise	4174 May 20 00:49	17°833'17"	
morning rise	4173 Jun 08 12:47	6°II51'57"		direct	4174 May 25 19:16	16°809'36"	
direct	4173 Jun 13 08:04	5°II59'08"		morning max el	4174 Jun 09 04:12	23°846'08"	26°38'08"
morning max el	4173 Jun 27 11:36	13°II10'31"	25°13'02"		4174 Jun 14 19:22	0°II	
	4173 Jul 10 14:36	0°☾			4174 Jul 03 13:58	0°☾	
asc. node	4173 Jul 21 23:50	20°☾51'43"		morning set	4174 Jul 08 12:09	10°☾00'23"	
morning set	4173 Jul 24 01:46	25°☾12'29"		asc. node	4174 Jul 08 20:53	10°☾46'30"	
	4173 Jul 26 07:26	0°Ω					
				superior conj	4174 Jul 15 12:04	25°☾13'06"	1°04'37"
superior conj	4173 Jul 31 00:24	10°Ω17'35"	1°22'05"	minimum elong	4174 Jul 15 09:48	25°☾00'37"	1°04'14"
minimum elong	4173 Jul 30 22:07	10°Ω05'04"	1°21'47"	max. Earth dist.	4174 Jul 15 17:25	25°☾42'39"	1.32094 AU
max. Earth dist.	4173 Aug 01 06:46	13°Ω03'30"	1.32555 AU		4174 Jul 17 16:10	0°Ω	
evening rise	4173 Aug 07 03:27	25°Ω31'49"		evening rise	4174 Jul 22 09:25	10°Ω10'09"	
	4173 Aug 09 08:20	0°൬			4174 Aug 01 15:08	0°൬	
	4173 Aug 26 19:07	0°♎		desc. node	4174 Aug 14 19:03	19°൬55'25"	
desc. node	4173 Aug 27 22:02	1°♎35'33"		evening max el	4174 Aug 21 17:55	27°൬38'14"	26°50'43"
evening max el	4173 Sep 08 13:44	15°♎25'49"	27°23'15"		4174 Aug 24 10:43	0°♎	
retrograde	4173 Sep 22 08:34	22°♎41'04"		retrograde	4174 Sep 04 15:50	4°♎48'49"	
evening set	4173 Sep 29 13:00	20°♎12'53"		evening set	4174 Sep 11 14:01	2°♎44'51"	
min. Earth dist.	4173 Oct 03 03:47	17°♎17'18"	0.62486 AU		4174 Sep 15 11:33	30°R൬	
inferior conj	4173 Oct 06 01:01	14°♎33'53"	-3°39'08"	min. Earth dist.	4174 Sep 15 08:01	0°♎07'03"	0.60490 AU
minimum elong	4173 Oct 06 06:49	14°♎20'09"	3°37'23"	inferior conj	4174 Sep 18 13:10	27°൬27'26"	-4°31'10"
morning rise	4173 Oct 13 02:19	9°♎27'28"		minimum elong	4174 Sep 18 18:53	27°൬15'33"	4°30'00"
direct	4173 Oct 15 11:25	9°♎02'00"		morning rise	4174 Sep 26 01:41	22°൬42'14"	
asc. node	4173 Oct 17 23:03	9°♎30'36"		direct	4174 Sep 28 10:14	22°൬20'53"	
morning max el	4173 Oct 22 06:02	12°♎29'39"	17°50'49"	asc. node	4174 Oct 04 20:06	25°൬06'53"	
	4173 Nov 03 01:55	0°♏		morning max el	4174 Oct 05 18:50	25°൬58'49"	18°05'50"
morning set	4173 Nov 07 06:26	7°♏25'59"			4174 Oct 09 05:43	0°♎	
				morning set	4174 Oct 21 13:42	20°♎59'11"	
					4174 Oct 26 09:51	0°♏	
superior conj	4173 Nov 18 12:25	27°♏05'47"	0°37'00"				
minimum elong	4173 Nov 18 15:43	27°♏19'44"	0°36'32"	superior conj	4174 Oct 31 07:54	8°♏56'34"	1°09'03"
	4173 Nov 20 05:47	0°♏		minimum elong	4174 Oct 31 12:00	9°♏14'53"	1°08'34"
desc. node	4173 Nov 23 21:20	6°♏02'23"		max. Earth dist.	4174 Nov 07 23:30	22°♏11'25"	1.41678 AU
max. Earth dist.	4173 Nov 25 12:34	8°♏42'05"	1.43428 AU	desc. node	4174 Nov 10 18:22	26°♏48'51"	
evening rise	4173 Dec 03 07:34	21°♏03'31"			4174 Nov 12 17:19	0°♏	
	4173 Dec 09 03:33	0°3		evening rise	4174 Nov 13 08:04	0°♏59'26"	
	4173 Dec 30 11:04	0°≈					

	4174 Dec 02 15:27	0°♄			4175 Nov 28 02:29	0°♄	
evening max el	4174 Dec 16 19:25	17°♄39'34	22°44'50	evening max el	4175 Nov 29 09:07	1°♄18'22	24°04'43
retrograde	4174 Dec 26 18:32	23°♄34'27		retrograde	4175 Dec 10 10:44	7°♄48'44	
evening set	4174 Dec 31 11:57	21°♄38'39		evening set	4175 Dec 15 17:15	5°♄36'56	
asc. node	4174 Dec 31 19:20	21°♄22'52		asc. node	4175 Dec 18 16:22	2°♄28'06	
inferior conj	4175 Jan 05 20:48	15°♄16'00	1°38'49	min. Earth dist.	4175 Dec 20 11:23	0°♄07'40	0.67824 AU
minimum elong	4175 Jan 05 18:47	15°♄22'59	1°38'04		4175 Dec 20 13:39	30°♄♂	
min. Earth dist.	4175 Jan 05 15:01	15°♄36'03	0.68029 AU	inferior conj	4175 Dec 21 04:03	29°♄11'20	0°50'15
morning rise	4175 Jan 11 01:30	9°♄07'05		minimum elong	4175 Dec 21 02:53	29°♄15'16	0°49'46
direct	4175 Jan 15 13:41	7°♄16'36		morning rise	4175 Dec 26 12:34	23°♄07'36	
morning max el	4175 Jan 24 13:49	12°♄32'23	21°46'32	direct	4175 Dec 30 10:59	21°♄39'42	
desc. node	4175 Feb 06 17:36	29°♄05'03		morning max el	4176 Jan 07 09:46	26°♄12'48	20°29'12
	4175 Feb 07 09:08	0°♄			4176 Jan 10 19:38	0°♄	
morning set	4175 Feb 25 22:07	28°♄01'58		desc. node	4176 Jan 24 14:39	19°♄06'27	
	4175 Feb 27 03:33	0°♄			4176 Jan 31 20:04	0°♄	
max. Earth dist.	4175 Mar 04 02:09	8°♄05'02	1.41575 AU	morning set	4176 Feb 04 22:59	6°♄20'38	
				max. Earth dist.	4176 Feb 14 08:50	21°♄12'15	1.43390 AU
superior conj	4175 Mar 11 17:52	21°♄09'17	-2°03'46		4176 Feb 19 18:06	0°♄	
minimum elong	4175 Mar 11 20:56	21°♄22'45	2°03'38				
	4175 Mar 16 16:59	0°♄		superior conj	4176 Feb 20 17:02	1°♄35'12	-2°07'10
evening rise	4175 Mar 22 12:02	10°♄36'22		minimum elong	4176 Feb 20 15:24	1°♄28'25	2°07'09
asc. node	4175 Mar 29 18:38	23°♄44'01		evening rise	4176 Mar 04 01:34	22°♄46'56	
	4175 Apr 02 15:21	0°♄			4176 Mar 08 04:25	0°♄	
evening max el	4175 Apr 07 20:10	6°♄33'57	18°11'55	asc. node	4176 Mar 15 15:40	12°♄23'41	
retrograde	4175 Apr 14 18:08	10°♄02'49		evening max el	4176 Mar 21 08:19	19°♄42'20	18°07'24
evening set	4175 Apr 17 06:43	9°♄35'41		retrograde	4176 Mar 27 20:02	23°♄04'55	
inferior conj	4175 Apr 24 04:49	4°♄48'19	2°51'42	evening set	4176 Mar 30 14:37	22°♄27'02	
minimum elong	4175 Apr 24 08:08	4°♄40'51	2°50'58	inferior conj	4176 Apr 05 22:38	17°♄19'34	3°25'12
min. Earth dist.	4175 Apr 27 13:35	1°♄48'26	0.59922 AU	minimum elong	4176 Apr 06 00:26	17°♄14'56	3°25'00
	4175 Apr 29 20:41	30°♄♂		min. Earth dist.	4176 Apr 08 21:20	14°♄18'52	0.62091 AU
morning rise	4175 May 01 07:06	29°♄03'16		morning rise	4176 Apr 12 08:42	11°♄18'31	
desc. node	4175 May 05 16:46	27°♄16'51		direct	4176 Apr 19 04:59	8°♄49'53	
direct	4175 May 07 18:52	27°♄04'39		desc. node	4176 Apr 21 13:49	9°♄06'16	
	4175 May 16 04:09	0°♄		morning max el	4176 May 03 07:55	16°♄48'48	27°52'01
morning max el	4175 May 22 02:58	4°♄56'09	27°33'34		4176 May 14 05:35	0°♄	
	4175 Jun 09 16:43	0°♄			4176 Jun 01 09:07	0°♄	
morning set	4175 Jun 22 19:29	24°♄36'58		morning set	4176 Jun 05 21:46	8°♄55'57	
	4175 Jun 25 08:39	0°♄		max. Earth dist.	4176 Jun 11 13:42	20°♄50'19	1.32383 AU
asc. node	4175 Jun 25 17:55	0°♄49'45		asc. node	4176 Jun 11 14:58	20°♄57'09	
max. Earth dist.	4175 Jun 29 05:05	8°♄22'40	1.32034 AU				
				superior conj	4176 Jun 13 09:22	24°♄47'16	0°18'26
superior conj	4175 Jun 29 23:38	10°♄04'49	0°43'11	minimum elong	4176 Jun 13 08:31	24°♄42'37	0°18'15
minimum elong	4175 Jun 29 21:52	9°♄55'02	0°42'50		4176 Jun 15 18:37	0°♄	
evening rise	4175 Jul 06 19:14	24°♄57'04		evening rise	4176 Jun 20 06:51	9°♄46'01	
	4175 Jul 09 05:10	0°♄			4176 Jun 30 16:09	0°♄	
	4175 Jul 26 18:22	0°♄		evening max el	4176 Jul 15 04:40	19°♄42'03	24°18'05
desc. node	4175 Aug 01 16:03	7°♄04'38		desc. node	4176 Jul 18 13:04	22°♄35'12	
evening max el	4175 Aug 03 14:35	9°♄01'27	25°46'10	retrograde	4176 Jul 29 00:45	26°♄40'48	
retrograde	4175 Aug 17 13:45	16°♄08'20		evening set	4176 Aug 02 20:10	25°♄49'16	
evening set	4175 Aug 23 17:10	14°♄39'05		min. Earth dist.	4176 Aug 08 15:28	22°♄54'32	0.56573 AU
min. Earth dist.	4175 Aug 28 02:44	12°♄02'10	0.58427 AU	inferior conj	4176 Aug 11 05:56	21°♄16'28	-5°07'56
inferior conj	4175 Aug 31 07:37	9°♄44'14	-5°05'36	minimum elong	4176 Aug 11 03:20	21°♄20'36	5°07'45
minimum elong	4175 Aug 31 10:37	9°♄38'48	5°05'21	morning rise	4176 Aug 19 13:05	17°♄15'25	
morning rise	4175 Sep 08 06:19	5°♄22'22		direct	4176 Aug 22 05:36	16°♄56'11	
direct	4175 Sep 10 17:32	5°♄02'53		morning max el	4176 Aug 31 21:20	21°♄26'11	19°38'22
morning max el	4175 Sep 19 00:58	9°♄00'47	18°41'20	asc. node	4176 Sep 07 14:12	29°♄43'34	
asc. node	4175 Sep 21 17:09	11°♄56'16			4176 Sep 07 18:31	0°♄	
	4175 Oct 02 17:12	0°♄		morning set	4176 Sep 18 10:40	19°♄32'00	
morning set	4175 Oct 05 08:19	5°♄04'36			4176 Sep 23 14:57	0°♄	
superior conj	4175 Oct 14 00:32	21°♄49'30	1°30'07	superior conj	4176 Sep 26 08:50	5°♄28'34	1°41'18
minimum elong	4175 Oct 14 03:36	22°♄03'57	1°29'51	minimum elong	4176 Sep 26 10:16	5°♄35'37	1°41'15
	4175 Oct 18 10:50	0°♄		max. Earth dist.	4176 Oct 02 10:01	17°♄05'11	1.37549 AU
max. Earth dist.	4175 Oct 21 05:39	4°♄57'50	1.39629 AU	evening rise	4176 Oct 06 04:12	23°♄55'28	
evening rise	4175 Oct 25 06:44	11°♄56'05			4176 Oct 09 15:44	0°♄	
desc. node	4175 Oct 28 15:24	17°♄31'18		desc. node	4176 Oct 14 12:24	8°♄05'15	
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


































































































































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retrograde	4176 Nov 22 22:40	21° ♊ 56'56		minimum elong	4177 Sep 10 04:12	19° ♎ 40'18	1°44'08
evening set	4176 Nov 28 18:52	19° ♊ 30'49		max. Earth dist.	4177 Sep 14 18:42	28° ♎ 57'04	1.35674 AU
min. Earth dist.	4176 Dec 03 05:20	14° ♊ 35'53	0.67270 AU		4177 Sep 15 07:32	0° ♎	
inferior conj	4176 Dec 04 08:50	13° ♊ 06'47	-0°03'54	evening rise	4177 Sep 18 21:09	6° ♎ 49'54	
minimum elong	4176 Dec 04 08:56	13° ♊ 06'29	0°03'51	desc. node	4177 Oct 01 09:24	28° ♎ 26'02	
transit middle	4176 Dec 04 08:56	13° ♊ 06'29	0°03'51		4177 Oct 02 09:16	0° ♎	
transit begin	4176 Dec 04 06:14	13° ♊ 15'16		evening max el	4177 Oct 24 09:58	28° ♎ 41'24	26°23'59
transit end	4176 Dec 04 11:39	12° ♊ 57'42			4177 Oct 25 19:39	0° ♊	
asc. node	4176 Dec 04 13:24	12° ♊ 52'00		retrograde	4177 Nov 06 05:30	5° ♊ 53'39	
morning rise	4176 Dec 09 23:18	7° ♊ 10'20		evening set	4177 Nov 12 15:00	3° ♊ 16'57	
direct	4176 Dec 13 09:33	6° ♊ 02'36			4177 Nov 15 21:15	30° ♊	
morning max el	4176 Dec 20 13:34	10° ♊ 03'36	19°25'14	min. Earth dist.	4177 Nov 16 18:32	28° ♊ 57'20	0.66376 AU
greatest brilliancy	4177 Jan 02 19:19	27° ♊ 43'11	-0.7m	inferior conj	4177 Nov 18 09:19	26° ♊ 59'27	-1°02'25
	4177 Jan 04 07:39	0° ♊		minimum elong	4177 Nov 18 11:01	26° ♊ 54'17	1°01'41
desc. node	4177 Jan 10 11:40	9° ♊ 25'42		asc. node	4177 Nov 21 10:27	23° ♊ 31'12	
morning set	4177 Jan 13 21:10	14° ♊ 40'17		morning rise	4177 Nov 24 07:39	21° ♊ 12'50	
	4177 Jan 23 17:23	0° ♊		direct	4177 Nov 27 07:49	20° ♊ 21'41	
max. Earth dist.	4177 Jan 26 21:59	5° ♊ 01'38	1.44660 AU	morning max el	4177 Dec 04 00:07	24° ♊ 01'21	18°36'51
					4177 Dec 08 23:04	0° ♊	
superior conj	4177 Jan 30 14:37	10° ♊ 53'35	-1°52'27	morning set	4177 Dec 24 16:21	24° ♊ 07'58	
minimum elong	4177 Jan 30 07:04	10° ♊ 23'27	1°51'55	desc. node	4177 Dec 28 08:41	29° ♊ 57'46	
	4177 Feb 11 08:17	0° ♊			4177 Dec 28 09:15	0° ♊	
evening rise	4177 Feb 13 18:30	4° ♊ 02'15					
	4177 Mar 02 04:53	0° ♊		superior conj	4178 Jan 09 18:51	19° ♊ 30'24	-1°18'34
asc. node	4177 Mar 02 12:41	0° ♊ 24'33		minimum elong	4178 Jan 09 09:55	18° ♊ 55'24	1°17'33
evening max el	4177 Mar 04 20:56	3° ♊ 03'40	18°21'49	max. Earth dist.	4178 Jan 09 15:41	19° ♊ 18'00	1.45246 AU
retrograde	4177 Mar 11 08:00	6° ♊ 33'18			4178 Jan 16 11:07	0° ♊	
evening set	4177 Mar 14 08:32	5° ♊ 43'34		evening rise	4178 Jan 25 12:09	14° ♊ 20'02	
inferior conj	4177 Mar 20 06:19	0° ♊ 17'28	3°36'05	greatest brilliancy	4178 Feb 02 22:05	27° ♊ 44'30	-0.8m
minimum elong	4177 Mar 20 06:24	0° ♊ 17'15	3°36'06		4178 Feb 04 08:31	0° ♊	
	4177 Mar 20 12:24	30° ♊		evening max el	4178 Feb 16 07:30	16° ♊ 32'10	18°54'12
min. Earth dist.	4177 Mar 22 14:26	27° ♊ 37'03	0.64049 AU	asc. node	4178 Feb 17 09:43	17° ♊ 35'08	
morning rise	4177 Mar 26 03:27	24° ♊ 08'12		retrograde	4178 Feb 23 02:12	20° ♊ 20'27	
direct	4177 Apr 01 23:35	21° ♊ 21'30		evening set	4178 Feb 26 09:14	19° ♊ 17'55	
desc. node	4177 Apr 08 10:51	23° ♊ 24'19		inferior conj	4178 Mar 04 00:06	13° ♊ 34'47	3°29'59
morning max el	4177 Apr 15 16:42	29° ♊ 18'39	27°33'35	minimum elong	4178 Mar 03 22:48	13° ♊ 38'48	3°29'52
	4177 Apr 16 08:55	0° ♊		min. Earth dist.	4178 Mar 05 16:34	11° ♊ 28'38	0.65652 AU
	4177 May 08 03:08	0° ♊		morning rise	4178 Mar 09 11:59	7° ♊ 21'55	
morning set	4177 May 20 16:32	22° ♊ 49'38		direct	4178 Mar 16 01:05	4° ♊ 31'22	
	4177 May 24 05:49	0° ♊		desc. node	4178 Mar 26 07:53	9° ♊ 36'57	
max. Earth dist.	4177 May 25 15:16	2° ♊ 53'24	1.33168 AU	morning max el	4178 Mar 29 02:32	12° ♊ 14'14	26°43'36
					4178 Apr 12 08:08	0° ♊	
superior conj	4177 May 28 15:27	9° ♊ 14'45	-0°08'57		4178 Apr 30 17:36	0° ♊	
minimum elong	4177 May 28 15:54	9° ♊ 17'08	0°08'51	morning set	4178 May 04 00:24	6° ♊ 07'24	
behind sun begin	4177 May 28 11:22	8° ♊ 53'00		max. Earth dist.	4178 May 08 06:25	14° ♊ 24'26	1.34424 AU
behind sun end	4177 May 28 20:25	9° ♊ 41'18					
asc. node	4177 May 29 12:00	11° ♊ 04'42		superior conj	4178 May 12 15:37	23° ♊ 19'58	-0°37'54
evening rise	4177 Jun 04 18:26	24° ♊ 31'02		minimum elong	4178 May 12 17:38	23° ♊ 30'25	0°37'31
	4177 Jun 07 09:41	0° ♊			4178 May 15 20:08	0° ♊	
	4177 Jun 26 15:45	0° ♊		asc. node	4178 May 16 09:01	1° ♊ 07'46	
evening max el	4177 Jun 26 18:18	0° ♊ 06'12	22°41'05	evening rise	4178 May 20 04:03	9° ♊ 05'21	
desc. node	4177 Jul 05 10:04	5° ♊ 53'03			4178 May 31 07:07	0° ♊	
retrograde	4177 Jul 09 23:21	6° ♊ 40'37		evening max el	4178 Jun 08 15:12	10° ♊ 45'08	21°09'56
evening set	4177 Jul 13 06:19	6° ♊ 16'52		retrograde	4178 Jun 20 12:27	16° ♊ 35'16	
min. Earth dist.	4177 Jul 21 02:18	2° ♊ 50'23	0.55274 AU	desc. node	4178 Jun 22 07:06	16° ♊ 27'53	
inferior conj	4177 Jul 22 09:47	2° ♊ 05'24	-4°23'13	evening set	4178 Jun 22 18:35	16° ♊ 23'26	
minimum elong	4177 Jul 22 01:54	2° ♊ 16'40	4°21'33	inferior conj	4178 Jul 02 03:23	12° ♊ 25'21	-2°49'50
	4177 Jul 26 06:04	30° ♊		minimum elong	4178 Jul 01 19:50	12° ♊ 35'58	2°47'22
morning rise	4177 Jul 30 23:38	28° ♊ 14'38		min. Earth dist.	4178 Jul 02 13:22	12° ♊ 11'20	0.54825 AU
direct	4177 Aug 02 23:47	27° ♊ 53'45		morning rise	4178 Jul 10 21:23	8° ♊ 27'25	
	4177 Aug 10 03:12	0° ♊		direct	4178 Jul 14 09:19	8° ♊ 01'01	
morning max el	4177 Aug 14 05:57	3° ♊ 07'54	20°56'34	morning max el	4178 Jul 27 03:22	14° ♊ 04'55	22°32'13
asc. node	4177 Aug 25 11:15	18° ♊ 15'42			4178 Aug 08 05:43	0° ♊	
	4177 Aug 31 16:16	0° ♊		asc. node	4178 Aug 12 08:17	7° ♊ 20'54	
morning set	4177 Sep 02 18:09	4° ♊ 14'35		morning set	4178 Aug 18 04:39	19° ♊ 05'28	
					4178 Aug 23 07:35	0° ♊	

superior conj	4178 Aug 25 07:30	4°♎15'27	1°40'03	superior conj	4179 Aug 09 15:37	19°♏03'34	1°30'06
minimum elong	4178 Aug 25 06:09	4°♎08'17	1°39'58	minimum elong	4179 Aug 09 13:32	18°♏52'15	1°29'53
max. Earth dist.	4178 Aug 28 11:52	10°♎56'09	1.34145 AU	max. Earth dist.	4179 Aug 11 13:49	23°♏13'11	1.33019 AU
evening rise	4178 Sep 02 05:03	20°♎26'29			4179 Aug 14 18:38	0°♎	
	4178 Sep 07 06:28	0°♎		evening rise	4179 Aug 16 23:58	4°♎34'15	
desc. node	4178 Sep 18 06:25	18°♎26'40			4179 Aug 30 22:55	0°♎	
	4178 Sep 26 08:07	0°♎		desc. node	4179 Sep 05 03:26	7°♎58'33	
evening max el	4178 Oct 06 22:38	12°♎14'12	27°08'23	evening max el	4179 Sep 19 09:49	25°♎25'41	27°26'36
retrograde	4178 Oct 20 06:31	19°♎31'34			4179 Sep 25 02:51	0°♎	
evening set	4178 Oct 27 03:22	16°♎50'29		retrograde	4179 Oct 03 01:18	2°♎42'15	
min. Earth dist.	4178 Oct 31 00:35	13°♎06'26	0.65131 AU	evening set	4179 Oct 10 05:08	0°♎05'47	
inferior conj	4178 Nov 02 03:18	10°♎44'37	-2°03'41		4179 Oct 10 08:19	30°♎♎	
minimum elong	4178 Nov 02 06:48	10°♎34'49	2°02'17	min. Earth dist.	4179 Oct 13 21:17	26°♎54'46	0.63545 AU
morning rise	4178 Nov 08 11:13	5°♎10'58		inferior conj	4179 Oct 16 12:12	24°♎16'08	-3°05'10
asc. node	4178 Nov 08 07:30	5°♎15'29		minimum elong	4179 Oct 16 17:22	24°♎03'06	3°03'24
direct	4178 Nov 11 03:34	4°♎32'34		morning rise	4179 Oct 23 06:59	18°♎58'58	
morning max el	4178 Nov 17 15:10	8°♎00'35	18°05'11	direct	4179 Oct 25 18:00	18°♎29'40	
	4178 Dec 02 15:26	0°♎♎		asc. node	4179 Oct 26 04:33	18°♎30'37	
morning set	4178 Dec 05 17:13	5°♎05'01		morning max el	4179 Nov 01 07:52	21°♎54'47	17°50'53
desc. node	4178 Dec 15 05:43	20°♎38'36			4179 Nov 07 13:14	0°♎	
				morning set	4179 Nov 17 20:12	17°♎17'48	
superior conj	4178 Dec 20 00:56	28°♎19'12	-0°32'35		4179 Nov 25 05:48	0°♎♎	
minimum elong	4178 Dec 19 20:52	28°♎03'02	0°32'02				
	4178 Dec 21 02:22	0°♎		superior conj	4179 Nov 30 03:15	8°♎09'50	0°13'44
max. Earth dist.	4178 Dec 23 11:16	3°♎44'37	1.45088 AU	minimum elong	4179 Nov 30 04:42	8°♎15'48	0°13'31
evening rise	4179 Jan 05 08:51	23°♎50'41		behind sun begin	4179 Nov 29 23:24	7°♎54'00	
	4179 Jan 09 08:29	0°♎		behind sun end	4179 Nov 30 10:00	8°♎37'35	
greatest brilliancy	4179 Jan 18 15:45	14°♎10'54	-0.7m	desc. node	4179 Dec 02 02:44	11°♎24'19	
evening max el	4179 Jan 30 14:01	0°♎03'52	19°43'02	max. Earth dist.	4179 Dec 06 05:20	18°♎02'04	1.44213 AU
	4179 Jan 30 12:30	0°♎			4179 Dec 13 19:56	0°♎	
asc. node	4179 Feb 04 06:45	3°♎41'45		evening rise	4179 Dec 15 18:42	3°♎00'38	
retrograde	4179 Feb 06 23:34	4°♎20'51			4180 Jan 02 21:38	0°♎	
evening set	4179 Feb 10 14:14	3°♎04'32		evening max el	4180 Jan 13 15:09	13°♎36'07	20°46'00
	4179 Feb 13 18:25	30°♎♎		retrograde	4180 Jan 21 21:45	18°♎29'24	
inferior conj	4179 Feb 16 00:51	27°♎06'25	3°10'56	asc. node	4180 Jan 22 03:48	18°♎29'03	
minimum elong	4179 Feb 15 22:43	27°♎13'30	3°10'32	evening set	4180 Jan 25 21:27	16°♎58'24	
min. Earth dist.	4179 Feb 17 02:35	25°♎41'13	0.66837 AU	inferior conj	4180 Jan 31 06:01	10°♎47'55	2°41'38
morning rise	4179 Feb 21 06:59	20°♎52'29		minimum elong	4180 Jan 31 03:33	10°♎56'24	2°40'58
direct	4179 Feb 27 08:20	18°♎10'23		min. Earth dist.	4180 Jan 31 18:30	10°♎05'05	0.67604 AU
morning max el	4179 Mar 11 11:44	25°♎24'53	25°30'39	morning rise	4180 Feb 05 09:29	4°♎34'34	
desc. node	4179 Mar 13 04:54	27°♎12'48		direct	4180 Feb 10 20:42	2°♎09'27	
	4179 Mar 15 16:08	0°♎♎		morning max el	4180 Feb 21 20:22	8°♎42'46	24°04'36
	4179 Apr 05 20:22	0°♎♎		desc. node	4180 Feb 28 01:57	15°♎47'32	
morning set	4179 Apr 16 17:06	18°♎37'09			4180 Mar 09 13:48	0°♎♎	
max. Earth dist.	4179 Apr 20 10:31	25°♎31'29	1.36131 AU	morning set	4180 Mar 28 12:55	0°♎02'52	
	4179 Apr 22 18:40	0°♎♎			4180 Mar 28 12:15	0°♎♎	
				max. Earth dist.	4180 Apr 01 06:55	6°♎38'15	1.38180 AU
superior conj	4179 Apr 26 07:12	6°♎55'39	-1°06'59				
minimum elong	4179 Apr 26 10:48	7°♎13'35	1°06'22	superior conj	4180 Apr 08 10:41	19°♎51'50	-1°33'58
asc. node	4179 May 03 06:03	21°♎02'31		minimum elong	4180 Apr 08 15:22	20°♎14'11	1°33'21
evening rise	4179 May 04 09:37	23°♎22'48			4180 Apr 13 16:06	0°♎♎	
	4179 May 07 17:04	0°♎♎		evening rise	4180 Apr 17 08:29	7°♎15'22	
evening max el	4179 May 21 23:54	22°♎00'43	19°54'28	asc. node	4180 Apr 19 03:05	10°♎43'52	
retrograde	4179 Jun 01 03:59	26°♎58'10			4180 Apr 30 09:50	0°♎♎	
evening set	4179 Jun 03 02:45	26°♎48'03		evening max el	4180 May 03 20:16	3°♎57'21	18°58'45
desc. node	4179 Jun 09 04:06	24°♎28'32		retrograde	4180 May 12 09:56	8°♎08'33	
inferior conj	4179 Jun 12 01:09	22°♎47'13	-0°51'15	evening set	4180 May 14 11:59	7°♎54'40	
minimum elong	4179 Jun 11 22:47	22°♎50'50	0°50'22	inferior conj	4180 May 22 15:33	3°♎39'13	0°58'35
min. Earth dist.	4179 Jun 14 02:01	21°♎32'59	0.55341 AU	minimum elong	4180 May 22 17:46	3°♎35'18	0°57'48
morning rise	4179 Jun 20 16:52	18°♎23'00		min. Earth dist.	4180 May 25 17:42	1°♎29'44	0.56711 AU
direct	4179 Jun 24 22:58	17°♎43'21		desc. node	4180 May 26 01:08	1°♎17'19	
morning max el	4179 Jul 08 18:09	24°♎32'41	24°15'43		4180 May 28 02:46	30°♎♎♎	
	4179 Jul 13 18:40	0°♎♎		morning rise	4180 May 30 20:20	28°♎39'02	
asc. node	4179 Jul 30 05:19	26°♎50'41		direct	4180 Jun 05 01:29	27°♎34'28	
	4179 Jul 31 18:33	0°♎♎			4180 Jun 13 00:27	0°♎♎	
morning set	4179 Aug 02 16:23	3°♎59'28		morning max el	4180 Jun 19 08:46	4°♎58'09	25°52'12
					4180 Jul 07 11:52	0°♎♎	

asc. node	4180 Jul 16 02:22	16°☿38'14		morning set	4181 Jul 01 13:03	3°☿35'35	
morning set	4180 Jul 17 03:46	18°☿51'33		asc. node	4181 Jul 02 23:24	6°☿37'21	
	4180 Jul 22 07:11	0°♊					
superior conj	4180 Jul 24 02:33	3°♊58'36	1°15'12	superior conj	4181 Jul 08 14:23	18°☿53'36	0°56'00
minimum elong	4180 Jul 24 00:13	3°♊45'46	1°14'51	minimum elong	4181 Jul 08 12:16	18°☿41'57	0°55'36
max. Earth dist.	4180 Jul 24 22:11	5°♊46'30	1.32308 AU	max. Earth dist.	4181 Jul 08 09:32	18°☿26'51	1.32010 AU
evening rise	4180 Jul 31 02:41	19°♊03'59		evening rise	4181 Jul 13 16:01	0°♊	
	4180 Aug 05 13:59	0°♋			4181 Jul 15 10:30	3°♊46'54	
desc. node	4180 Aug 22 00:27	26°♋49'51		desc. node	4181 Jul 29 09:45	0°♋	
	4180 Aug 24 10:49	0°♌		evening max el	4181 Aug 08 21:28	14°♋43'14	
evening max el	4180 Aug 31 17:07	8°♌02'53	27°13'25	retrograde	4181 Aug 13 18:09	19°♋54'49	26°26'55
retrograde	4180 Sep 14 13:21	15°♌16'35		evening set	4181 Aug 27 17:19	27°♋04'45	
evening set	4180 Sep 21 16:38	12°♌56'45		min. Earth dist.	4181 Sep 03 09:01	25°♋14'31	
min. Earth dist.	4180 Sep 25 07:32	10°♌10'49	0.61659 AU	inferior conj	4181 Sep 07 07:37	22°♋39'16	0.59602 AU
inferior conj	4180 Sep 28 08:58	7°♌26'44	-4°02'37	minimum elong	4181 Sep 10 14:02	20°♋06'16	-4°48'43
minimum elong	4180 Sep 28 14:59	7°♌13'15	4°01'03	morning rise	4181 Sep 10 19:00	19°♋56'33	4°47'57
morning rise	4180 Oct 05 15:09	2°♌29'22		direct	4181 Sep 18 07:07	15°♋31'04	
direct	4180 Oct 07 23:37	2°♌06'00		morning max el	4181 Sep 20 16:13	15°♋10'54	
asc. node	4180 Oct 12 01:36	3°♌19'05		asc. node	4181 Sep 28 09:37	18°♋56'19	18°18'18
morning max el	4180 Oct 14 23:10	5°♌36'43	17°54'50	asc. node	4181 Sep 28 22:39	19°♋28'42	
morning set	4180 Oct 30 18:54	0°♌27'11		morning set	4181 Oct 06 12:15	0°♌	
	4180 Oct 30 12:55	0°♌			4181 Oct 14 07:31	14°♌15'43	
					4181 Oct 22 15:57	0°♌	
superior conj	4180 Nov 10 08:25	19°♌19'49	0°51'57	superior conj	4181 Oct 23 13:36	1°♌39'18	1°19'17
minimum elong	4180 Nov 10 12:23	19°♌36'56	0°51'26	minimum elong	4181 Oct 23 17:25	1°♌56'41	1°18'52
	4180 Nov 16 15:43	0°♍		max. Earth dist.	4181 Oct 31 03:08	15°♌01'53	1.40828 AU
desc. node	4180 Nov 17 23:47	2°♍12'02		evening rise	4181 Nov 04 19:14	22°♌51'07	
max. Earth dist.	4180 Nov 17 18:57	1°♍52'14	1.42731 AU	desc. node	4181 Nov 04 20:48	22°♌57'32	
evening rise	4180 Nov 24 09:48	12°♍30'12			4181 Nov 09 05:47	0°♍	
	4180 Dec 05 21:27	0°♎			4181 Nov 29 21:48	0°♎	
evening max el	4180 Dec 26 10:49	27°♎10'02	21°59'32	evening max el	4181 Dec 09 02:15	10°♎47'02	23°18'54
	4180 Dec 29 13:32	0°♏		retrograde	4181 Dec 19 13:05	16°♎58'10	
retrograde	4181 Jan 04 18:46	2°♏43'12		evening set	4181 Dec 24 11:48	14°♎55'44	
asc. node	4181 Jan 08 00:50	1°♏46'29		asc. node	4181 Dec 25 21:52	13°♎34'21	
evening set	4181 Jan 09 05:11	0°♏56'40		inferior conj	4181 Dec 29 21:19	8°♎31'13	1°18'58
	4181 Jan 10 06:16	30°♏☿		minimum elong	4181 Dec 29 19:37	8°♎37'05	1°18'17
inferior conj	4181 Jan 14 13:29	24°♎37'14	2°03'53	min. Earth dist.	4181 Dec 29 10:56	9°♎06'54	0.67985 AU
minimum elong	4181 Jan 14 11:10	24°♎45'16	2°03'05	morning rise	4182 Jan 04 03:21	2°♎23'59	
min. Earth dist.	4181 Jan 14 14:06	24°♎35'04	0.67980 AU	direct	4182 Jan 08 09:30	0°♎43'10	
morning rise	4181 Jan 19 17:00	18°♎25'59		morning max el	4182 Jan 16 22:11	5°♎40'01	21°12'03
direct	4181 Jan 24 13:25	16°♎22'23		desc. node	4182 Jan 31 20:04	24°♎52'53	
morning max el	4181 Feb 03 06:40	22°♎06'52	22°35'30		4182 Feb 04 08:09	0°♏	
	4181 Feb 10 02:22	0°♏		morning set	4182 Feb 16 18:35	18°♏58'30	
desc. node	4181 Feb 13 23:01	5°♏04'55			4182 Feb 23 15:44	0°♐	
	4181 Mar 02 21:39	0°♑		max. Earth dist.	4182 Feb 24 04:21	0°♑51'34	1.42398 AU
morning set	4181 Mar 09 05:55	10°♑10'06					
max. Earth dist.	4181 Mar 14 02:38	18°♑17'28	1.40364 AU	superior conj	4182 Mar 03 11:14	13°♑03'51	-2°07'08
	4181 Mar 20 19:26	0°♒		minimum elong	4182 Mar 03 12:41	13°♑10'02	2°07'07
					4182 Mar 13 01:59	0°♒	
superior conj	4181 Mar 21 21:41	1°♒58'14	-1°55'32	evening rise	4182 Mar 14 20:49	3°♒13'10	
minimum elong	4181 Mar 22 02:03	2°♒18'01	1°55'12	asc. node	4182 Mar 23 21:09	19°♒04'15	
evening rise	4181 Mar 31 21:30	20°♒35'00		evening max el	4182 Mar 31 12:08	29°♒27'24	18°07'45
	4181 Apr 05 22:41	0°♓			4182 Apr 01 01:53	0°♓	
asc. node	4181 Apr 06 00:08	0°♓06'32		retrograde	4182 Apr 07 04:21	2°♓51'31	
evening max el	4181 Apr 17 01:29	16°♓29'15	18°23'21	evening set	4182 Apr 09 19:37	2°♓19'57	
retrograde	4181 Apr 24 10:35	20°♓08'47			4182 Apr 13 13:50	30°♓♒	
evening set	4181 Apr 26 19:18	19°♓47'17		inferior conj	4182 Apr 16 11:14	27°♒24'12	3°09'03
inferior conj	4181 May 04 03:21	15°♓12'16	2°19'36	minimum elong	4182 Apr 16 14:00	27°♒17'37	3°08'34
minimum elong	4181 May 04 07:00	15°♓04'44	2°18'36	min. Earth dist.	4182 Apr 19 16:46	24°♒20'51	0.60854 AU
min. Earth dist.	4181 May 07 13:59	12°♓23'38	0.58666 AU	morning rise	4182 Apr 23 06:19	21°♒31'27	
morning rise	4181 May 11 15:40	9°♓40'35		direct	4182 Apr 29 23:05	19°♒18'36	
desc. node	4181 May 12 22:11	9°♓04'04		desc. node	4182 Apr 29 19:14	19°♒18'40	
direct	4181 May 17 18:23	8°♓01'48		morning max el	4182 May 14 05:12	27°♒14'22	27°46'06
morning max el	4181 Jun 01 03:52	15°♓46'48	27°05'59		4182 May 16 20:15	0°♓	
	4181 Jun 12 17:29	0°♔			4182 Jun 06 08:54	0°♔	
	4181 Jun 29 19:27	0°☿		morning set	4182 Jun 15 18:29	18°♔05'44	

asc. node	4182 Jun 19 20:26	26°II43'17			4183 May 29 14:56	0°II	
	4182 Jun 21 08:43	0°☾		morning set	4183 May 30 17:51	2°II14'26	
max. Earth dist.	4182 Jun 21 20:15	1°☾02'58	1.32125 AU	max. Earth dist.	4183 Jun 05 02:22	13°II21'26	1.32664 AU
				asc. node	4183 Jun 06 17:28	16°II51'04	
superior conj	4182 Jun 23 01:24	3°☾42'38	0°33'05				
minimum elong	4182 Jun 22 23:58	3°☾34'45	0°32'47	superior conj	4183 Jun 07 09:46	18°II19'07	0°07'07
evening rise	4182 Jun 29 21:19	18°☾35'59		minimum elong	4183 Jun 07 09:26	18°II17'17	0°07'02
	4182 Jul 05 11:14	0°♊		behind sun begin	4183 Jun 07 04:42	17°II51'40	
	4182 Jul 25 11:44	0°♊		behind sun end	4183 Jun 07 14:10	18°II42'55	
evening max el	4182 Jul 26 11:53	0°♊59'25	25°11'00		4183 Jun 12 19:00	0°☾	
desc. node	4182 Jul 26 18:28	1°♊15'02		evening rise	4183 Jun 14 09:07	3°☾23'55	
retrograde	4182 Aug 09 10:51	8°♊03'31			4183 Jun 28 18:36	0°♊	
evening set	4182 Aug 15 01:48	6°♊51'00		evening max el	4183 Jul 08 00:50	11°♊28'51	23°37'00
min. Earth dist.	4182 Aug 19 23:35	4°♊08'22	0.57596 AU	desc. node	4183 Jul 13 15:28	15°♊53'29	
inferior conj	4182 Aug 23 00:08	2°♊05'35	-5°11'32	retrograde	4183 Jul 21 15:57	18°♊19'05	
minimum elong	4182 Aug 23 01:02	2°♊04'04	5°11'30	evening set	4183 Jul 25 19:48	17°♊41'07	
	4182 Aug 26 05:50	30°♊♊		min. Earth dist.	4183 Aug 01 10:47	14°♊34'40	0.55938 AU
morning rise	4182 Aug 31 02:36	27°♊52'48		inferior conj	4183 Aug 03 13:58	13°♊18'11	-4°55'18
direct	4182 Sep 02 15:43	27°♊33'35		minimum elong	4183 Aug 03 08:44	13°♊26'03	4°54'39
	4182 Sep 09 10:09	0°♊		morning rise	4183 Aug 12 00:09	9°♊23'18	
morning max el	4182 Sep 11 11:54	1°♊43'59	19°02'46	direct	4183 Aug 14 19:53	9°♊03'29	
asc. node	4182 Sep 15 19:42	6°♊44'40		morning max el	4183 Aug 25 03:13	13°♊50'37	20°09'09
morning set	4182 Sep 28 05:48	28°♊31'49		asc. node	4183 Sep 02 16:43	24°♊52'20	
	4182 Sep 28 23:38	0°♊			4183 Sep 05 16:33	0°♊	
				morning set	4183 Sep 12 10:39	13°♊06'54	
superior conj	4182 Oct 06 13:29	14°♊53'32	1°35'58				
minimum elong	4182 Oct 06 15:53	15°♊05'04	1°35'48	superior conj	4183 Sep 20 03:02	28°♊48'21	1°43'26
max. Earth dist.	4182 Oct 13 08:00	27°♊30'24	1.38745 AU	minimum elong	4183 Sep 20 03:46	28°♊52'02	1°43'25
	4182 Oct 14 17:30	0°♊			4183 Sep 20 17:19	0°♊	
evening rise	4182 Oct 17 03:55	4°♊15'33		max. Earth dist.	4183 Sep 25 13:58	9°♊30'13	1.36721 AU
desc. node	4182 Oct 22 17:48	13°♊37'03		evening rise	4183 Sep 29 10:11	16°♊39'47	
	4182 Nov 02 08:31	0°♊			4183 Oct 07 02:22	0°♊	
evening max el	4182 Nov 21 15:19	24°♊27'57	24°37'51	desc. node	4183 Oct 09 14:47	4°♊06'25	
	4182 Nov 28 18:46	0°♊			4183 Oct 27 18:49	0°♊	
retrograde	4182 Dec 03 03:25	1°♊10'19		evening max el	4183 Nov 04 03:44	8°♊10'58	25°49'12
	4182 Dec 07 02:39	30°♊♊		retrograde	4183 Nov 16 13:07	15°♊15'08	
evening set	4182 Dec 08 15:43	28°♊52'23		evening set	4183 Nov 22 15:15	12°♊43'52	
asc. node	4182 Dec 12 18:55	24°♊15'52		min. Earth dist.	4183 Nov 26 22:43	8°♊04'03	0.66940 AU
min. Earth dist.	4182 Dec 13 06:35	23°♊37'29	0.67637 AU	inferior conj	4183 Nov 28 06:58	6°♊22'15	-0°28'15
inferior conj	4182 Dec 14 03:45	22°♊27'06	0°27'53	minimum elong	4183 Nov 28 07:42	6°♊19'55	0°27'55
minimum elong	4182 Dec 14 03:04	22°♊29'21	0°27'36	asc. node	4183 Nov 29 15:58	4°♊39'47	
morning rise	4182 Dec 19 14:31	16°♊26'01		morning rise	4183 Dec 04 00:33	0°♊29'50	
direct	4182 Dec 23 07:38	15°♊06'53			4183 Dec 04 23:02	30°♊♊	
morning max el	4182 Dec 30 21:22	19°♊24'38	20°00'04	direct	4183 Dec 07 06:21	29°♊29'32	
	4183 Jan 08 10:39	0°♊			4183 Dec 09 15:21	0°♊	
desc. node	4183 Jan 18 17:06	15°♊02'43		morning max el	4183 Dec 14 04:20	3°♊19'42	19°02'41
morning set	4183 Jan 26 15:00	27°♊07'47			4184 Jan 02 01:44	0°♊	
	4183 Jan 28 11:32	0°♊		morning set	4184 Jan 05 20:05	5°♊51'46	
max. Earth dist.	4183 Feb 06 14:15	14°♊19'41	1.44012 AU	desc. node	4184 Jan 05 14:06	5°♊28'25	
				max. Earth dist.	4184 Jan 20 06:21	28°♊25'36	1.45003 AU
					4184 Jan 21 06:20	0°♊	
superior conj	4183 Feb 11 23:18	23°♊00'14	-2°03'21				
minimum elong	4183 Feb 11 19:01	22°♊42'45	2°03'11				
	4183 Feb 16 05:14	0°♊		superior conj	4184 Jan 22 11:45	1°♊56'06	-1°40'11
evening rise	4183 Feb 25 02:02	15°♊00'50		minimum elong	4184 Jan 22 02:44	1°♊20'31	1°39'23
	4183 Mar 05 21:40	0°♊		evening rise	4184 Feb 06 09:17	25°♊52'23	
asc. node	4183 Mar 10 18:11	7°♊28'44			4184 Feb 08 21:48	0°♊	
evening max el	4183 Mar 15 00:51	12°♊42'23	18°11'18	asc. node	4184 Feb 25 15:14	25°♊10'05	
retrograde	4183 Mar 21 11:00	16°♊06'07		evening max el	4184 Feb 26 12:52	26°♊07'30	18°33'23
evening set	4183 Mar 24 08:13	15°♊23'07		retrograde	4184 Mar 04 02:11	29°♊43'50	
inferior conj	4183 Mar 30 11:24	10°♊07'26	3°32'12	evening set	4184 Mar 07 05:24	28°♊48'40	
minimum elong	4183 Mar 30 12:27	10°♊04'36	3°32'08	inferior conj	4184 Mar 12 23:51	23°♊14'46	3°35'18
min. Earth dist.	4183 Apr 02 04:08	7°♊13'28	0.62963 AU	minimum elong	4184 Mar 12 23:17	23°♊16'26	3°35'17
morning rise	4183 Apr 05 15:33	4°♊02'27		min. Earth dist.	4184 Mar 15 01:09	20°♊47'57	0.64781 AU
direct	4183 Apr 12 12:50	1°♊24'37		morning rise	4184 Mar 18 16:36	17°♊03'28	
desc. node	4183 Apr 16 16:16	2°♊14'59		direct	4184 Mar 25 10:18	14°♊13'50	
morning max el	4183 Apr 26 11:55	9°♊23'09	27°48'33	desc. node	4184 Apr 02 13:19	17°♊26'18	
	4183 May 12 12:10	0°♊		morning max el	4184 Apr 07 21:38	22°♊06'11	27°15'46

	4184 Apr 14 19:52	0°♿		morning max el	4185 Mar 21 07:35	5°♿10'21	26°14'45
	4184 May 04 17:13	0°♿			4185 Apr 09 08:37	0°♿	
morning set	4184 May 13 08:24	15°♿53'50		morning set	4185 Apr 26 10:28	28°♿53'20	
max. Earth dist.	4184 May 18 00:05	25°♿12'06	1.33650 AU		4185 Apr 27 00:43	0°♿	
	4184 May 20 07:38	0°♿		max. Earth dist.	4185 Apr 30 10:25	6°♿31'11	1.35095 AU
superior conj	4184 May 21 13:35	2°♿37'25	-0°21'07	superior conj	4185 May 05 10:28	16°♿31'06	-0°50'22
minimum elong	4184 May 21 14:40	2°♿43'11	0°20'54	minimum elong	4185 May 05 13:11	16°♿44'55	0°49'51
asc. node	4184 May 23 14:30	6°♿56'58		asc. node	4185 May 10 11:33	26°♿57'15	
evening rise	4184 May 28 20:07	18°♿04'56			4185 May 11 22:43	0°♿	
	4184 Jun 03 18:01	0°♿		evening rise	4185 May 13 04:18	2°♿32'59	
evening max el	4184 Jun 18 16:24	21°♿54'04	22°00'43		4185 May 29 04:18	0°♿	
desc. node	4184 Jun 29 12:30	28°♿04'03		evening max el	4185 May 31 18:04	2°♿47'24	20°35'36
retrograde	4184 Jul 01 09:44	28°♿12'19		retrograde	4185 Jun 11 22:43	8°♿15'39	
evening set	4184 Jul 04 04:07	27°♿55'13		evening set	4185 Jun 13 23:26	8°♿05'35	
inferior conj	4184 Jul 13 11:47	23°♿50'41	-3°48'42	desc. node	4185 Jun 16 09:32	7°♿29'07	
minimum elong	4184 Jul 13 03:13	24°♿02'43	3°46'24	inferior conj	4185 Jun 23 05:26	4°♿08'14	-2°00'34
min. Earth dist.	4184 Jul 12 21:08	24°♿11'15	0.54964 AU	minimum elong	4185 Jun 22 23:48	4°♿16'21	1°58'32
morning rise	4184 Jul 22 03:58	19°♿59'49		min. Earth dist.	4185 Jun 24 09:06	3°♿28'23	0.54917 AU
direct	4184 Jul 25 08:24	19°♿37'22		morning rise	4185 Jul 01 23:25	0°♿00'47	
morning max el	4184 Aug 06 06:45	25°♿12'04	21°35'46		4185 Jul 02 00:35	30°♿♿	
	4184 Aug 10 16:40	0°♿		direct	4185 Jul 05 17:57	29°♿30'05	
asc. node	4184 Aug 19 13:45	13°♿39'20			4185 Jul 09 09:39	0°♿	
morning set	4184 Aug 26 19:37	27°♿53'34		morning max el	4185 Jul 19 00:50	5°♿55'10	23°16'12
	4184 Aug 27 19:50	0°♿			4185 Aug 04 21:58	0°♿	
				asc. node	4185 Aug 06 10:47	2°♿56'08	
superior conj	4184 Sep 03 02:09	13°♿11'18	1°43'11	morning set	4185 Aug 11 06:52	12°♿46'45	
minimum elong	4184 Sep 03 01:27	13°♿07'37	1°43'10				
max. Earth dist.	4184 Sep 07 01:54	21°♿22'38	1.34967 AU	superior conj	4185 Aug 18 07:46	27°♿53'09	1°36'29
evening rise	4184 Sep 11 09:56	29°♿53'04		minimum elong	4185 Aug 18 06:02	27°♿43'56	1°36'22
	4184 Sep 11 11:23	0°♿			4185 Aug 19 07:28	0°♿	
desc. node	4184 Sep 25 11:47	24°♿19'41		max. Earth dist.	4185 Aug 20 22:42	3°♿27'58	1.33605 AU
	4184 Sep 29 05:04	0°♿		evening rise	4185 Aug 25 22:59	13°♿44'43	
evening max el	4184 Oct 16 16:12	21°♿49'33	26°45'36		4185 Sep 03 15:52	0°♿	
retrograde	4184 Oct 29 17:35	29°♿05'26		desc. node	4185 Sep 12 08:50	14°♿09'45	
evening set	4184 Nov 05 08:24	26°♿25'34			4185 Sep 24 05:01	0°♿	
min. Earth dist.	4184 Nov 09 09:02	22°♿21'32	0.65890 AU	evening max el	4185 Sep 29 04:21	5°♿14'49	27°19'43
inferior conj	4184 Nov 11 04:57	20°♿12'26	-1°28'11	retrograde	4185 Oct 12 16:20	12°♿33'21	
minimum elong	4184 Nov 11 07:25	20°♿05'13	1°27'08	evening set	4185 Oct 19 16:43	9°♿52'48	
asc. node	4184 Nov 15 13:00	15°♿41'54		min. Earth dist.	4185 Oct 23 11:25	6°♿23'20	0.64492 AU
morning rise	4184 Nov 17 07:13	14°♿31'15		inferior conj	4185 Oct 25 19:26	3°♿52'59	-2°29'55
direct	4184 Nov 20 03:43	13°♿46'07		minimum elong	4185 Oct 25 23:41	3°♿41'34	2°28'19
morning max el	4184 Nov 26 17:14	17°♿19'39	18°21'21		4185 Oct 29 19:31	30°♿♿	
	4184 Dec 06 03:55	0°♿		morning rise	4185 Nov 01 07:52	28°♿26'01	
morning set	4184 Dec 16 03:46	15°♿57'48		asc. node	4185 Nov 02 10:02	28°♿03'24	
desc. node	4184 Dec 22 11:05	26°♿04'47		direct	4185 Nov 03 21:30	27°♿52'03	
	4184 Dec 24 22:13	0°♿			4185 Nov 08 22:53	0°♿	
				morning max el	4185 Nov 10 09:24	1°♿18'09	17°56'54
superior conj	4184 Dec 31 14:07	10°♿30'59	-0°59'51	morning set	4185 Nov 27 16:30	27°♿29'35	
minimum elong	4184 Dec 31 06:45	10°♿02'03	0°58'56		4185 Nov 29 04:13	0°♿	
max. Earth dist.	4185 Jan 02 01:11	12°♿48'35	1.45270 AU	desc. node	4185 Dec 09 08:07	16°♿48'19	
	4185 Jan 13 00:35	0°♿					
evening rise	4185 Jan 16 17:21	5°♿48'13		superior conj	4185 Dec 11 03:17	19°♿42'33	-0°12'24
greatest brilliancy	4185 Jan 27 09:53	22°♿31'10	-0.8m	minimum elong	4185 Dec 11 01:48	19°♿36'36	0°12'11
	4185 Feb 01 09:22	0°♿		behind sun begin	4185 Dec 10 18:57	19°♿08'58	
evening max el	4185 Feb 08 21:50	9°♿37'21	19°13'01	behind sun end	4185 Dec 11 08:40	20°♿04'11	
asc. node	4185 Feb 11 12:17	11°♿55'16		max. Earth dist.	4185 Dec 15 19:53	27°♿11'28	1.44801 AU
retrograde	4185 Feb 15 22:12	13°♿37'10			4185 Dec 17 14:37	0°♿	
evening set	4185 Feb 19 08:13	12°♿29'00		evening rise	4185 Dec 27 07:42	15°♿05'39	
inferior conj	4185 Feb 24 20:59	6°♿39'04	3°23'19		4186 Jan 06 02:22	0°♿	
minimum elong	4185 Feb 24 19:16	6°♿44'34	3°23'04	greatest brilliancy	4186 Jan 10 22:06	7°♿10'53	-0.6m
min. Earth dist.	4185 Feb 26 07:01	4°♿49'46	0.66207 AU	evening max el	4186 Jan 23 02:09	23°♿09'34	20°08'16
morning rise	4185 Mar 02 06:00	0°♿25'11		asc. node	4186 Jan 29 09:20	27°♿30'01	
	4185 Mar 02 17:41	30°♿♿		retrograde	4186 Jan 30 20:10	27°♿41'26	
direct	4185 Mar 08 14:23	27°♿36'57		evening set	4186 Feb 03 14:24	26°♿19'12	
	4185 Mar 15 05:35	0°♿		inferior conj	4186 Feb 08 23:56	20°♿15'37	2°59'38
desc. node	4185 Mar 20 10:20	4°♿17'43		minimum elong	4186 Feb 08 21:35	20°♿23'30	2°59'06

min. Earth dist.	4186 Feb 09 19:56	19°  08'08	0.67218 AU	minimum elong	4187 Jan 24 03:52	4°  09'42	2°25'49
morning rise	4186 Feb 14 04:34	14°  01'33		min. Earth dist.	4187 Jan 24 13:40	3°  35'47	0.67817 AU
direct	4186 Feb 20 00:08	11°  25'34			4187 Jan 27 07:23	30°  R 	
morning max el	4186 Mar 03 16:18	18°  24'24	24°54'50	morning rise	4187 Jan 29 09:30	27°  Z48'39	
desc. node	4186 Mar 07 07:22	22°  21'05		direct	4187 Feb 03 14:33	25°  Z32'07	
	4186 Mar 13 10:49	0°  H			4187 Feb 12 05:26	0° 	
	4186 Apr 02 10:11	0°  Y		morning max el	4187 Feb 14 01:04	1°  44'32	23°26'27
morning set	4186 Apr 08 19:02	10°  Y58'04		desc. node	4187 Feb 22 04:25	11°  16'01	
max. Earth dist.	4186 Apr 12 10:01	17°  Y32'00	1.36967 AU		4187 Mar 07 11:06	0°  H	
				morning set	4187 Mar 21 04:06	21°  H52'12	
superior conj	4186 Apr 18 21:24	29°  Y51'21	-1°18'53	max. Earth dist.	4187 Mar 25 05:16	28°  H49'37	1.39115 AU
minimum elong	4186 Apr 19 01:33	0°  B11'44	1°18'14		4187 Mar 25 21:19	0°  Y	
	4186 Apr 18 23:10	0°  B					
evening rise	4186 Apr 27 07:21	16°  B40'37		superior conj	4187 Apr 01 18:32	12°  Y28'42	-1°44'01
asc. node	4186 Apr 27 08:36	16°  B46'57		minimum elong	4187 Apr 01 23:20	12°  Y51'03	1°43'30
	4186 May 04 05:37	0°  II			4187 Apr 10 22:12	0°  B	
evening max el	4186 May 14 08:06	14°  II21'21	19°28'21	evening rise	4187 Apr 11 02:29	0°  B20'42	
retrograde	4186 May 23 18:51	18°  II57'12		asc. node	4187 Apr 14 05:40	6°  B21'25	
evening set	4186 May 25 18:14	18°  II46'02		evening max el	4187 Apr 27 08:44	26°  B34'32	18°41'10
inferior conj	4186 Jun 03 09:11	14°  II40'30	-0°01'55		4187 May 02 11:52	0°  II	
minimum elong	4186 Jun 03 09:05	14°  II40'38	0°01'54	retrograde	4187 May 05 08:31	0°  II29'54	
transit middle	4186 Jun 03 09:05	14°  II40'38	0°01'54	evening set	4187 May 07 13:30	0°  II13'01	
transit begin	4186 Jun 03 05:14	14°  II46'51			4187 May 08 07:29	30°  R 	
transit end	4186 Jun 03 12:57	14°  II34'25		inferior conj	4187 May 15 08:31	25°  B49'24	1°36'56
desc. node	4186 Jun 03 06:35	14°  II44'40		minimum elong	4187 May 15 11:44	25°  B43'20	1°35'54
min. Earth dist.	4186 Jun 05 23:07	13°  II01'15	0.55830 AU	min. Earth dist.	4187 May 18 16:14	23°  B20'52	0.57500 AU
morning rise	4186 Jun 11 21:10	10°  II01'10		desc. node	4187 May 21 03:37	21°  B42'46	
direct	4186 Jun 16 13:02	9°  II12'04		morning rise	4187 May 23 06:45	20°  B35'07	
morning max el	4186 Jun 30 14:40	16°  II18'07	24°58'33	direct	4187 May 28 21:54	19°  B16'42	
	4186 Jul 11 16:31	0°  E		morning max el	4187 Jun 12 06:35	26°  B49'57	26°27'08
asc. node	4186 Jul 24 07:50	22°  E34'06			4187 Jun 15 07:20	0°  II	
morning set	4186 Jul 26 18:37	27°  E40'11			4187 Jul 05 00:21	0°  E	
	4186 Jul 27 20:51	0°  Q		morning set	4187 Jul 11 05:17	12°  E29'10	
				asc. node	4187 Jul 11 04:54	12°  E27'09	
superior conj	4186 Aug 02 17:19	12°  Q44'54	1°24'21				
minimum elong	4186 Aug 02 15:04	12°  Q32'36	1°24'04	superior conj	4187 Jul 18 04:49	27°  E40'09	1°07'33
max. Earth dist.	4186 Aug 04 03:38	15°  Q51'57	1.32665 AU	minimum elong	4187 Jul 18 02:31	27°  E27'29	1°07'09
evening rise	4186 Aug 09 21:35	28°  Q02'59		max. Earth dist.	4187 Jul 18 13:51	28°  E30'00	1.32138 AU
	4186 Aug 10 20:33	0°  P			4187 Jul 19 06:11	0°  Q	
	4186 Aug 27 21:19	0°  E		evening rise	4187 Jul 25 02:45	12°  Q39'04	
desc. node	4186 Aug 30 05:53	3°  E25'58			4187 Aug 02 23:31	0°  P	
evening max el	4186 Sep 11 14:22	18°  E13'39	27°25'10	desc. node	4187 Aug 17 02:54	21°  P54'38	
retrograde	4186 Sep 25 08:25	25°  E29'01			4187 Aug 24 05:49	0°  E	
evening set	4186 Oct 02 12:54	22°  E58'26		evening max el	4187 Aug 24 19:26	0°  E32'41	26°57'40
min. Earth dist.	4186 Oct 06 03:57	19°  E59'03	0.62769 AU	retrograde	4187 Sep 07 16:48	7°  E43'48	
inferior conj	4186 Oct 08 23:34	17°  E16'36	-3°30'24	evening set	4187 Sep 14 16:46	5°  E35'20	
minimum elong	4186 Oct 09 05:15	17°  E02'56	3°28'38	min. Earth dist.	4187 Sep 18 09:39	2°  E55'59	0.60796 AU
morning rise	4186 Oct 15 23:09	12°  E07'09		inferior conj	4187 Sep 21 14:03	0°  E14'45	-4°24'12
direct	4186 Oct 18 08:40	11°  E40'45		minimum elong	4187 Sep 21 19:56	0°  E02'17	4°22'54
asc. node	4186 Oct 20 07:04	11°  E58'23			4187 Sep 21 21:00	30°  R 	
morning max el	4186 Oct 25 01:48	15°  E07'33	17°50'14	morning rise	4187 Sep 29 00:57	25°  P26'19	
	4186 Nov 04 09:51	0°  M		direct	4187 Oct 01 09:26	25°  P04'29	
morning set	4186 Nov 10 04:41	10°  M08'52		asc. node	4187 Oct 07 04:06	27°  P22'25	
				morning max el	4187 Oct 08 15:20	28°  P40'07	18°02'22
superior conj	4186 Nov 21 16:52	0°  J06'27	0°31'11		4187 Oct 09 21:49	0°  E	
minimum elong	4186 Nov 21 19:47	0°  J18'42	0°30'47	morning set	4187 Oct 24 09:52	23°  E36'18	
	4186 Nov 21 15:20	0°  J			4187 Oct 27 20:40	0°  M	
desc. node	4186 Nov 26 05:10	7°  J35'22					
max. Earth dist.	4186 Nov 28 12:16	11°  J19'10	1.43650 AU	superior conj	4187 Nov 03 08:44	11°  M46'56	1°04'55
evening rise	4186 Dec 06 17:49	24°  J19'32		minimum elong	4187 Nov 03 12:52	12°  M05'14	1°04'24
	4186 Dec 10 10:26	0°  Z		max. Earth dist.	4187 Nov 11 00:04	24°  M54'56	1.41960 AU
	4186 Dec 31 06:58	0° 		desc. node	4187 Nov 13 02:11	28°  M22'13	
evening max el	4187 Jan 06 01:04	6°  E43'29	21°16'16		4187 Nov 14 02:06	0°  J	
retrograde	4187 Jan 14 17:57	11°  E53'04		evening rise	4187 Nov 16 15:28	4°  J07'37	
asc. node	4187 Jan 16 06:21	11°  E40'34			4187 Dec 03 18:49	0°  Z	
evening set	4187 Jan 18 22:02	10°  E15'37		evening max el	4187 Dec 19 18:46	20°  Z18'35	22°32'57
inferior conj	4187 Jan 24 06:19	4°  E01'11	2°26'34	retrograde	4187 Dec 29 13:53	26°  Z07'56	

evening set	4188 Jan 03 05:28	24° Z 14'26		inferior conj	4188 Dec 22 21:34	1° Z 47'33	0°57'59
asc. node	4188 Jan 03 03:23	24° Z 18'43		minimum elong	4188 Dec 22 20:15	1° Z 52'02	0°57'28
inferior conj	4188 Jan 08 14:07	17° Z 52'28	1°45'37	min. Earth dist.	4188 Dec 22 06:30	2° Z 38'44	0.67877 AU
minimum elong	4188 Jan 08 12:01	17° Z 59'47	1°44'52		4188 Dec 24 05:38	30° R Z	
min. Earth dist.	4188 Jan 08 09:56	18° Z 06'58	0.68028 AU	morning rise	4188 Dec 28 05:22	25° Z 42'49	
morning rise	4188 Jan 13 18:27	11° Z 43'00		direct	4189 Jan 01 05:41	24° Z 11'43	
direct	4188 Jan 18 08:43	9° Z 49'10		morning max el	4189 Jan 09 07:57	28° Z 50'46	20°39'52
morning max el	4188 Jan 27 13:12	15° Z 12'10	21°59'01		4189 Jan 10 10:36	0° Z	
	4188 Feb 08 11:49	0° \approx		desc. node	4189 Jan 25 22:27	20° Z 45'24	
desc. node	4188 Feb 09 01:26	0° \approx 47'25			4189 Feb 01 02:39	0° \approx	
	4188 Feb 28 11:40	0° X		morning set	4189 Feb 07 12:00	9° \approx 48'46	
morning set	4188 Feb 29 08:41	1° X 24'16		max. Earth dist.	4189 Feb 16 08:51	23° \approx 52'02	1.43149 AU
max. Earth dist.	4188 Mar 06 03:38	10° X 53'45	1.41272 AU		4189 Feb 20 02:58	0° X	
superior conj	4188 Mar 13 21:02	24° X 10'41	-2°01'59	superior conj	4189 Feb 22 23:59	4° X 46'51	-2°07'44
minimum elong	4188 Mar 14 00:33	24° X 26'13	2°01'48	minimum elong	4189 Feb 22 23:14	4° X 43'43	2°07'43
	4188 Mar 17 03:12	0° Y		evening rise	4189 Mar 07 02:23	25° X 42'02	
evening rise	4188 Mar 24 10:12	13° Y 24'08			4189 Mar 09 12:44	0° Y	
asc. node	4188 Mar 31 02:41	25° Y 34'25		asc. node	4189 Mar 17 23:42	14° Y 19'09	
	4188 Apr 02 17:37	0° Z		evening max el	4189 Mar 24 04:25	22° Y 24'19	18°06'52
evening max el	4188 Apr 09 16:36	9° Z 18'20	18°14'11	retrograde	4189 Mar 30 17:02	25° Y 46'54	
retrograde	4188 Apr 16 17:08	12° Z 49'35		evening set	4189 Apr 02 10:44	25° Y 10'45	
evening set	4188 Apr 19 04:41	12° Z 24'01		inferior conj	4189 Apr 08 20:36	20° Y 06'22	3°21'40
inferior conj	4188 Apr 26 05:15	7° Z 39'44	2°44'10	minimum elong	4189 Apr 08 22:40	20° Y 01'09	3°21'24
minimum elong	4188 Apr 26 08:42	7° Z 32'08	2°43'23	min. Earth dist.	4189 Apr 11 21:18	17° Y 04'06	0.61776 AU
min. Earth dist.	4188 Apr 29 14:49	4° Z 41'58	0.59594 AU	morning rise	4189 Apr 15 08:54	14° Y 07'05	
morning rise	4188 May 03 10:06	1° Z 57'44		direct	4189 Apr 22 04:32	11° Y 42'07	
desc. node	4188 May 07 00:38	0° Z 25'50		desc. node	4189 Apr 23 21:40	11° Y 50'41	
direct	4188 May 09 19:44	0° Z 04'13		morning max el	4189 May 06 08:32	19° Y 40'50	27°51'41
morning max el	4188 May 24 04:27	7° Z 54'23	27°27'38		4189 May 15 03:39	0° Z	
	4188 Jun 09 22:03	0° II			4189 Jun 02 19:32	0° II	
morning set	4188 Jun 24 13:11	27° II 08'06		morning set	4189 Jun 08 16:20	11° II 30'17	
	4188 Jun 25 21:53	0° O		asc. node	4189 Jun 13 22:58	22° II 37'00	
asc. node	4188 Jun 27 01:57	2° O 29'46		max. Earth dist.	4189 Jun 14 10:46	23° II 40'48	1.32298 AU
max. Earth dist.	4188 Jul 01 01:33	11° O 10'45	1.32011 AU				
superior conj	4188 Jul 01 16:29	12° O 33'03	0°46'41	superior conj	4189 Jun 16 02:36	27° II 17'29	0°22'24
minimum elong	4188 Jul 01 14:37	12° O 22'42	0°46'19	minimum elong	4189 Jun 16 01:35	27° II 11'55	0°22'10
evening rise	4188 Jul 08 12:06	27° O 25'15			4189 Jun 17 08:19	0° O	
	4188 Jul 09 17:28	0° Q		evening rise	4189 Jun 22 23:33	12° O 14'25	
	4188 Jul 26 15:36	0° P			4189 Jul 01 22:57	0° Q	
desc. node	4188 Aug 02 23:54	9° P 16'36		evening max el	4189 Jul 18 08:02	22° Q 49'37	24°32'17
evening max el	4188 Aug 05 17:10	12° P 03'27	25°57'38	desc. node	4189 Jul 20 20:55	25° Q 04'28	
retrograde	4188 Aug 19 16:26	19° P 11'26		retrograde	4189 Aug 01 05:21	29° Q 50'24	
evening set	4188 Aug 25 23:32	17° P 36'25		evening set	4189 Aug 06 06:01	28° Q 53'40	
min. Earth dist.	4188 Aug 30 05:35	15° P 00'39	0.58725 AU	min. Earth dist.	4189 Aug 11 19:07	26° Q 02'32	0.56820 AU
inferior conj	4188 Sep 02 11:22	12° P 38'05	-5°02'09	inferior conj	4189 Aug 14 12:45	24° Q 17'32	-5°10'22
minimum elong	4188 Sep 02 15:00	12° P 31'23	5°01'46	minimum elong	4189 Aug 14 11:05	24° Q 20'12	5°10'18
morning rise	4188 Sep 10 08:42	8° P 12'56		morning rise	4189 Aug 22 18:43	20° Q 13'41	
direct	4188 Sep 12 19:14	7° P 53'21		direct	4189 Aug 25 10:11	19° Q 54'33	
morning max el	4188 Sep 20 22:44	11° P 47'34	18°34'41	morning max el	4189 Sep 03 20:45	24° Q 19'15	19°28'26
asc. node	4188 Sep 23 01:09	14° P 02'14			4189 Sep 08 17:44	0° P	
	4188 Oct 03 03:02	0° U		asc. node	4189 Sep 09 22:12	1° P 41'49	
morning set	4188 Oct 07 03:02	7° U 37'57		morning set	4189 Sep 21 04:26	22° P 02'43	
					4189 Sep 25 03:18	0° U	
superior conj	4188 Oct 15 22:36	24° U 32'08	1°27'36	superior conj	4189 Sep 29 04:53	8° U 05'18	1°40'10
minimum elong	4188 Oct 16 01:53	24° U 47'29	1°27'17	minimum elong	4189 Sep 29 06:34	8° U 13'34	1°40'05
	4188 Oct 18 21:42	0° M		max. Earth dist.	4189 Oct 05 10:47	19° U 59'04	1.37854 AU
max. Earth dist.	4188 Oct 23 06:35	7° M 47'16	1.39941 AU	evening rise	4189 Oct 09 04:55	26° U 45'47	
evening rise	4188 Oct 27 10:38	14° M 55'00			4189 Oct 11 01:21	0° M	
desc. node	4188 Oct 29 23:12	19° M 05'45		desc. node	4189 Oct 16 20:12	9° M 41'25	
	4188 Nov 05 20:06	0° Z			4189 Oct 30 08:23	0° Z	
	4188 Nov 27 16:41	0° Z		evening max el	4189 Nov 13 21:14	17° Z 38'08	25°09'35
evening max el	4188 Dec 01 08:46	3° Z 56'42	23°52'53	retrograde	4189 Nov 25 19:19	24° Z 31'54	
retrograde	4188 Dec 12 06:42	10° Z 22'35		evening set	4189 Dec 01 13:25	22° Z 07'52	
evening set	4188 Dec 17 11:09	8° Z 13'07		min. Earth dist.	4189 Dec 06 01:01	17° Z 07'36	0.67376 AU
asc. node	4188 Dec 20 00:23	5° Z 34'13		asc. node	4189 Dec 06 21:25	16° Z 01'01	

inferior conj	4189 Dec 07 02:51	15°♊43'16	0°04'38		4190 Oct 26 01:32	0°♊	
minimum elong	4189 Dec 07 02:44	15°♊43'40	0°04'35	evening max el	4190 Oct 27 09:48	1°♊20'18	26°15'33
transit middle	4189 Dec 07 02:44	15°♊43'40	0°04'35	retrograde	4190 Nov 09 02:51	8°♊30'34	
transit begin	4189 Dec 07 00:04	15°♊52'22		evening set	4190 Nov 15 10:29	5°♊55'15	
transit end	4189 Dec 07 05:24	15°♊34'58		min. Earth dist.	4190 Nov 19 15:05	1°♊30'18	0.66533 AU
morning rise	4189 Dec 12 16:16	9°♊45'26			4190 Nov 20 20:30	30°♋	
direct	4189 Dec 16 04:14	8°♊34'50		inferior conj	4190 Nov 21 04:07	29°♋36'34	-0°53'18
morning max el	4189 Dec 23 10:34	12°♊39'57	19°33'44	minimum elong	4190 Nov 21 05:33	29°♋32'08	0°52'41
greatest brilliancy	4190 Jan 05 13:08	0°♋02'00	-0.7m	asc. node	4190 Nov 23 18:28	26°♋34'10	
	4190 Jan 05 12:35	0°♋		morning rise	4190 Nov 27 01:09	23°♋48'15	
desc. node	4190 Jan 12 19:28	11°♋02'19		direct	4190 Nov 30 02:43	22°♋54'48	
morning set	4190 Jan 17 08:51	18°♋03'12		morning max el	4190 Dec 06 20:14	26°♋36'48	18°43'01
	4190 Jan 25 01:15	0°♌			4190 Dec 09 19:59	0°♊	
max. Earth dist.	4190 Jan 29 21:04	7°♌35'51	1.44510 AU	morning set	4190 Dec 27 23:59	27°♊18'24	
					4190 Dec 29 16:58	0°♋	
superior conj	4190 Feb 03 01:12	14°♌14'52	-1°55'58	desc. node	4190 Dec 30 16:29	1°♋32'40	
minimum elong	4190 Feb 02 18:24	13°♌47'36	1°55'33	max. Earth dist.	4191 Jan 12 14:31	21°♋50'08	1.45206 AU
	4190 Feb 12 16:43	0°♌					
evening rise	4190 Feb 16 22:37	7°♌06'00		superior conj	4191 Jan 13 06:58	22°♋54'44	-1°24'43
	4190 Mar 03 01:26	0°♍		minimum elong	4191 Jan 12 21:46	22°♋18'38	1°23'44
asc. node	4190 Mar 04 20:43	2°♍26'53			4191 Jan 17 19:06	0°♌	
evening max el	4190 Mar 07 17:12	5°♍44'46	18°18'33	evening rise	4191 Jan 28 19:44	17°♌32'03	
retrograde	4190 Mar 14 03:45	9°♍12'23		greatest brilliancy	4191 Feb 05 06:01	29°♌27'11	-0.9m
evening set	4190 Mar 17 03:24	8°♍24'26			4191 Feb 05 14:15	0°♌	
inferior conj	4190 Mar 23 02:29	3°♍01'06	3°35'37	evening max el	4191 Feb 19 04:15	19°♌12'29	18°48'19
minimum elong	4190 Mar 23 02:49	3°♍00'10	3°35'36	asc. node	4191 Feb 19 17:46	19°♌45'53	
min. Earth dist.	4190 Mar 25 12:55	0°♍16'36	0.63778 AU	retrograde	4191 Feb 25 21:15	22°♌57'13	
	4190 Mar 25 19:02	30°♋		evening set	4191 Mar 01 03:18	21°♌56'33	
morning rise	4190 Mar 29 01:20	26°♋52'50		inferior conj	4191 Mar 06 19:00	16°♌15'45	3°31'50
direct	4190 Apr 04 22:04	24°♋07'53		minimum elong	4191 Mar 06 17:53	16°♌19'11	3°31'44
desc. node	4190 Apr 10 18:42	25°♋48'47		min. Earth dist.	4191 Mar 08 13:44	14°♋04'04	0.65438 AU
	4190 Apr 16 12:01	0°♍		morning rise	4191 Mar 12 08:03	10°♋03'18	
morning max el	4190 Apr 18 16:49	2°♍05'45	27°38'30	direct	4191 Mar 18 22:31	7°♋12'38	
	4190 May 09 09:45	0°♎		desc. node	4191 Mar 28 15:44	11°♋46'12	
morning set	4190 May 23 12:23	25°♎28'25		morning max el	4191 Apr 01 02:38	14°♋58'06	26°52'47
	4190 May 25 18:21	0°♏			4191 Apr 13 09:44	0°♍	
max. Earth dist.	4190 May 28 13:35	5°♏48'07	1.33024 AU		4191 May 02 03:38	0°♎	
				morning set	4191 May 06 22:08	8°♎52'03	
superior conj	4190 May 31 09:21	11°♏47'51	-0°04'39	max. Earth dist.	4191 May 11 06:35	17°♎24'33	1.34212 AU
minimum elong	4190 May 31 09:35	11°♏49'06	0°04'37				
behind sun begin	4190 May 31 04:26	11°♏21'31		superior conj	4191 May 15 10:34	25°♎56'43	-0°33'28
behind sun end	4190 May 31 14:44	12°♏16'43		minimum elong	4191 May 15 12:20	26°♎05'56	0°33'06
asc. node	4190 May 31 20:01	12°♏45'02			4191 May 17 09:00	0°♏	
evening rise	4190 Jun 07 11:17	27°♏00'40		asc. node	4191 May 18 17:03	2°♏49'00	
	4190 Jun 08 21:26	0°♐		evening rise	4191 May 22 21:20	11°♏36'59	
	4190 Jun 26 20:35	0°♑			4191 Jun 01 10:39	0°♐	
evening max el	4190 Jun 29 21:16	3°♑14'11	22°55'28	evening max el	4191 Jun 11 16:36	13°♐48'41	21°22'35
desc. node	4190 Jul 07 17:56	8°♑44'32		retrograde	4191 Jun 23 19:18	19°♐46'21	
retrograde	4190 Jul 13 05:26	9°♑53'07		desc. node	4191 Jun 24 14:58	19°♐44'47	
evening set	4190 Jul 16 17:32	9°♑26'15		evening set	4191 Jun 26 04:08	19°♐33'29	
min. Earth dist.	4190 Jul 24 06:01	6°♑05'21	0.55424 AU	inferior conj	4191 Jul 05 13:11	15°♐34'13	-3°06'25
inferior conj	4190 Jul 25 18:56	5°♑12'06	-4°33'22	minimum elong	4191 Jul 05 05:09	15°♐45'27	3°03'53
minimum elong	4190 Jul 25 11:35	5°♑22'43	4°31'58	min. Earth dist.	4191 Jul 05 16:44	15°♐29'15	0.54835 AU
morning rise	4190 Aug 03 07:52	1°♑20'40		morning rise	4191 Jul 14 06:53	11°♐38'51	
direct	4190 Aug 06 06:49	1°♑00'06		direct	4191 Jul 17 16:47	11°♐13'39	
morning max el	4190 Aug 17 07:03	6°♑07'04	20°43'39	morning max el	4191 Jul 30 05:54	17°♐09'47	22°17'16
asc. node	4190 Aug 27 19:15	20°♑07'43			4191 Aug 09 09:40	0°♑	
	4190 Sep 02 03:24	0°♒		asc. node	4191 Aug 14 16:18	9°♑08'23	
morning set	4190 Sep 05 11:18	6°♒43'16		morning set	4191 Aug 20 21:30	21°♑33'18	
					4191 Aug 24 21:04	0°♒	
superior conj	4190 Sep 12 22:57	22°♒13'10	1°44'10				
minimum elong	4190 Sep 12 23:02	22°♒13'34	1°44'11	superior conj	4191 Aug 28 01:10	6°♒44'51	1°41'03
	4190 Sep 16 19:47	0°♓		minimum elong	4191 Aug 27 23:58	6°♒38'32	1°41'00
max. Earth dist.	4190 Sep 17 18:35	1°♓51'51	1.35938 AU	max. Earth dist.	4191 Aug 31 10:29	13°♒49'14	1.34345 AU
evening rise	4190 Sep 21 19:14	9°♓32'32		evening rise	4191 Sep 05 01:11	23°♒03'24	
desc. node	4190 Oct 03 17:13	0°♔04'26			4191 Sep 08 17:00	0°♓	
	4190 Oct 03 16:06	0°♔		desc. node	4191 Sep 20 14:15	20°♓08'48	

	4191 Sep 27 08:08	0°♄		evening rise	4192 Aug 18 18:40	7°♄07'03	
evening max el	4191 Oct 09 22:32	14°♄55'19	27°03'17		4192 Aug 31 05:32	0°♄	
retrograde	4191 Oct 23 04:46	22°♄12'17		desc. node	4192 Sep 06 11:19	9°♄45'50	
evening set	4191 Oct 30 00:13	19°♄31'14		evening max el	4192 Sep 21 09:57	28°♄10'21	27°25'47
min. Earth dist.	4191 Nov 02 22:17	15°♄42'08	0.65339 AU		4192 Sep 23 10:38	0°♄	
inferior conj	4191 Nov 04 23:15	13°♄23'27	-1°54'17	retrograde	4192 Oct 05 00:36	5°♄27'45	
minimum elong	4191 Nov 05 02:28	13°♄14'18	1°52'59	evening set	4192 Oct 12 03:49	2°♄49'45	
asc. node	4191 Nov 10 15:31	8°♄06'40			4192 Oct 15 10:02	30°♄	
morning rise	4191 Nov 11 05:39	7°♄47'48		min. Earth dist.	4192 Oct 15 20:28	29°♄34'15	0.63799 AU
direct	4191 Nov 13 23:02	7°♄07'42		inferior conj	4192 Oct 18 09:41	26°♄57'21	-2°56'01
morning max el	4191 Nov 20 10:51	10°♄36'45	18°08'51	minimum elong	4192 Oct 18 14:38	26°♄44'40	2°54'16
	4191 Dec 03 22:50	0°♄		morning rise	4192 Oct 25 02:48	21°♄37'40	
morning set	4191 Dec 08 20:33	8°♄02'57		direct	4192 Oct 27 14:24	21°♄07'19	
desc. node	4191 Dec 17 13:31	22°♄12'32		asc. node	4192 Oct 27 12:34	21°♄07'20	
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superior conj	4191 Dec 23 11:28	1°♄38'14	-0°39'51	morning set	4192 Nov 19 20:03	20°♄05'38	
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max. Earth dist.	4191 Dec 26 10:18	6°♄17'32	1.45160 AU				
evening rise	4192 Jan 08 19:11	27°♄08'46		superior conj	4192 Dec 02 10:07	11°♄18'07	0°07'05
	4192 Jan 10 15:20	0°♄		minimum elong	4192 Dec 02 10:54	11°♄21'19	0°06'59
greatest brilliancy	4192 Jan 21 10:52	16°♄36'32	-0.7m	behind sun begin	4192 Dec 02 01:58	10°♄44'46	
	4192 Jan 31 01:09	0°♄		behind sun end	4192 Dec 02 19:49	11°♄57'48	
evening max el	4192 Feb 02 11:27	2°♄43'36	19°34'46	desc. node	4192 Dec 03 10:33	12°♄57'49	
asc. node	4192 Feb 06 14:49	6°♄02'59		max. Earth dist.	4192 Dec 08 04:36	20°♄36'51	1.44386 AU
retrograde	4192 Feb 09 18:24	6°♄55'52			4192 Dec 14 03:41	0°♄	
evening set	4192 Feb 13 07:50	5°♄41'37		evening rise	4192 Dec 18 05:44	6°♄19'26	
inferior conj	4192 Feb 18 18:56	29°♄45'25	3°14'32		4193 Jan 03 00:33	0°♄	
minimum elong	4192 Feb 18 16:53	29°♄52'08	3°14'10	evening max el	4193 Jan 15 13:23	16°♄15'33	20°35'47
	4192 Feb 18 14:30	30°♄		asc. node	4193 Jan 23 11:51	21°♄03'05	
min. Earth dist.	4192 Feb 19 22:43	28°♄14'01	0.66688 AU	retrograde	4193 Jan 23 16:37	21°♄03'18	
morning rise	4192 Feb 24 01:43	23°♄31'27		evening set	4193 Jan 27 14:50	19°♄34'36	
direct	4192 Mar 01 04:57	20°♄47'36		inferior conj	4193 Feb 01 23:35	13°♄25'44	2°46'38
morning max el	4192 Mar 13 12:08	28°♄07'21	25°42'34	minimum elong	4193 Feb 01 21:08	13°♄34'06	2°46'00
desc. node	4192 Mar 14 12:45	29°♄10'57		min. Earth dist.	4193 Feb 02 13:58	12°♄36'31	0.67518 AU
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	4192 Apr 06 03:25	0°♄		direct	4193 Feb 12 16:37	4°♄43'57	
morning set	4192 Apr 18 17:25	21°♄29'31		morning max el	4193 Feb 23 20:47	11°♄24'23	24°17'44
max. Earth dist.	4192 Apr 22 12:20	28°♄34'06	1.35851 AU	desc. node	4193 Mar 01 09:47	17°♄37'50	
	4192 Apr 23 06:17	0°♄			4193 Mar 10 17:19	0°♄	
					4193 Mar 29 21:38	0°♄	
superior conj	4192 Apr 28 03:37	9°♄36'50	-1°02'40	morning set	4193 Mar 31 16:45	3°♄05'51	
minimum elong	4192 Apr 28 06:59	9°♄53'47	1°02'04	max. Earth dist.	4193 Apr 04 09:14	9°♄37'33	1.37856 AU
asc. node	4192 May 04 14:06	22°♄45'04					
evening rise	4192 May 06 03:38	25°♄57'05		superior conj	4193 Apr 11 09:09	22°♄39'22	-1°30'09
	4192 May 08 03:42	0°♄		minimum elong	4193 Apr 11 13:44	23°♄01'23	1°29'32
evening max el	4192 May 23 23:25	24°♄57'46	20°04'29		4193 Apr 15 03:44	0°♄	
	4192 Jun 02 07:28	0°♄		evening rise	4193 Apr 20 03:41	9°♄53'41	
retrograde	4192 Jun 03 09:54	0°♄03'17		asc. node	4193 Apr 21 11:10	12°♄28'43	
	4192 Jun 04 12:41	30°♄			4193 May 01 06:55	0°♄	
evening set	4192 Jun 05 08:45	29°♄53'22		evening max el	4193 May 06 18:13	6°♄48'43	19°05'50
desc. node	4192 Jun 10 12:01	28°♄05'27		retrograde	4193 May 15 13:11	11°♄05'58	
inferior conj	4192 Jun 14 09:26	25°♄53'44	-1°09'21	evening set	4193 May 17 14:19	10°♄52'59	
minimum elong	4192 Jun 14 06:12	25°♄58'36	1°08'09	inferior conj	4193 May 25 20:54	6°♄40'23	0°43'32
min. Earth dist.	4192 Jun 16 05:07	24°♄48'25	0.55201 AU	minimum elong	4193 May 25 22:37	6°♄37'25	0°42'54
morning rise	4192 Jun 23 02:01	21°♄34'19		desc. node	4193 May 28 09:01	4°♄57'17	
direct	4192 Jun 27 04:51	20°♄57'25		min. Earth dist.	4193 May 28 20:28	4°♄38'13	0.56456 AU
morning max el	4192 Jul 10 21:23	27°♄40'44	24°00'26	morning rise	4193 Jun 03 03:44	1°♄45'27	
	4192 Jul 13 04:33	0°♄		direct	4193 Jun 08 05:23	0°♄45'12	
asc. node	4192 Jul 31 13:20	28°♄34'52		morning max el	4193 Jun 22 11:40	8°♄05'03	25°38'55
	4192 Aug 01 06:19	0°♄			4193 Jul 08 18:32	0°♄	
morning set	4192 Aug 04 09:09	6°♄27'10		asc. node	4193 Jul 18 10:23	18°♄20'16	
				morning set	4193 Jul 19 20:40	21°♄19'58	
					4193 Jul 23 21:02	0°♄	
superior conj	4192 Aug 11 08:42	21°♄31'27	1°31'58				
minimum elong	4192 Aug 11 06:42	21°♄20'36	1°31'45				
max. Earth dist.	4192 Aug 13 11:10	26°♄03'08	1.33156 AU	superior conj	4193 Jul 26 19:21	6°♄26'08	1°17'47
	4192 Aug 15 07:50	0°♄		minimum elong	4193 Jul 26 17:01	6°♄13'21	1°17'26

































































































































max. Earth dist.	4193 Jul 27 18:42	8°♎34'13	1.32386 AU		4194 Jul 15 05:35	0°♎	
evening rise	4193 Aug 02 20:24	21°♎34'13		evening rise	4194 Jul 18 03:34	6°♎15'21	
	4193 Aug 07 00:57	0°♎			4194 Jul 30 15:05	0°♎	
desc. node	4193 Aug 24 08:20	28°♎44'17		desc. node	4194 Aug 11 05:20	16°♎47'23	
	4193 Aug 25 06:45	0°♎		evening max el	4194 Aug 16 20:08	22°♎52'30	26°35'55
evening max el	4193 Sep 03 17:58	10°♎53'19	27°17'30		4194 Aug 29 18:38	0°♎	
retrograde	4193 Sep 17 13:50	18°♎07'42		retrograde	4194 Aug 30 18:58	0°♎02'35	
evening set	4193 Sep 24 17:41	15°♎44'37			4194 Aug 31 19:10	30°♎	
min. Earth dist.	4193 Sep 28 08:21	12°♎55'34	0.61955 AU	evening set	4194 Sep 06 13:10	28°♎07'23	
inferior conj	4193 Oct 01 08:26	10°♎11'19	-3°54'30	min. Earth dist.	4194 Sep 10 09:54	25°♎31'32	0.59915 AU
minimum elong	4193 Oct 01 14:25	9°♎57'40	3°52'50	inferior conj	4194 Sep 13 16:02	22°♎55'52	-4°42'57
morning rise	4193 Oct 08 12:56	5°♎10'46		minimum elong	4194 Sep 13 21:20	22°♎45'16	4°42'02
direct	4193 Oct 10 21:31	4°♎46'45		morning rise	4194 Sep 21 07:33	18°♎17'02	
asc. node	4193 Oct 14 09:35	5°♎41'39		direct	4194 Sep 23 16:21	17°♎56'32	
morning max el	4193 Oct 17 19:13	8°♎16'17	17°53'00	asc. node	4194 Oct 01 06:37	21°♎39'26	
	4193 Oct 31 22:40	0°♎		morning max el	4194 Oct 01 06:31	21°♎39'11	18°13'27
morning set	4193 Nov 02 16:09	3°♎07'14			4194 Oct 07 16:50	0°♎	
				morning set	4194 Oct 17 02:57	16°♎50'28	
superior conj	4193 Nov 13 11:14	22°♎15'51	0°46'51		4194 Oct 24 03:06	0°♎	
minimum elong	4193 Nov 13 15:01	22°♎32'04	0°46'19				
	4193 Nov 18 01:03	0°♎		superior conj	4194 Oct 26 13:05	4°♎25'17	1°15'51
desc. node	4193 Nov 20 07:36	3°♎45'15		minimum elong	4194 Oct 26 17:02	4°♎43'09	1°15'24
max. Earth dist.	4193 Nov 20 18:41	4°♎30'33	1.42986 AU	max. Earth dist.	4194 Nov 03 03:44	17°♎46'53	1.41131 AU
evening rise	4193 Nov 27 18:59	15°♎43'10		desc. node	4194 Nov 07 04:38	24°♎31'06	
	4193 Dec 07 03:20	0°♎		evening rise	4194 Nov 08 01:08	25°♎54'53	
evening max el	4193 Dec 29 09:50	29°♎49'04	21°48'05		4194 Nov 10 13:57	0°♎	
	4193 Dec 29 14:10	0°♎			4194 Nov 30 22:11	0°♎	
retrograde	4194 Jan 07 13:53	5°♎16'12		evening max el	4194 Dec 12 01:50	13°♎25'39	23°07'01
asc. node	4194 Jan 10 08:52	4°♎34'15		retrograde	4194 Dec 22 08:35	19°♎31'10	
evening set	4194 Jan 11 22:33	3°♎32'08		evening set	4194 Dec 27 05:25	17°♎31'05	
	4194 Jan 15 05:46	30°♎		asc. node	4194 Dec 28 05:53	16°♎34'45	
inferior conj	4194 Jan 17 06:49	27°♎13'53	2°10'04	min. Earth dist.	4195 Jan 01 05:55	11°♎37'26	0.68007 AU
minimum elong	4194 Jan 17 04:26	27°♎22'06	2°09'18	inferior conj	4195 Jan 01 14:41	11°♎07'13	1°26'11
min. Earth dist.	4194 Jan 17 09:10	27°♎05'40	0.67951 AU	minimum elong	4195 Jan 01 12:51	11°♎13'31	1°25'30
morning rise	4194 Jan 22 10:09	21°♎02'10		morning rise	4195 Jan 06 20:11	4°♎59'21	
direct	4194 Jan 27 08:48	18°♎55'03		direct	4195 Jan 11 04:27	3°♎15'05	
morning max el	4194 Feb 06 06:30	24°♎46'56	22°48'31	morning max el	4195 Jan 19 21:00	8°♎18'21	21°23'54
	4194 Feb 10 22:45	0°♎		desc. node	4195 Feb 03 03:51	26°♎33'21	
desc. node	4194 Feb 16 06:49	6°♎49'28			4195 Feb 05 13:02	0°♎	
	4194 Mar 04 04:50	0°♎		morning set	4195 Feb 20 06:36	22°♎24'13	
morning set	4194 Mar 12 14:01	13°♎25'15			4195 Feb 25 00:22	0°♎	
max. Earth dist.	4194 Mar 17 04:24	21°♎09'28	1.40042 AU	max. Earth dist.	4195 Feb 27 05:17	3°♎36'19	1.42121 AU
	4194 Mar 22 05:45	0°♎					
superior conj	4194 Mar 24 22:55	4°♎53'56	-1°52'48	superior conj	4195 Mar 06 16:01	16°♎09'36	-2°06'15
minimum elong	4194 Mar 25 03:29	5°♎14'43	1°52'26	minimum elong	4195 Mar 06 18:06	16°♎18'38	2°06'12
evening rise	4194 Apr 03 18:24	23°♎18'31			4195 Mar 14 11:50	0°♎	
	4194 Apr 07 07:28	0°♎		evening rise	4195 Mar 17 20:02	6°♎03'37	
asc. node	4194 Apr 08 08:11	1°♎54'20		asc. node	4195 Mar 26 05:13	20°♎56'16	
evening max el	4194 Apr 19 22:21	19°♎15'46	18°27'21		4195 Apr 01 08:57	0°♎	
retrograde	4194 Apr 27 10:50	22°♎58'44		evening max el	4195 Apr 03 08:25	2°♎10'33	18°08'45
evening set	4194 Apr 29 18:36	22°♎38'31		retrograde	4195 Apr 10 02:20	5°♎35'54	
inferior conj	4194 May 07 05:25	18°♎06'37	2°09'23	evening set	4195 Apr 12 16:43	5°♎05'52	
minimum elong	4194 May 07 09:02	17°♎59'19	2°08'22	inferior conj	4195 Apr 19 10:31	0°♎13'00	3°03'22
min. Earth dist.	4194 May 10 15:50	15°♎22'23	0.58352 AU	minimum elong	4195 Apr 19 13:30	0°♎06'02	3°02'48
morning rise	4194 May 14 20:21	12°♎39'11			4195 Apr 19 16:04	30°♎	
desc. node	4194 May 15 06:02	12°♎27'12		min. Earth dist.	4195 Apr 22 17:21	27°♎10'23	0.60532 AU
direct	4194 May 20 20:23	11°♎05'38		morning rise	4195 Apr 26 08:06	24°♎22'48	
morning max el	4194 Jun 04 05:45	18°♎48'03	26°56'59	desc. node	4195 May 02 03:03	22°♎16'49	
	4194 Jun 13 16:06	0°♎		direct	4195 May 02 23:22	22°♎14'47	
	4194 Jul 01 07:25	0°♎			4195 May 17 02:30	0°♎	
morning set	4194 Jul 04 06:21	6°♎05'04		morning max el	4195 May 17 06:09	0°♎08'58	27°42'30
asc. node	4194 Jul 05 07:26	8°♎17'43			4195 Jun 07 17:04	0°♎	
				morning set	4195 Jun 18 12:27	20°♎37'03	
superior conj	4194 Jul 11 07:07	21°♎21'04	0°59'11	asc. node	4195 Jun 22 04:29	28°♎22'31	
minimum elong	4194 Jul 11 04:57	21°♎09'04	0°58'46		4195 Jun 22 22:31	0°♎	
max. Earth dist.	4194 Jul 11 05:48	21°♎13'48	1.32028 AU	max. Earth dist.	4195 Jun 24 16:52	3°♎50'55	1.32084 AU

superior conj	4195 Jun 25 18:20	6°☿10'43	0°36'47	minimum elong	4196 Jun 09 02:43	20°♄46'28	0°11'06
minimum elong	4195 Jun 25 16:46	6°☿02'07	0°36'27	behind sun begin	4196 Jun 08 22:57	20°♄26'03	
evening rise	4195 Jul 02 14:03	21°☿03'23		behind sun end	4196 Jun 09 06:29	21°♄06'54	
	4195 Jul 06 22:03	0°♌			4196 Jun 13 08:26	0°☿	
	4195 Jul 25 18:54	0°♍		evening rise	4196 Jun 16 01:52	5°☿51'53	
desc. node	4195 Jul 29 02:20	3°♍32'48			4196 Jun 28 20:18	0°♌	
evening max el	4195 Jul 29 14:53	4°♍03'11	25°23'47	evening max el	4196 Jul 10 04:06	14°♌35'56	23°51'30
retrograde	4195 Aug 12 13:57	11°♍08'11		desc. node	4196 Jul 14 23:21	18°♌30'37	
evening set	4195 Aug 18 09:36	9°♍49'51		retrograde	4196 Jul 23 21:11	21°♌29'35	
min. Earth dist.	4195 Aug 23 02:43	7°♍09'37	0.57879 AU	evening set	4196 Jul 28 06:35	20°♌47'05	
inferior conj	4195 Aug 26 05:05	5°♍01'15	-5°10'14	min. Earth dist.	4196 Aug 03 14:19	17°♌45'04	0.56144 AU
minimum elong	4195 Aug 26 06:47	4°♍58'17	5°10'10	inferior conj	4196 Aug 05 21:51	16°♌20'46	-5°00'57
morning rise	4195 Sep 03 06:16	0°♍45'19		minimum elong	4196 Aug 05 17:31	16°♌27'23	5°00'29
direct	4195 Sep 05 18:43	0°♍26'01		morning rise	4196 Aug 14 07:00	12°♌24'04	
morning max el	4195 Sep 14 10:11	4°♍31'47	18°54'48	direct	4196 Aug 17 01:35	12°♌04'29	
asc. node	4195 Sep 18 03:41	8°♍46'03		morning max el	4196 Aug 27 03:21	16°♌45'18	19°58'00
	4195 Sep 30 11:10	0°♌		asc. node	4196 Sep 04 00:44	26°♌46'52	
morning set	4195 Oct 01 00:02	1°♌03'04			4196 Sep 05 23:33	0°♍	
				morning set	4196 Sep 14 04:07	15°♍36'00	
superior conj	4195 Oct 09 10:32	17°♌32'17	1°34'04		4196 Sep 21 05:58	0°♌	
minimum elong	4195 Oct 09 13:11	17°♌44'54	1°33'52				
	4195 Oct 16 04:11	0°♍		superior conj	4196 Sep 21 22:24	1°♌22'19	1°42'49
max. Earth dist.	4195 Oct 16 09:06	0°♍22'00	1.39054 AU	minimum elong	4196 Sep 21 23:23	1°♌27'12	1°42'48
evening rise	4195 Oct 20 06:19	7°♍09'35		max. Earth dist.	4196 Sep 27 14:32	12°♌24'43	1.37005 AU
desc. node	4195 Oct 25 01:38	15°♍11'42		evening rise	4196 Oct 01 09:40	19°♌25'43	
	4195 Nov 03 13:50	0°♎			4196 Oct 07 11:15	0°♍	
evening max el	4195 Nov 24 15:05	27°♎05'46	24°26'24	desc. node	4196 Oct 10 22:40	5°♍43'04	
	4195 Nov 27 20:03	0°♏			4196 Oct 27 16:30	0°♎	
retrograde	4195 Dec 05 23:33	3°♏43'58		evening max el	4196 Nov 06 03:28	10°♎48'28	25°39'17
evening set	4195 Dec 11 09:50	1°♏28'07		retrograde	4196 Nov 18 10:03	17°♎50'23	
	4195 Dec 12 22:25	30°♎♎		evening set	4196 Nov 24 10:10	15°♎20'45	
asc. node	4195 Dec 15 02:55	27°♎23'33		min. Earth dist.	4196 Nov 28 18:38	10°♎35'42	0.67067 AU
min. Earth dist.	4195 Dec 16 01:50	26°♎08'15	0.67711 AU	inferior conj	4196 Nov 30 01:15	8°♎58'10	-0°19'26
inferior conj	4195 Dec 16 21:25	25°♎02'41	0°36'00	minimum elong	4196 Nov 30 01:45	8°♎56'33	0°19'13
minimum elong	4195 Dec 16 20:34	25°♎05'34	0°35'38	asc. node	4196 Nov 30 23:56	7°♎46'30	
morning rise	4195 Dec 22 07:22	19°♎00'42		morning rise	4196 Dec 05 17:43	3°♎04'20	
direct	4195 Dec 26 02:19	17°♎38'31		direct	4196 Dec 09 01:02	2°♎01'32	
morning max el	4196 Jan 02 19:01	22°♎01'15	20°09'57	morning max el	4196 Dec 16 00:58	5°♎55'12	19°10'12
	4196 Jan 09 11:09	0°♏		greatest brilliancy	4196 Dec 30 12:57	25°♎40'47	-0.8m
desc. node	4196 Jan 21 00:51	16°♏40'01			4197 Jan 02 08:29	0°♏	
	4196 Jan 29 18:57	0°♐		desc. node	4197 Jan 06 21:54	7°♏03'32	
morning set	4196 Jan 30 03:59	0°♐34'52		morning set	4197 Jan 08 06:12	9°♏08'57	
max. Earth dist.	4196 Feb 09 14:12	16°♐57'41	1.43808 AU		4197 Jan 21 14:36	0°♐	
				max. Earth dist.	4197 Jan 22 05:20	0°♐58'01	1.44899 AU
superior conj	4196 Feb 15 07:55	26°♐15'54	-2°05'08				
minimum elong	4196 Feb 15 04:35	26°♐02'12	2°05'01	superior conj	4197 Jan 24 23:18	5°♐18'35	-1°44'56
	4196 Feb 17 14:12	0°♑		minimum elong	4197 Jan 24 14:40	4°♐44'24	1°44'14
evening rise	4196 Feb 28 04:13	17°♑59'14		evening rise	4197 Feb 08 14:53	28°♐58'51	
	4196 Mar 06 03:47	0°♒			4197 Feb 09 05:44	0°♑	
asc. node	4196 Mar 12 02:14	9°♒26'15		asc. node	4197 Feb 26 23:16	27°♑14'32	
evening max el	4196 Mar 16 20:59	15°♒23'16	18°09'32	evening max el	4197 Feb 28 09:15	28°♑46'54	18°29'00
retrograde	4196 Mar 23 07:29	18°♒46'22			4197 Mar 01 16:35	0°♒	
evening set	4196 Mar 26 03:47	18°♒05'10		retrograde	4197 Mar 06 21:40	2°♒20'44	
inferior conj	4196 Apr 01 08:34	12°♒52'13	3°30'05	evening set	4197 Mar 09 23:54	1°♒27'31	
minimum elong	4196 Apr 01 09:53	12°♒48'43	3°29'58		4197 Mar 11 23:59	30°♒♑	
min. Earth dist.	4196 Apr 04 03:26	9°♒55'33	0.62665 AU	inferior conj	4197 Mar 15 19:27	25°♒56'17	3°35'53
morning rise	4196 Apr 07 14:43	6°♒48'27		minimum elong	4197 Mar 15 19:07	25°♒57'17	3°35'52
direct	4196 Apr 14 11:47	4°♒13'39		min. Earth dist.	4197 Mar 17 23:08	23°♒24'26	0.64531 AU
desc. node	4196 Apr 18 00:04	4°♒49'49		morning rise	4197 Mar 21 13:39	19°♒45'31	
morning max el	4196 Apr 28 12:20	12°♒12'21	27°50'31	direct	4197 Mar 28 08:17	16°♒56'39	
	4196 May 12 15:13	0°♓		desc. node	4197 Apr 04 21:06	19°♒42'38	
	4196 May 30 02:40	0°♄		morning max el	4197 Apr 10 21:52	24°♒51'11	27°22'37
morning set	4196 Jun 01 12:54	4°♄49'30			4197 Apr 15 14:08	0°♒	
max. Earth dist.	4196 Jun 07 00:02	16°♄13'10	1.32556 AU		4197 May 06 01:48	0°♓	
asc. node	4196 Jun 08 01:32	18°♄30'16		morning set	4197 May 16 05:01	18°♓34'11	
				max. Earth dist.	4197 May 20 23:12	28°♓08'26	1.33471 AU
superior conj	4196 Jun 09 03:15	20°♄49'22	0°11'13		4197 May 21 20:44	0°♄	

superior conj	4197 May 24 07:55	5° Π 11'01	-0°16'45	max. Earth dist.	4198 May 03 11:13	9° \mathcal{B} 31'36	1.34849 AU
minimum elong	4197 May 24 08:46	5° Π 15'34	0°16'33				
asc. node	4197 May 25 22:35	8° Π 36'50		superior conj	4198 May 08 06:02	19° \mathcal{B} 09'13	-0°45'54
evening rise	4197 May 31 13:08	20° Π 34'26		minimum elong	4198 May 08 08:30	19° \mathcal{B} 21'51	0°45'26
	4197 Jun 05 03:51	0° \mathcal{E}		asc. node	4198 May 12 19:38	28° \mathcal{B} 38'21	
evening max el	4197 Jun 21 18:48	24° \mathcal{E} 59'54	22°14'39		4198 May 13 11:15	0° Π	
	4197 Jun 28 16:12	0° Ω		evening rise	4198 May 15 21:53	5° Π 05'03	
desc. node	4197 Jul 01 20:22	1° Ω 05'39			4198 May 29 20:14	0° \mathcal{E}	
retrograde	4197 Jul 04 16:39	1° Ω 24'24		evening max el	4198 Jun 03 18:46	5° \mathcal{E} 48'07	20°47'15
evening set	4197 Jul 07 15:05	1° Ω 05'17		retrograde	4198 Jun 15 05:24	11° \mathcal{E} 24'04	
	4197 Jul 11 00:45	30° \mathcal{R} \mathcal{E}		evening set	4198 Jun 17 07:38	11° \mathcal{E} 13'35	
min. Earth dist.	4197 Jul 16 00:50	27° \mathcal{E} 27'43	0.55051 AU	desc. node	4198 Jun 18 17:23	10° \mathcal{E} 55'21	
inferior conj	4197 Jul 16 21:34	26° \mathcal{E} 58'29	-4°02'03	inferior conj	4198 Jun 26 14:56	7° \mathcal{E} 16'23	-2°18'30
minimum elong	4197 Jul 16 13:06	27° \mathcal{E} 10'26	3°59'56	minimum elong	4198 Jun 26 08:32	7° \mathcal{E} 25'31	2°16'16
morning rise	4197 Jul 25 12:58	23° \mathcal{E} 08'03		min. Earth dist.	4198 Jun 27 12:35	6° \mathcal{E} 45'31	0.54867 AU
direct	4197 Jul 28 15:45	22° \mathcal{E} 46'17		morning rise	4198 Jul 05 09:02	3° \mathcal{E} 12'33	
morning max el	4197 Aug 09 08:40	28° \mathcal{E} 13'46	21°21'47	direct	4198 Jul 09 01:09	2° \mathcal{E} 43'31	
	4197 Aug 11 03:24	0° Ω		morning max el	4198 Jul 22 03:49	9° \mathcal{E} 01'26	23°00'40
asc. node	4197 Aug 21 21:48	15° Ω 28'38			4198 Aug 06 06:41	0° Ω	
	4197 Aug 29 08:32	0° \mathcal{M}		asc. node	4198 Aug 08 18:52	4° Ω 41'29	
morning set	4197 Aug 29 12:38	0° \mathcal{M} 21'14		morning set	4198 Aug 13 23:38	15° Ω 13'24	
					4198 Aug 20 21:14	0° \mathcal{M}	
superior conj	4197 Sep 05 20:22	15° \mathcal{M} 41'48	1°43'39	superior conj	4198 Aug 21 01:09	0° \mathcal{M} 20'55	1°37'53
minimum elong	4197 Sep 05 19:51	15° \mathcal{M} 39'08	1°43'39	minimum elong	4198 Aug 20 23:33	0° \mathcal{M} 12'24	1°37'45
max. Earth dist.	4197 Sep 10 01:11	24° \mathcal{M} 15'54	1.35204 AU	max. Earth dist.	4198 Aug 23 20:37	6° \mathcal{M} 18'14	1.33786 AU
	4197 Sep 12 23:15	0° \mathcal{A}		evening rise	4198 Aug 28 18:28	16° \mathcal{M} 18'56	
evening rise	4197 Sep 14 07:09	2° \mathcal{A} 32'35			4198 Sep 05 01:22	0° \mathcal{A}	
desc. node	4197 Sep 27 19:42	25° \mathcal{A} 59'06		desc. node	4198 Sep 14 16:43	15° \mathcal{A} 52'48	
	4197 Sep 30 10:02	0° \mathcal{M}			4198 Sep 24 22:44	0° \mathcal{M}	
evening max el	4197 Oct 19 15:56	24° \mathcal{M} 28'09	26°38'26	evening max el	4198 Oct 02 04:20	7° \mathcal{M} 56'12	27°16'21
	4197 Oct 26 19:11	0° \mathcal{A}		retrograde	4198 Oct 15 15:03	15° \mathcal{M} 14'27	
retrograde	4197 Nov 01 15:27	1° \mathcal{A} 43'12		evening set	4198 Oct 22 14:14	12° \mathcal{M} 33'37	
	4197 Nov 06 22:25	30° \mathcal{R} \mathcal{M}		min. Earth dist.	4198 Oct 26 09:48	8° \mathcal{M} 59'02	0.64720 AU
evening set	4197 Nov 08 04:26	29° \mathcal{M} 04'16		inferior conj	4198 Oct 28 15:57	6° \mathcal{M} 31'32	-2°20'35
min. Earth dist.	4197 Nov 12 06:04	24° \mathcal{M} 54'45	0.66067 AU	minimum elong	4198 Oct 28 19:56	6° \mathcal{M} 20'39	2°19'03
inferior conj	4197 Nov 14 00:11	22° \mathcal{M} 49'25	-1°18'53	morning rise	4198 Nov 04 02:46	1° \mathcal{M} 02'05	
minimum elong	4197 Nov 14 02:22	22° \mathcal{M} 42'55	1°17'58	asc. node	4198 Nov 04 18:03	0° \mathcal{M} 46'59	
asc. node	4197 Nov 17 20:59	18° \mathcal{M} 39'32		direct	4198 Nov 06 17:17	0° \mathcal{M} 26'39	
morning rise	4197 Nov 20 01:03	17° \mathcal{M} 06'16		morning max el	4198 Nov 13 04:57	3° \mathcal{M} 53'20	17°59'26
direct	4197 Nov 22 22:45	16° \mathcal{M} 19'09		morning set	4198 Nov 30 18:12	0° \mathcal{A} 21'40	
morning max el	4197 Nov 29 13:09	19° \mathcal{M} 54'42	18°26'25		4198 Nov 30 13:02	0° \mathcal{A}	
	4197 Dec 07 07:55	0° \mathcal{A}		desc. node	4198 Dec 11 15:59	18° \mathcal{A} 21'13	
morning set	4197 Dec 19 09:30	19° \mathcal{A} 01'42					
desc. node	4197 Dec 24 18:57	27° \mathcal{A} 38'39		superior conj	4198 Dec 14 12:19	22° \mathcal{A} 56'07	-0°19'33
	4197 Dec 26 06:32	0° \mathcal{B}		minimum elong	4198 Dec 14 09:57	22° \mathcal{A} 46'35	0°19'12
superior conj	4198 Jan 04 01:59	13° \mathcal{B} 53'27	-1°06'43		4198 Dec 18 23:02	0° \mathcal{B}	
minimum elong	4198 Jan 03 17:57	13° \mathcal{B} 21'54	1°05'45	max. Earth dist.	4198 Dec 18 18:47	29° \mathcal{A} 43'14	1.44915 AU
max. Earth dist.	4198 Jan 04 23:42	15° \mathcal{B} 18'39	1.45277 AU	evening rise	4198 Dec 30 18:35	18° \mathcal{B} 23'45	
	4198 Jan 14 08:31	0° \approx			4199 Jan 07 08:22	0° \approx	
evening rise	4198 Jan 20 02:17	9° \approx 02'23		greatest brilliancy	4199 Jan 14 01:17	10° \approx 04'20	-0.6m
greatest brilliancy	4198 Jan 30 00:58	24° \approx 41'34	-0.8m	evening max el	4199 Jan 25 23:58	25° \approx 48'45	19°59'10
	4198 Feb 02 12:08	0° \mathcal{H}		asc. node	4199 Jan 31 17:19	29° \approx 55'41	
evening max el	4198 Feb 11 18:50	12° \mathcal{H} 16'35	19°06'07		4199 Jan 31 22:48	0° \mathcal{H}	
asc. node	4198 Feb 13 20:17	14° \mathcal{H} 09'14		retrograde	4199 Feb 02 14:53	0° \mathcal{H} 15'08	
retrograde	4198 Feb 18 17:07	16° \mathcal{H} 12'15			4199 Feb 04 05:48	30° \mathcal{R} \approx	
evening set	4198 Feb 22 02:04	15° \mathcal{H} 06'06		evening set	4199 Feb 06 07:51	28° \approx 55'00	
inferior conj	4198 Feb 27 15:30	9° \mathcal{H} 18'33	3°25'55	inferior conj	4199 Feb 11 17:43	22° \approx 53'21	3°03'51
minimum elong	4198 Feb 27 13:56	9° \mathcal{H} 23'33	3°25'44	minimum elong	4199 Feb 11 15:27	23° \approx 00'59	3°03'22
min. Earth dist.	4198 Mar 01 03:48	7° \mathcal{H} 23'09	0.66020 AU	min. Earth dist.	4199 Feb 12 15:43	21° \approx 39'36	0.67095 AU
morning rise	4198 Mar 05 01:27	3° \mathcal{H} 04'57		morning rise	4199 Feb 16 22:49	16° \approx 39'19	
direct	4198 Mar 11 11:34	0° \mathcal{H} 15'35		direct	4199 Feb 22 20:30	14° \approx 00'59	
desc. node	4198 Mar 22 18:09	6° \mathcal{H} 21'02		morning max el	4199 Mar 06 16:38	21° \approx 05'27	25°07'33
morning max el	4198 Mar 24 07:50	7° \mathcal{H} 52'49	26°25'17	desc. node	4199 Mar 09 15:11	24° \approx 14'52	
	4198 Apr 10 13:22	0° \mathcal{Y}			4199 Mar 14 09:37	0° \mathcal{H}	
	4198 Apr 28 11:42	0° \mathcal{B}			4199 Apr 03 18:36	0° \mathcal{Y}	
morning set	4198 Apr 29 09:16	1° \mathcal{B} 40'45		morning set	4199 Apr 11 20:45	13° \mathcal{Y} 54'11	

max. Earth dist.	4199 Apr 15 12:12	20° Υ 33'25	1.36669 AU	max. Earth dist.	4200 Mar 28 07:44	1° Υ 46'47	1.38791 AU
	4199 Apr 20 11:04	0° \mathcal{B}					
superior conj	4199 Apr 21 18:38	2° \mathcal{B} 34'48	-1°14'41	superior conj	4200 Apr 04 18:04	15° Υ 18'52	-1°40'33
minimum elong	4199 Apr 21 22:37	2° \mathcal{B} 54'24	1°14'03	minimum elong	4200 Apr 04 22:51	15° Υ 41'24	1°40'01
asc. node	4199 Apr 29 16:39	18° \mathcal{B} 29'41		evening rise	4200 Apr 12 09:16	0° \mathcal{B}	
evening rise	4199 Apr 30 01:49	19° \mathcal{B} 15'56		asc. node	4200 Apr 13 22:19	3° \mathcal{B} 00'29	
	4199 May 05 13:35	0° Π		evening max el	4200 Apr 16 13:39	8° \mathcal{B} 06'31	
evening max el	4199 May 17 06:58	17° Π 15'28	19°37'05		4200 Apr 30 06:06	29° \mathcal{B} 22'40	18°46'52
retrograde	4199 May 26 23:36	21° Π 58'34			4200 Apr 30 22:02	0° Π	
evening set	4199 May 28 22:38	21° Π 47'52		retrograde	4200 May 08 10:29	3° Π 23'18	
desc. node	4199 Jun 05 14:25	18° Π 24'42		evening set	4200 May 10 14:25	3° Π 07'32	
inferior conj	4199 Jun 06 16:19	17° Π 44'13	-0°19'10		4200 May 16 19:36	30° \mathcal{R} \mathcal{B}	
minimum elong	4199 Jun 06 15:28	17° Π 45'34	0°18'51	inferior conj	4200 May 18 12:24	28° \mathcal{B} 46'44	1°23'54
min. Earth dist.	4199 Jun 09 02:01	16° Π 13'37	0.55644 AU	minimum elong	4200 May 18 15:20	28° \mathcal{B} 41'21	1°22'56
morning rise	4199 Jun 15 05:48	13° Π 10'24		min. Earth dist.	4200 May 21 18:29	26° \mathcal{B} 24'33	0.57214 AU
direct	4199 Jun 19 18:15	12° Π 24'48		desc. node	4200 May 23 11:25	25° \mathcal{B} 16'21	
morning max el	4199 Jul 03 17:47	19° Π 25'09	24°43'46	morning rise	4200 May 26 13:01	23° \mathcal{B} 37'18	
	4199 Jul 12 15:52	0° \mathcal{G}		direct	4200 Jun 01 00:43	22° \mathcal{B} 23'56	
asc. node	4199 Jul 26 15:55	24° \mathcal{G} 16'41			4200 Jun 15 11:35	0° Π	
morning set	4199 Jul 29 11:24	0° Ω 07'02		morning max el	4200 Jun 15 09:05	29° \mathcal{B} 53'55	26°15'31
	4199 Jul 29 10:04	0° Ω			4200 Jul 06 10:02	0° \mathcal{G}	
				morning set	4200 Jul 13 22:19	14° \mathcal{G} 57'11	
				asc. node	4200 Jul 13 12:56	14° \mathcal{G} 07'48	
superior conj	4199 Aug 05 10:13	15° Ω 11'23	1°26'31				
minimum elong	4199 Aug 05 08:01	14° Ω 59'24	1°26'15	superior conj	4200 Jul 20 21:31	0° Ω 06'36	1°10'23
max. Earth dist.	4199 Aug 07 00:37	18° Ω 40'07	1.32781 AU	minimum elong	4200 Jul 20 19:12	29° \mathcal{G} 53'49	1°10'00
	4199 Aug 12 09:15	0° \mathcal{M}			4200 Jul 20 20:19	0° Ω	
evening rise	4199 Aug 12 15:49	0° \mathcal{M} 33'39		max. Earth dist.	4200 Jul 21 10:16	1° Ω 16'51	1.32188 AU
	4199 Aug 29 01:12	0° \mathcal{L}		evening rise	4200 Jul 27 20:09	15° Ω 07'35	
desc. node	4199 Sep 01 13:44	5° \mathcal{L} 14'50			4200 Aug 04 08:52	0° \mathcal{M}	
evening max el	4199 Sep 14 14:53	21° \mathcal{L} 00'02	27°26'24	desc. node	4200 Aug 19 10:45	23° \mathcal{M} 51'57	
retrograde	4199 Sep 28 08:02	28° \mathcal{L} 15'40			4200 Aug 24 12:36	0° \mathcal{L}	
evening set	4199 Oct 05 12:28	25° \mathcal{L} 42'50		evening max el	4200 Aug 27 20:43	3° \mathcal{L} 25'26	27°03'53
min. Earth dist.	4199 Oct 09 03:51	22° \mathcal{L} 39'32	0.63045 AU	retrograde	4200 Sep 10 17:38	10° \mathcal{L} 37'23	
inferior conj	4199 Oct 11 21:50	19° \mathcal{L} 58'16	-3°21'34	evening set	4200 Sep 17 19:04	8° \mathcal{L} 24'39	
minimum elong	4199 Oct 12 03:21	19° \mathcal{L} 44'46	3°19'46	min. Earth dist.	4200 Sep 21 11:01	5° \mathcal{L} 43'24	0.61102 AU
morning rise	4199 Oct 18 19:43	14° \mathcal{L} 45'58		inferior conj	4200 Sep 24 14:33	3° \mathcal{L} 00'47	-4°16'51
direct	4199 Oct 21 05:42	14° \mathcal{L} 18'36		minimum elong	4200 Sep 24 20:32	2° \mathcal{L} 47'52	4°15'26
asc. node	4199 Oct 22 15:06	14° \mathcal{L} 27'54			4200 Sep 28 09:17	30° \mathcal{R} \mathcal{M}	
morning max el	4199 Oct 27 21:31	17° \mathcal{L} 44'38	17°50'05	morning rise	4200 Oct 01 23:50	28° \mathcal{M} 09'15	
	4199 Nov 05 16:47	0° \mathcal{M}		direct	4200 Oct 04 08:15	27° \mathcal{M} 46'55	
morning set	4199 Nov 13 03:18	12° \mathcal{M} 52'20		asc. node	4200 Oct 09 12:09	29° \mathcal{M} 39'23	
	4199 Nov 23 01:00	0° \mathcal{X}			4200 Oct 09 23:07	0° \mathcal{L}	
				morning max el	4200 Oct 11 11:42	1° \mathcal{L} 20'32	17°59'19
superior conj	4199 Nov 24 21:54	3° \mathcal{X} 08'21	0°25'09	morning set	4200 Oct 27 06:16	26° \mathcal{L} 13'32	
minimum elong	4199 Nov 25 00:22	3° \mathcal{X} 18'38	0°24'48		4200 Oct 29 07:25	0° \mathcal{M}	
desc. node	4199 Nov 28 13:01	9° \mathcal{X} 07'58					
max. Earth dist.	4199 Dec 01 11:57	13° \mathcal{X} 55'24	1.43860 AU	superior conj	4200 Nov 06 10:04	14° \mathcal{M} 38'11	1°00'31
evening rise	4199 Dec 10 04:19	27° \mathcal{X} 35'48		minimum elong	4200 Nov 06 14:11	14° \mathcal{M} 56'16	0°59'59
	4199 Dec 11 17:46	0° \mathcal{Z}		max. Earth dist.	4200 Nov 14 00:24	27° \mathcal{M} 36'23	1.42237 AU
	4200 Jan 01 05:53	0° \approx		desc. node	4200 Nov 15 10:02	29° \mathcal{M} 55'05	
evening max el	4200 Jan 08 23:41	9° \approx 22'21	21°05'26		4200 Nov 15 11:14	0° \mathcal{X}	
retrograde	4200 Jan 17 12:49	14° \approx 26'02		evening rise	4200 Nov 19 23:23	7° \mathcal{X} 16'28	
asc. node	4200 Jan 18 14:20	14° \approx 19'53			4200 Dec 04 23:13	0° \mathcal{Z}	
evening set	4200 Jan 21 15:22	12° \approx 50'47		evening max el	4200 Dec 22 18:00	22° \mathcal{Z} 56'45	22°21'08
inferior conj	4200 Jan 26 23:43	6° \approx 37'41	2°32'06	retrograde	4201 Jan 01 09:10	28° \mathcal{Z} 40'32	
minimum elong	4200 Jan 26 21:14	6° \approx 46'13	2°31'23	asc. node	4201 Jan 05 11:22	27° \mathcal{Z} 11'57	
min. Earth dist.	4200 Jan 27 08:49	6° \approx 06'16	0.67755 AU	evening set	4201 Jan 05 22:56	26° \mathcal{Z} 49'26	
morning rise	4200 Feb 01 02:57	0° \approx 24'54		inferior conj	4201 Jan 11 07:25	20° \mathcal{Z} 28'12	1°52'18
	4200 Feb 01 14:38	30° \mathcal{R} \mathcal{Z}		minimum elong	4201 Jan 11 05:14	20° \mathcal{Z} 35'48	1°51'32
direct	4200 Feb 06 10:11	28° \mathcal{Z} 05'17		min. Earth dist.	4201 Jan 11 04:53	20° \mathcal{Z} 37'01	0.68020 AU
	4200 Feb 11 20:07	0° \approx		morning rise	4201 Jan 16 11:24	14° \mathcal{Z} 18'05	
morning max el	4200 Feb 17 01:16	4° \approx 24'55	23°39'47	direct	4201 Jan 21 03:48	12° \mathcal{Z} 20'54	
desc. node	4200 Feb 24 12:13	13° \approx 02'57		morning max el	4201 Jan 30 12:43	17° \mathcal{Z} 51'21	22°11'38
	4200 Mar 08 16:40	0° \mathcal{H}			4201 Feb 09 13:30	0° \approx	
morning set	4200 Mar 24 09:40	24° \mathcal{H} 59'32		desc. node	4201 Feb 11 09:15	2° \approx 29'30	
	4200 Mar 27 07:23	0° Υ			4201 Mar 01 19:42	0° \mathcal{H}	

morning set	4201 Mar 04 18:38	4° H 44'09		max. Earth dist.	4202 Feb 20 09:00	26° \approx 31'49	1.42893 AU
max. Earth dist.	4201 Mar 10 05:09	13° H 42'22	1.40958 AU		4202 Feb 22 11:59	0° H	
superior conj	4201 Mar 17 23:39	27° H 09'50	-1°59'56	superior conj	4202 Feb 27 06:22	7° H 56'18	-2°07'54
minimum elong	4201 Mar 18 03:32	27° H 27'09	1°59'42	minimum elong	4202 Feb 27 06:28	7° H 56'42	2°07'53
	4201 Mar 19 13:38	0° Y		evening rise	4202 Mar 11 02:46	28° H 35'14	
evening rise	4201 Mar 28 08:00	16° Y 10'07			4202 Mar 11 21:47	0° Y	
asc. node	4201 Apr 03 10:41	27° Y 23'21		asc. node	4202 Mar 21 07:43	16° Y 13'01	
	4201 Apr 04 22:39	0° Z		evening max el	4202 Mar 28 00:37	25° Y 06'17	18°06'48
evening max el	4201 Apr 13 13:06	12° Z 02'42	18°16'58	retrograde	4202 Apr 03 14:17	28° Y 29'06	
retrograde	4201 Apr 20 16:27	15° Z 36'38		evening set	4202 Apr 06 07:08	27° Y 54'37	
evening set	4201 Apr 23 02:58	15° Z 12'35		inferior conj	4202 Apr 12 18:56	22° Y 53'19	3°17'38
inferior conj	4201 Apr 30 06:05	10° Z 31'32	2°36'00	minimum elong	4202 Apr 12 21:15	22° Y 47'35	3°17'17
minimum elong	4201 Apr 30 09:39	10° Z 23'51	2°35'08	min. Earth dist.	4202 Apr 15 21:29	19° Y 50'07	0.61454 AU
min. Earth dist.	4201 May 03 16:16	7° Z 36'22	0.59262 AU	morning rise	4202 Apr 19 09:33	16° Y 56'07	
morning rise	4201 May 07 13:32	4° Z 52'49		direct	4202 Apr 26 04:23	14° Y 35'05	
desc. node	4201 May 10 08:25	3° Z 38'17		desc. node	4202 Apr 27 05:28	14° Y 38'15	
direct	4201 May 13 20:51	3° Z 04'26		morning max el	4202 May 10 09:14	22° Y 33'10	27°50'32
morning max el	4201 May 28 06:03	10° Z 53'10	27°20'52		4202 May 16 23:06	0° Z	
	4201 Jun 12 02:06	0° II			4202 Jun 05 05:32	0° II	
morning set	4201 Jun 28 06:46	29° II 38'28		morning set	4202 Jun 12 10:46	14° II 03'35	
	4201 Jun 28 10:53	0° S		asc. node	4202 Jun 17 07:00	24° II 16'20	
asc. node	4201 Jun 30 09:58	4° S 09'30		max. Earth dist.	4202 Jun 18 07:43	26° II 30'11	1.32227 AU
superior conj	4201 Jul 05 09:18	15° S 00'44	0°50'06	superior conj	4202 Jun 19 19:47	29° II 46'56	0°26'18
minimum elong	4201 Jul 05 07:20	14° S 49'51	0°49'43	minimum elong	4202 Jun 19 18:36	29° II 40'30	0°26'02
max. Earth dist.	4201 Jul 04 21:57	13° S 58'09	1.32000 AU		4202 Jun 19 22:10	0° S	
evening rise	4201 Jul 12 05:01	29° S 53'05		evening rise	4202 Jun 26 16:17	14° S 42'17	
	4201 Jul 12 06:19	0° O			4202 Jul 04 07:16	0° O	
	4201 Jul 28 15:55	0° P		evening max el	4202 Jul 22 11:21	25° O 55'56	24°46'09
desc. node	4201 Aug 06 07:45	11° P 25'50		desc. node	4202 Jul 24 04:46	27° O 30'03	
evening max el	4201 Aug 09 19:35	15° P 03'42	26°08'27		4202 Jul 27 12:10	0° P	
retrograde	4201 Aug 23 18:55	22° P 12'33		retrograde	4202 Aug 05 09:31	2° P 58'10	
evening set	4201 Aug 30 05:19	20° P 31'58		evening set	4202 Aug 10 15:21	1° P 56'03	
min. Earth dist.	4201 Sep 03 08:20	17° P 56'50	0.59032 AU		4202 Aug 14 12:55	30° R 0	
inferior conj	4201 Sep 06 14:38	15° P 30'08	-4°57'57	min. Earth dist.	4202 Aug 15 22:44	29° O 08'10	0.57082 AU
minimum elong	4201 Sep 06 18:49	15° P 22'16	4°57'27	inferior conj	4202 Aug 18 19:05	27° O 16'40	-5°11'46
morning rise	4201 Sep 14 10:32	11° P 01'32		minimum elong	4202 Aug 18 18:22	27° O 17'50	5°11'45
direct	4201 Sep 16 20:28	10° P 41'49		morning rise	4202 Aug 26 23:52	23° O 09'45	
morning max el	4201 Sep 24 20:17	14° P 32'43	18°28'29	direct	4202 Aug 29 14:25	22° O 50'40	
asc. node	4201 Sep 26 09:12	16° P 08'55		morning max el	4202 Sep 07 19:51	27° O 10'14	19°18'59
	4201 Oct 05 12:06	0° A			4202 Sep 10 11:24	0° P	
morning set	4201 Oct 10 21:56	10° A 10'47		asc. node	4202 Sep 13 06:15	3° P 40'25	
				morning set	4202 Sep 24 22:20	24° P 32'50	
superior conj	4201 Oct 19 21:01	27° A 14'46	1°24'48		4202 Sep 27 15:42	0° A	
minimum elong	4201 Oct 20 00:30	27° A 30'57	1°24'28	superior conj	4202 Oct 03 01:11	10° A 41'44	1°38'49
	4201 Oct 21 08:53	0° M		minimum elong	4202 Oct 03 03:07	10° A 51'12	1°38'43
max. Earth dist.	4201 Oct 27 07:21	10° M 34'19	1.40256 AU	max. Earth dist.	4202 Oct 09 11:36	22° A 51'24	1.38165 AU
evening rise	4201 Oct 31 15:04	17° M 54'20		evening rise	4202 Oct 13 06:05	29° A 36'21	
desc. node	4201 Nov 02 07:04	20° M 39'22			4202 Oct 13 11:29	0° M	
	4201 Nov 08 03:31	0° X		desc. node	4202 Oct 20 04:06	11° M 16'42	
	4201 Nov 29 11:18	0° Z			4202 Nov 01 11:38	0° X	
evening max el	4201 Dec 05 08:24	6° Z 34'03	23°41'03	evening max el	4202 Nov 17 21:05	20° X 15'42	24°58'42
retrograde	4201 Dec 16 02:33	12° Z 55'07		retrograde	4202 Nov 29 15:50	27° X 05'45	
evening set	4201 Dec 21 04:58	10° Z 48'06		evening set	4202 Dec 05 07:52	24° X 43'54	
asc. node	4201 Dec 23 08:25	8° Z 38'05		min. Earth dist.	4202 Dec 09 20:38	19° X 38'24	0.67474 AU
min. Earth dist.	4201 Dec 26 01:36	5° Z 08'37	0.67921 AU	asc. node	4202 Dec 10 05:28	19° X 09'25	
inferior conj	4201 Dec 26 15:02	4° Z 22'44	1°05'37	inferior conj	4202 Dec 10 20:48	18° X 18'56	0°13'05
minimum elong	4201 Dec 26 13:34	4° Z 27'45	1°05'02	minimum elong	4202 Dec 10 20:28	18° X 20'00	0°12'56
	4201 Dec 30 02:06	30° R 7		transit middle	4202 Dec 10 20:28	18° X 20'00	0°12'56
morning rise	4201 Dec 31 22:09	28° X 17'03		transit begin	4202 Dec 10 18:48	18° X 25'29	
direct	4202 Jan 05 00:28	26° X 42'36		transit end	4202 Dec 10 22:08	18° X 14'32	
	4202 Jan 11 17:02	0° Z		morning rise	4202 Dec 16 09:14	12° X 19'51	
morning max el	4202 Jan 13 06:18	1° Z 27'50	20°50'51	direct	4202 Dec 19 22:59	11° X 06'18	
desc. node	4202 Jan 29 06:17	22° Z 23'54		morning max el	4202 Dec 27 07:44	15° X 15'38	19°42'36
	4202 Feb 03 09:08	0° \approx			4203 Jan 07 16:52	0° Z	
morning set	4202 Feb 12 00:52	13° \approx 15'48					

greatest brilliancy	4203 Jan 09 11:03	2°  35'05	-0.7m	morning rise	4203 Nov 30 18:36	26°  23'21	
desc. node	4203 Jan 16 03:19	12°  38'38		direct	4203 Dec 03 21:38	25°  27'32	
morning set	4203 Jan 21 21:00	21°  26'52		morning max el	4203 Dec 10 16:30	29°  12'05	18°49'31
	4203 Jan 27 09:15	0°  ≈			4203 Dec 11 11:00	0°  ≈	
max. Earth dist.	4203 Feb 02 20:22	10°  ≈10'19	1.44349 AU	morning set	4204 Jan 01 08:20	0°  ≈30'27	
					4204 Jan 01 00:35	0°  ≈	
superior conj	4203 Feb 07 11:19	17°  ≈34'10	-1°59'02	desc. node	4204 Jan 03 00:22	3°  ≈07'35	
minimum elong	4203 Feb 07 05:21	17°  ≈10'08	1°58'43	max. Earth dist.	4204 Jan 16 13:35	24°  ≈22'39	1.45153 AU
	4203 Feb 15 01:30	0°  ≈					
evening rise	4203 Feb 21 02:13	10°  ≈07'38		superior conj	4204 Jan 17 19:04	26°  ≈18'32	-1°30'34
	4203 Mar 05 02:22	0°  ≈		minimum elong	4204 Jan 17 09:46	25°  ≈42'00	1°29'37
asc. node	4203 Mar 08 04:46	4°  ≈27'10			4204 Jan 20 03:19	0°  ≈	
evening max el	4203 Mar 11 13:29	8°  ≈25'15	18°15'41	evening rise	4204 Feb 02 02:52	20°  ≈≈42'23	
retrograde	4203 Mar 17 23:41	11°  ≈51'09			4204 Feb 07 20:52	0°  ≈	
evening set	4203 Mar 20 22:30	11°  ≈04'56		evening max el	4204 Feb 23 00:54	21°  ≈52'00	18°42'45
inferior conj	4203 Mar 26 22:57	5°  ≈44'18	3°34'43	asc. node	4204 Feb 23 01:49	21°  ≈54'17	
minimum elong	4203 Mar 26 23:32	5°  ≈42'41	3°34'41	retrograde	4204 Feb 29 16:25	25°  ≈33'31	
min. Earth dist.	4203 Mar 29 11:38	2°  ≈56'09	0.63500 AU	evening set	4204 Mar 03 21:30	24°  ≈34'43	
morning rise	4203 Apr 01 23:35	29°  ≈37'08		inferior conj	4204 Mar 09 14:05	18°  ≈56'16	3°33'16
	4203 Apr 01 12:21	30°  ≈37'08		minimum elong	4204 Mar 09 13:10	18°  ≈59'05	3°33'14
direct	4203 Apr 08 20:43	26°  ≈54'22		min. Earth dist.	4204 Mar 11 11:05	16°  ≈39'11	0.65218 AU
desc. node	4203 Apr 14 02:30	28°  ≈15'08		morning rise	4204 Mar 15 04:22	12°  ≈44'12	
	4203 Apr 17 00:50	0°  ≈		direct	4204 Mar 21 20:03	9°  ≈53'43	
morning max el	4203 Apr 22 16:58	4°  ≈52'32	27°42'42	desc. node	4204 Mar 30 23:32	13°  ≈56'36	
	4203 May 11 15:43	0°  ≈		morning max el	4204 Apr 04 02:48	17°  ≈41'43	27°01'22
morning set	4203 May 27 08:02	28°  ≈05'33			4204 Apr 14 10:07	0°  ≈	
	4203 May 28 06:51	0°  ≈			4204 May 03 13:28	0°  ≈	
max. Earth dist.	4203 Jun 01 11:45	8°  ≈41'34	1.32890 AU	morning set	4204 May 09 19:33	11°  ≈34'54	
				max. Earth dist.	4204 May 14 06:30	20°  ≈23'11	1.34005 AU
superior conj	4203 Jun 04 03:10	14°  ≈19'41	-0°00'23				
minimum elong	4203 Jun 04 03:11	14°  ≈19'46	0°00'23	superior conj	4204 May 18 05:21	28°  ≈32'03	-0°29'01
behind sun begin	4203 Jun 03 21:53	13°  ≈15'17		minimum elong	4204 May 18 06:52	28°  ≈40'02	0°28'43
behind sun end	4203 Jun 04 08:29	14°  ≈14'8'17			4204 May 18 22:07	0°  ≈	
asc. node	4203 Jun 04 04:04	14°  ≈12'42'27		asc. node	4204 May 21 01:06	4°  ≈12'29'19	
evening rise	4203 Jun 11 04:06	29°  ≈12'29'20		evening rise	4204 May 25 14:32	14°  ≈12'07'35	
	4203 Jun 11 09:54	0°  ≈			4204 Jun 02 16:38	0°  ≈	
	4203 Jun 28 10:52	0°  ≈		evening max el	4204 Jun 14 18:18	16°  ≈52'37	21°35'41
evening max el	4203 Jul 04 00:23	6°  ≈21'36	23°09'57	desc. node	4204 Jun 26 22:46	22°  ≈57'46	
desc. node	4203 Jul 11 01:47	11°  ≈13'31'38		retrograde	4204 Jun 27 02:21	22°  ≈57'49	
retrograde	4203 Jul 17 11:14	13°  ≈13'04'42		evening set	4204 Jun 29 14:12	22°  ≈43'42	
evening set	4203 Jul 21 04:46	12°  ≈13'34'19		inferior conj	4204 Jul 08 23:06	18°  ≈42'51	-3°22'17
min. Earth dist.	4203 Jul 28 09:40	9°  ≈18'44	0.55589 AU	minimum elong	4204 Jul 08 14:44	18°  ≈54'32	3°19'47
inferior conj	4203 Jul 30 03:49	8°  ≈17'17	-4°42'20	min. Earth dist.	4204 Jul 08 20:09	18°  ≈46'58	0.54859 AU
minimum elong	4203 Jul 29 21:08	8°  ≈12'27'04	4°41'12	morning rise	4204 Jul 17 16:21	14°  ≈49'37	
morning rise	4203 Aug 07 15:48	4°  ≈12'24'55		direct	4204 Jul 21 00:16	14°  ≈25'29	
direct	4203 Aug 10 13:40	4°  ≈10'04'36		morning max el	4204 Aug 02 08:19	20°  ≈13'57	22°02'31
morning max el	4203 Aug 21 07:53	9°  ≈10'04'29	20°31'12		4204 Aug 10 10:53	0°  ≈	
asc. node	4203 Aug 31 03:18	22°  ≈10'00'01		asc. node	4204 Aug 17 00:21	10°  ≈10'56'25	
	4203 Sep 04 13:48	0°  ≈		morning set	4204 Aug 23 14:23	24°  ≈10'01'11	
morning set	4203 Sep 09 04:34	9°  ≈11'40			4204 Aug 26 10:24	0°  ≈	
superior conj	4203 Sep 16 17:45	24°  ≈14'45'17	1°44'04	superior conj	4204 Aug 30 18:58	9°  ≈14'32	1°41'57
minimum elong	4203 Sep 16 18:03	24°  ≈14'46'50	1°44'03	minimum elong	4204 Aug 30 17:57	9°  ≈14'09'08	1°41'54
	4203 Sep 19 08:20	0°  ≈		max. Earth dist.	4204 Sep 03 09:22	16°  ≈42'52	1.34554 AU
max. Earth dist.	4203 Sep 21 18:45	4°  ≈14'46'36	1.36206 AU	evening rise	4204 Sep 07 21:35	25°  ≈14'40'57	
evening rise	4203 Sep 25 17:42	12°  ≈14'15'34			4204 Sep 10 04:00	0°  ≈	
	4203 Oct 05 23:41	0°  ≈		desc. node	4204 Sep 22 22:09	21°  ≈14'50'20	
desc. node	4203 Oct 07 01:08	1°  ≈14'42'19			4204 Sep 28 09:51	0°  ≈	
	4203 Oct 27 14:22	0°  ≈		evening max el	4204 Oct 12 22:20	17°  ≈13'35'33	26°57'32
evening max el	4203 Oct 31 09:40	3°  ≈14'58'44	26°06'41	retrograde	4204 Oct 26 02:54	24°  ≈13'52'12	
retrograde	4203 Nov 13 00:07	11°  ≈14'57'06'52		evening set	4204 Nov 01 20:50	22°  ≈13'11'22	
evening set	4203 Nov 19 05:51	8°  ≈14'32'52		min. Earth dist.	4204 Nov 05 19:46	18°  ≈13'17'07	0.65543 AU
min. Earth dist.	4203 Nov 23 11:28	4°  ≈14'02'48	0.66684 AU	inferior conj	4204 Nov 07 18:59	16°  ≈13'01'39	-1°44'54
inferior conj	4203 Nov 24 22:48	2°  ≈14'13'11	-0°44'16	minimum elong	4204 Nov 07 21:56	15°  ≈13'53'11	1°43'42
minimum elong	4203 Nov 24 23:59	2°  ≈14'09'30	0°43'44	asc. node	4204 Nov 12 23:33	10°  ≈13'59'35	
	4203 Nov 26 18:54	30°  ≈13'38'19		morning rise	4204 Nov 13 23:55	10°  ≈13'24'04	
asc. node	4203 Nov 27 02:31	29°  ≈13'38'19		direct	4204 Nov 16 18:22	9°  ≈13'42'16	

morning max el	4204 Nov 23 06:36	13° \mathbb{M} 12'34	18°12'53	minimum elong	4205 Oct 22 11:34	29° \mathbb{A} 25'36	2°45'03
	4204 Dec 05 05:39	0° \mathbb{A}		morning rise	4205 Oct 28 22:20	24° \mathbb{A} 15'39	
morning set	4204 Dec 12 00:28	11° \mathbb{A} 02'08		asc. node	4205 Oct 30 20:35	23° \mathbb{A} 45'52	
desc. node	4204 Dec 19 21:26	23° \mathbb{A} 46'44		direct	4205 Oct 31 10:34	23° \mathbb{A} 44'08	
	4204 Dec 23 19:02	0° \mathbb{B}		morning max el	4205 Nov 06 23:09	27° \mathbb{A} 09'23	17°53'17
					4205 Nov 09 11:22	0° \mathbb{M}	
superior conj	4204 Dec 26 22:26	4° \mathbb{B} 58'12	-0°47'04	morning set	4205 Nov 23 20:17	22° \mathbb{M} 54'20	
minimum elong	4204 Dec 26 16:32	4° \mathbb{B} 34'56	0°46'17		4205 Nov 28 00:18	0° \mathbb{A}	
max. Earth dist.	4204 Dec 29 09:12	8° \mathbb{B} 49'25	1.45219 AU				
	4205 Jan 11 22:37	0° \mathbb{A}		superior conj	4205 Dec 06 17:32	14° \mathbb{A} 27'49	0°00'16
evening rise	4205 Jan 12 05:14	0° \mathbb{A} 25'46		minimum elong	4205 Dec 06 17:33	14° \mathbb{A} 27'55	0°00'15
greatest brilliancy	4205 Jan 24 04:55	18° \mathbb{A} 58'00	-0.7m	behind sun begin	4205 Dec 06 07:36	13° \mathbb{A} 47'23	
	4205 Jan 31 20:31	0° \mathbb{H}		behind sun end	4205 Dec 07 03:31	15° \mathbb{A} 08'23	
evening max el	4205 Feb 05 08:43	5° \mathbb{H} 22'35	19°26'47	desc. node	4205 Dec 06 18:28	14° \mathbb{A} 31'37	
asc. node	4205 Feb 08 22:49	8° \mathbb{H} 21'40		max. Earth dist.	4205 Dec 12 03:33	23° \mathbb{A} 10'01	1.44544 AU
retrograde	4205 Feb 12 13:14	9° \mathbb{H} 30'21			4205 Dec 16 11:37	0° \mathbb{B}	
evening set	4205 Feb 16 01:27	8° \mathbb{H} 18'15		evening rise	4205 Dec 22 16:47	9° \mathbb{B} 38'08	
inferior conj	4205 Feb 21 13:04	2° \mathbb{H} 24'06	3°17'50		4206 Jan 05 04:30	0° \mathbb{A}	
minimum elong	4205 Feb 21 11:08	2° \mathbb{H} 30'24	3°17'32	evening max el	4206 Jan 19 11:28	18° \mathbb{A} 54'56	20°25'52
min. Earth dist.	4205 Feb 22 19:00	0° \mathbb{H} 46'24	0.66531 AU	asc. node	4206 Jan 26 19:49	23° \mathbb{A} 34'50	
	4205 Feb 23 09:30	30° \mathbb{R} \mathbb{A}		retrograde	4206 Jan 27 11:25	23° \mathbb{A} 37'08	
morning rise	4205 Feb 26 20:34	26° \mathbb{A} 10'04		evening set	4206 Jan 31 08:11	22° \mathbb{A} 10'45	
direct	4205 Mar 05 01:38	23° \mathbb{A} 24'33		inferior conj	4206 Feb 05 17:10	16° \mathbb{A} 03'39	2°51'29
	4205 Mar 16 16:34	0° \mathbb{H}		minimum elong	4206 Feb 05 14:45	16° \mathbb{A} 11'54	2°50'52
morning max el	4205 Mar 17 12:31	0° \mathbb{H} 49'27	25°54'09	min. Earth dist.	4206 Feb 06 09:30	15° \mathbb{A} 08'01	0.67421 AU
desc. node	4205 Mar 17 20:35	1° \mathbb{H} 10'00		morning rise	4206 Feb 10 21:07	9° \mathbb{A} 49'43	
	4205 Apr 08 10:03	0° \mathbb{Y}		direct	4206 Feb 16 12:39	7° \mathbb{A} 18'44	
morning set	4205 Apr 22 17:17	24° \mathbb{Y} 20'12		morning max el	4206 Feb 27 21:10	14° \mathbb{A} 06'01	24°30'50
	4205 Apr 25 17:49	0° \mathbb{B}		desc. node	4206 Mar 04 17:39	19° \mathbb{A} 29'25	
max. Earth dist.	4205 Apr 26 13:48	1° \mathbb{B} 35'36	1.35576 AU		4206 Mar 12 19:47	0° \mathbb{H}	
					4206 Apr 01 06:44	0° \mathbb{Y}	
superior conj	4205 May 01 23:46	12° \mathbb{B} 16'47	-0°58'18	morning set	4206 Apr 04 20:00	6° \mathbb{Y} 07'16	
minimum elong	4205 May 02 02:54	12° \mathbb{B} 32'40	0°57'44	max. Earth dist.	4206 Apr 08 11:30	12° \mathbb{Y} 37'42	1.37540 AU
asc. node	4205 May 07 22:08	24° \mathbb{B} 26'49					
evening rise	4205 May 09 21:31	28° \mathbb{B} 30'28		superior conj	4206 Apr 15 07:16	25° \mathbb{Y} 25'59	-1°26'13
	4205 May 10 15:04	0° \mathbb{II}		minimum elong	4206 Apr 15 11:43	25° \mathbb{Y} 47'33	1°25'35
evening max el	4205 May 27 23:12	27° \mathbb{II} 55'38	20°15'01		4206 Apr 17 15:27	0° \mathbb{B}	
	4205 May 30 08:21	0° \mathbb{B}		evening rise	4206 Apr 23 22:41	12° \mathbb{B} 31'16	
retrograde	4205 Jun 07 16:10	3° \mathbb{B} 09'18		asc. node	4206 Apr 24 19:09	14° \mathbb{B} 12'44	
evening set	4205 Jun 09 15:19	2° \mathbb{B} 59'29			4206 May 03 08:35	0° \mathbb{II}	
desc. node	4205 Jun 13 19:47	1° \mathbb{B} 40'20		evening max el	4206 May 10 16:22	9° \mathbb{II} 40'47	19°13'17
	4205 Jun 17 01:31	30° \mathbb{R} \mathbb{II}		retrograde	4206 May 19 16:43	14° \mathbb{II} 04'17	
inferior conj	4205 Jun 18 18:06	29° \mathbb{II} 00'55	-1°27'40	evening set	4206 May 21 17:05	13° \mathbb{II} 52'03	
minimum elong	4205 Jun 18 13:59	29° \mathbb{II} 07'00	1°26'08	inferior conj	4206 May 30 02:41	9° \mathbb{II} 42'11	0°27'49
min. Earth dist.	4205 Jun 20 08:21	28° \mathbb{II} 04'31	0.55077 AU	minimum elong	4206 May 30 03:49	9° \mathbb{II} 40'16	0°27'24
morning rise	4205 Jun 27 11:19	24° \mathbb{II} 46'00		desc. node	4206 May 31 16:48	8° \mathbb{II} 38'01	
direct	4205 Jul 01 11:01	24° \mathbb{II} 11'33		min. Earth dist.	4206 Jun 01 23:17	7° \mathbb{II} 47'43	0.56221 AU
	4205 Jul 14 03:14	0° \mathbb{B}		morning rise	4206 Jun 07 11:27	4° \mathbb{II} 52'38	
morning max el	4205 Jul 15 00:36	0° \mathbb{B} 48'46	23°45'02	direct	4206 Jun 12 09:40	3° \mathbb{II} 56'29	
asc. node	4205 Aug 03 21:23	0° \mathbb{O} 19'42		morning max el	4206 Jun 26 14:36	11° \mathbb{II} 12'01	25°25'10
	4205 Aug 03 17:24	0° \mathbb{O}			4206 Jul 10 23:43	0° \mathbb{B}	
morning set	4205 Aug 08 01:54	8° \mathbb{O} 54'55		asc. node	4206 Jul 21 18:26	20° \mathbb{B} 02'31	
				morning set	4206 Jul 23 13:30	23° \mathbb{B} 47'50	
superior conj	4205 Aug 15 01:51	23° \mathbb{O} 59'41	1°33'42		4206 Jul 26 10:45	0° \mathbb{O}	
minimum elong	4205 Aug 14 23:56	23° \mathbb{O} 49'22	1°33'31				
max. Earth dist.	4205 Aug 17 08:38	28° \mathbb{O} 53'28	1.33302 AU	superior conj	4206 Jul 30 12:07	8° \mathbb{O} 53'19	1°20'13
	4205 Aug 17 21:11	0° \mathbb{P}		minimum elong	4206 Jul 30 09:49	8° \mathbb{O} 40'40	1°19'54
evening rise	4205 Aug 22 13:33	9° \mathbb{P} 40'28		max. Earth dist.	4206 Jul 31 15:14	11° \mathbb{O} 21'44	1.32473 AU
	4205 Sep 02 13:01	0° \mathbb{A}		evening rise	4206 Aug 06 14:11	24° \mathbb{O} 04'32	
desc. node	4205 Sep 09 19:08	11° \mathbb{A} 32'08			4206 Aug 09 12:26	0° \mathbb{P}	
	4205 Sep 24 11:39	0° \mathbb{M}			4206 Aug 27 05:31	0° \mathbb{A}	
evening max el	4205 Sep 25 09:57	0° \mathbb{M} 54'09	27°24'15	desc. node	4206 Aug 27 16:07	0° \mathbb{A} 36'57	
retrograde	4205 Oct 08 23:46	8° \mathbb{M} 12'13		evening max el	4206 Sep 07 18:42	13° \mathbb{A} 42'48	27°20'54
evening set	4205 Oct 16 02:08	5° \mathbb{M} 33'00		retrograde	4206 Sep 21 14:04	20° \mathbb{A} 57'39	
min. Earth dist.	4205 Oct 19 19:25	2° \mathbb{M} 12'47	0.64049 AU	evening set	4206 Sep 28 18:17	18° \mathbb{A} 31'42	
	4205 Oct 21 22:25	30° \mathbb{R} \mathbb{A}		min. Earth dist.	4206 Oct 02 08:58	15° \mathbb{A} 39'12	0.62245 AU
inferior conj	4205 Oct 22 06:52	29° \mathbb{A} 37'52	-2°46'45	inferior conj	4206 Oct 05 07:33	12° \mathbb{A} 55'15	-3°46'07

minimum elong	4206 Oct 05 13:27	12° Ω 41'31	3°44'24	inferior conj	4207 Sep 17 17:40	25° Π 45'05	-4°36'44
morning rise	4206 Oct 12 10:20	7° Ω 51'30		minimum elong	4207 Sep 17 23:13	25° Π 33'43	4°35'40
direct	4206 Oct 14 19:08	7° Ω 26'45		morning rise	4207 Sep 25 07:35	21° Π 02'47	
asc. node	4206 Oct 17 17:38	8° Ω 06'07		direct	4207 Sep 27 16:11	20° Π 41'51	
morning max el	4206 Oct 21 15:07	10° Ω 55'15	17°51'35	asc. node	4207 Oct 04 14:42	23° Π 52'25	
	4206 Nov 03 07:50	0° Π		morning max el	4207 Oct 05 03:17	24° Π 21'55	18°09'08
morning set	4206 Nov 06 13:40	5° Π 48'12			4207 Oct 09 18:12	0° Ω	
				morning set	4207 Oct 20 22:41	19° Ω 26'45	
					4207 Oct 26 14:04	0° Π	
superior conj	4206 Nov 17 14:33	25° Π 13'23	0°41'29				
minimum elong	4206 Nov 17 18:05	25° Π 28'27	0°40'59	superior conj	4207 Oct 30 13:04	7° Π 13'26	1°12'09
	4206 Nov 20 10:26	0° Σ		minimum elong	4207 Oct 30 17:07	7° Π 31'36	1°11'41
desc. node	4206 Nov 23 15:27	5° Σ 18'43		max. Earth dist.	4207 Nov 07 04:27	20° Π 32'21	1.41429 AU
max. Earth dist.	4206 Nov 24 18:19	7° Σ 08'20	1.43228 AU	desc. node	4207 Nov 10 12:28	26° Π 05'08	
evening rise	4206 Dec 02 04:30	18° Σ 57'16		evening rise	4207 Nov 12 07:37	29° Π 00'58	
	4206 Dec 09 09:36	0° Σ			4207 Nov 12 22:15	0° Σ	
	4206 Dec 31 01:53	0° \approx			4207 Dec 02 23:48	0° Σ	
evening max el	4207 Jan 02 08:46	2° \approx 28'34	21°36'51	evening max el	4207 Dec 16 01:23	16° Σ 04'59	22°55'03
retrograde	4207 Jan 11 08:53	7° \approx 49'34		retrograde	4207 Dec 26 04:00	22° Σ 04'46	
asc. node	4207 Jan 13 16:52	7° \approx 20'10		evening set	4207 Dec 30 23:00	20° Σ 06'59	
evening set	4207 Jan 15 15:54	6° \approx 07'53		asc. node	4207 Dec 31 13:55	19° Σ 33'58	
	4207 Jan 20 21:31	30° κ Σ		inferior conj	4208 Jan 05 08:02	13° Σ 43'46	1°33'18
inferior conj	4207 Jan 21 00:08	29° Σ 50'57	2°16'09	minimum elong	4208 Jan 05 06:06	13° Σ 50'28	1°32'34
minimum elong	4207 Jan 20 21:43	29° Σ 59'18	2°15'23	min. Earth dist.	4208 Jan 05 00:52	14° Σ 08'31	0.68025 AU
min. Earth dist.	4207 Jan 21 04:14	29° Σ 36'42	0.67911 AU	morning rise	4208 Jan 10 13:05	7° Σ 35'19	
morning rise	4207 Jan 26 03:21	23° Σ 38'53		direct	4208 Jan 14 23:27	5° Σ 47'41	
direct	4207 Jan 31 04:17	21° Σ 28'20		morning max el	4208 Jan 23 20:00	10° Σ 57'31	21°35'57
morning max el	4207 Feb 10 06:25	27° Σ 27'30	23°01'42	desc. node	4208 Feb 06 11:43	28° Σ 15'04	
	4207 Feb 12 15:36	0° \approx			4208 Feb 07 17:07	0° \approx	
desc. node	4207 Feb 19 14:41	8° \approx 35'24		morning set	4208 Feb 24 18:06	25° \approx 49'03	
	4207 Mar 06 11:30	0° H			4208 Feb 27 08:46	0° H	
morning set	4207 Mar 16 21:27	16° H 39'00		max. Earth dist.	4208 Mar 02 06:28	6° H 22'53	1.41834 AU
max. Earth dist.	4207 Mar 21 06:26	24° H 03'43	1.39721 AU				
	4207 Mar 24 15:53	0° Υ		superior conj	4208 Mar 09 20:12	19° H 14'00	-2°05'02
superior conj	4207 Mar 28 23:42	7° Υ 48'49	-1°49'51	minimum elong	4208 Mar 09 22:52	19° H 25'38	2°04'56
minimum elong	4207 Mar 29 04:24	8° Υ 10'23	1°49'25		4208 Mar 15 21:47	0° Υ	
evening rise	4207 Apr 07 15:00	26° Υ 01'36		evening rise	4208 Mar 20 18:52	8° Υ 53'20	
	4207 Apr 09 17:00	0° B		asc. node	4208 Mar 28 13:12	22° Υ 47'41	
asc. node	4207 Apr 11 16:10	3° B 41'36			4208 Apr 02 03:20	0° B	
evening max el	4207 Apr 23 19:22	22° B 03'15	18°31'45	evening max el	4208 Apr 06 04:45	4° B 54'27	18°10'14
retrograde	4207 May 01 11:30	25° B 50'05		retrograde	4208 Apr 13 00:43	8° B 21'31	
evening set	4207 May 03 18:18	25° B 31'05		evening set	4208 Apr 15 14:08	7° B 53'02	
inferior conj	4207 May 11 07:57	21° B 02'08	1°58'29	inferior conj	4208 Apr 22 10:13	3° B 03'04	2°57'04
minimum elong	4207 May 11 11:29	20° B 55'11	1°57'25	minimum elong	4208 Apr 22 13:23	2° B 55'48	2°56'25
min. Earth dist.	4207 May 14 17:46	18° B 22'57	0.58050 AU		4208 Apr 25 18:58	30° κ Υ	
desc. node	4207 May 18 13:51	15° B 54'02		min. Earth dist.	4208 Apr 25 18:10	0° B 01'42	0.60207 AU
morning rise	4207 May 19 01:30	15° B 39'11		morning rise	4208 Apr 29 10:19	27° Υ 15'33	
direct	4207 May 24 22:38	14° B 10'56		desc. node	4208 May 04 10:53	25° Υ 19'13	
morning max el	4207 Jun 08 07:47	21° B 50'17	26°47'10	direct	4208 May 05 23:47	25° Υ 12'33	
	4207 Jun 15 11:36	0° II			4208 May 16 21:08	0° B	
	4207 Jul 03 18:50	0° E		morning max el	4208 May 20 07:17	3° B 05'13	27°38'05
morning set	4207 Jul 07 23:33	8° E 34'10			4208 Jun 09 00:10	0° II	
asc. node	4207 Jul 08 15:28	9° E 58'15		morning set	4208 Jun 21 06:21	23° II 08'40	
				asc. node	4208 Jun 24 12:30	0° E 02'09	
superior conj	4207 Jul 14 23:50	23° E 48'22	1°02'15		4208 Jun 24 12:06	0° E	
minimum elong	4207 Jul 14 21:37	23° E 36'04	1°01'52	max. Earth dist.	4208 Jun 27 13:30	6° E 39'30	1.32051 AU
max. Earth dist.	4207 Jul 15 02:04	24° E 00'39	1.32057 AU				
	4207 Jul 17 19:21	0° Ω		superior conj	4208 Jun 28 11:16	8° E 39'12	0°40'24
evening rise	4207 Jul 21 20:43	8° Ω 43'59		minimum elong	4208 Jun 28 09:35	8° E 29'55	0°40'03
	4207 Aug 01 21:45	0° Π		evening rise	4208 Jul 05 06:52	23° E 31'33	
desc. node	4207 Aug 14 13:07	18° Π 49'35			4208 Jul 08 09:29	0° Ω	
evening max el	4207 Aug 20 22:00	25° Π 49'23	26°44'16		4208 Jul 26 09:08	0° Π	
	4207 Aug 26 02:37	0° Ω		desc. node	4208 Jul 31 10:09	5° Π 48'32	
retrograde	4207 Sep 03 20:22	2° Ω 59'44		evening max el	4208 Aug 01 17:47	7° Π 06'49	25°36'06
evening set	4207 Sep 10 16:51	0° Ω 59'45		retrograde	4208 Aug 15 16:56	14° Π 12'49	
	4207 Sep 12 07:06	30° κ Π		evening set	4208 Aug 21 16:55	12° Π 48'36	
min. Earth dist.	4207 Sep 14 12:00	28° Π 23'00	0.60221 AU	min. Earth dist.	4208 Aug 26 05:45	10° Π 10'23	0.58168 AU

inferior conj	4208 Aug 29 09:37	7° \mathbb{M} 56'44	-5°08'10	min. Earth dist.	4209 Aug 07 17:57	20° Ω 55'13	0.56369 AU
minimum elong	4208 Aug 29 12:05	7° \mathbb{M} 52'22	5°08'00	inferior conj	4209 Aug 10 05:24	19° Ω 23'23	-5°05'24
morning rise	4208 Sep 06 09:30	3° \mathbb{M} 37'40		minimum elong	4209 Aug 10 02:00	19° Ω 28'40	5°05'07
direct	4208 Sep 08 21:16	3° \mathbb{M} 18'16		morning rise	4209 Aug 18 13:30	15° Ω 24'28	
morning max el	4208 Sep 17 08:19	7° \mathbb{M} 19'43	18°47'22	direct	4209 Aug 21 06:55	15° Ω 05'06	
asc. node	4208 Sep 20 11:45	10° \mathbb{M} 49'39		morning max el	4209 Aug 31 03:16	19° Ω 39'57	19°47'14
	4208 Oct 01 22:07	0° $\underline{\Omega}$		asc. node	4209 Sep 07 08:48	28° Ω 43'09	
morning set	4208 Oct 03 18:31	3° $\underline{\Omega}$ 35'49			4209 Sep 08 04:17	0° \mathbb{M}	
				morning set	4209 Sep 17 21:43	18° \mathbb{M} 05'58	
					4209 Sep 23 18:31	0° $\underline{\Omega}$	
superior conj	4208 Oct 12 08:00	20° $\underline{\Omega}$ 13'10	1°31'56	superior conj	4209 Sep 25 18:02	3° $\underline{\Omega}$ 57'37	1°42'02
minimum elong	4208 Oct 12 10:54	20° $\underline{\Omega}$ 26'50	1°31'42	minimum elong	4209 Sep 25 19:16	4° $\underline{\Omega}$ 03'42	1°41'59
	4208 Oct 17 14:54	0° \mathbb{M}		max. Earth dist.	4209 Oct 01 15:09	15° $\underline{\Omega}$ 19'05	1.37297 AU
max. Earth dist.	4208 Oct 19 10:20	3° \mathbb{M} 13'59	1.39365 AU	evening rise	4209 Oct 05 09:35	22° $\underline{\Omega}$ 13'28	
evening rise	4208 Oct 23 09:20	10° \mathbb{M} 06'06			4209 Oct 09 20:26	0° \mathbb{M}	
desc. node	4208 Oct 27 09:28	16° \mathbb{M} 46'47		desc. node	4209 Oct 14 06:30	7° \mathbb{M} 19'39	
	4208 Nov 04 19:36	0° \mathbb{X}			4209 Oct 29 15:59	0° \mathbb{X}	
evening max el	4208 Nov 27 14:53	29° \mathbb{X} 44'27	24°14'45	evening max el	4209 Nov 10 03:12	13° \mathbb{X} 26'27	25°29'07
	4208 Nov 27 21:11	0° \mathbb{Z}		retrograde	4209 Nov 22 06:57	20° \mathbb{X} 25'55	
retrograde	4208 Dec 08 19:39	6° \mathbb{Z} 18'26		evening set	4209 Nov 28 04:58	17° \mathbb{X} 58'07	
evening set	4208 Dec 14 03:55	4° \mathbb{Z} 04'43		min. Earth dist.	4209 Dec 02 14:30	13° \mathbb{X} 07'45	0.67183 AU
asc. node	4208 Dec 17 10:59	0° \mathbb{Z} 31'25		inferior conj	4209 Dec 03 19:28	11° \mathbb{X} 34'39	-0°10'45
	4208 Dec 17 20:47	30° \mathbb{R} \mathbb{X}		minimum elong	4209 Dec 03 19:44	11° \mathbb{X} 33'46	0°10'37
min. Earth dist.	4208 Dec 18 21:03	28° \mathbb{X} 39'50	0.67780 AU	transit middle	4209 Dec 03 19:44	11° \mathbb{X} 33'46	0°10'37
inferior conj	4208 Dec 19 15:05	27° \mathbb{X} 39'08	0°43'59	transit begin	4209 Dec 03 17:38	11° \mathbb{X} 40'35	
minimum elong	4208 Dec 19 14:03	27° \mathbb{X} 42'36	0°43'34	transit end	4209 Dec 03 21:51	11° \mathbb{X} 26'59	
morning rise	4208 Dec 25 00:14	21° \mathbb{X} 36'14		asc. node	4209 Dec 04 08:02	10° \mathbb{X} 54'24	
direct	4208 Dec 28 21:03	20° \mathbb{X} 11'00		morning rise	4209 Dec 09 10:50	5° \mathbb{X} 39'24	
morning max el	4209 Jan 05 16:55	24° \mathbb{X} 39'05	20°20'06	direct	4209 Dec 12 19:42	4° \mathbb{X} 34'01	
	4209 Jan 10 08:59	0° \mathbb{Z}		morning max el	4209 Dec 19 21:46	8° \mathbb{X} 31'28	19°18'05
desc. node	4209 Jan 23 08:45	18° \mathbb{Z} 18'43		greatest brilliancy	4210 Jan 02 09:28	26° \mathbb{X} 38'25	-0.7m
	4209 Jan 31 02:00	0° \approx			4210 Jan 04 14:34	0° \mathbb{Z}	
morning set	4209 Feb 02 17:07	4° \approx 03'06		desc. node	4210 Jan 10 05:46	8° \mathbb{Z} 39'49	
max. Earth dist.	4209 Feb 12 14:13	19° \approx 36'44	1.43590 AU	morning set	4210 Jan 12 16:56	12° \mathbb{Z} 28'49	
					4210 Jan 23 22:37	0° \approx	
superior conj	4209 Feb 18 15:59	29° \approx 30'36	-2°06'27	max. Earth dist.	4210 Jan 26 04:16	3° \approx 31'13	1.44777 AU
minimum elong	4209 Feb 18 13:35	29° \approx 20'43	2°06'24				
	4209 Feb 18 23:05	0° \mathbb{X}		superior conj	4210 Jan 29 10:36	8° \approx 41'26	-1°49'17
evening rise	4209 Mar 03 05:56	20° \mathbb{X} 56'55		minimum elong	4210 Jan 29 02:30	8° \approx 09'14	1°48'39
	4209 Mar 08 10:50	0° \mathbb{Y}			4210 Feb 11 13:48	0° \mathbb{X}	
asc. node	4209 Mar 15 10:15	11° \mathbb{Y} 23'14		evening rise	4210 Feb 12 19:59	2° \mathbb{X} 04'58	
evening max el	4209 Mar 20 17:08	18° \mathbb{Y} 05'00	18°08'14	asc. node	4210 Mar 02 07:18	29° \mathbb{X} 18'39	
retrograde	4209 Mar 27 04:12	21° \mathbb{Y} 27'44			4210 Mar 02 21:19	0° \mathbb{Y}	
evening set	4209 Mar 29 23:35	20° \mathbb{Y} 48'20		evening max el	4210 Mar 04 05:36	1° \mathbb{Y} 27'23	18°25'00
inferior conj	4209 Apr 05 06:03	15° \mathbb{Y} 38'18	3°27'28	retrograde	4210 Mar 10 17:15	4° \mathbb{Y} 58'54	
minimum elong	4209 Apr 05 07:38	15° \mathbb{Y} 34'09	3°27'19	evening set	4210 Mar 13 18:33	4° \mathbb{Y} 07'35	
min. Earth dist.	4209 Apr 08 03:00	12° \mathbb{Y} 39'16	0.62355 AU		4210 Mar 18 11:00	30° \mathbb{R} \mathbb{X}	
morning rise	4209 Apr 11 14:17	9° \mathbb{Y} 35'53		inferior conj	4210 Mar 19 15:15	28° \mathbb{X} 39'06	3°36'03
direct	4209 Apr 18 10:58	7° \mathbb{Y} 04'21		minimum elong	4210 Mar 19 15:09	28° \mathbb{X} 39'26	3°36'04
desc. node	4209 Apr 21 07:56	7° \mathbb{Y} 28'33		min. Earth dist.	4210 Mar 21 21:20	26° \mathbb{X} 02'29	0.64272 AU
morning max el	4209 May 02 12:54	15° \mathbb{Y} 03'22	27°51'45	morning rise	4210 Mar 25 11:00	22° \mathbb{X} 29'03	
	4209 May 14 16:32	0° \mathbb{X}		direct	4210 Apr 01 06:28	19° \mathbb{X} 41'13	
	4209 Jun 01 13:48	0° \mathbb{I}		desc. node	4210 Apr 08 04:59	22° \mathbb{X} 02'22	
morning set	4209 Jun 05 07:51	7° \mathbb{I} 25'13		morning max el	4210 Apr 14 22:03	27° \mathbb{X} 37'27	27°28'51
max. Earth dist.	4209 Jun 10 21:34	19° \mathbb{I} 05'33	1.32456 AU		4210 Apr 17 04:12	0° \mathbb{Y}	
asc. node	4209 Jun 11 09:33	20° \mathbb{I} 10'03			4210 May 08 09:34	0° \mathbb{X}	
				morning set	4210 May 20 01:23	21° \mathbb{X} 14'39	
superior conj	4209 Jun 12 20:41	23° \mathbb{I} 20'25	0°15'17		4210 May 24 09:31	0° \mathbb{I}	
minimum elong	4209 Jun 12 19:58	23° \mathbb{I} 16'32	0°15'07	max. Earth dist.	4210 May 24 22:01	1° \mathbb{I} 04'48	1.33302 AU
behind sun begin	4209 Jun 12 18:21	23° \mathbb{I} 07'43					
behind sun end	4209 Jun 12 21:35	23° \mathbb{I} 25'21		superior conj	4210 May 28 02:05	7° \mathbb{I} 45'03	-0°12'22
	4209 Jun 15 21:56	0° \mathbb{E}		minimum elong	4210 May 28 02:43	7° \mathbb{I} 48'23	0°12'15
evening rise	4209 Jun 19 18:38	8° \mathbb{E} 20'50		behind sun begin	4210 May 27 23:12	7° \mathbb{I} 29'41	
	4209 Jul 01 00:12	0° Ω		behind sun end	4210 May 28 06:14	8° \mathbb{I} 07'07	
evening max el	4209 Jul 14 07:27	17° Ω 43'53	24°05'53	asc. node	4210 May 29 06:34	10° \mathbb{I} 17'03	
desc. node	4209 Jul 18 07:11	21° Ω 05'15		evening rise	4210 Jun 04 06:04	23° \mathbb{I} 04'32	
retrograde	4209 Jul 28 02:15	24° Ω 40'29					
evening set	4209 Aug 01 17:07	23° Ω 53'09					

	4210 Jun 07 14:28	0°☿				4211 May 15 23:55	0°♊
evening max el	4210 Jun 25 21:25	28°☿07'11	22°28'48	asc. node		4211 May 16 03:36	0°♊19'21
	4210 Jun 27 23:28	0°♊		evening rise		4211 May 19 15:17	7°♊36'52
desc. node	4210 Jul 05 04:13	4°♊04'03				4211 May 31 18:04	0°☿
retrograde	4210 Jul 08 23:19	4°♊37'16		evening max el		4211 Jun 07 19:40	8°☿49'55 20°59'17
evening set	4210 Jul 12 02:14	4°♊15'47		retrograde		4211 Jun 19 12:04	14°☿33'30
min. Earth dist.	4210 Jul 20 04:37	0°♊44'18	0.55164 AU	evening set		4211 Jun 21 16:15	14°☿22'22
inferior conj	4210 Jul 21 07:12	0°♊06'33	-4°14'15	desc. node		4211 Jun 22 01:13	14°☿18'18
minimum elong	4210 Jul 20 23:00	0°♊18'13	4°12'23	inferior conj		4211 Jul 01 00:31	10°☿24'53 -2°36'03
	4210 Jul 21 11:49	30°☿☿		minimum elong		4211 Jun 30 17:25	10°☿34'54 2°33'39
morning rise	4210 Jul 29 21:46	26°☿16'06		min. Earth dist.		4211 Jul 01 15:56	10°☿03'05 0.54836 AU
direct	4210 Aug 01 23:06	25°☿54'51		morning rise		4211 Jul 09 18:35	6°☿24'24
	4210 Aug 11 23:47	0°♊		direct		4211 Jul 13 08:28	5°☿56'48
morning max el	4210 Aug 13 10:19	1°♊15'08	21°08'03	morning max el		4211 Jul 26 06:34	12°☿07'15 22°45'20
asc. node	4210 Aug 25 05:50	17°♊19'15				4211 Aug 08 13:47	0°♊
	4210 Aug 31 20:41	0°♊		asc. node		4211 Aug 12 02:51	6°♊27'38
morning set	4210 Sep 02 05:40	2°♊49'24		morning set		4211 Aug 17 16:22	17°♊40'36
						4211 Aug 23 10:52	0°♊
superior conj	4210 Sep 09 14:40	18°♊13'00	1°43'59	superior conj		4211 Aug 24 18:34	2°♊49'22 1°39'08
minimum elong	4210 Sep 09 14:22	18°♊11'24	1°43'58	minimum elong		4211 Aug 24 17:06	2°♊41'35 1°39'02
max. Earth dist.	4210 Sep 14 00:33	27°♊09'31	1.35454 AU	max. Earth dist.		4211 Aug 27 18:46	9°♊09'52 1.33974 AU
	4210 Sep 15 11:15	0°♊		evening rise		4211 Sep 01 14:07	18°♊54'16
evening rise	4210 Sep 18 04:38	5°♊13'19				4211 Sep 07 11:13	0°♊
desc. node	4210 Oct 01 03:32	27°♊38'12		desc. node		4211 Sep 18 00:32	17°♊35'40
	4210 Oct 02 15:46	0°♊				4211 Sep 26 19:18	0°♊
evening max el	4210 Oct 23 15:42	27°♊07'08	26°30'52	evening max el		4211 Oct 06 04:16	10°♊37'49 27°12'23
	4210 Oct 26 21:38	0°♊		retrograde		4211 Oct 19 13:31	17°♊55'37
retrograde	4210 Nov 05 13:11	4°♊20'53		evening set		4211 Oct 26 11:28	15°♊14'37
evening set	4210 Nov 12 00:17	1°♊43'09		min. Earth dist.		4211 Oct 30 07:55	11°♊34'57 0.64942 AU
	4210 Nov 13 20:37	30°☿♊		inferior conj		4211 Nov 01 12:13	9°♊10'28 -2°11'12
min. Earth dist.	4210 Nov 16 02:55	27°♊28'12	0.66234 AU	minimum elong		4211 Nov 01 15:56	9°♊00'10 2°09'45
inferior conj	4210 Nov 17 19:15	25°♊26'46	-1°09'42	morning rise		4211 Nov 07 21:27	3°♊38'41
minimum elong	4210 Nov 17 21:10	25°♊21'00	1°08'53	asc. node		4211 Nov 08 02:05	3°♊33'32
asc. node	4210 Nov 21 05:03	21°♊39'23		direct		4211 Nov 10 12:55	3°♊01'41
morning rise	4210 Nov 23 18:44	19°♊41'44		morning max el		4211 Nov 17 00:30	6°♊29'02 18°02'22
direct	4210 Nov 26 17:44	18°♊52'30				4211 Dec 02 21:16	0°♊
morning max el	4210 Dec 03 09:06	22°♊30'12	18°31'52	morning set		4211 Dec 04 20:24	3°♊16'02
	4210 Dec 09 09:50	0°♊		desc. node		4211 Dec 14 23:50	19°♊54'53
morning set	4210 Dec 23 15:53	22°♊08'22					
desc. node	4210 Dec 28 02:49	29°♊13'26		superior conj		4211 Dec 18 21:53	26°♊11'58 -0°26'45
	4210 Dec 28 14:34	0°♊		minimum elong		4211 Dec 18 18:34	25°♊58'46 0°26'17
superior conj	4211 Jan 08 14:01	17°♊17'21	-1°13'23			4211 Dec 21 07:20	0°♊
minimum elong	4211 Jan 08 05:25	16°♊43'41	1°12'22	max. Earth dist.		4211 Dec 22 17:45	2°♊15'54 1.45016 AU
max. Earth dist.	4211 Jan 08 22:20	17°♊49'58	1.45267 AU	evening rise		4212 Jan 04 05:19	21°♊42'24
	4211 Jan 16 16:21	0°♊				4212 Jan 09 14:39	0°♊
evening rise	4211 Jan 24 10:46	12°♊16'26		greatest brilliancy		4212 Jan 18 00:03	12°♊42'48 -0.7m
greatest brilliancy	4211 Feb 02 14:30	26°♊46'44	-0.8m	evening max el		4212 Jan 29 21:38	28°♊28'31 19°50'18
	4211 Feb 04 16:10	0°♊				4212 Jan 31 12:02	0°♊
evening max el	4211 Feb 15 15:45	14°♊56'42	18°59'32	asc. node		4212 Feb 04 01:21	2°♊20'09
asc. node	4211 Feb 17 04:19	16°♊22'30		retrograde		4212 Feb 06 09:35	2°♊49'39
retrograde	4211 Feb 22 12:02	18°♊48'14		evening set		4212 Feb 10 01:18	1°♊31'34
evening set	4211 Feb 25 19:56	17°♊44'03				4212 Feb 11 19:27	30°☿♊
inferior conj	4211 Mar 03 10:07	11°♊58'54	3°28'14	inferior conj		4212 Feb 15 11:33	25°♊31'49 3°07'51
minimum elong	4211 Mar 03 08:42	12°♊03'21	3°28'05	minimum elong		4212 Feb 15 09:21	25°♊39'08 3°07'24
min. Earth dist.	4211 Mar 05 00:41	9°♊57'34	0.65828 AU	min. Earth dist.		4212 Feb 16 11:33	24°♊11'54 0.66965 AU
morning rise	4211 Mar 08 21:06	5°♊45'38		morning rise		4212 Feb 20 17:12	19°♊17'49
direct	4211 Mar 15 08:51	2°♊55'29		direct		4212 Feb 26 16:53	16°♊37'23
desc. node	4211 Mar 26 02:00	8°♊26'45		morning max el		4212 Mar 09 16:56	23°♊47'16 25°20'01
morning max el	4211 Mar 28 07:57	10°♊35'54	26°35'18	desc. node		4212 Mar 11 23:02	26°♊10'35
	4211 Apr 12 16:57	0°♊				4212 Mar 15 06:01	0°♊
	4211 Apr 30 22:18	0°♊				4212 Apr 05 02:27	0°♊
morning set	4211 May 03 07:35	4°♊27'05		morning set		4212 Apr 14 21:54	16°♊49'05
max. Earth dist.	4211 May 07 11:40	12°♊31'42	1.34617 AU	max. Earth dist.		4212 Apr 18 14:12	23°♊35'26 1.36378 AU
						4212 Apr 21 22:48	0°♊
superior conj	4211 May 12 01:19	21°♊46'50	-0°41'28	superior conj		4212 Apr 24 15:32	5°♊17'39 -1°10'27
minimum elong	4211 May 12 03:32	21°♊58'15	0°41'02				

minimum elong	4212 Apr 24 19:19	5°♄36'23	1°09'49		4213 Apr 13 20:32	0°♄	
asc. node	4212 May 02 00:38	20°♄12'28		evening rise	4213 Apr 16 17:56	5°♄40'10	
evening rise	4212 May 02 20:06	21°♄51'04		asc. node	4213 Apr 18 21:40	9°♄51'53	
	4212 May 06 22:43	0°♄			4213 May 01 02:49	0°♄	
evening max el	4212 May 20 05:59	20°♄10'43	19°46'15	evening max el	4213 May 03 03:39	2°♄12'14	18°53'02
retrograde	4212 May 30 04:44	25°♄01'28		retrograde	4213 May 11 12:57	6°♄18'29	
evening set	4212 Jun 01 03:31	24°♄51'07		evening set	4213 May 13 15:49	6°♄03'47	
desc. node	4212 Jun 07 22:13	22°♄04'06		inferior conj	4213 May 21 16:49	1°♄45'52	1°10'10
inferior conj	4212 Jun 09 23:48	20°♄49'06	-0°36'48	minimum elong	4213 May 21 19:23	1°♄41'15	1°09'16
minimum elong	4212 Jun 09 22:08	20°♄51'42	0°36'09		4213 May 24 03:51	30°♄	
min. Earth dist.	4212 Jun 12 04:54	19°♄27'17	0.55468 AU	min. Earth dist.	4213 May 24 20:56	29°♄30'20	0.56935 AU
morning rise	4212 Jun 18 14:33	16°♄20'39		desc. node	4213 May 25 19:16	28°♄52'59	
direct	4212 Jun 22 23:35	15°♄38'20		morning rise	4213 May 29 19:42	26°♄41'22	
morning max el	4212 Jul 06 20:52	22°♄32'49	24°28'52	direct	4213 Jun 04 03:51	25°♄32'51	
	4212 Jul 13 11:24	0°♄			4213 Jun 15 01:24	0°♄	
asc. node	4212 Jul 28 23:54	26°♄00'05		morning max el	4213 Jun 18 11:48	2°♄59'33	26°03'18
	4212 Jul 30 22:40	0°♄			4213 Jul 07 18:36	0°♄	
morning set	4212 Aug 01 04:09	2°♄34'47		asc. node	4213 Jul 15 20:56	15°♄49'09	
				morning set	4213 Jul 16 15:19	17°♄25'53	
superior conj	4212 Aug 08 03:09	17°♄38'53	1°28'33		4213 Jul 22 10:19	0°♄	
minimum elong	4212 Aug 08 01:00	17°♄27'15	1°28'20				
max. Earth dist.	4212 Aug 09 21:45	21°♄29'45	1.32902 AU	superior conj	4213 Jul 23 14:16	2°♄33'54	1°13'07
	4212 Aug 13 22:03	0°♄		minimum elong	4213 Jul 23 11:56	2°♄21'03	1°12'45
evening rise	4212 Aug 15 10:11	3°♄05'38		max. Earth dist.	4213 Jul 24 06:44	4°♄04'34	1.32245 AU
	4212 Aug 30 06:07	0°♄		evening rise	4213 Jul 30 13:39	17°♄37'08	
desc. node	4212 Sep 03 21:31	7°♄03'25			4213 Aug 05 18:50	0°♄	
evening max el	4212 Sep 17 15:13	23°♄46'13	27°26'51	desc. node	4213 Aug 21 18:32	25°♄48'25	
	4212 Sep 26 11:53	0°♄			4213 Aug 25 01:51	0°♄	
retrograde	4212 Oct 01 07:27	1°♄02'18		evening max el	4213 Aug 30 21:50	6°♄17'47	27°09'21
	4212 Oct 05 20:55	30°♄		retrograde	4213 Sep 13 18:22	13°♄30'39	
evening set	4212 Oct 08 11:40	28°♄27'26		evening set	4213 Sep 20 20:56	11°♄13'54	
min. Earth dist.	4212 Oct 12 03:25	25°♄20'02	0.63317 AU	min. Earth dist.	4213 Sep 24 12:12	8°♄30'19	0.61405 AU
inferior conj	4212 Oct 14 19:46	22°♄40'05	-3°12'32	inferior conj	4213 Sep 27 14:41	5°♄46'44	-4°09'10
minimum elong	4212 Oct 15 01:06	22°♄26'49	3°10'45	minimum elong	4213 Sep 27 20:43	5°♄33'27	4°07'39
morning rise	4212 Oct 21 15:59	17°♄25'08		morning rise	4213 Oct 04 22:20	0°♄52'02	
direct	4212 Oct 24 02:31	16°♄56'45		direct	4213 Oct 07 06:44	0°♄29'11	
asc. node	4212 Oct 24 23:07	17°♄00'21		asc. node	4213 Oct 11 20:11	1°♄58'48	
morning max el	4212 Oct 30 17:10	20°♄22'09	17°50'20	morning max el	4213 Oct 14 07:59	4°♄01'07	17°56'41
	4212 Nov 06 22:02	0°♄		morning set	4213 Oct 30 02:59	28°♄51'59	
morning set	4212 Nov 16 02:17	15°♄37'27			4213 Oct 30 17:50	0°♄	
	4212 Nov 24 10:29	0°♄					
superior conj	4212 Nov 28 03:32	6°♄12'36	0°18'53	superior conj	4213 Nov 09 11:55	17°♄31'24	0°55'51
minimum elong	4212 Nov 28 05:28	6°♄20'36	0°18'37	minimum elong	4213 Nov 09 15:58	17°♄49'01	0°55'19
desc. node	4212 Nov 30 20:51	10°♄41'07			4213 Nov 16 20:26	0°♄	
max. Earth dist.	4212 Dec 04 11:27	16°♄31'11	1.44059 AU	max. Earth dist.	4213 Nov 17 00:30	0°♄16'48	1.42509 AU
	4212 Dec 13 01:14	0°♄		desc. node	4213 Nov 17 17:51	1°♄28'10	
evening rise	4212 Dec 13 15:00	0°♄53'07		evening rise	4213 Nov 23 07:44	10°♄26'58	
	4213 Jan 02 06:40	0°♄			4213 Dec 06 04:12	0°♄	
evening max el	4213 Jan 11 22:07	12°♄01'26	20°54'48	evening max el	4213 Dec 25 17:09	25°♄35'18	22°09'29
retrograde	4213 Jan 20 07:40	16°♄59'26			4213 Dec 31 03:03	0°♄	
asc. node	4213 Jan 20 22:23	16°♄57'23		retrograde	4214 Jan 04 04:26	1°♄13'28	
evening set	4213 Jan 24 08:42	15°♄26'26		asc. node	4214 Jan 07 19:26	0°♄03'26	
inferior conj	4213 Jan 29 17:08	9°♄14'42	2°37'29		4214 Jan 07 21:30	30°♄	
minimum elong	4213 Jan 29 14:40	9°♄23'13	2°36'47	evening set	4214 Jan 08 16:23	29°♄24'48	
min. Earth dist.	4213 Jan 30 04:03	8°♄37'10	0.67682 AU	inferior conj	4214 Jan 14 00:45	23°♄04'28	1°58'50
morning rise	4213 Feb 03 20:28	3°♄01'36		minimum elong	4214 Jan 13 22:29	23°♄12'19	1°58'03
direct	4213 Feb 09 05:51	0°♄39'00		min. Earth dist.	4214 Jan 13 23:54	23°♄07'27	0.68001 AU
morning max el	4213 Feb 20 01:34	7°♄05'57	23°53'06	morning rise	4214 Jan 19 04:27	16°♄53'44	
desc. node	4213 Feb 26 20:06	14°♄51'27		direct	4214 Jan 23 23:00	14°♄53'06	
	4213 Mar 09 21:28	0°♄		morning max el	4214 Feb 02 12:25	20°♄31'10	22°24'26
morning set	4213 Mar 27 14:37	28°♄05'41			4214 Feb 10 13:32	0°♄	
	4213 Mar 28 17:09	0°♄		desc. node	4214 Feb 13 17:08	4°♄12'56	
max. Earth dist.	4213 Mar 31 10:14	4°♄45'22	1.38463 AU		4214 Mar 03 03:23	0°♄	
				morning set	4214 Mar 08 04:00	8°♄02'57	
superior conj	4213 Apr 07 17:13	18°♄08'26	-1°36'59	max. Earth dist.	4214 Mar 13 06:49	16°♄32'45	1.40639 AU
minimum elong	4213 Apr 07 21:58	18°♄30'56	1°36'24		4214 Mar 20 24:00	0°♄	

superior conj	4214 Mar 21 01:49	0°♈08'11	-1°57'37	minimum elong	4215 Mar 02 13:05	11°♋08'21	2°07'39
minimum elong	4214 Mar 21 06:00	0°♈27'00	1°57'20		4215 Mar 13 07:13	0°♈	
evening rise	4214 Mar 31 05:31	18°♈55'43		evening rise	4215 Mar 14 02:46	1°♈27'37	
asc. node	4214 Apr 05 18:43	29°♈12'17		asc. node	4215 Mar 23 15:47	18°♈06'25	
	4214 Apr 06 05:24	0°♋		evening max el	4215 Mar 30 20:53	27°♈48'56	18°07'08
evening max el	4214 Apr 16 09:48	14°♋48'22	18°20'11		4215 Apr 02 14:08	0°♋	
retrograde	4214 Apr 23 16:08	18°♋25'10		retrograde	4215 Apr 06 11:50	1°♋12'18	
evening set	4214 Apr 26 01:40	18°♋02'32		evening set	4215 Apr 09 03:49	0°♋39'24	
inferior conj	4214 May 03 07:25	13°♋24'45	2°27'05		4215 Apr 10 11:44	30°♋♈	
minimum elong	4214 May 03 11:03	13°♋17'07	2°26'09	inferior conj	4215 Apr 15 17:39	25°♈41'05	3°12'58
min. Earth dist.	4214 May 06 17:57	10°♋32'51	0.58940 AU	minimum elong	4215 Apr 15 20:13	25°♈34'52	3°12'34
morning rise	4214 May 10 17:30	7°♋49'40		min. Earth dist.	4215 Apr 18 21:52	22°♈37'35	0.61134 AU
desc. node	4214 May 12 16:19	6°♋55'12		morning rise	4215 Apr 22 10:39	19°♈46'12	
direct	4214 May 16 22:25	6°♋06'27		direct	4215 Apr 29 04:28	17°♈29'27	
morning max el	4214 May 31 07:50	13°♋53'21	27°13'11	desc. node	4215 Apr 29 13:21	17°♈29'50	
	4214 Jun 13 04:24	0°♊		morning max el	4215 May 13 10:00	25°♈26'21	27°48'28
	4214 Jun 29 23:32	0°♊			4215 May 17 14:54	0°♋	
morning set	4214 Jul 01 00:16	2°♊08'34			4215 Jun 06 14:56	0°♊	
asc. node	4214 Jul 02 17:59	5°♊49'22		morning set	4215 Jun 15 05:04	16°♊36'11	
				asc. node	4215 Jun 19 15:02	25°♊55'29	
superior conj	4214 Jul 08 02:07	17°♊28'25	0°53'26	max. Earth dist.	4215 Jun 21 04:32	29°♊18'55	1.32170 AU
minimum elong	4214 Jul 08 00:04	17°♊17'05	0°53'03		4215 Jun 21 12:04	0°♊	
max. Earth dist.	4214 Jul 07 18:16	16°♊45'08	1.32001 AU				
	4214 Jul 13 19:31	0°♊		superior conj	4215 Jun 22 12:55	2°♊15'59	0°30'08
evening rise	4214 Jul 14 22:00	2°♊21'06		minimum elong	4215 Jun 22 11:36	2°♊08'44	0°29'50
	4214 Jul 29 18:32	0°♋		evening rise	4215 Jun 29 09:04	17°♊10'03	
desc. node	4214 Aug 08 15:34	13°♋33'00			4215 Jul 05 16:44	0°♊	
evening max el	4214 Aug 12 21:50	18°♋02'59	26°18'39	evening max el	4215 Jul 25 14:39	29°♊01'28	24°59'39
retrograde	4214 Aug 26 21:07	25°♋12'29		desc. node	4215 Jul 26 12:35	29°♊52'34	
evening set	4214 Sep 02 10:31	23°♋26'35			4215 Jul 26 15:53	0°♋	
min. Earth dist.	4214 Sep 06 11:00	20°♋51'33	0.59338 AU	retrograde	4215 Aug 08 13:21	6°♋04'46	
inferior conj	4214 Sep 09 17:28	18°♋21'16	-4°53'14	evening set	4215 Aug 14 00:11	4°♋57'08	
minimum elong	4214 Sep 09 22:06	18°♋12'20	4°52'34	min. Earth dist.	4215 Aug 19 02:14	2°♋12'12	0.57352 AU
morning rise	4214 Sep 17 11:53	13°♋49'08		inferior conj	4215 Aug 22 00:57	0°♋14'34	-5°12'10
direct	4214 Sep 19 21:18	13°♋29'13		minimum elong	4215 Aug 22 01:08	0°♋14'14	5°12'10
morning max el	4214 Sep 27 17:37	17°♋17'05	18°22'47		4215 Aug 22 09:40	30°♋♊	
asc. node	4214 Sep 28 17:14	18°♋17'05		morning rise	4215 Aug 30 04:30	26°♊04'31	
	4214 Oct 06 19:51	0°♋		direct	4215 Sep 01 18:15	25°♊45'23	
morning set	4214 Oct 13 17:02	12°♋44'23			4215 Sep 10 18:39	0°♋	
				morning max el	4215 Sep 10 18:40	0°♋00'03	19°10'05
superior conj	4214 Oct 22 19:49	29°♋58'41	1°21'49	asc. node	4215 Sep 15 14:16	5°♋39'57	
minimum elong	4214 Oct 22 23:29	0°♌15'34	1°21'26	morning set	4215 Sep 27 16:23	27°♋03'31	
	4214 Oct 22 20:06	0°♌			4215 Sep 29 03:52	0°♋	
max. Earth dist.	4214 Oct 30 08:02	13°♌20'34	1.40566 AU				
evening rise	4214 Nov 03 20:02	20°♌55'23		superior conj	4215 Oct 05 21:46	13°♋19'08	1°37'18
desc. node	4214 Nov 04 14:52	22°♌12'51		minimum elong	4215 Oct 05 23:58	13°♋29'45	1°37'09
	4214 Nov 09 11:15	0°♌		max. Earth dist.	4215 Oct 12 12:37	25°♋44'00	1.38474 AU
	4214 Nov 30 08:36	0°♌			4215 Oct 14 21:51	0°♌	
evening max el	4214 Dec 08 08:03	9°♌12'08	23°29'12	evening rise	4215 Oct 16 07:43	2°♌28'25	
retrograde	4214 Dec 18 22:21	15°♌28'03		desc. node	4215 Oct 22 11:53	12°♌51'36	
evening set	4214 Dec 23 22:45	13°♌23'29			4215 Nov 02 15:46	0°♌	
asc. node	4214 Dec 25 16:30	11°♌41'07		evening max el	4215 Nov 20 20:59	22°♌53'45	24°47'33
inferior conj	4214 Dec 29 08:31	6°♌58'30	1°13'06	retrograde	4215 Dec 02 12:13	29°♌39'43	
minimum elong	4214 Dec 29 06:55	7°♌04'01	1°12'29	evening set	4215 Dec 08 02:13	27°♌20'01	
min. Earth dist.	4214 Dec 28 20:43	7°♌38'56	0.67957 AU	min. Earth dist.	4215 Dec 12 16:07	22°♌09'25	0.67566 AU
morning rise	4215 Jan 03 15:01	0°♌51'57		asc. node	4215 Dec 12 13:31	22°♌17'56	
	4215 Jan 04 22:17	30°♌♌		inferior conj	4215 Dec 13 14:40	20°♌54'48	0°21'23
direct	4215 Jan 07 19:23	29°♌14'05		minimum elong	4215 Dec 13 14:08	20°♌56'32	0°21'11
	4215 Jan 10 21:03	0°♌		morning rise	4215 Dec 19 02:11	14°♌54'36	
morning max el	4215 Jan 16 04:51	4°♌05'32	21°02'08	direct	4215 Dec 22 17:44	13°♌38'02	
desc. node	4215 Jan 31 14:09	24°♌03'27		morning max el	4215 Dec 30 05:04	17°♌51'43	19°51'50
	4215 Feb 04 15:04	0°♌			4216 Jan 08 20:00	0°♌	
morning set	4215 Feb 15 13:32	16°♌42'45		desc. node	4216 Jan 18 11:10	14°♌15'25	
max. Earth dist.	4215 Feb 23 09:23	29°♌13'11	1.42630 AU	morning set	4216 Jan 25 09:33	24°♌51'56	
	4215 Feb 23 20:50	0°♌			4216 Jan 28 17:06	0°♌	
				max. Earth dist.	4216 Feb 05 19:58	12°♌46'04	1.44176 AU
superior conj	4215 Mar 02 12:13	11°♌04'40	-2°07'39				

superior conj	4216 Feb 10 20:57	20° \approx 52'10	-2°01'38	desc. node	4217 Jan 04 08:11	4° \approx 42'24	
minimum elong	4216 Feb 10 15:54	20° \approx 31'39	2°01'23	max. Earth dist.	4217 Jan 18 12:39	26° \approx 55'08	1.45084 AU
	4216 Feb 16 10:25	0° \approx					
evening rise	4216 Feb 24 05:19	13° \approx 07'53		superior conj	4217 Jan 20 07:03	29° \approx 41'58	-1°36'02
	4216 Mar 05 05:58	0° \approx		minimum elong	4217 Jan 19 21:50	29° \approx 05'41	1°35'10
asc. node	4216 Mar 09 12:49	6° \approx 26'07			4217 Jan 20 11:38	0° \approx	
evening max el	4216 Mar 13 09:42	11° \approx 05'31	18°13'09	evening rise	4217 Feb 04 09:28	23° \approx 51'17	
retrograde	4216 Mar 19 19:45	14° \approx 30'04			4217 Feb 08 04:06	0° \approx	
evening set	4216 Mar 22 17:44	13° \approx 45'34		asc. node	4217 Feb 24 09:50	24° \approx 00'56	
inferior conj	4216 Mar 28 19:37	8° \approx 27'35	3°33'23	evening max el	4217 Feb 24 21:25	24° \approx 31'03	18°37'34
minimum elong	4216 Mar 28 20:27	8° \approx 25'17	3°33'21	retrograde	4217 Mar 03 11:40	28° \approx 09'40	
min. Earth dist.	4216 Mar 31 10:30	5° \approx 36'09	0.63215 AU	evening set	4217 Mar 06 15:45	27° \approx 12'48	
morning rise	4216 Apr 03 22:07	2° \approx 21'33		inferior conj	4217 Mar 12 09:18	21° \approx 36'44	3°34'29
	4216 Apr 08 10:10	30° \approx 8'8		minimum elong	4217 Mar 12 08:35	21° \approx 38'55	3°34'27
direct	4216 Apr 10 19:24	29° \approx 41'21		min. Earth dist.	4217 Mar 14 08:36	19° \approx 14'20	0.64985 AU
	4216 Apr 13 06:44	0° \approx		morning rise	4217 Mar 18 00:53	15° \approx 25'03	
desc. node	4216 Apr 15 10:24	0° \approx 44'12		direct	4217 Mar 24 17:41	12° \approx 34'57	
morning max el	4216 Apr 24 17:11	7° \approx 39'43	27°46'10	desc. node	4217 Apr 02 07:25	16° \approx 08'56	
	4216 May 11 20:45	0° \approx		morning max el	4217 Apr 07 02:59	20° \approx 25'29	27°09'27
	4216 May 28 19:08	0° \approx			4217 Apr 15 08:44	0° \approx	
morning set	4216 May 29 03:29	0° \approx 41'41			4217 May 04 22:53	0° \approx	
max. Earth dist.	4216 Jun 03 09:46	11° \approx 34'17	1.32764 AU	morning set	4217 May 12 16:40	14° \approx 16'40	
				max. Earth dist.	4217 May 17 06:10	23° \approx 21'04	1.33804 AU
					4217 May 20 11:16	0° \approx	
superior conj	4216 Jun 05 20:51	16° \approx 50'42	0°03'51				
minimum elong	4216 Jun 05 20:40	16° \approx 49'42	0°03'47				
behind sun begin	4216 Jun 05 15:32	16° \approx 21'58		superior conj	4217 May 20 23:56	1° \approx 06'28	-0°24'36
behind sun end	4216 Jun 06 01:49	17° \approx 17'28		minimum elong	4217 May 21 01:13	1° \approx 13'13	0°24'20
asc. node	4216 Jun 05 12:04	16° \approx 03'20		asc. node	4217 May 23 09:07	6° \approx 09'01	
	4216 Jun 11 22:49	0° \approx		evening rise	4217 May 28 07:38	16° \approx 37'36	
evening rise	4216 Jun 12 20:54	1° \approx 57'36			4217 Jun 04 00:23	0° \approx	
	4216 Jun 28 06:51	0° \approx		evening max el	4217 Jun 17 20:13	19° \approx 57'04	21°49'07
evening max el	4216 Jul 06 03:36	9° \approx 28'58	23°24'29	desc. node	4217 Jun 29 06:39	26° \approx 06'39	
desc. node	4216 Jul 12 09:37	14° \approx 15'02		retrograde	4217 Jun 30 09:25	26° \approx 09'33	
retrograde	4216 Jul 19 16:51	16° \approx 15'59		evening set	4217 Jul 03 00:40	25° \approx 53'55	
evening set	4216 Jul 23 15:56	15° \approx 41'39		inferior conj	4217 Jul 12 09:02	21° \approx 51'11	-3°37'24
min. Earth dist.	4216 Jul 30 13:15	12° \approx 31'08	0.55770 AU	minimum elong	4217 Jul 12 00:29	22° \approx 03'09	3°34'58
inferior conj	4216 Aug 01 12:24	11° \approx 21'33	-4°50'05	min. Earth dist.	4217 Jul 11 23:40	22° \approx 04'16	0.54907 AU
minimum elong	4216 Aug 01 06:28	11° \approx 30'20	4°49'14	morning rise	4217 Jul 21 01:43	17° \approx 59'28	
morning rise	4216 Aug 09 23:25	7° \approx 27'58		direct	4217 Jul 24 07:42	17° \approx 36'19	
direct	4216 Aug 12 20:09	7° \approx 07'55		morning max el	4217 Aug 05 10:35	23° \approx 17'13	21°47'55
morning max el	4216 Aug 23 08:28	12° \approx 00'50	20°19'10		4217 Aug 11 08:23	0° \approx	
asc. node	4216 Sep 01 11:18	23° \approx 52'53		asc. node	4217 Aug 19 08:20	12° \approx 44'21	
	4216 Sep 04 23:10	0° \approx		morning set	4217 Aug 26 07:16	26° \approx 28'32	
morning set	4216 Sep 10 21:53	11° \approx 40'15			4217 Aug 27 23:35	0° \approx	
superior conj	4216 Sep 18 12:44	27° \approx 17'53	1°43'45	superior conj	4217 Sep 02 12:51	11° \approx 44'01	1°42'40
minimum elong	4216 Sep 18 13:16	27° \approx 20'37	1°43'45	minimum elong	4217 Sep 02 12:00	11° \approx 39'34	1°42'39
	4216 Sep 19 20:59	0° \approx		max. Earth dist.	4217 Sep 06 08:19	19° \approx 35'46	1.34777 AU
max. Earth dist.	4216 Sep 23 19:09	7° \approx 41'33	1.36479 AU	evening rise	4217 Sep 10 18:12	28° \approx 18'33	
evening rise	4216 Sep 27 16:29	14° \approx 59'27			4217 Sep 11 15:27	0° \approx	
	4216 Oct 06 07:50	0° \approx		desc. node	4217 Sep 25 05:56	23° \approx 30'15	
desc. node	4216 Oct 08 08:54	3° \approx 19'14			4217 Sep 29 13:06	0° \approx	
	4216 Oct 27 07:35	0° \approx		evening max el	4217 Oct 15 22:01	20° \approx 14'16	26°51'15
evening max el	4216 Nov 02 09:28	6° \approx 36'41	25°57'25	retrograde	4217 Oct 29 00:53	27° \approx 30'33	
retrograde	4216 Nov 14 21:12	13° \approx 42'42		evening set	4217 Nov 04 17:11	24° \approx 50'11	
evening set	4216 Nov 21 01:01	11° \approx 10'09		min. Earth dist.	4217 Nov 08 17:01	20° \approx 50'40	0.65736 AU
min. Earth dist.	4216 Nov 25 07:38	6° \approx 34'50	0.66828 AU	inferior conj	4217 Nov 10 14:29	18° \approx 38'32	-1°35'34
inferior conj	4216 Nov 26 17:19	4° \approx 49'23	-0°35'17	minimum elong	4217 Nov 10 17:09	18° \approx 30'45	1°34'28
minimum elong	4216 Nov 26 18:15	4° \approx 46'28	0°34'53	asc. node	4217 Nov 15 07:33	13° \approx 53'17	
asc. node	4216 Nov 28 10:32	2° \approx 43'20		morning rise	4217 Nov 16 17:57	12° \approx 59'02	
	4216 Dec 01 02:02	30° \approx 8'18		direct	4217 Nov 19 13:29	12° \approx 15'29	
morning rise	4216 Dec 02 11:54	28° \approx 58'08		morning max el	4217 Nov 26 02:20	15° \approx 47'21	18°17'14
direct	4216 Dec 05 16:25	27° \approx 59'55			4217 Dec 06 11:45	0° \approx	
	4216 Dec 10 12:44	0° \approx		morning set	4217 Dec 15 04:53	14° \approx 02'04	
morning max el	4216 Dec 12 12:52	1° \approx 47'19	18°56'26	desc. node	4217 Dec 22 05:12	25° \approx 19'55	
	4217 Jan 01 07:56	0° \approx			4217 Dec 25 03:30	0° \approx	
morning set	4217 Jan 03 17:20	3° \approx 44'20					

superior conj	4217 Dec 30 09:40	8°♄18'28	-0°54'10	morning set	4218 Nov 26 20:57	25°♄43'25	
minimum elong	4217 Dec 30 02:55	7°♄51'56	0°53'19		4218 Nov 29 09:33	0°♄	
max. Earth dist.	4218 Jan 01 07:50	11°♄19'47	1.45254 AU	desc. node	4218 Dec 09 02:14	16°♄04'03	
	4218 Jan 13 06:16	0°♄					
evening rise	4218 Jan 15 14:50	3°♄41'12		superior conj	4218 Dec 10 01:28	17°♄38'10	-0°06'43
greatest brilliancy	4218 Jan 26 22:07	21°♄16'11	-0.7m	minimum elong	4218 Dec 10 00:41	17°♄35'00	0°06'35
	4218 Feb 01 19:43	0°♄		behind sun begin	4218 Dec 09 15:19	16°♄57'05	
evening max el	4218 Feb 08 05:50	8°♄01'11	19°19'13	behind sun end	4218 Dec 10 10:04	18°♄12'51	
asc. node	4218 Feb 11 06:51	10°♄38'18		max. Earth dist.	4218 Dec 15 02:24	25°♄41'49	1.44687 AU
retrograde	4218 Feb 15 08:04	12°♄04'39			4218 Dec 17 19:52	0°♄	
evening set	4218 Feb 18 19:05	10°♄54'39		evening rise	4218 Dec 26 03:45	12°♄56'02	
inferior conj	4218 Feb 24 07:18	5°♄02'43	3°20'57		4219 Jan 06 09:29	0°♄	
minimum elong	4218 Feb 24 05:29	5°♄08'35	3°20'41	evening max el	4219 Jan 22 09:27	21°♄33'45	20°16'16
min. Earth dist.	4218 Feb 25 15:26	3°♄18'43	0.66360 AU	asc. node	4219 Jan 29 03:53	26°♄03'50	
	4218 Feb 28 10:26	30°♄		retrograde	4219 Jan 30 06:11	26°♄10'21	
morning rise	4218 Mar 01 15:35	28°♄48'42		evening set	4219 Feb 03 01:33	24°♄46'14	
direct	4218 Mar 07 22:25	26°♄01'38		inferior conj	4219 Feb 08 10:48	18°♄41'00	2°56'05
	4218 Mar 16 16:27	0°♄		minimum elong	4219 Feb 08 08:26	18°♄49'03	2°55'31
desc. node	4218 Mar 20 04:27	3°♄10'20		min. Earth dist.	4219 Feb 09 05:07	17°♄38'57	0.67316 AU
morning max el	4218 Mar 20 12:49	3°♄31'19	26°05'25	morning rise	4219 Feb 13 15:05	12°♄26'57	
	4218 Apr 09 16:06	0°♄		direct	4219 Feb 19 08:49	9°♄53'10	
morning set	4218 Apr 25 16:44	27°♄09'20		morning max el	4219 Mar 02 21:31	16°♄46'53	24°43'48
	4218 Apr 27 05:13	0°♄		desc. node	4219 Mar 07 01:28	21°♄21'10	
max. Earth dist.	4218 Apr 29 15:03	4°♄36'32	1.35310 AU		4219 Mar 13 21:11	0°♄	
					4219 Apr 02 15:42	0°♄	
superior conj	4218 May 04 19:40	14°♄55'37	-0°53'54	morning set	4219 Apr 07 22:39	9°♄06'07	
minimum elong	4218 May 04 22:34	15°♄10'23	0°53'21	max. Earth dist.	4219 Apr 11 13:41	15°♄37'30	1.37232 AU
asc. node	4218 May 10 06:08	26°♄07'48					
	4218 May 12 03:02	0°♄		superior conj	4219 Apr 18 05:02	28°♄10'51	-1°22'11
evening rise	4218 May 12 15:16	1°♄02'53		minimum elong	4219 Apr 18 09:21	28°♄31'48	1°21'33
	4218 May 30 01:59	0°♄			4219 Apr 19 03:23	0°♄	
evening max el	4218 May 30 23:16	0°♄54'02	20°25'57	evening rise	4219 Apr 26 17:28	15°♄07'22	
retrograde	4218 Jun 10 22:36	6°♄15'42		asc. node	4219 Apr 27 03:12	15°♄55'52	
evening set	4218 Jun 12 22:26	6°♄05'49			4219 May 04 13:29	0°♄	
desc. node	4218 Jun 16 03:40	5°♄11'48		evening max el	4219 May 13 14:45	12°♄32'54	19°21'10
inferior conj	4218 Jun 22 03:04	2°♄08'03	-1°45'56	retrograde	4219 May 22 20:36	17°♄02'53	
minimum elong	4218 Jun 21 22:06	2°♄15'18	1°44'08	evening set	4219 May 24 20:23	16°♄51'16	
min. Earth dist.	4218 Jun 23 11:42	1°♄20'35	0.54980 AU	inferior conj	4219 Jun 02 08:54	12°♄43'51	0°11'36
	4218 Jun 25 21:39	30°♄		minimum elong	4219 Jun 02 09:23	12°♄43'03	0°11'24
morning rise	4218 Jun 30 20:44	27°♄57'19		transit middle	4219 Jun 02 09:23	12°♄43'03	0°11'24
direct	4218 Jul 04 17:35	27°♄25'00		transit begin	4219 Jun 02 06:41	12°♄47'30	
	4218 Jul 13 02:15	0°♄		transit end	4219 Jun 02 12:06	12°♄38'36	
morning max el	4218 Jul 18 03:45	3°♄55'50	23°29'30	desc. node	4219 Jun 03 00:41	12°♄17'52	
	4218 Aug 05 03:49	0°♄		min. Earth dist.	4219 Jun 05 02:06	10°♄57'26	0.56004 AU
asc. node	4218 Aug 06 05:22	2°♄03'50		morning rise	4219 Jun 10 19:27	7°♄59'48	
morning set	4218 Aug 10 18:38	11°♄21'39		direct	4219 Jun 15 14:18	7°♄07'29	
				morning max el	4219 Jun 29 17:33	14°♄18'07	25°11'04
superior conj	4218 Aug 17 19:03	26°♄27'10	1°35'18		4219 Jul 12 03:16	0°♄	
minimum elong	4218 Aug 17 17:15	26°♄17'27	1°35'09	asc. node	4219 Jul 24 02:26	21°♄43'50	
	4218 Aug 19 10:48	0°♄		morning set	4219 Jul 26 06:20	26°♄14'40	
max. Earth dist.	4218 Aug 20 06:12	1°♄43'00	1.33462 AU		4219 Jul 28 00:29	0°♄	
evening rise	4218 Aug 25 08:36	12°♄13'33					
	4218 Sep 03 21:30	0°♄		superior conj	4219 Aug 02 04:57	11°♄19'39	1°22'35
desc. node	4218 Sep 12 02:58	13°♄16'32		minimum elong	4219 Aug 02 02:41	11°♄07'11	1°22'16
	4218 Sep 24 21:35	0°♄		max. Earth dist.	4219 Aug 03 11:54	14°♄08'39	1.32569 AU
evening max el	4218 Sep 28 09:55	3°♄36'23	27°22'04	evening rise	4219 Aug 09 08:10	26°♄34'25	
retrograde	4218 Oct 11 22:49	10°♄54'47			4219 Aug 11 00:34	0°♄	
evening set	4218 Oct 19 00:08	8°♄14'45			4219 Aug 28 06:45	0°♄	
min. Earth dist.	4218 Oct 22 18:09	4°♄49'36	0.64291 AU	desc. node	4219 Aug 29 23:59	2°♄27'49	
inferior conj	4218 Oct 25 03:47	2°♄17'01	-2°37'27	evening max el	4219 Sep 10 19:23	16°♄30'47	27°23'34
minimum elong	4218 Oct 25 08:14	2°♄05'12	2°35'48	retrograde	4219 Sep 24 14:06	23°♄45'58	
	4218 Oct 27 09:27	30°♄		evening set	4219 Oct 01 18:32	21°♄17'27	
morning rise	4218 Oct 31 17:37	26°♄52'13		min. Earth dist.	4219 Oct 05 09:23	18°♄21'18	0.62528 AU
asc. node	4218 Nov 02 04:35	26°♄25'28		inferior conj	4219 Oct 08 06:23	15°♄38'02	-3°37'34
direct	4218 Nov 03 06:33	26°♄19'27		minimum elong	4219 Oct 08 12:10	15°♄24'18	3°35'48
morning max el	4218 Nov 09 18:43	29°♄45'07	17°55'02	morning rise	4219 Oct 15 07:27	10°♄31'10	
	4218 Nov 10 00:36	0°♄		direct	4219 Oct 17 16:35	10°♄05'36	

































































































































asc. node	4219 Oct 20 01:39	10° Ω 31'53		direct	4220 Sep 29 15:45	23° Π 26'00	
morning max el	4219 Oct 24 10:58	13° Ω 33'07	17°50'39	asc. node	4220 Oct 05 22:43	26° Π 06'22	
	4219 Nov 04 16:25	0° Π		morning max el	4220 Oct 06 23:57	27° Π 03'37	18°05'17
morning set	4219 Nov 09 11:38	8° Π 29'48			4220 Oct 09 14:54	0° Ω	
				morning set	4220 Oct 22 18:43	22° Ω 03'12	
superior conj	4219 Nov 20 18:30	28° Π 12'09	0°35'51		4220 Oct 27 01:07	0° Π	
minimum elong	4219 Nov 20 21:44	28° Π 25'46	0°35'24				
	4219 Nov 21 20:06	0° Σ		superior conj	4220 Nov 01 13:34	10° Π 02'26	1°08'12
desc. node	4219 Nov 25 23:15	6° Σ 51'06		minimum elong	4220 Nov 01 17:41	10° Π 20'44	1°07'42
max. Earth dist.	4219 Nov 27 18:01	9° Σ 45'15	1.43462 AU	max. Earth dist.	4220 Nov 09 05:12	23° Π 16'33	1.41722 AU
evening rise	4219 Dec 05 14:28	22° Σ 12'00		desc. node	4220 Nov 11 20:17	27° Π 38'10	
	4219 Dec 10 16:25	0° Σ			4220 Nov 13 07:02	0° Σ	
	4219 Dec 31 19:38	0° \approx		evening rise	4220 Nov 14 14:41	2° Σ 07'49	
evening max el	4220 Jan 05 07:37	5° \approx 07'26	21°25'42		4220 Dec 03 02:47	0° Σ	
retrograde	4220 Jan 14 03:50	10° \approx 22'15		evening max el	4220 Dec 18 00:52	18° Σ 43'28	22°43'04
asc. node	4220 Jan 16 00:56	10° \approx 03'06		retrograde	4220 Dec 27 23:24	24° Σ 37'33	
evening set	4220 Jan 18 09:16	8° \approx 42'51		evening set	4221 Jan 01 16:35	22° Σ 42'03	
inferior conj	4220 Jan 23 17:30	2° \approx 27'16	2°21'59	asc. node	4221 Jan 01 21:58	22° Σ 30'37	
minimum elong	4220 Jan 23 15:04	2° \approx 35'44	2°21'15	inferior conj	4221 Jan 07 01:24	16° Σ 19'28	1°40'13
min. Earth dist.	4220 Jan 23 23:21	2° \approx 07'01	0.67867 AU	minimum elong	4221 Jan 06 23:22	16° Σ 26'31	1°39'29
	4220 Jan 25 12:42	30° κ Σ		min. Earth dist.	4221 Jan 06 19:50	16° Σ 38'46	0.68037 AU
morning rise	4220 Jan 28 20:40	26° Σ 14'56		morning rise	4221 Jan 12 06:02	10° Σ 10'29	
direct	4220 Feb 02 23:50	24° Σ 01'07		direct	4221 Jan 16 18:31	8° Σ 19'30	
	4220 Feb 13 03:31	0° \approx		morning max el	4221 Jan 25 19:14	13° Σ 36'13	21°48'10
morning max el	4220 Feb 13 06:27	0° \approx 07'22	23°14'57	desc. node	4221 Feb 07 19:32	29° Σ 56'05	
desc. node	4220 Feb 21 22:30	10° \approx 20'55			4221 Feb 07 20:38	0° \approx	
	4220 Mar 06 17:57	0° H		morning set	4221 Feb 27 05:06	29° \approx 11'31	
morning set	4220 Mar 19 04:14	19° H 49'51			4221 Feb 27 17:12	0° H	
max. Earth dist.	4220 Mar 23 08:38	26° H 58'22	1.39398 AU	max. Earth dist.	4221 Mar 05 07:49	9° H 09'41	1.41537 AU
	4220 Mar 25 02:08	0° Υ					
superior conj	4220 Mar 31 00:03	10° Υ 41'30	-1°46'42	superior conj	4221 Mar 12 23:48	22° H 15'48	-2°03'29
minimum elong	4220 Mar 31 04:49	11° Υ 03'37	1°46'14	minimum elong	4221 Mar 13 02:58	22° H 29'43	2°03'22
evening rise	4220 Apr 09 11:20	28° Υ 42'55			4221 Mar 17 08:04	0° Υ	
	4220 Apr 10 03:21	0° B		evening rise	4221 Mar 23 17:18	11° Υ 41'05	
asc. node	4220 Apr 13 00:15	5° B 27'52		asc. node	4221 Mar 30 21:17	24° Υ 37'57	
evening max el	4220 Apr 25 16:31	24° B 50'27	18°36'37		4221 Apr 03 03:34	0° B	
retrograde	4220 May 03 12:38	28° B 41'40		evening max el	4221 Apr 09 01:08	7° B 37'54	18°12'11
evening set	4220 May 05 18:27	28° B 23'50		retrograde	4221 Apr 15 23:27	11° B 07'07	
inferior conj	4220 May 13 10:58	23° B 57'45	1°46'47	evening set	4221 Apr 18 11:52	10° B 40'13	
minimum elong	4220 May 13 14:21	23° B 51'15	1°45'44	inferior conj	4221 Apr 25 10:19	5° B 53'16	2°50'05
min. Earth dist.	4220 May 16 19:49	21° B 24'04	0.57750 AU	minimum elong	4221 Apr 25 13:39	5° B 45'46	2°49'22
desc. node	4220 May 19 21:43	19° B 22'55		min. Earth dist.	4221 Apr 28 19:13	2° B 53'36	0.59874 AU
morning rise	4220 May 21 07:03	18° B 39'26		morning rise	4221 May 02 12:58	0° B 08'35	
direct	4220 May 27 01:04	17° B 16'28			4221 May 02 18:48	30° κ Υ	
morning max el	4220 Jun 10 09:59	24° B 52'34	26°36'48	desc. node	4221 May 06 18:45	28° Υ 24'40	
	4220 Jun 15 03:15	0° Π		direct	4221 May 09 00:24	28° Υ 10'42	
	4220 Jul 04 05:46	0° E			4221 May 15 13:28	0° B	
morning set	4220 Jul 09 16:46	11° E 02'39		morning max el	4221 May 23 08:38	6° B 02'05	27°32'54
asc. node	4220 Jul 09 23:31	11° E 38'17			4221 Jun 10 06:21	0° Π	
superior conj	4220 Jul 16 16:36	26° E 15'09	1°05'15	morning set	4221 Jun 24 00:09	25° Π 39'39	
minimum elong	4220 Jul 16 14:20	26° E 02'37	1°04'52		4221 Jun 26 01:34	0° E	
max. Earth dist.	4220 Jul 16 22:27	26° E 47'26	1.32091 AU	asc. node	4221 Jun 26 20:33	1° E 41'36	
	4220 Jul 18 09:24	0° Ω		max. Earth dist.	4221 Jun 30 10:07	9° E 27'41	1.32022 AU
evening rise	4220 Jul 23 14:01	11° Ω 12'25		superior conj	4221 Jul 01 04:10	11° E 07'07	0°43'57
	4220 Aug 02 05:39	0° Π		minimum elong	4221 Jul 01 02:22	10° E 57'13	0°43'35
desc. node	4220 Aug 15 21:00	20° Π 49'52		evening rise	4221 Jul 07 23:44	25° E 59'20	
evening max el	4220 Aug 22 23:45	28° Π 44'47	26°51'53		4221 Jul 09 21:36	0° Ω	
	4220 Aug 24 08:47	0° Ω			4221 Jul 27 04:16	0° Π	
retrograde	4220 Sep 05 21:36	5° Ω 55'29		desc. node	4221 Aug 02 18:03	8° Π 01'50	
evening set	4220 Sep 12 20:04	3° Ω 50'51		evening max el	4221 Aug 04 20:34	10° Π 09'12	25°47'58
min. Earth dist.	4220 Sep 16 13:52	1° Ω 12'55	0.60530 AU	retrograde	4221 Aug 18 19:46	17° Π 16'16	
	4220 Sep 18 01:29	30° κ Π		evening set	4221 Aug 24 23:46	15° Π 46'07	
inferior conj	4220 Sep 19 18:56	28° Π 33'02	-4°30'04	min. Earth dist.	4221 Aug 29 08:43	13° Π 09'30	0.58465 AU
minimum elong	4220 Sep 20 00:42	28° Π 21'01	4°28'51	inferior conj	4221 Sep 01 13:46	10° Π 50'52	-5°05'15
morning rise	4220 Sep 27 07:15	23° Π 47'24		minimum elong	4221 Sep 01 16:55	10° Π 45'11	5°04'59
				morning rise	4221 Sep 09 12:19	6° Π 28'33	

direct	4221 Sep 11 23:23	6° \mathbb{M} 09'05		morning max el	4222 Sep 03 02:50	22° \mathcal{Q} 32'41	19°36'56
morning max el	4221 Sep 20 06:17	10° \mathbb{M} 06'30	18°40'20		4222 Sep 09 06:13	0° \mathbb{M}	
asc. node	4221 Sep 22 19:45	12° \mathbb{M} 53'49		asc. node	4222 Sep 09 16:47	0° \mathbb{M} 39'30	
	4221 Oct 03 08:35	0° \mathcal{A}		morning set	4222 Sep 20 15:21	20° \mathbb{M} 35'18	
morning set	4221 Oct 06 13:08	6° \mathcal{A} 08'16			4222 Sep 25 07:08	0° \mathcal{A}	
superior conj	4221 Oct 15 05:49	22° \mathcal{A} 54'25	1°29'35	superior conj	4222 Sep 28 13:50	6° \mathcal{A} 32'41	1°41'02
minimum elong	4221 Oct 15 08:56	23° \mathcal{A} 09'03	1°29'18	minimum elong	4222 Sep 28 15:19	6° \mathcal{A} 39'59	1°40'59
	4221 Oct 19 01:54	0° \mathbb{M}		max. Earth dist.	4222 Oct 04 15:43	18° \mathcal{A} 11'51	1.37594 AU
max. Earth dist.	4221 Oct 22 11:26	6° \mathbb{M} 04'05	1.39678 AU	evening rise	4222 Oct 08 09:52	25° \mathcal{A} 01'34	
evening rise	4221 Oct 26 12:51	13° \mathbb{M} 03'19			4222 Oct 11 06:05	0° \mathbb{M}	
desc. node	4221 Oct 29 17:19	18° \mathbb{M} 20'57		desc. node	4222 Oct 16 14:21	8° \mathbb{M} 55'23	
	4221 Nov 06 02:09	0° \mathcal{A}			4222 Oct 30 17:12	0° \mathcal{A}	
	4221 Nov 28 08:08	0° \mathcal{B}		evening max el	4222 Nov 13 02:56	16° \mathcal{A} 03'57	25°18'44
evening max el	4221 Nov 30 14:36	2° \mathcal{B} 22'15	24°02'59	retrograde	4222 Nov 25 03:44	23° \mathcal{A} 00'37	
retrograde	4221 Dec 11 15:43	8° \mathcal{B} 51'58		evening set	4222 Nov 30 23:38	20° \mathcal{A} 34'49	
evening set	4221 Dec 16 21:55	6° \mathcal{B} 40'30		min. Earth dist.	4222 Dec 05 10:16	15° \mathcal{A} 39'07	0.67289 AU
asc. node	4221 Dec 19 19:00	3° \mathcal{B} 37'57		inferior conj	4222 Dec 06 13:33	14° \mathcal{A} 10'39	-0°02'06
min. Earth dist.	4221 Dec 21 16:14	1° \mathcal{B} 10'31	0.67839 AU	minimum elong	4222 Dec 06 13:36	14° \mathcal{A} 10'29	0°02'05
inferior conj	4221 Dec 22 08:41	0° \mathcal{B} 14'51	0°51'52	transit middle	4222 Dec 06 13:36	14° \mathcal{A} 10'29	0°02'05
minimum elong	4221 Dec 22 07:29	0° \mathcal{B} 18'54	0°51'23	transit begin	4222 Dec 06 10:50	14° \mathcal{A} 19'28	
	4221 Dec 22 13:04	30° \mathcal{R} \mathcal{A}		transit end	4222 Dec 06 16:22	14° \mathcal{A} 01'31	
morning rise	4221 Dec 27 17:05	24° \mathcal{A} 10'59		asc. node	4222 Dec 06 16:01	14° \mathcal{A} 02'41	
direct	4221 Dec 31 15:47	22° \mathcal{A} 42'38		morning rise	4222 Dec 12 03:51	8° \mathcal{A} 13'59	
morning max el	4222 Jan 08 15:01	27° \mathcal{A} 16'29	20°30'34	direct	4222 Dec 15 14:21	7° \mathcal{A} 05'51	
	4222 Jan 11 03:21	0° \mathcal{B}		morning max el	4222 Dec 22 18:39	11° \mathcal{A} 07'21	19°26'20
desc. node	4222 Jan 25 16:34	19° \mathcal{B} 56'50		greatest brilliancy	4223 Jan 04 23:47	28° \mathcal{A} 43'42	-0.7m
	4222 Feb 01 08:56	0° \approx			4223 Jan 05 20:07	0° \mathcal{B}	
morning set	4222 Feb 06 06:17	7° \approx 31'04		desc. node	4223 Jan 12 13:35	10° \mathcal{B} 15'49	
max. Earth dist.	4222 Feb 15 14:17	22° \approx 15'49	1.43358 AU	morning set	4223 Jan 16 04:16	15° \mathcal{B} 50'15	
	4222 Feb 20 08:06	0° \mathcal{H}			4223 Jan 25 06:39	0° \approx	
				max. Earth dist.	4223 Jan 29 03:18	6° \approx 04'38	1.44642 AU
superior conj	4222 Feb 21 23:29	2° \mathcal{H} 43'20	-2°07'22	superior conj	4223 Feb 01 21:36	12° \approx 03'21	-1°53'11
minimum elong	4222 Feb 21 22:01	2° \mathcal{H} 37'13	2°07'20	minimum elong	4223 Feb 01 14:10	11° \approx 33'42	1°52'40
evening rise	4222 Mar 06 07:12	23° \mathcal{H} 52'55			4223 Feb 12 22:12	0° \mathcal{H}	
	4222 Mar 09 18:50	0° \mathcal{Y}		evening rise	4223 Feb 16 00:36	5° \mathcal{H} 09'37	
asc. node	4222 Mar 17 18:19	13° \mathcal{Y} 18'59			4223 Mar 03 14:13	0° \mathcal{Y}	
evening max el	4222 Mar 23 13:16	20° \mathcal{Y} 46'27	18°07'19	asc. node	4223 Mar 04 15:19	1° \mathcal{Y} 21'20	
retrograde	4222 Mar 30 01:06	24° \mathcal{Y} 09'01		evening max el	4223 Mar 07 01:54	4° \mathcal{Y} 07'44	18°21'19
evening set	4222 Apr 01 19:33	23° \mathcal{Y} 31'24		retrograde	4223 Mar 13 12:53	7° \mathcal{Y} 37'02	
inferior conj	4222 Apr 08 03:49	18° \mathcal{Y} 24'24	3°24'22	evening set	4223 Mar 16 13:17	6° \mathcal{Y} 47'34	
minimum elong	4222 Apr 08 05:40	18° \mathcal{Y} 19'39	3°24'09	inferior conj	4223 Mar 22 11:15	1° \mathcal{Y} 21'52	3°35'54
min. Earth dist.	4222 Apr 11 02:49	15° \mathcal{Y} 23'25	0.62043 AU	minimum elong	4223 Mar 22 11:22	1° \mathcal{Y} 21'29	3°35'53
morning rise	4222 Apr 14 14:12	12° \mathcal{Y} 23'33			4223 Mar 23 15:42	30° \mathcal{R} \mathcal{H}	
direct	4222 Apr 21 10:23	9° \mathcal{Y} 55'28		min. Earth dist.	4223 Mar 24 19:42	28° \mathcal{H} 40'48	0.64012 AU
desc. node	4222 Apr 23 15:46	10° \mathcal{Y} 09'57		morning rise	4223 Mar 28 08:38	25° \mathcal{H} 12'42	
morning max el	4222 May 05 13:30	17° \mathcal{Y} 54'31	27°52'06	direct	4223 Apr 04 04:49	22° \mathcal{H} 26'16	
	4222 May 15 16:08	0° \mathcal{B}		desc. node	4223 Apr 10 12:48	24° \mathcal{H} 24'06	
	4222 Jun 03 00:36	0° \mathbb{I}			4223 Apr 17 12:43	0° \mathcal{Y}	
morning set	4222 Jun 08 02:33	9° \mathbb{I} 59'29		morning max el	4223 Apr 17 22:11	0° \mathcal{Y} 23'34	27°34'19
asc. node	4222 Jun 13 17:35	21° \mathbb{I} 49'26			4223 May 09 16:48	0° \mathcal{B}	
max. Earth dist.	4222 Jun 13 18:49	21° \mathbb{I} 56'07	1.32367 AU	morning set	4223 May 22 21:26	23° \mathcal{B} 53'26	
					4223 May 25 22:15	0° \mathbb{I}	
superior conj	4222 Jun 15 13:58	25° \mathbb{I} 50'16	0°19'17	max. Earth dist.	4223 May 27 20:30	3° \mathbb{I} 59'22	1.33148 AU
minimum elong	4222 Jun 15 13:05	25° \mathbb{I} 45'26	0°19'05				
	4222 Jun 17 11:40	0° \mathcal{B}		superior conj	4223 May 30 20:05	10° \mathbb{I} 17'48	-0°08'04
evening rise	4222 Jun 22 11:20	10° \mathcal{B} 48'41		minimum elong	4223 May 30 20:29	10° \mathbb{I} 19'58	0°07'58
	4222 Jul 02 06:11	0° \mathcal{Q}		behind sun begin	4223 May 30 15:47	9° \mathbb{I} 54'51	
evening max el	4222 Jul 17 10:43	20° \mathcal{Q} 50'35	24°20'09	behind sun end	4223 May 31 01:12	10° \mathbb{I} 45'07	
desc. node	4222 Jul 20 15:03	23° \mathcal{Q} 35'57		asc. node	4223 May 31 14:36	11° \mathbb{I} 56'55	
retrograde	4222 Jul 31 06:59	27° \mathcal{Q} 49'37		evening rise	4223 Jun 06 22:55	25° \mathbb{I} 33'33	
evening set	4222 Aug 05 03:13	26° \mathcal{Q} 57'17			4223 Jun 09 01:57	0° \mathcal{B}	
min. Earth dist.	4222 Aug 10 21:34	24° \mathcal{Q} 03'06	0.56607 AU		4223 Jun 27 18:55	0° \mathcal{Q}	
inferior conj	4222 Aug 13 12:29	22° \mathcal{Q} 24'04	-5°08'42	evening max el	4223 Jun 29 00:10	1° \mathcal{Q} 14'03	22°43'04
minimum elong	4222 Aug 13 10:03	22° \mathcal{Q} 27'56	5°08'34	desc. node	4223 Jul 07 12:03	6° \mathcal{Q} 57'43	
morning rise	4222 Aug 21 19:28	18° \mathcal{Q} 22'37		retrograde	4223 Jul 12 05:39	7° \mathcal{Q} 49'06	
direct	4222 Aug 24 11:49	18° \mathcal{Q} 03'24					

evening set	4223 Jul 15 13:23	7°♎24'53		retrograde	4224 Jun 21 18:53	17°♏43'33	
min. Earth dist.	4223 Jul 23 08:18	3°♎59'12	0.55295 AU	desc. node	4224 Jun 23 09:04	17°♏37'38	
inferior conj	4223 Jul 24 16:31	3°♎13'06	-4°25'24	evening set	4224 Jun 24 01:22	17°♏31'36	
minimum elong	4223 Jul 24 08:44	3°♎24'17	4°23'46	inferior conj	4224 Jul 03 10:13	13°♏33'22	-2°53'06
	4223 Jul 31 03:25	30°♏♏		minimum elong	4224 Jul 03 02:33	13°♏44'07	2°50'36
morning rise	4223 Aug 02 06:12	29°♏22'17		min. Earth dist.	4224 Jul 03 19:17	13°♏20'38	0.54824 AU
direct	4223 Aug 05 06:15	29°♏01'24		morning rise	4224 Jul 12 04:06	9°♏35'53	
	4223 Aug 10 03:11	0°♎		direct	4224 Jul 15 15:50	9°♏09'36	
morning max el	4223 Aug 16 11:36	4°♎14'35	20°54'49	morning max el	4224 Jul 28 09:11	15°♏12'24	22°30'11
asc. node	4223 Aug 27 13:49	19°♎10'05			4224 Aug 08 19:05	0°♎	
	4223 Sep 02 08:19	0°♏		asc. node	4224 Aug 13 10:52	8°♎14'34	
morning set	4223 Sep 04 22:43	5°♏17'16		morning set	4224 Aug 19 09:09	20°♎08'03	
					4224 Aug 24 00:25	0°♏	
superior conj	4223 Sep 12 09:05	20°♏44'11	1°44'08	superior conj	4224 Aug 26 12:05	5°♏18'11	1°40'15
minimum elong	4223 Sep 12 08:59	20°♏43'41	1°44'08	minimum elong	4224 Aug 26 10:46	5°♏11'13	1°40'10
	4223 Sep 16 23:29	0°♎		max. Earth dist.	4224 Aug 29 17:11	12°♏02'25	1.34168 AU
max. Earth dist.	4223 Sep 17 00:11	0°♎03'26	1.35707 AU	evening rise	4224 Sep 03 09:59	21°♏30'21	
evening rise	4223 Sep 21 02:23	7°♎54'37			4224 Sep 07 21:31	0°♎	
desc. node	4223 Oct 03 11:22	29°♎16'42		desc. node	4224 Sep 19 08:23	19°♎18'09	
	4223 Oct 03 22:18	0°♏			4224 Sep 26 18:13	0°♏	
evening max el	4223 Oct 26 15:30	29°♏45'57	26°22'52	evening max el	4224 Oct 08 04:10	13°♏19'04	27°07'47
	4223 Oct 26 21:21	0°♏		retrograde	4224 Oct 21 11:50	20°♏36'26	
retrograde	4223 Nov 08 10:43	6°♏58'00		evening set	4224 Oct 28 08:28	17°♏55'23	
evening set	4223 Nov 14 19:55	4°♏21'34		min. Earth dist.	4224 Nov 01 05:48	14°♏10'39	0.65158 AU
min. Earth dist.	4223 Nov 18 23:36	0°♏01'13	0.66395 AU	inferior conj	4224 Nov 03 08:18	11°♏49'14	-2°01'49
	4223 Nov 19 00:00	30°♏♏		minimum elong	4224 Nov 03 11:45	11°♏39'34	2°00'26
inferior conj	4223 Nov 20 14:09	28°♏03'51	-1°00'31	asc. node	4224 Nov 09 10:05	6°♏22'37	
minimum elong	4223 Nov 20 15:48	27°♏58'50	0°59'49	morning rise	4224 Nov 09 16:00	6°♏15'19	
asc. node	4223 Nov 23 13:02	24°♏41'00		direct	4224 Nov 12 08:28	5°♏36'41	
morning rise	4223 Nov 26 12:17	22°♏17'01		morning max el	4224 Nov 18 20:06	9°♏04'50	18°05'42
direct	4223 Nov 29 12:40	21°♏25'32			4224 Dec 03 05:03	0°♏	
morning max el	4223 Dec 06 05:07	25°♏05'30	18°37'44	morning set	4224 Dec 06 23:12	6°♏12'13	
	4223 Dec 10 09:03	0°♏		desc. node	4224 Dec 16 07:38	21°♏28'34	
morning set	4223 Dec 26 22:59	25°♏17'02					
	4223 Dec 29 22:28	0°♏		superior conj	4224 Dec 21 07:59	29°♏29'28	-0°34'01
desc. node	4223 Dec 30 10:37	0°♏47'59		minimum elong	4224 Dec 21 03:44	29°♏12'36	0°33'25
					4224 Dec 21 15:41	0°♏	
superior conj	4224 Jan 12 02:10	20°♏41'32	-1°19'46	max. Earth dist.	4224 Dec 24 16:44	4°♏48'32	1.45102 AU
minimum elong	4224 Jan 11 17:10	20°♏06'15	1°18'47	evening rise	4225 Jan 06 15:52	25°♏00'44	
max. Earth dist.	4224 Jan 11 21:07	20°♏21'46	1.45244 AU		4225 Jan 09 21:18	0°♏	
	4224 Jan 18 00:20	0°♏		greatest brilliancy	4225 Jan 19 20:33	15°♏13'15	-0.7m
evening rise	4224 Jan 27 18:49	15°♏29'18			4225 Jan 30 17:40	0°♏	
greatest brilliancy	4224 Feb 05 01:37	28°♏42'03	-0.8m	evening max el	4225 Jan 31 19:11	1°♏08'16	19°41'47
	4224 Feb 05 21:22	0°♏		asc. node	4225 Feb 05 09:23	4°♏42'50	
evening max el	4224 Feb 18 12:35	17°♏36'38	18°53'16	retrograde	4225 Feb 08 04:21	5°♏24'31	
asc. node	4224 Feb 19 12:20	18°♏34'00		evening set	4225 Feb 11 18:51	4°♏08'27	
retrograde	4224 Feb 25 06:59	21°♏24'17			4225 Feb 15 19:55	30°♏♏	
evening set	4224 Feb 28 13:54	20°♏22'00		inferior conj	4225 Feb 17 05:32	28°♏10'35	3°11'37
inferior conj	4224 Mar 05 04:53	14°♏39'12	3°30'17	minimum elong	4225 Feb 17 03:25	28°♏17'35	3°11'13
minimum elong	4224 Mar 05 03:38	14°♏43'05	3°30'09	min. Earth dist.	4225 Feb 18 07:34	26°♏44'30	0.66822 AU
min. Earth dist.	4224 Mar 06 21:41	12°♏32'12	0.65629 AU	morning rise	4225 Feb 22 11:46	21°♏56'37	
morning rise	4224 Mar 10 16:57	8°♏26'20		direct	4225 Feb 28 13:23	19°♏14'16	
direct	4224 Mar 17 06:14	5°♏35'47		morning max el	4225 Mar 12 17:19	26°♏29'31	25°32'16
desc. node	4224 Mar 27 09:50	10°♏33'59		desc. node	4225 Mar 14 06:51	28°♏07'35	
morning max el	4224 Mar 30 08:03	13°♏19'00	26°44'51		4225 Mar 15 23:23	0°♏	
	4224 Apr 12 19:29	0°♏			4225 Apr 06 09:46	0°♏	
	4224 May 01 08:39	0°♏		morning set	4225 Apr 17 22:39	19°♏43'02	
morning set	4224 May 05 05:34	7°♏11'59		max. Earth dist.	4225 Apr 21 16:13	26°♏38'30	1.36091 AU
max. Earth dist.	4224 May 09 11:54	15°♏31'03	1.34396 AU		4225 Apr 23 10:26	0°♏	
				superior conj	4225 Apr 27 12:13	8°♏00'01	-1°06'08
superior conj	4224 May 13 20:24	24°♏23'32	-0°37'01	minimum elong	4225 Apr 27 15:47	8°♏17'48	1°05'32
minimum elong	4224 May 13 22:22	24°♏33'44	0°36'37	asc. node	4225 May 04 08:42	21°♏55'29	
	4224 May 16 12:47	0°♏		evening rise	4225 May 05 14:17	24°♏26'12	
asc. node	4224 May 17 11:38	10°♏00'14			4225 May 08 08:49	0°♏	
evening rise	4224 May 21 08:36	10°♏08'07		evening max el	4225 May 23 05:19	23°♏07'22	19°55'53
	4224 May 31 19:55	0°♏					
evening max el	4224 Jun 09 20:50	11°♏52'20	21°11'40				

retrograde	4225 Jun 02 10:22	28°♄06'05			4226 May 01 19:37	0°♄	
evening set	4225 Jun 04 09:04	27°♄56'02		evening max el	4226 May 06 01:28	5°♄03'16	18°59'41
desc. node	4225 Jun 10 06:06	25°♄42'52		retrograde	4226 May 14 15:53	9°♄15'22	
inferior conj	4225 Jun 13 07:49	23°♄55'25	-0°54'45	evening set	4226 May 16 17:45	9°♄01'38	
minimum elong	4225 Jun 13 05:17	23°♄59'16	0°53'48	inferior conj	4226 May 24 21:47	4°♄46'36	0°55'38
min. Earth dist.	4225 Jun 15 07:57	22°♄42'29	0.55314 AU	minimum elong	4226 May 24 23:55	4°♄42'52	0°54'52
morning rise	4225 Jun 21 23:36	19°♄32'00		min. Earth dist.	4226 May 27 23:35	2°♄38'08	0.56673 AU
direct	4225 Jun 26 05:16	18°♄52'44		desc. node	4226 May 28 03:08	2°♄32'12	
morning max el	4225 Jul 10 00:07	25°♄41'14	24°13'38		4226 Jun 01 14:38	30°♄	
	4225 Jul 14 01:44	0°♄		morning rise	4226 Jun 02 02:50	29°♄47'11	
asc. node	4225 Jul 31 07:56	27°♄44'15		direct	4226 Jun 07 07:30	28°♄43'13	
	4225 Aug 01 10:45	0°♄			4226 Jun 13 01:06	0°♄	
morning set	4225 Aug 03 20:55	5°♄02'41		morning max el	4226 Jun 21 14:41	6°♄06'23	25°50'25
					4226 Jul 09 02:03	0°♄	
superior conj	4225 Aug 10 20:10	20°♄06'44	1°30'31	asc. node	4226 Jul 18 05:00	17°♄31'12	
minimum elong	4225 Aug 10 18:06	19°♄55'31	1°30'17	morning set	4226 Jul 19 08:19	19°♄54'35	
max. Earth dist.	4225 Aug 12 19:01	24°♄19'43	1.33035 AU		4226 Jul 24 00:15	0°♄	
	4225 Aug 15 11:09	0°♄					
evening rise	4225 Aug 18 04:45	5°♄38'08		superior conj	4226 Jul 26 07:04	5°♄01'27	1°15'46
	4225 Aug 31 12:08	0°♄		minimum elong	4226 Jul 26 04:44	4°♄48'38	1°15'24
desc. node	4225 Sep 06 05:25	8°♄51'24		max. Earth dist.	4226 Jul 27 03:15	6°♄52'18	1.32317 AU
evening max el	4225 Sep 20 15:24	26°♄31'19	27°26'32	evening rise	4226 Aug 02 07:18	20°♄07'10	
	4225 Sep 24 18:08	0°♄			4226 Aug 07 05:30	0°♄	
retrograde	4225 Oct 04 06:46	3°♄48'01		desc. node	4226 Aug 24 02:27	27°♄43'51	
evening set	4225 Oct 11 10:31	1°♄11'21			4226 Aug 25 19:40	0°♄	
	4225 Oct 12 22:36	30°♄		evening max el	4226 Sep 02 22:46	9°♄08'55	27°14'01
min. Earth dist.	4225 Oct 15 02:44	27°♄59'41	0.63583 AU	retrograde	4226 Sep 16 18:58	16°♄22'38	
inferior conj	4225 Oct 17 17:26	25°♄21'15	-3°03'27	evening set	4226 Sep 23 22:19	14°♄02'20	
minimum elong	4225 Oct 17 22:33	25°♄08'17	3°01'40	min. Earth dist.	4226 Sep 27 13:11	11°♄15'56	0.61703 AU
morning rise	4225 Oct 24 11:59	20°♄03'45		inferior conj	4226 Sep 30 14:26	8°♄31'51	-4°01'14
direct	4225 Oct 26 23:04	19°♄34'19		minimum elong	4226 Sep 30 20:28	8°♄18'19	3°59'37
asc. node	4225 Oct 27 07:09	19°♄34'52		morning rise	4226 Oct 07 20:25	3°♄34'00	
morning max el	4225 Nov 02 12:49	22°♄59'23	17°50'58	direct	4226 Oct 10 04:51	3°♄10'36	
	4225 Nov 08 01:09	0°♄		asc. node	4226 Oct 14 04:12	4°♄19'59	
morning set	4225 Nov 19 01:40	18°♄23'31		morning max el	4226 Oct 17 04:08	6°♄41'09	17°54'30
	4225 Nov 25 19:55	0°♄			4226 Nov 01 03:52	0°♄	
				morning set	4226 Nov 01 23:57	1°♄31'18	
superior conj	4225 Dec 01 09:45	9°♄18'30	0°12'26				
minimum elong	4225 Dec 01 11:04	9°♄23'57	0°12'15	superior conj	4226 Nov 12 14:16	20°♄26'11	0°50'57
behind sun begin	4225 Dec 01 04:43	8°♄57'50		minimum elong	4226 Nov 12 18:11	20°♄43'07	0°50'25
behind sun end	4225 Dec 01 17:25	9°♄50'02			4226 Nov 18 05:41	0°♄	
desc. node	4225 Dec 03 04:40	12°♄14'14		max. Earth dist.	4226 Nov 20 00:22	2°♄56'07	1.42768 AU
max. Earth dist.	4225 Dec 07 10:46	19°♄05'58	1.44241 AU	desc. node	4226 Nov 20 01:43	3°♄01'38	
	4225 Dec 14 08:56	0°♄		evening rise	4226 Nov 26 16:31	13°♄38'53	
evening rise	4225 Dec 17 01:48	4°♄10'44			4226 Dec 07 09:42	0°♄	
	4226 Jan 03 08:54	0°♄		evening max el	4226 Dec 28 16:13	28°♄14'20	21°57'59
evening max el	4226 Jan 14 20:27	14°♄40'40	20°44'31		4226 Dec 30 12:23	0°♄	
retrograde	4226 Jan 23 02:34	19°♄33'09		retrograde	4227 Jan 06 23:38	3°♄46'44	
asc. node	4226 Jan 23 06:26	19°♄33'01		asc. node	4227 Jan 10 03:28	2°♄53'12	
evening set	4226 Jan 27 02:05	18°♄02'26		evening set	4227 Jan 11 09:48	2°♄00'31	
inferior conj	4226 Feb 01 10:39	11°♄52'11	2°42'37		4227 Jan 13 10:46	30°♄	
minimum elong	4226 Feb 01 08:12	12°♄00'38	2°41'59	inferior conj	4227 Jan 16 18:05	25°♄41'15	2°05'09
min. Earth dist.	4226 Feb 01 23:25	11°♄08'25	0.67595 AU	minimum elong	4227 Jan 16 15:45	25°♄49'20	2°04'23
morning rise	4226 Feb 06 14:08	5°♄38'45		min. Earth dist.	4227 Jan 16 18:57	25°♄38'15	0.67974 AU
direct	4226 Feb 12 01:39	3°♄13'12		morning rise	4227 Jan 21 21:33	19°♄29'58	
morning max el	4226 Feb 23 01:58	9°♄47'32	24°06'25	direct	4227 Jan 26 18:18	17°♄25'49	
desc. node	4226 Mar 01 03:53	16°♄40'55		morning max el	4227 Feb 05 12:12	23°♄11'27	22°37'22
	4226 Mar 11 01:28	0°♄			4227 Feb 11 11:24	0°♄	
	4226 Mar 30 02:37	0°♄		desc. node	4227 Feb 16 00:55	5°♄57'05	
morning set	4226 Mar 30 19:01	1°♄10'40			4227 Mar 04 10:40	0°♄	
max. Earth dist.	4226 Apr 03 12:47	7°♄45'21	1.38135 AU	morning set	4227 Mar 11 12:42	11°♄20'08	
				max. Earth dist.	4227 Mar 16 08:30	19°♄24'07	1.40317 AU
superior conj	4226 Apr 10 16:02	20°♄57'27	-1°33'14		4227 Mar 22 10:15	0°♄	
minimum elong	4226 Apr 10 20:43	21°♄19'46	1°32'39				
	4226 Apr 15 07:58	0°♄		superior conj	4227 Mar 24 03:29	3°♄05'25	-1°55'04
evening rise	4226 Apr 19 13:23	8°♄19'42		minimum elong	4227 Mar 24 07:54	3°♄25'28	1°54'43
asc. node	4226 Apr 21 05:45	11°♄37'27		evening rise	4227 Apr 03 02:41	21°♄40'32	

	4227 Apr 07 13:26	0°♄		evening max el	4228 Apr 01 17:08	0°♄32'06	18°07'52
asc. node	4227 Apr 08 02:48	1°♄01'03		retrograde	4228 Apr 08 09:34	3°♄56'23	
evening max el	4227 Apr 19 06:36	17°♄34'53	18°23'50	evening set	4228 Apr 11 00:42	3°♄25'01	
retrograde	4227 Apr 26 16:08	21°♄14'50			4228 Apr 16 01:40	30°♄♂	
evening set	4227 Apr 29 00:41	20°♄53'33		inferior conj	4228 Apr 17 16:38	28°♄29'39	3°07'47
inferior conj	4227 May 06 09:10	16°♄18'57	2°17'27	minimum elong	4228 Apr 17 19:26	28°♄23'00	3°07'18
minimum elong	4227 May 06 12:48	16°♄11'28	2°16'27	min. Earth dist.	4228 Apr 20 22:21	25°♄26'23	0.60808 AU
min. Earth dist.	4227 May 09 19:45	13°♄30'57	0.58623 AU	morning rise	4228 Apr 24 12:05	22°♄37'14	
morning rise	4227 May 13 21:52	10°♄47'51		desc. node	4228 Apr 30 21:09	20°♄25'22	
desc. node	4227 May 15 00:08	10°♄16'06		direct	4228 May 01 04:37	20°♄25'05	
direct	4227 May 20 00:14	9°♄09'48		morning max el	4228 May 15 10:50	28°♄20'36	27°45'40
morning max el	4227 Jun 03 09:40	16°♄54'24	27°04'45		4228 May 17 01:30	0°♄	
	4227 Jun 14 04:31	0°♄			4228 Jun 06 23:26	0°♄	
	4227 Jul 01 11:44	0°♄		morning set	4228 Jun 16 23:11	19°♄08'52	
morning set	4227 Jul 03 17:40	4°♄38'37		asc. node	4228 Jun 20 23:06	27°♄35'36	
asc. node	4227 Jul 05 02:03	7°♄29'58			4228 Jun 22 01:46	0°♄	
				max. Earth dist.	4228 Jun 23 01:17	2°♄08'17	1.32116 AU
superior conj	4227 Jul 10 18:55	19°♄56'19	0°56'41				
minimum elong	4227 Jul 10 16:47	19°♄44'35	0°56'17	superior conj	4228 Jun 24 05:57	4°♄45'20	0°33'53
max. Earth dist.	4227 Jul 10 14:32	19°♄32'08	1.32013 AU	minimum elong	4228 Jun 24 04:29	4°♄37'18	0°33'34
	4227 Jul 15 08:56	0°♄		evening rise	4228 Jul 01 01:49	19°♄38'30	
evening rise	4227 Jul 17 15:03	4°♄49'39			4228 Jul 06 02:56	0°♄	
	4227 Jul 30 22:54	0°♄			4228 Jul 25 15:37	0°♄	
desc. node	4227 Aug 10 23:28	15°♄38'55		evening max el	4228 Jul 27 17:52	2°♄07'22	25°12'53
evening max el	4227 Aug 15 23:57	21°♄01'40	26°28'13	desc. node	4228 Jul 27 20:27	2°♄13'32	
retrograde	4227 Aug 29 23:04	28°♄11'33		retrograde	4228 Aug 10 16:51	9°♄11'33	
evening set	4227 Sep 05 15:09	26°♄20'37		evening set	4228 Aug 16 08:32	7°♄58'10	
min. Earth dist.	4227 Sep 09 13:29	23°♄45'17	0.59645 AU	min. Earth dist.	4228 Aug 21 05:35	5°♄15'57	0.57633 AU
inferior conj	4227 Sep 12 19:50	21°♄11'57	-4°47'52	inferior conj	4228 Aug 24 06:24	3°♄12'24	-5°11'35
minimum elong	4227 Sep 13 00:52	21°♄02'03	4°47'04	minimum elong	4228 Aug 24 07:27	3°♄10'36	5°11'34
morning rise	4227 Sep 20 12:44	16°♄36'15			4228 Aug 29 13:50	30°♄♂	
direct	4227 Sep 22 21:45	16°♄16'03		morning rise	4228 Sep 01 08:42	28°♄59'11	
morning max el	4227 Sep 30 14:43	20°♄01'07	18°17'34	direct	4228 Sep 03 21:42	28°♄39'58	
asc. node	4227 Oct 01 01:15	20°♄27'08			4228 Sep 08 21:52	0°♄	
	4227 Oct 08 01:42	0°♄		morning max el	4228 Sep 12 17:14	2°♄49'48	19°01'37
morning set	4227 Oct 16 12:20	15°♄19'11		asc. node	4228 Sep 16 22:17	7°♄41'26	
	4227 Oct 24 07:12	0°♄		morning set	4228 Sep 29 10:32	29°♄35'20	
					4228 Sep 29 15:31	0°♄	
superior conj	4227 Oct 25 18:59	2°♄44'17	1°18'34				
minimum elong	4227 Oct 25 22:49	3°♄01'45	1°18'09	superior conj	4228 Oct 07 18:36	15°♄58'03	1°35'33
max. Earth dist.	4227 Nov 02 08:41	16°♄06'46	1.40872 AU	minimum elong	4228 Oct 07 21:03	16°♄09'49	1°35'23
desc. node	4227 Nov 06 22:44	23°♄47'12		max. Earth dist.	4228 Oct 14 13:46	28°♄37'08	1.38788 AU
evening rise	4227 Nov 07 01:31	23°♄58'34			4228 Oct 15 08:17	0°♄	
	4227 Nov 10 19:07	0°♄		evening rise	4228 Oct 18 09:48	5°♄22'20	
	4227 Dec 01 07:46	0°♄		desc. node	4228 Oct 23 19:47	14°♄27'21	
evening max el	4227 Dec 11 07:40	11°♄51'02	23°17'16		4228 Nov 02 20:31	0°♄	
retrograde	4227 Dec 21 17:57	18°♄01'26		evening max el	4228 Nov 22 20:49	25°♄32'14	24°36'10
evening set	4227 Dec 26 16:25	15°♄59'19			4228 Nov 28 04:26	0°♄	
asc. node	4227 Dec 28 00:29	14°♄43'17		retrograde	4228 Dec 04 08:24	2°♄13'58	
min. Earth dist.	4227 Dec 31 15:44	10°♄09'49	0.67989 AU	evening set	4228 Dec 09 20:24	29°♄56'21	
inferior conj	4228 Jan 01 01:54	9°♄34'53	1°20'28		4228 Dec 09 18:40	30°♄♂	
minimum elong	4228 Jan 01 00:10	9°♄40'50	1°19'48	asc. node	4228 Dec 13 21:29	25°♄26'37	
morning rise	4228 Jan 06 07:50	3°♄27'34		min. Earth dist.	4228 Dec 14 11:25	24°♄40'46	0.67654 AU
direct	4228 Jan 10 14:18	1°♄46'15		inferior conj	4228 Dec 15 08:23	23°♄30'58	0°29'37
morning max el	4228 Jan 19 03:30	6°♄43'56	21°13'41	minimum elong	4228 Dec 15 07:40	23°♄33'21	0°29'19
desc. node	4228 Feb 02 21:56	25°♄43'49		morning rise	4228 Dec 20 19:02	17°♄29'47	
	4228 Feb 05 20:17	0°♄		direct	4228 Dec 24 12:26	16°♄10'11	
morning set	4228 Feb 19 01:48	20°♄09'15		morning max el	4229 Jan 01 02:32	20°♄28'31	20°01'21
	4228 Feb 25 05:28	0°♄			4229 Jan 08 21:29	0°♄	
max. Earth dist.	4228 Feb 26 09:58	1°♄56'25	1.42360 AU	desc. node	4229 Jan 19 18:59	15°♄53'04	
				morning set	4229 Jan 27 22:16	28°♄18'18	
superior conj	4228 Mar 04 17:26	14°♄11'44	-2°07'04		4229 Jan 29 00:35	0°♄	
minimum elong	4228 Mar 04 19:00	14°♄18'30	2°07'01	max. Earth dist.	4229 Feb 07 19:41	15°♄23'15	1.43989 AU
	4228 Mar 13 16:50	0°♄					
evening rise	4228 Mar 16 02:15	4°♄19'00		superior conj	4229 Feb 13 05:58	24°♄09'02	-2°03'46
asc. node	4228 Mar 24 23:49	19°♄59'16		minimum elong	4229 Feb 13 01:50	23°♄52'14	2°03'36
	4228 Apr 01 04:30	0°♄			4229 Feb 16 19:14	0°♄	

evening rise	4229 Feb 26 07:49	16°  07'16			4230 Feb 09 11:33	0° 	
	4229 Mar 06 11:10	0° 		asc. node	4230 Feb 26 17:48	26°  07'03	
asc. node	4229 Mar 11 20:48	8°  24'25		evening max el	4230 Feb 27 17:51	27°  11'09	18°32'45
evening max el	4229 Mar 16 05:48	13°  46'20	18°11'04		4230 Mar 03 08:16	0° 	
retrograde	4229 Mar 22 15:59	17°  09'56		retrograde	4230 Mar 06 07:02	0°  47'07	
evening set	4229 Mar 25 13:05	16°  27'12		evening set	4230 Mar 09 10:07	29°  52'13	
inferior conj	4229 Mar 31 16:28	11°  11'54	3°31'41		4230 Mar 09 04:32	30°  R 	
minimum elong	4229 Mar 31 17:35	11°  08'55	3°31'36	inferior conj	4230 Mar 15 04:42	24°  18'42	3°35'20
min. Earth dist.	4229 Apr 03 09:31	8°  17'29	0.62918 AU	minimum elong	4230 Mar 15 04:11	24°  20'14	3°35'19
morning rise	4229 Apr 06 20:55	5°  07'01		min. Earth dist.	4230 Mar 17 06:21	21°  51'06	0.64743 AU
direct	4229 Apr 13 18:09	2°  29'40		morning rise	4230 Mar 20 21:39	18°  07'26	
desc. node	4229 Apr 17 18:10	3°  16'40		direct	4230 Mar 27 15:28	15°  17'55	
morning max el	4229 Apr 27 17:28	10°  28'19	27°48'57	desc. node	4230 Apr 04 15:12	18°  24'18	
	4229 May 13 00:27	0°  8		morning max el	4230 Apr 10 03:10	23°  10'46	27°16'52
	4229 May 30 06:55	0°  II			4230 Apr 16 04:38	0° 	
morning set	4229 May 31 22:41	3°  II18'00			4230 May 06 07:36	0°  8	
max. Earth dist.	4229 Jun 06 07:34	14°  II27'22	1.32643 AU	morning set	4230 May 15 13:29	16°  8'58'16	
asc. node	4229 Jun 07 20:07	17°  II43'20		max. Earth dist.	4230 May 20 05:31	26°  8'18'48	1.33618 AU
					4230 May 22 00:16	0°  II	
superior conj	4229 Jun 08 14:24	19°  II22'08	0°07'59				
minimum elong	4229 Jun 08 14:01	19°  II20'02	0°07'54	superior conj	4230 May 23 18:21	3°  II40'58	-0°20'12
behind sun begin	4229 Jun 08 09:26	18°  II55'15		minimum elong	4230 May 23 19:23	3°  II46'30	0°19'59
behind sun end	4229 Jun 08 18:36	19°  II44'51		asc. node	4230 May 25 17:09	7°  II49'25	
	4229 Jun 13 11:54	0°  ☿		evening rise	4230 May 31 00:40	19°  II07'53	
evening rise	4229 Jun 15 13:37	4°  ☿26'32			4230 Jun 05 09:23	0°  ☿	
	4229 Jun 29 06:26	0°  ♊		evening max el	4230 Jun 20 22:19	23°  ☿02'33	22°02'47
evening max el	4229 Jul 09 06:53	12°  ♊37'27	23°39'09	desc. node	4230 Jul 01 14:27	29°  ☿11'45	
desc. node	4229 Jul 14 17:28	16°  ♊56'03		retrograde	4230 Jul 03 16:20	29°  ☿21'48	
retrograde	4229 Jul 22 22:17	19°  ♊28'10		evening set	4230 Jul 06 11:21	29°  ☿04'24	
evening set	4229 Jul 27 03:01	18°  ♊49'30		min. Earth dist.	4230 Jul 15 03:15	25°  ☿21'25	0.54976 AU
min. Earth dist.	4229 Aug 02 16:50	15°  ♊43'45	0.55966 AU	inferior conj	4230 Jul 15 18:50	24°  ☿59'32	-3°51'31
inferior conj	4229 Aug 04 20:41	14°  ♊26'07	-4°56'43	minimum elong	4230 Jul 15 10:15	25°  ☿11'36	3°49'14
minimum elong	4229 Aug 04 15:37	14°  ♊33'46	4°56'06	morning rise	4230 Jul 24 10:50	21°  ☿08'46	
morning rise	4229 Aug 13 06:42	10°  ♊31'00		direct	4230 Jul 27 15:04	20°  ☿46'24	
direct	4229 Aug 16 02:17	10°  ♊11'12		morning max el	4230 Aug 08 12:38	26°  ☿19'59	21°33'42
morning max el	4229 Aug 26 08:50	14°  ♊57'24	20°07'31		4230 Aug 12 00:07	0°  ♊	
asc. node	4229 Sep 03 19:19	25°  ♊47'41		asc. node	4230 Aug 21 16:24	14°  ♊33'45	
	4229 Sep 06 06:58	0°  ♊		morning set	4230 Aug 29 00:12	28°  ♊56'27	
morning set	4229 Sep 13 15:16	14°  ♊09'58			4230 Aug 29 12:24	0°  ♊	
superior conj	4229 Sep 21 07:55	29°  ♊52'02	1°43'17	superior conj	4230 Sep 05 06:54	14°  ♊14'29	1°43'16
minimum elong	4229 Sep 21 08:42	29°  ♊55'57	1°43'16	minimum elong	4230 Sep 05 06:14	14°  ♊11'01	1°43'15
	4229 Sep 21 09:30	0°  ♋		max. Earth dist.	4230 Sep 09 07:23	22°  ♊29'07	1.35005 AU
max. Earth dist.	4229 Sep 26 19:39	10°  ♋37'08	1.36764 AU		4230 Sep 13 03:05	0°  ♋	
evening rise	4229 Sep 30 15:40	17°  ♋45'13		evening rise	4230 Sep 13 15:07	0°  ♋57'33	
	4229 Oct 07 16:18	0°  ♋		desc. node	4230 Sep 27 13:48	25°  ♋10'27	
desc. node	4229 Oct 10 16:48	4°  ♋56'55			4230 Sep 30 17:19	0°  ♋	
	4229 Oct 28 03:40	0°  ♋		evening max el	4230 Oct 18 21:42	22°  ♋53'26	26°44'32
evening max el	4229 Nov 05 09:13	9°  ♋14'51	25°47'44		4230 Oct 30 06:37	0°  ♋	
retrograde	4229 Nov 17 18:12	16°  ♋18'42		retrograde	4230 Oct 31 22:50	0°  ♋09'10	
evening set	4229 Nov 23 20:02	13°  ♋47'42			4230 Nov 02 13:51	30°  R 	
min. Earth dist.	4229 Nov 28 03:39	9°  ♋07'09	0.66963 AU	evening set	4230 Nov 07 13:22	27°  ♋29'29	
inferior conj	4229 Nov 29 11:41	7°  ♋25'54	-0°26'24	min. Earth dist.	4230 Nov 11 14:09	23°  ♋24'38	0.65918 AU
minimum elong	4229 Nov 29 12:23	7°  ♋23'42	0°26'06	inferior conj	4230 Nov 13 09:50	21°  ♋16'01	-1°26'18
asc. node	4229 Nov 30 18:31	5°  ♋49'52		minimum elong	4230 Nov 13 12:14	21°  ♋08'57	1°25'17
morning rise	4229 Dec 05 05:07	1°  ♋33'17		asc. node	4230 Nov 17 15:35	16°  ♋49'43	
direct	4229 Dec 08 11:07	0°  ♋32'38		morning rise	4230 Nov 19 11:53	15°  ♋34'35	
morning max el	4229 Dec 15 09:22	4°  ♋23'12	19°03'40	direct	4230 Nov 22 08:33	14°  ♋49'10	
	4230 Jan 02 14:46	0°  ♋		morning max el	4230 Nov 28 22:11	18°  ♋22'55	18°21'59
desc. node	4230 Jan 06 16:03	6°  ♋18'18			4230 Dec 07 16:32	0°  ♋	
morning set	4230 Jan 07 02:57	7°  ♋00'45		morning set	4230 Dec 18 10:02	17°  ♋04'47	
max. Earth dist.	4230 Jan 21 11:39	29°  ♋28'12	1.44992 AU	desc. node	4230 Dec 24 13:05	26°  ♋54'19	
	4230 Jan 21 19:44	0°  ♋			4230 Dec 26 11:44	0°  ♋	
superior conj	4230 Jan 23 18:51	3°  ♋05'51	-1°41'07	superior conj	4231 Jan 02 21:17	11°  ♋40'44	-1°01'11
minimum elong	4230 Jan 23 09:53	2°  ♋30'26	1°40'21	minimum elong	4231 Jan 02 13:47	11°  ♋11'16	1°00'14
evening rise	4230 Feb 07 15:34	26° ♋59'54		max. Earth dist.	4231 Jan 04 06:27	13° ♋50'50	1.45273 AU

	4231 Jan 14 13:55	0°♊		minimum elong	4231 Dec 13 08:26	20°♊44'34	0°13'32
evening rise	4231 Jan 19 00:07	6°♊56'46		behind sun begin	4231 Dec 13 02:43	20°♊21'36	
greatest brilliancy	4231 Jan 29 14:23	23°♊31'44	-0.8m	behind sun end	4231 Dec 13 14:09	21°♊07'32	
	4231 Feb 02 21:08	0°♋		max. Earth dist.	4231 Dec 18 01:17	28°♊14'21	1.44819 AU
evening max el	4231 Feb 11 02:55	10°♋40'57	19°11'59		4231 Dec 19 04:04	0°♋	
asc. node	4231 Feb 13 14:51	12°♋54'09		evening rise	4231 Dec 29 14:46	16°♋14'55	
retrograde	4231 Feb 18 02:58	14°♋40'08			4232 Jan 07 14:59	0°♋	
evening set	4231 Feb 21 12:51	13°♋32'14		greatest brilliancy	4232 Jan 13 04:42	8°♋18'54	-0.6m
inferior conj	4231 Feb 27 01:42	7°♋42'39	3°23'45	evening max el	4232 Jan 25 07:23	24°♋13'22	20°06'55
minimum elong	4231 Feb 27 00:01	7°♋48'03	3°23'32	asc. node	4232 Jan 31 11:54	28°♋31'30	
min. Earth dist.	4231 Feb 28 12:04	5°♋52'25	0.66183 AU	retrograde	4232 Feb 02 00:57	28°♋44'23	
morning rise	4231 Mar 04 10:51	1°♋28'46		evening set	4232 Feb 05 19:00	27°♋22'26	
	4231 Mar 06 09:40	30°♌		inferior conj	4232 Feb 11 04:35	21°♋19'07	3°00'26
direct	4231 Mar 10 19:28	28°♋40'22		minimum elong	4232 Feb 11 02:15	21°♋26'57	2°59'56
	4231 Mar 15 15:45	0°♌		min. Earth dist.	4232 Feb 12 00:52	20°♋10'44	0.67205 AU
desc. node	4231 Mar 22 12:16	5°♌13'01		morning rise	4232 Feb 16 09:16	15°♋05'02	
morning max el	4231 Mar 23 13:07	6°♌14'21	26°16'15	direct	4232 Feb 22 05:09	12°♋28'42	
	4231 Apr 10 21:13	0°♍		morning max el	4232 Mar 04 21:52	19°♋28'20	24°56'35
morning set	4231 Apr 28 15:49	29°♍58'02		desc. node	4232 Mar 08 09:18	23°♋14'30	
	4231 Apr 28 16:14	0°♎			4232 Mar 13 20:57	0°♎	
max. Earth dist.	4231 May 02 16:02	7°♎37'39	1.35060 AU		4232 Apr 03 00:15	0°♎	
				morning set	4232 Apr 10 00:48	12°♎03'50	
superior conj	4231 May 07 15:22	17°♎34'32	-0°49'28	max. Earth dist.	4232 Apr 13 15:48	18°♎38'18	1.36929 AU
minimum elong	4231 May 07 18:02	17°♎48'08	0°48'58		4232 Apr 19 15:13	0°♎	
asc. node	4231 May 12 14:10	27°♎49'16					
	4231 May 13 15:18	0°♏		superior conj	4232 Apr 20 02:32	0°♎55'21	-1°18'03
evening rise	4231 May 15 08:54	3°♏35'31		minimum elong	4232 Apr 20 06:40	1°♎15'37	1°17'26
	4231 May 30 12:08	0°♐		asc. node	4232 Apr 28 11:13	17°♎39'02	
evening max el	4231 Jun 02 23:39	3°♐53'56	20°37'13	evening rise	4232 Apr 28 12:06	17°♎43'26	
retrograde	4231 Jun 14 05:09	9°♐23'19			4232 May 04 20:23	0°♏	
evening set	4231 Jun 16 06:04	9°♐13'12		evening max el	4232 May 15 13:24	15°♏26'33	19°29'30
desc. node	4231 Jun 18 11:29	8°♐40'35		retrograde	4232 May 25 00:58	20°♏03'25	
inferior conj	4231 Jun 25 12:16	5°♐15'55	-2°04'02	evening set	4232 May 27 00:16	19°♏52'20	
minimum elong	4231 Jun 25 06:29	5°♐24'15	2°01'58	desc. node	4232 Jun 04 08:31	15°♏58'27	
min. Earth dist.	4231 Jun 26 15:05	4°♐37'21	0.54908 AU	inferior conj	4232 Jun 04 15:37	15°♏47'03	-0°05'15
morning rise	4231 Jul 04 06:12	1°♐09'03		minimum elong	4232 Jun 04 15:23	15°♏47'26	0°05'10
direct	4231 Jul 08 00:29	0°♐38'32		transit middle	4232 Jun 04 15:23	15°♏47'26	0°05'10
morning max el	4231 Jul 21 06:47	7°♐02'38	23°14'04	transit begin	4232 Jun 04 11:42	15°♏53'20	
	4231 Aug 06 13:10	0°♑		transit end	4232 Jun 04 19:05	15°♏41'30	
asc. node	4231 Aug 08 13:28	3°♑49'15		min. Earth dist.	4232 Jun 07 04:59	14°♏09'01	0.55802 AU
morning set	4231 Aug 13 11:24	13°♑48'52		morning rise	4232 Jun 13 03:47	11°♏08'34	
				direct	4232 Jun 17 19:14	10°♏19'55	
superior conj	4231 Aug 20 12:22	28°♑55'22	1°36'47	morning max el	4232 Jul 01 20:34	17°♏25'08	24°56'37
minimum elong	4231 Aug 20 10:41	28°♑46'18	1°36'39		4232 Jul 12 04:19	0°♒	
	4231 Aug 21 00:26	0°♓		asc. node	4232 Jul 25 10:30	23°♒26'25	
max. Earth dist.	4231 Aug 23 03:57	4°♓33'27	1.33627 AU	morning set	4232 Jul 27 23:09	28°♒42'04	
evening rise	4231 Aug 28 03:53	14°♓47'51			4232 Jul 28 13:49	0°♑	
	4231 Sep 05 06:30	0°♑					
desc. node	4231 Sep 14 10:49	15°♑00'55		superior conj	4232 Aug 03 21:50	13°♑46'41	1°24'49
	4231 Sep 25 12:33	0°♒		minimum elong	4232 Aug 03 19:36	13°♑34'28	1°24'32
evening max el	4231 Oct 01 09:56	6°♒19'08	27°19'20	max. Earth dist.	4232 Aug 05 08:44	16°♑56'50	1.32674 AU
retrograde	4231 Oct 14 21:45	13°♒37'38		evening rise	4232 Aug 11 02:17	29°♑05'22	
evening set	4231 Oct 21 21:57	10°♒57'05			4232 Aug 11 12:58	0°♓	
min. Earth dist.	4231 Oct 25 16:47	7°♒26'52	0.64523 AU		4232 Aug 28 09:35	0°♑	
inferior conj	4231 Oct 28 00:32	4°♒56'54	-2°28'08	desc. node	4232 Aug 31 07:51	4°♑18'09	
minimum elong	4231 Oct 28 04:44	4°♒45'35	2°26'31	evening max el	4232 Sep 12 20:02	19°♑18'43	27°25'29
	4231 Nov 02 13:04	30°♓		retrograde	4232 Sep 26 13:57	26°♑34'08	
morning rise	4231 Nov 03 12:45	29°♑29'34		evening set	4232 Oct 03 18:27	24°♑03'15	
asc. node	4231 Nov 04 12:40	29°♑08'20		min. Earth dist.	4232 Oct 07 09:32	21°♑03'19	0.62806 AU
direct	4231 Nov 06 02:29	28°♑55'26		inferior conj	4232 Oct 10 04:57	18°♑21'00	-3°28'48
	4231 Nov 09 15:49	0°♒		minimum elong	4232 Oct 10 10:36	18°♑07'21	3°27'00
morning max el	4231 Nov 12 14:20	2°♒21'36	17°57'13	morning rise	4232 Oct 17 04:18	13°♑11'09	
morning set	4231 Nov 29 22:14	28°♒35'06		direct	4232 Oct 19 13:51	12°♑44'38	
	4231 Nov 30 18:24	0°♓		asc. node	4232 Oct 21 09:44	13°♑00'27	
desc. node	4231 Dec 11 10:06	17°♓37'37		morning max el	4232 Oct 26 06:47	16°♑11'17	17°50'08
					4232 Nov 04 23:57	0°♒	
superior conj	4231 Dec 13 10:05	20°♓51'12	-0°13'47	morning set	4232 Nov 11 10:00	11°♒13'10	

	4232 Nov 22 05:40	0°♊		morning max el	4233 Oct 09 20:25	29°♎44'31	18°01'52
					4233 Oct 10 02:41	0°♊	
superior conj	4232 Nov 22 23:06	1°♊13'18	0°30'00	morning set	4233 Oct 25 14:54	24°♊39'57	
minimum elong	4232 Nov 23 01:55	1°♊25'10	0°29'35		4233 Oct 28 12:00	0°♎	
desc. node	4232 Nov 27 07:08	8°♊24'20					
max. Earth dist.	4232 Nov 29 17:46	12°♊22'30	1.43686 AU	superior conj	4233 Nov 04 14:29	12°♎52'32	1°04'00
evening rise	4232 Dec 08 00:48	25°♊28'18		minimum elong	4233 Nov 04 18:37	13°♎10'46	1°03'30
	4232 Dec 10 23:27	0°♊		max. Earth dist.	4233 Nov 12 05:44	25°♎59'15	1.42006 AU
	4232 Dec 31 16:49	0°♊		desc. node	4233 Nov 14 04:10	29°♎11'17	
evening max el	4233 Jan 07 06:24	7°♊46'48	21°14'41		4233 Nov 14 16:04	0°♊	
retrograde	4233 Jan 15 22:44	12°♊55'30		evening rise	4233 Nov 17 22:10	5°♊15'36	
asc. node	4233 Jan 17 08:58	12°♊44'27			4233 Dec 04 06:39	0°♊	
evening set	4233 Jan 20 02:38	11°♊18'19		evening max el	4233 Dec 21 00:11	21°♊21'47	22°31'13
inferior conj	4233 Jan 25 10:55	5°♊04'05	2°27'41	retrograde	4233 Dec 30 18:44	27°♊10'16	
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	4233 Feb 12 05:37	0°♊		morning rise	4234 Jan 14 22:59	12°♊45'37	
morning max el	4233 Feb 15 06:35	2°♊47'52	23°28'13	direct	4234 Jan 19 13:34	10°♊51'18	
desc. node	4233 Feb 23 06:20	12°♊07'36		morning max el	4234 Jan 28 18:38	16°♊15'17	22°00'40
	4233 Mar 07 23:47	0°♋			4234 Feb 08 23:05	0°♊	
morning set	4233 Mar 22 10:23	22°♋59'17		desc. node	4234 Feb 10 03:22	1°♋37'55	
max. Earth dist.	4233 Mar 26 11:03	29°♋54'59	1.39070 AU		4234 Mar 01 01:22	0°♋	
	4233 Mar 26 12:12	0°♋		morning set	4234 Mar 02 15:35	2°♋32'57	
				max. Earth dist.	4234 Mar 08 09:18	11°♋57'53	1.41228 AU
superior conj	4233 Apr 02 23:59	13°♋33'23	-1°43'24				
minimum elong	4233 Apr 03 04:47	13°♋55'49	1°42'52	superior conj	4234 Mar 16 02:53	25°♋16'26	-2°01'40
	4233 Apr 11 14:05	0°♋		minimum elong	4234 Mar 16 06:29	25°♋32'22	2°01'28
evening rise	4233 Apr 12 07:25	1°♋24'00			4234 Mar 18 18:24	0°♋	
asc. node	4233 Apr 15 08:16	7°♋13'52		evening rise	4234 Mar 26 15:25	14°♋28'11	
evening max el	4233 Apr 28 13:50	27°♋38'53	18°41'57	asc. node	4234 Apr 02 05:17	26°♋27'32	
	4233 May 01 12:10	0°♌			4234 Apr 04 07:04	0°♋	
retrograde	4233 May 06 14:16	1°♌35'03		evening max el	4234 Apr 11 21:36	10°♋22'06	18°14'34
evening set	4233 May 08 19:04	1°♌18'21		retrograde	4234 Apr 18 22:31	13°♋53'45	
	4233 May 12 00:25	30°♋♌		evening set	4234 Apr 21 09:54	13°♋28'25	
inferior conj	4233 May 16 14:31	26°♋55'08	1°34'20	inferior conj	4234 Apr 28 10:49	8°♋44'36	2°42'30
minimum elong	4233 May 16 17:40	26°♋49'12	1°33'19	minimum elong	4234 Apr 28 14:18	8°♋36'58	2°41'40
min. Earth dist.	4233 May 19 22:01	24°♋27'29	0.57455 AU	min. Earth dist.	4234 May 01 20:29	5°♋47'10	0.59542 AU
desc. node	4233 May 22 05:31	22°♋55'28		morning rise	4234 May 05 16:03	3°♋03'01	
morning rise	4233 May 24 13:04	21°♋41'34		desc. node	4234 May 09 02:33	1°♋34'19	
direct	4233 May 30 03:43	20°♋23'52		direct	4234 May 12 01:20	1°♋10'16	
morning max el	4233 Jun 13 12:24	27°♋56'42	26°25'40	morning max el	4234 May 26 10:09	9°♋00'20	27°26'49
	4233 Jun 15 12:45	0°♌			4234 Jun 11 11:14	0°♌	
	4233 Jun 05 15:49	0°♌		morning set	4234 Jun 26 17:48	28°♌10'21	
morning set	4233 Jul 12 09:52	13°♌31'26			4234 Jun 27 14:43	0°♌	
asc. node	4233 Jul 12 07:32	13°♌19'08		asc. node	4234 Jun 29 04:33	3°♌21'13	
superior conj	4233 Jul 19 09:20	28°♌42'11	1°08'10	superior conj	4234 Jul 03 21:00	13°♌34'55	0°47'25
minimum elong	4233 Jul 19 07:02	28°♌29'30	1°07'47	minimum elong	4234 Jul 03 19:06	13°♌24'27	0°47'03
	4233 Jul 19 23:27	0°♍		max. Earth dist.	4234 Jul 03 06:35	12°♌15'25	1.32007 AU
max. Earth dist.	4233 Jul 19 18:55	29°♌35'00	1.32139 AU	evening rise	4234 Jul 10 16:36	28°♌27'05	
evening rise	4233 Jul 26 07:21	13°♍41'23			4234 Jul 11 10:11	0°♍	
	4233 Aug 03 14:26	0°♍			4234 Jul 28 02:53	0°♍	
desc. node	4233 Aug 18 04:51	22°♍48'37		desc. node	4234 Aug 05 01:51	10°♍12'27	
	4233 Aug 24 09:10	0°♍		evening max el	4234 Aug 07 23:03	13°♍09'59	25°59'12
evening max el	4233 Aug 26 01:14	1°♍38'53	26°58'39	retrograde	4234 Aug 21 22:18	20°♍18'03	
retrograde	4233 Sep 08 22:31	8°♍50'05		evening set	4234 Aug 28 05:56	18°♍42'10	
evening set	4233 Sep 15 22:44	6°♍40'58		min. Earth dist.	4234 Sep 01 11:31	16°♍06'31	0.58769 AU
min. Earth dist.	4233 Sep 19 15:27	4°♍01'24	0.60841 AU	inferior conj	4234 Sep 04 17:21	13°♍43'24	-5°01'37
inferior conj	4233 Sep 22 19:44	1°♍19'56	-4°22'56	minimum elong	4234 Sep 04 21:06	13°♍36'28	5°01'13
minimum elong	4233 Sep 23 01:39	1°♍07'22	4°21'37	morning rise	4234 Sep 12 14:31	9°♍17'45	
	4233 Sep 24 10:06	30°♋♍		direct	4234 Sep 15 00:56	8°♍58'10	
morning rise	4233 Sep 30 06:27	26°♍31'03		morning max el	4234 Sep 23 03:56	12°♍51'57	18°33'47
direct	4233 Oct 02 14:53	26°♍09'10		asc. node	4234 Sep 25 03:46	14°♍59'06	
asc. node	4233 Oct 08 06:45	28°♍22'00			4234 Oct 04 18:16	0°♍	

































































































































morning set	4234 Oct 09 07:50	8°♄40'30		asc. node	4235 Sep 12 00:48	2°♄36'54	
				morning set	4235 Sep 23 09:04	23°♄04'43	
superior conj	4234 Oct 18 03:53	25°♄36'03	1°27'00		4235 Sep 26 19:40	0°♄	
minimum elong	4234 Oct 18 07:13	25°♄51'34	1°26'41				
	4234 Oct 20 13:03	0°♄		superior conj	4235 Oct 01 09:50	9°♄08'08	1°39'53
max. Earth dist.	4234 Oct 25 12:14	8°♄51'52	1.39988 AU	minimum elong	4235 Oct 01 11:35	9°♄16'39	1°39'47
evening rise	4234 Oct 29 16:48	16°♄01'18		max. Earth dist.	4235 Oct 07 16:22	21°♄04'09	1.37897 AU
desc. node	4234 Nov 01 01:12	19°♄54'47		evening rise	4235 Oct 11 10:35	27°♄50'42	
	4234 Nov 07 09:17	0°♄			4235 Oct 12 16:05	0°♄	
	4234 Nov 29 00:25	0°♄		desc. node	4235 Oct 18 22:12	10°♄30'42	
evening max el	4234 Dec 03 14:13	4°♄59'45	23°51'13		4235 Oct 31 19:47	0°♄	
retrograde	4234 Dec 14 11:38	11°♄25'01		evening max el	4235 Nov 16 02:44	18°♄41'19	25°08'05
evening set	4234 Dec 19 15:48	9°♄15'55		retrograde	4235 Nov 28 00:23	25°♄34'38	
asc. node	4234 Dec 22 02:59	6°♄43'09		evening set	4235 Dec 03 18:10	23°♄10'58	
min. Earth dist.	4234 Dec 24 11:20	3°♄40'49	0.67885 AU	min. Earth dist.	4235 Dec 08 05:55	18°♄09'58	0.67390 AU
inferior conj	4234 Dec 25 02:11	2°♄50'20	0°59'37	inferior conj	4235 Dec 09 07:32	16°♄46'16	0°06'25
minimum elong	4234 Dec 25 00:50	2°♄54'56	0°59'04	minimum elong	4235 Dec 09 07:22	16°♄46'48	0°06'21
	4234 Dec 27 05:54	30°♄		transit middle	4235 Dec 09 07:22	16°♄46'48	0°06'21
morning rise	4234 Dec 30 09:52	26°♄45'28		transit begin	4235 Dec 09 04:49	16°♄55'09	
direct	4235 Jan 03 10:29	25°♄13'53		transit end	4235 Dec 09 09:56	16°♄38'27	
morning max el	4235 Jan 11 13:14	29°♄53'46	20°41'22	asc. node	4235 Dec 09 00:02	17°♄10'51	
	4235 Jan 11 15:43	0°♄		morning rise	4235 Dec 14 20:48	10°♄48'16	
desc. node	4235 Jan 28 00:25	21°♄35'22		direct	4235 Dec 18 09:03	9°♄37'14	
	4235 Feb 02 15:34	0°♄		morning max el	4235 Dec 25 15:41	13°♄42'53	19°34'56
morning set	4235 Feb 09 19:21	10°♄58'49			4236 Jan 07 00:58	0°♄	
max. Earth dist.	4235 Feb 18 14:21	24°♄55'12	1.43114 AU	greatest brilliancy	4236 Jan 07 18:08	1°♄03'40	-0.7m
	4235 Feb 21 17:05	0°♄		desc. node	4236 Jan 14 21:27	11°♄51'55	
				morning set	4236 Jan 19 16:04	19°♄12'43	
superior conj	4235 Feb 25 06:24	5°♄54'19	-2°07'51		4236 Jan 26 14:42	0°♄	
minimum elong	4235 Feb 25 05:49	5°♄51'53	2°07'50	max. Earth dist.	4236 Feb 01 02:29	8°♄38'27	1.44493 AU
evening rise	4235 Mar 09 07:59	26°♄47'20					
	4235 Mar 11 03:31	0°♄		superior conj	4236 Feb 05 08:08	15°♄23'42	-1°56'37
asc. node	4235 Mar 20 02:18	15°♄13'26		minimum elong	4236 Feb 05 01:28	14°♄56'58	1°56'13
evening max el	4235 Mar 26 09:24	23°♄27'54	18°06'50		4236 Feb 14 06:53	0°♄	
retrograde	4235 Apr 01 22:09	26°♄50'30		evening rise	4236 Feb 19 04:39	8°♄12'19	
evening set	4235 Apr 04 15:43	26°♄14'36			4236 Mar 03 12:55	0°♄	
inferior conj	4235 Apr 11 01:51	21°♄10'40	3°20'45	asc. node	4236 Mar 05 23:20	3°♄22'18	
minimum elong	4235 Apr 11 03:58	21°♄05'20	3°20'28	evening max el	4236 Mar 08 22:11	6°♄47'51	18°18'05
min. Earth dist.	4235 Apr 14 02:50	18°♄08'13	0.61728 AU	retrograde	4236 Mar 15 08:38	10°♄15'08	
morning rise	4235 Apr 17 14:30	15°♄11'38		evening set	4236 Mar 18 08:12	9°♄27'25	
direct	4235 Apr 24 10:00	12°♄47'14		inferior conj	4236 Mar 24 07:28	4°♄04'27	3°35'17
desc. node	4235 Apr 25 23:34	12°♄54'23		minimum elong	4236 Mar 24 07:51	4°♄03'24	3°35'17
morning max el	4235 May 08 14:08	20°♄45'55	27°51'36	min. Earth dist.	4236 Mar 26 18:14	1°♄19'22	0.63743 AU
	4235 May 16 13:29	0°♄			4236 Mar 28 00:22	30°♄	
	4235 Jun 04 10:58	0°♄		morning rise	4236 Mar 30 06:35	27°♄56'17	
morning set	4235 Jun 10 21:04	12°♄32'47		direct	4236 Apr 06 03:22	25°♄11'40	
asc. node	4235 Jun 16 01:35	23°♄28'19		desc. node	4236 Apr 11 20:37	26°♄47'54	
max. Earth dist.	4235 Jun 16 15:51	24°♄45'29	1.32287 AU		4236 Apr 16 12:03	0°♄	
				morning max el	4236 Apr 19 22:19	3°♄09'35	27°39'06
superior conj	4235 Jun 18 07:10	28°♄19'27	0°23'13		4236 May 09 23:23	0°♄	
minimum elong	4235 Jun 18 06:07	28°♄13'42	0°23'00	morning set	4236 May 24 17:16	26°♄31'01	
	4235 Jun 19 01:33	0°♄			4236 May 26 10:54	0°♄	
evening rise	4235 Jun 25 04:01	13°♄16'04		max. Earth dist.	4236 May 29 18:47	6°♄52'50	1.33001 AU
	4235 Jul 03 13:46	0°♄					
evening max el	4235 Jul 20 14:00	23°♄56'43	24°34'15	superior conj	4236 Jun 01 14:00	12°♄49'49	-0°03'46
desc. node	4235 Jul 22 22:51	26°♄03'18		minimum elong	4236 Jun 01 14:11	12°♄50'48	0°03'44
	4235 Jul 29 11:08	0°♄		behind sun begin	4236 Jun 01 08:58	12°♄22'50	
retrograde	4235 Aug 03 11:26	0°♄57'39		behind sun end	4236 Jun 01 19:24	13°♄18'48	
evening set	4235 Aug 08 12:54	0°♄00'08		asc. node	4236 Jun 01 22:38	13°♄36'08	
	4235 Aug 08 13:03	30°♄		evening rise	4236 Jun 08 15:45	28°♄02'06	
min. Earth dist.	4235 Aug 14 01:09	27°♄09'28	0.56857 AU		4236 Jun 09 14:08	0°♄	
inferior conj	4235 Aug 16 19:08	25°♄23'35	-5°10'58		4236 Jun 27 03:58	0°♄	
minimum elong	4235 Aug 16 17:40	25°♄25'58	5°10'55	evening max el	4236 Jul 01 03:13	4°♄21'30	22°57'35
morning rise	4235 Aug 25 00:58	21°♄19'17		desc. node	4236 Jul 08 19:51	9°♄47'49	
direct	4235 Aug 27 16:18	21°♄00'10		retrograde	4236 Jul 14 11:49	11°♄01'06	
morning max el	4235 Sep 06 02:09	25°♄24'11	19°27'04	evening set	4236 Jul 18 00:44	10°♄33'43	
	4235 Sep 10 03:47	0°♄		min. Earth dist.	4236 Jul 25 12:03	7°♄13'40	0.55442 AU




































































































































inferior conj	4236 Jul 27 01:44	6°♎19'14	-4°35'22	minimum elong	4237 Jul 06 12:01	16°♊53'17	3°07'04
minimum elong	4236 Jul 26 18:29	6°♎29'44	4°34'01	min. Earth dist.	4237 Jul 06 22:44	16°♊38'18	0.54831 AU
morning rise	4236 Aug 04 14:29	2°♎27'44		morning rise	4237 Jul 15 13:42	12°♊47'00	
direct	4236 Aug 07 13:20	2°♎07'11		direct	4237 Jul 18 23:21	12°♊21'56	
morning max el	4236 Aug 18 12:42	7°♎13'12	20°41'54	morning max el	4237 Jul 31 11:46	18°♊16'59	22°15'13
asc. node	4236 Aug 28 21:52	21°♎01'53			4237 Aug 09 22:10	0°♎	
	4236 Sep 02 19:15	0°♎		asc. node	4237 Aug 15 18:56	10°♎01'52	
morning set	4236 Sep 06 15:54	7°♎45'29		morning set	4237 Aug 22 02:03	22°♎35'38	
					4237 Aug 25 13:58	0°♎	
superior conj	4236 Sep 14 03:44	23°♎15'52	1°44'09				
minimum elong	4236 Sep 14 03:52	23°♎16'30	1°44'08	superior conj	4237 Aug 29 05:49	7°♎47'19	1°41'14
	4236 Sep 17 11:58	0°♎		minimum elong	4237 Aug 29 04:40	7°♎41'13	1°41'11
max. Earth dist.	4236 Sep 19 00:12	2°♎58'09	1.35973 AU	max. Earth dist.	4237 Sep 01 15:56	14°♎55'30	1.34373 AU
evening rise	4236 Sep 23 00:34	10°♎36'54		evening rise	4237 Sep 06 06:13	24°♎07'03	
	4236 Oct 04 05:35	0°♎			4237 Sep 09 08:23	0°♎	
desc. node	4236 Oct 04 19:13	0°♎54'33		desc. node	4237 Sep 21 16:13	20°♎59'30	
	4236 Oct 26 06:38	0°♎			4237 Sep 27 19:09	0°♎	
evening max el	4236 Oct 28 15:21	2°♎24'11	26°14'18	evening max el	4237 Oct 11 04:03	15°♎59'15	27°02'28
retrograde	4236 Nov 10 08:03	9°♎34'10		retrograde	4237 Oct 24 10:04	23°♎16'11	
evening set	4236 Nov 16 15:23	6°♎59'05		evening set	4237 Oct 31 05:16	20°♎35'12	
min. Earth dist.	4236 Nov 20 20:08	2°♎33'25	0.66557 AU	min. Earth dist.	4237 Nov 04 03:29	16°♎45'22	0.65372 AU
inferior conj	4236 Nov 22 08:56	0°♎40'13	-0°51'25	inferior conj	4237 Nov 06 04:13	14°♎27'05	-1°52'25
minimum elong	4236 Nov 22 10:19	0°♎35'57	0°50'49	minimum elong	4237 Nov 06 07:23	14°♎18'04	1°51'07
	4236 Nov 22 22:03	30°♎		asc. node	4237 Nov 11 18:09	9°♎13'16	
asc. node	4236 Nov 24 21:05	27°♎43'32		morning rise	4237 Nov 12 10:24	8°♎51'10	
morning rise	4236 Nov 28 05:47	24°♎51'42		direct	4237 Nov 15 03:56	8°♎10'51	
direct	4236 Dec 01 07:34	23°♎57'54		morning max el	4237 Nov 21 15:47	11°♎39'59	18°09'21
morning max el	4236 Dec 08 01:15	27°♎40'12	18°43'53		4237 Dec 04 12:29	0°♎	
	4236 Dec 10 04:12	0°♎		morning set	4237 Dec 10 02:34	9°♎09'11	
morning set	4236 Dec 29 06:42	28°♎26'47		desc. node	4237 Dec 18 15:32	23°♎02'00	
	4236 Dec 30 06:21	0°♎			4237 Dec 23 00:14	0°♎	
desc. node	4236 Dec 31 18:30	2°♎22'24					
max. Earth dist.	4237 Jan 13 19:59	22°♎53'02	1.45206 AU	superior conj	4237 Dec 24 18:32	2°♎47'32	-0°41'14
				minimum elong	4237 Dec 24 13:21	2°♎27'04	0°40'32
superior conj	4237 Jan 14 14:16	24°♎04'49	-1°25'53	max. Earth dist.	4237 Dec 27 15:38	7°♎19'56	1.45171 AU
minimum elong	4237 Jan 14 05:02	23°♎28'34	1°24'54	evening rise	4238 Jan 10 02:08	28°♎17'39	
	4237 Jan 18 08:35	0°♎			4238 Jan 11 04:30	0°♎	
evening rise	4237 Jan 30 02:20	18°♎40'06		greatest brilliancy	4238 Jan 22 15:47	17°♎38'28	-0.7m
	4237 Feb 06 03:39	0°♎			4238 Jan 31 09:43	0°♎	
greatest brilliancy	4237 Feb 06 08:38	0°♎19'54	-0.9m	evening max el	4238 Feb 03 16:36	3°♎47'10	19°33'35
evening max el	4237 Feb 20 09:19	20°♎15'48	18°47'26	asc. node	4238 Feb 07 17:24	7°♎02'51	
asc. node	4237 Feb 20 20:22	20°♎43'15		retrograde	4238 Feb 10 23:12	7°♎58'47	
retrograde	4237 Feb 27 02:04	23°♎59'58		evening set	4238 Feb 14 12:28	6°♎44'49	
evening set	4237 Mar 02 08:00	22°♎59'32		inferior conj	4238 Feb 19 23:37	0°♎48'55	3°15'10
inferior conj	4237 Mar 07 23:48	17°♎19'04	3°31'59	minimum elong	4238 Feb 19 21:36	0°♎55'33	3°14'49
minimum elong	4237 Mar 07 22:44	17°♎22'22	3°31'55		4238 Feb 20 14:28	30°♎	
min. Earth dist.	4237 Mar 09 18:52	15°♎06'34	0.65414 AU	min. Earth dist.	4238 Feb 21 03:44	29°♎16'34	0.66667 AU
morning rise	4237 Mar 13 13:03	11°♎06'37		morning rise	4238 Feb 25 06:30	24°♎34'54	
direct	4237 Mar 20 03:41	8°♎15'59		direct	4238 Mar 03 09:59	21°♎50'49	
desc. node	4237 Mar 29 17:41	12°♎42'28		morning max el	4238 Mar 15 17:44	29°♎11'23	25°44'15
morning max el	4237 Apr 02 08:11	16°♎01'49	26°53'58	desc. node	4238 Mar 16 14:44	0°♎05'28	
	4237 Apr 13 20:53	0°♎			4238 Mar 16 12:39	0°♎	
	4237 May 02 18:46	0°♎			4238 Apr 07 16:45	0°♎	
morning set	4237 May 08 03:17	9°♎55'35		morning set	4238 Apr 20 22:59	22°♎34'57	
max. Earth dist.	4237 May 12 12:01	18°♎29'56	1.34179 AU		4238 Apr 24 22:06	0°♎	
				max. Earth dist.	4238 Apr 24 18:06	29°♎40'58	1.35811 AU
superior conj	4237 May 16 15:22	26°♎59'20	-0°32'33				
minimum elong	4237 May 16 17:05	27°♎08'18	0°32'13	superior conj	4238 Apr 30 08:40	10°♎40'48	-1°01'47
	4237 May 18 01:52	0°♎		minimum elong	4238 Apr 30 12:00	10°♎57'33	1°01'12
asc. node	4237 May 19 19:41	3°♎40'23		asc. node	4238 May 06 16:43	23°♎37'12	
evening rise	4237 May 24 01:54	12°♎38'53		evening rise	4238 May 08 08:21	27°♎00'06	
	4237 Jun 02 00:38	0°♎			4238 May 09 19:50	0°♎	
evening max el	4237 Jun 12 22:21	14°♎55'32	21°24'28	evening max el	4238 May 26 04:54	26°♎04'06	20°05'56
retrograde	4237 Jun 25 01:52	20°♎54'25			4238 May 31 14:47	0°♎	
desc. node	4237 Jun 25 16:53	20°♎53'30		retrograde	4238 Jun 05 16:20	1°♎10'53	
evening set	4237 Jun 27 11:07	20°♎41'23		evening set	4238 Jun 07 15:10	1°♎01'00	
inferior conj	4237 Jul 06 20:08	16°♎41'56	-3°09'36		4238 Jun 11 01:47	30°♎	

desc. node	4238 Jun 12 13:54	29° Π 19'03		retrograde	4239 May 17 19:10	12° Π 12'15	
inferior conj	4238 Jun 16 16:12	27° Π 01'34	-1°12'58	evening set	4239 May 19 20:08	11° Π 59'23	
minimum elong	4238 Jun 16 12:47	27° Π 06'40	1°11'41	inferior conj	4239 May 28 03:12	7° Π 47'11	0°40'27
min. Earth dist.	4238 Jun 18 11:06	25° Π 57'32	0.55180 AU	minimum elong	4239 May 28 04:48	7° Π 44'24	0°39'52
morning rise	4238 Jun 25 08:49	22° Π 42'51		desc. node	4239 May 30 10:57	6° Π 11'45	
direct	4238 Jun 29 11:15	22° Π 06'18		min. Earth dist.	4239 May 31 02:20	5° Π 46'06	0.56425 AU
morning max el	4238 Jul 13 03:23	28° Π 48'45	23°58'18	morning rise	4239 Jun 05 10:17	2° Π 53'00	
	4238 Jul 14 08:32	0° \mathfrak{C}		direct	4239 Jun 10 11:31	1° Π 53'18	
asc. node	4238 Aug 02 16:00	29° \mathfrak{C} 27'57		morning max el	4239 Jun 24 17:35	9° Π 12'30	25°37'03
	4238 Aug 02 22:26	0° Ω			4239 Jul 10 08:22	0° \mathfrak{C}	
morning set	4238 Aug 06 13:43	7° Ω 29'40		asc. node	4239 Jul 20 13:02	19° \mathfrak{C} 12'29	
				morning set	4239 Jul 22 01:12	22° \mathfrak{C} 22'03	
					4239 Jul 25 14:12	0° Ω	
superior conj	4238 Aug 13 13:17	22° Ω 33'56	1°32'19				
minimum elong	4238 Aug 13 11:18	22° Ω 23'13	1°32'08				
max. Earth dist.	4238 Aug 15 16:24	27° Ω 08'55	1.33174 AU	superior conj	4239 Jul 28 23:51	7° Ω 28'04	1°18'17
	4238 Aug 17 00:36	0° \mathfrak{M}		minimum elong	4239 Jul 28 21:32	7° Ω 15'19	1°17'58
evening rise	4238 Aug 20 23:29	8° \mathfrak{M} 10'14		max. Earth dist.	4239 Jul 29 23:42	9° Ω 38'53	1.32394 AU
	4238 Sep 01 19:20	0° \mathfrak{L}		evening rise	4239 Aug 05 01:01	22° Ω 36'33	
desc. node	4238 Sep 08 13:13	10° \mathfrak{L} 37'24			4239 Aug 08 16:52	0° \mathfrak{M}	
evening max el	4238 Sep 23 15:30	29° \mathfrak{L} 14'55	27°25'35	desc. node	4239 Aug 26 10:14	29° \mathfrak{M} 37'00	
	4238 Sep 24 10:53	0° \mathfrak{M}			4239 Aug 26 16:57	0° \mathfrak{L}	
retrograde	4238 Oct 07 06:02	6° \mathfrak{M} 32'22		evening max el	4239 Sep 05 23:37	11° \mathfrak{L} 58'42	27°18'07
evening set	4238 Oct 14 09:07	3° \mathfrak{M} 54'12		retrograde	4239 Sep 19 19:26	19° \mathfrak{L} 13'13	
min. Earth dist.	4238 Oct 18 01:52	0° \mathfrak{M} 38'02	0.63837 AU	evening set	4239 Sep 26 23:20	16° \mathfrak{L} 49'45	
	4238 Oct 18 16:56	30° \mathfrak{R} \mathfrak{L}		min. Earth dist.	4239 Sep 30 14:01	14° \mathfrak{L} 00'13	0.61992 AU
inferior conj	4238 Oct 20 14:51	28° \mathfrak{L} 01'23	-2°54'15	inferior conj	4239 Oct 03 13:53	11° \mathfrak{L} 16'02	-3°53'01
minimum elong	4238 Oct 20 19:45	27° \mathfrak{L} 48'46	2°52'30	minimum elong	4239 Oct 03 19:51	11° \mathfrak{L} 02'20	3°51'21
morning rise	4238 Oct 27 07:45	22° \mathfrak{L} 41'20		morning rise	4239 Oct 10 18:10	6° \mathfrak{L} 15'01	
direct	4238 Oct 29 19:24	22° \mathfrak{L} 10'50		direct	4239 Oct 13 02:43	5° \mathfrak{L} 50'58	
asc. node	4238 Oct 29 15:13	22° \mathfrak{L} 10'59		asc. node	4239 Oct 16 12:15	6° \mathfrak{L} 42'43	
morning max el	4238 Nov 05 08:28	25° \mathfrak{L} 35'52	17°52'00	morning max el	4239 Oct 20 00:11	9° \mathfrak{L} 20'22	17°52'46
	4238 Nov 09 01:09	0° \mathfrak{M}			4239 Nov 02 13:30	0° \mathfrak{M}	
morning set	4238 Nov 22 01:30	21° \mathfrak{M} 10'19		morning set	4239 Nov 04 21:17	4° \mathfrak{M} 11'24	
	4238 Nov 27 05:24	0° \mathfrak{X}					
superior conj	4238 Dec 04 16:37	12° \mathfrak{X} 25'50	0°05'47	superior conj	4239 Nov 15 17:12	23° \mathfrak{M} 22'23	0°45'45
minimum elong	4238 Dec 04 17:15	12° \mathfrak{X} 28'25	0°05'41	minimum elong	4239 Nov 15 20:56	23° \mathfrak{M} 38'23	0°45'15
behind sun begin	4238 Dec 04 07:58	11° \mathfrak{X} 50'27			4239 Nov 19 15:08	0° \mathfrak{X}	
behind sun end	4238 Dec 05 02:31	13° \mathfrak{X} 06'18		desc. node	4239 Nov 22 09:33	4° \mathfrak{X} 34'40	
desc. node	4238 Dec 05 12:32	13° \mathfrak{X} 47'05		max. Earth dist.	4239 Nov 23 00:09	5° \mathfrak{X} 34'26	1.43021 AU
max. Earth dist.	4238 Dec 10 09:56	21° \mathfrak{X} 39'26	1.44410 AU	evening rise	4239 Nov 30 01:49	16° \mathfrak{X} 52'01	
	4238 Dec 15 16:59	0° \mathfrak{Z}			4239 Dec 08 15:49	0° \mathfrak{Z}	
evening rise	4238 Dec 20 12:44	7° \mathfrak{Z} 28'19		evening max el	4239 Dec 31 15:12	0° \mathfrak{Z} 53'06	21°46'29
	4239 Jan 04 12:27	0° \mathfrak{Z}		retrograde	4240 Jan 09 18:42	6° \mathfrak{Z} 19'24	
evening max el	4239 Jan 17 18:38	17° \mathfrak{Z} 19'14	20°34'24	asc. node	4240 Jan 12 11:29	5° \mathfrak{Z} 40'10	
retrograde	4239 Jan 25 21:25	22° \mathfrak{Z} 06'13		evening set	4240 Jan 14 03:09	4° \mathfrak{Z} 35'39	
asc. node	4239 Jan 25 14:27	22° \mathfrak{Z} 05'45			4240 Jan 18 05:37	30° \mathfrak{R} \mathfrak{Z}	
evening set	4239 Jan 29 19:26	20° \mathfrak{Z} 37'49		inferior conj	4240 Jan 19 11:23	28° \mathfrak{Z} 17'36	2°11'21
inferior conj	4239 Feb 04 04:12	14° \mathfrak{Z} 29'13	2°47'38	minimum elong	4240 Jan 19 09:01	28° \mathfrak{Z} 25'50	2°10'35
minimum elong	4239 Feb 04 01:45	14° \mathfrak{Z} 37'34	2°47'00	min. Earth dist.	4240 Jan 19 14:00	28° \mathfrak{Z} 08'31	0.67948 AU
min. Earth dist.	4239 Feb 04 18:51	13° \mathfrak{Z} 39'05	0.67504 AU	morning rise	4240 Jan 24 14:42	22° \mathfrak{Z} 05'50	
morning rise	4239 Feb 09 07:53	8° \mathfrak{Z} 15'29		direct	4240 Jan 29 13:41	19° \mathfrak{Z} 58'11	
direct	4239 Feb 14 21:34	5° \mathfrak{Z} 46'58		morning max el	4240 Feb 08 12:01	25° \mathfrak{Z} 51'06	22°50'21
morning max el	4239 Feb 26 02:22	12° \mathfrak{Z} 28'30	24°19'36		4240 Feb 12 06:43	0° \mathfrak{Z}	
desc. node	4239 Mar 03 11:46	18° \mathfrak{Z} 31'00		desc. node	4240 Feb 18 08:47	7° \mathfrak{Z} 41'40	
	4239 Mar 12 04:46	0° \mathfrak{X}			4240 Mar 04 17:48	0° \mathfrak{X}	
	4239 Mar 31 11:59	0° \mathfrak{Y}		morning set	4240 Mar 13 20:37	14° \mathfrak{X} 34'13	
morning set	4239 Apr 02 22:46	4° \mathfrak{Y} 12'56		max. Earth dist.	4240 Mar 18 10:11	22° \mathfrak{X} 15'28	1.39999 AU
max. Earth dist.	4239 Apr 06 15:08	10° \mathfrak{Y} 44'34	1.37813 AU		4240 Mar 22 20:36	0° \mathfrak{Y}	
superior conj	4239 Apr 13 14:26	23° \mathfrak{Y} 44'20	-1°29'24	superior conj	4240 Mar 26 04:34	6° \mathfrak{Y} 00'08	-1°52'17
minimum elong	4239 Apr 13 19:01	24° \mathfrak{Y} 06'18	1°28'46	minimum elong	4240 Mar 26 09:10	6° \mathfrak{Y} 21'09	1°51'54
	4239 Apr 16 19:44	0° \mathfrak{Z}		evening rise	4240 Apr 04 23:28	24° \mathfrak{Y} 23'08	
evening rise	4239 Apr 22 08:33	10° \mathfrak{Z} 57'23			4240 Apr 07 22:39	0° \mathfrak{Z}	
asc. node	4239 Apr 23 13:44	13° \mathfrak{Z} 21'19		asc. node	4240 Apr 09 10:45	2° \mathfrak{Z} 47'47	
	4239 May 02 18:54	0° Π		evening max el	4240 Apr 21 03:27	20° \mathfrak{Z} 20'48	18°27'56
evening max el	4239 May 08 23:27	7° Π 54'08	19°06'47	retrograde	4240 Apr 28 16:26	24° \mathfrak{Z} 04'19	

evening set	4240 May 01 00:01	23°♄44'18		evening set	4241 Apr 13 21:49	6°♄10'47	
inferior conj	4240 May 08 11:16	19°♄12'47	2°07'11	inferior conj	4241 Apr 20 15:57	1°♄18'21	3°02'01
minimum elong	4240 May 08 14:52	19°♄05'33	2°06'08	minimum elong	4241 Apr 20 18:57	1°♄11'20	3°01'26
min. Earth dist.	4240 May 11 21:36	16°♄29'16	0.58310 AU		4241 Apr 22 01:23	30°♄	
morning rise	4240 May 16 02:35	13°♄45'59		min. Earth dist.	4241 Apr 23 22:57	28°♄15'52	0.60480 AU
desc. node	4240 May 16 07:58	13°♄39'15		morning rise	4241 Apr 27 13:53	25°♄28'31	
direct	4240 May 22 02:12	12°♄13'11		desc. node	4241 May 03 05:00	23°♄24'05	
morning max el	4240 Jun 05 11:32	19°♄55'05	26°55'39	direct	4241 May 04 04:51	23°♄21'17	
	4240 Jun 14 02:13	0°♄			4241 May 17 04:19	0°♄	
	4240 Jul 01 23:33	0°♄		morning max el	4241 May 18 11:47	1°♄15'22	27°42'03
morning set	4240 Jul 05 10:56	7°♄07'31			4241 Jun 08 07:11	0°♄	
asc. node	4240 Jul 06 10:02	9°♄09'42		morning set	4241 Jun 19 17:09	21°♄40'32	
				asc. node	4241 Jun 23 07:04	29°♄14'45	
					4241 Jun 23 15:27	0°♄	
superior conj	4240 Jul 12 11:38	22°♄23'18	0°59'50	max. Earth dist.	4241 Jun 25 21:58	4°♄56'57	1.32074 AU
minimum elong	4240 Jul 12 09:26	22°♄11'14	0°59'27				
max. Earth dist.	4240 Jul 12 10:46	22°♄18'34	1.32031 AU				
	4240 Jul 15 22:40	0°♄		superior conj	4241 Jun 26 22:54	7°♄13'49	0°37'34
evening rise	4240 Jul 19 08:08	7°♄17'43		minimum elong	4241 Jun 26 21:18	7°♄05'03	0°37'14
	4240 Jul 31 04:53	0°♄		evening rise	4241 Jul 03 18:35	22°♄06'25	
desc. node	4240 Aug 12 07:15	17°♄42'12			4241 Jul 07 13:59	0°♄	
evening max el	4240 Aug 18 01:58	23°♄59'10	26°37'11		4241 Jul 26 01:43	0°♄	
	4240 Aug 26 16:30	0°♄		desc. node	4241 Jul 30 04:15	4°♄31'04	
retrograde	4240 Sep 01 00:44	1°♄09'15		evening max el	4241 Jul 30 20:55	5°♄11'39	25°25'37
	4240 Sep 06 05:53	30°♄		retrograde	4241 Aug 13 19:58	12°♄16'42	
evening set	4240 Sep 07 19:17	29°♄13'22		evening set	4241 Aug 19 16:19	10°♄57'26	
min. Earth dist.	4240 Sep 11 15:47	26°♄37'26	0.59954 AU	min. Earth dist.	4241 Aug 24 08:46	8°♄17'33	0.57923 AU
inferior conj	4240 Sep 14 21:49	24°♄01'29	-4°42'01	inferior conj	4241 Aug 27 11:20	6°♄08'27	-5°10'10
minimum elong	4240 Sep 15 03:11	23°♄50'43	4°41'04	minimum elong	4241 Aug 27 13:12	6°♄05'12	5°10'04
morning rise	4240 Sep 22 13:08	19°♄22'10		morning rise	4241 Sep 04 12:22	1°♄52'02	
direct	4240 Sep 24 21:52	19°♄01'37		direct	4241 Sep 07 00:41	1°♄32'44	
asc. node	4240 Oct 02 09:17	22°♄38'20		morning max el	4241 Sep 15 15:31	5°♄37'53	18°53'41
morning max el	4240 Oct 02 11:38	22°♄44'00	18°12'50	asc. node	4241 Sep 19 06:19	9°♄43'27	
	4240 Oct 08 05:11	0°♄			4241 Oct 01 02:54	0°♄	
morning set	4240 Oct 18 07:53	17°♄54'22		morning set	4241 Oct 02 04:49	2°♄06'52	
	4240 Oct 24 18:22	0°♄					
				superior conj	4241 Oct 10 15:44	18°♄37'10	1°33'36
superior conj	4240 Oct 27 18:37	5°♄30'51	1°15'04	minimum elong	4241 Oct 10 18:26	18°♄50'00	1°33'23
minimum elong	4240 Oct 27 22:34	5°♄48'46	1°14'38		4241 Oct 16 19:05	0°♄	
max. Earth dist.	4240 Nov 04 09:26	18°♄52'22	1.41175 AU	max. Earth dist.	4241 Oct 17 14:54	1°♄28'41	1.39103 AU
desc. node	4240 Nov 08 06:34	25°♄20'47		evening rise	4241 Oct 21 12:20	8°♄16'45	
evening rise	4240 Nov 09 07:36	27°♄03'03		desc. node	4241 Oct 26 03:35	16°♄01'46	
	4240 Nov 11 03:25	0°♄			4241 Nov 04 02:08	0°♄	
	4240 Dec 01 08:44	0°♄		evening max el	4241 Nov 25 20:36	28°♄10'02	24°24'41
evening max el	4240 Dec 13 07:17	14°♄29'47	23°05'15		4241 Nov 27 19:21	0°♄	
retrograde	4240 Dec 23 13:27	20°♄34'26		retrograde	4241 Dec 07 04:31	4°♄47'38	
evening set	4240 Dec 28 10:02	18°♄34'41		evening set	4241 Dec 12 14:31	2°♄32'04	
asc. node	4240 Dec 29 08:30	17°♄43'18			4241 Dec 15 01:45	30°♄	
inferior conj	4241 Jan 02 19:16	12°♄10'51	1°27'41	asc. node	4241 Dec 16 05:33	28°♄34'00	
minimum elong	4241 Jan 02 17:25	12°♄17'15	1°26'59	min. Earth dist.	4241 Dec 17 06:41	27°♄11'31	0.67727 AU
min. Earth dist.	4241 Jan 02 10:43	12°♄40'21	0.68018 AU	inferior conj	4241 Dec 18 02:04	26°♄06'35	0°37'40
morning rise	4241 Jan 08 00:42	6°♄02'55		minimum elong	4241 Dec 18 01:10	26°♄09'35	0°37'18
direct	4241 Jan 12 09:17	4°♄18'10		morning rise	4241 Dec 23 11:53	20°♄04'29	
morning max el	4241 Jan 21 02:20	9°♄22'13	21°25'28	direct	4241 Dec 27 07:07	18°♄41'51	
desc. node	4241 Feb 04 05:50	27°♄24'36		morning max el	4242 Jan 04 00:14	23°♄05'15	20°11'17
	4241 Feb 06 01:00	0°♄			4242 Jan 09 21:08	0°♄	
morning set	4241 Feb 21 13:41	23°♄34'16		desc. node	4242 Jan 22 02:52	17°♄30'54	
	4241 Feb 25 14:06	0°♄			4242 Jan 30 07:55	0°♄	
max. Earth dist.	4241 Feb 28 10:51	4°♄40'43	1.42083 AU	morning set	4242 Jan 31 11:19	1°♄45'41	
				max. Earth dist.	4242 Feb 10 19:40	18°♄01'25	1.43781 AU
superior conj	4241 Mar 07 22:04	17°♄16'44	-2°06'06	superior conj	4242 Feb 16 14:32	27°♄24'43	-2°05'27
minimum elong	4241 Mar 08 00:17	17°♄26'17	2°06'03	minimum elong	4242 Feb 16 11:22	27°♄11'42	2°05'22
	4241 Mar 15 02:48	0°♄			4242 Feb 18 04:11	0°♄	
evening rise	4241 Mar 19 01:22	7°♄08'48		evening rise	4242 Mar 01 09:58	19°♄05'44	
asc. node	4241 Mar 27 07:47	21°♄50'32			4242 Mar 07 17:41	0°♄	
	4241 Apr 01 17:24	0°♄		asc. node	4242 Mar 14 04:49	10°♄21'46	
evening max el	4241 Apr 04 13:23	3°♄14'58	18°08'59	evening max el	4242 Mar 19 01:56	16°♄27'24	18°09'20
retrograde	4241 Apr 11 07:35	6°♄40'34					

retrograde	4242 Mar 25 12:30	19° Υ 50'26			4243 Mar 02 17:42	0° Υ	
evening set	4242 Mar 28 08:40	19° Υ 09'29		retrograde	4243 Mar 09 02:33	3° Υ 24'53	
inferior conj	4242 Apr 03 13:40	13° Υ 56'58	3°29'27	evening set	4243 Mar 12 04:40	2° Υ 31'55	
minimum elong	4242 Apr 03 15:02	13° Υ 53'20	3°29'20		4243 Mar 15 08:05	30° \Re \mathfrak{H}	
min. Earth dist.	4242 Apr 06 08:50	10° Υ 59'54	0.62617 AU	inferior conj	4243 Mar 18 00:21	27° \mathfrak{H} 01'06	3°35'48
morning rise	4242 Apr 09 20:08	7° Υ 53'21		minimum elong	4243 Mar 18 00:04	27° \mathfrak{H} 01'57	3°35'47
direct	4242 Apr 16 17:07	5° Υ 19'03		min. Earth dist.	4243 Mar 20 04:24	24° \mathfrak{H} 28'29	0.64496 AU
desc. node	4242 Apr 20 02:04	5° Υ 52'26		morning rise	4243 Mar 23 18:47	20° \mathfrak{H} 50'21	
morning max el	4242 Apr 30 17:54	13° Υ 17'57	27°50'51	direct	4243 Mar 30 13:31	18° \mathfrak{H} 01'39	
	4242 May 14 02:52	0° \mathfrak{B}		desc. node	4243 Apr 06 23:06	20° \mathfrak{H} 41'59	
	4242 May 31 18:24	0° Π		morning max el	4243 Apr 13 03:25	25° \mathfrak{H} 56'30	27°23'33
morning set	4242 Jun 03 17:44	5° Π 53'27			4243 Apr 16 21:22	0° Υ	
max. Earth dist.	4242 Jun 09 05:14	17° Π 19'33	1.32536 AU		4243 May 07 15:50	0° \mathfrak{B}	
asc. node	4242 Jun 10 04:05	19° Π 22'28		morning set	4243 May 18 10:02	19° \mathfrak{B} 38'43	
				max. Earth dist.	4243 May 23 04:34	29° \mathfrak{B} 15'11	1.33445 AU
superior conj	4242 Jun 11 07:52	21° Π 52'43	0°12'06		4243 May 23 13:14	0° Π	
minimum elong	4242 Jun 11 07:17	21° Π 49'36	0°11'57				
behind sun begin	4242 Jun 11 03:49	21° Π 30'49		superior conj	4243 May 26 12:38	6° Π 14'41	-0°15'49
behind sun end	4242 Jun 11 10:45	22° Π 08'25		minimum elong	4243 May 26 13:26	6° Π 18'59	0°15'40
	4242 Jun 15 01:21	0° \mathfrak{S}		behind sun begin	4243 May 26 12:21	6° Π 13'12	
evening rise	4242 Jun 18 06:22	6° \mathfrak{S} 54'53		behind sun end	4243 May 26 14:32	6° Π 24'46	
	4242 Jun 30 09:03	0° Ω		asc. node	4243 May 28 01:09	9° Π 29'09	
evening max el	4242 Jul 12 10:08	15° Ω 44'46	23°53'36	evening rise	4243 Jun 02 17:39	21° Π 37'29	
desc. node	4242 Jul 17 01:17	19° Ω 32'41			4243 Jun 06 19:34	0° \mathfrak{S}	
retrograde	4242 Jul 26 03:28	22° Ω 38'52		evening max el	4243 Jun 24 00:40	26° \mathfrak{S} 08'16	22°16'39
evening set	4242 Jul 30 13:45	21° Ω 55'36			4243 Jun 28 20:05	0° Ω	
min. Earth dist.	4242 Aug 05 20:24	18° Ω 54'13	0.56178 AU	desc. node	4243 Jul 03 22:19	2° Ω 12'18	
inferior conj	4242 Aug 08 04:31	17° Ω 28'49	-5°02'05	retrograde	4243 Jul 06 23:08	2° Ω 33'36	
minimum elong	4242 Aug 08 00:21	17° Ω 35'12	5°01'41	evening set	4243 Jul 09 22:14	2° Ω 14'09	
morning rise	4242 Aug 16 13:31	13° Ω 31'49			4243 Jul 15 18:13	30° \Re \mathfrak{S}	
direct	4242 Aug 19 07:57	13° Ω 12'16		min. Earth dist.	4243 Jul 18 06:53	28° \mathfrak{S} 37'30	0.55067 AU
morning max el	4242 Aug 29 08:55	17° Ω 52'11	19°56'23	inferior conj	4243 Jul 19 04:28	28° \mathfrak{S} 07'02	-4°04'34
asc. node	4242 Sep 06 03:22	27° Ω 42'37		minimum elong	4243 Jul 18 20:02	28° \mathfrak{S} 18'58	4°02'31
	4242 Sep 07 13:10	0° \mathfrak{P}		morning rise	4243 Jul 27 19:43	24° \mathfrak{S} 16'40	
morning set	4242 Sep 16 08:45	16° \mathfrak{P} 39'10		direct	4243 Jul 30 22:21	23° \mathfrak{S} 54'56	
	4242 Sep 22 22:10	0° \mathfrak{U}		morning max el	4243 Aug 11 14:27	29° \mathfrak{S} 21'25	21°19'49
superior conj	4242 Sep 24 03:19	2° \mathfrak{U} 26'08	1°42'38		4243 Aug 12 06:39	0° Ω	
minimum elong	4242 Sep 24 04:21	2° \mathfrak{U} 31'16	1°42'36	asc. node	4243 Aug 24 00:25	16° Ω 23'11	
max. Earth dist.	4242 Sep 29 20:09	13° \mathfrak{U} 31'12	1.37050 AU	morning set	4243 Aug 31 00:54	0° \mathfrak{P}	
evening rise	4242 Oct 03 15:11	20° \mathfrak{U} 31'19			4243 Aug 31 17:11	1° \mathfrak{P} 24'09	
	4242 Oct 09 01:22	0° \mathfrak{M}		superior conj	4243 Sep 08 01:04	16° \mathfrak{P} 45'03	1°43'42
desc. node	4242 Oct 13 00:36	6° \mathfrak{M} 33'15		minimum elong	4243 Sep 08 00:36	16° \mathfrak{P} 42'38	1°43'42
	4242 Oct 29 02:09	0° \mathfrak{X}		max. Earth dist.	4243 Sep 12 06:37	25° \mathfrak{P} 22'26	1.35240 AU
evening max el	4242 Nov 08 08:57	11° \mathfrak{X} 52'32	25°37'53		4243 Sep 14 15:01	0° \mathfrak{U}	
retrograde	4242 Nov 20 15:11	18° \mathfrak{X} 54'11		evening rise	4243 Sep 16 12:19	3° \mathfrak{U} 37'13	
evening set	4242 Nov 26 14:58	16° \mathfrak{X} 24'50		desc. node	4243 Sep 29 21:37	26° \mathfrak{U} 49'47	
min. Earth dist.	4242 Nov 30 23:36	11° \mathfrak{X} 39'03	0.67083 AU		4243 Oct 01 22:34	0° \mathfrak{M}	
inferior conj	4242 Dec 02 06:00	10° \mathfrak{X} 02'04	-0°17'39	evening max el	4243 Oct 21 21:26	25° \mathfrak{M} 32'29	26°37'25
minimum elong	4242 Dec 02 06:27	10° \mathfrak{X} 00'37	0°17'26		4243 Oct 27 06:42	0° \mathfrak{X}	
asc. node	4242 Dec 03 02:36	8° \mathfrak{X} 56'48		retrograde	4243 Nov 03 20:42	2° \mathfrak{X} 47'22	
morning rise	4242 Dec 07 22:17	4° \mathfrak{X} 08'05		evening set	4243 Nov 10 09:24	0° \mathfrak{X} 08'39	
direct	4242 Dec 11 05:49	3° \mathfrak{X} 04'56			4243 Nov 10 13:34	30° \Re \mathfrak{M}	
morning max el	4242 Dec 18 06:02	6° \mathfrak{X} 59'04	19°11'16	min. Earth dist.	4243 Nov 14 11:10	25° \mathfrak{M} 58'23	0.66092 AU
greatest brilliancy	4243 Jan 01 03:39	25° \mathfrak{X} 48'56	-0.7m	inferior conj	4243 Nov 16 05:04	23° \mathfrak{M} 53'31	-1°17'03
	4243 Jan 03 21:15	0° \mathfrak{Z}		minimum elong	4243 Nov 16 07:12	23° \mathfrak{M} 47'10	1°16'08
desc. node	4243 Jan 08 23:53	7° \mathfrak{Z} 54'04		asc. node	4243 Nov 19 23:40	19° \mathfrak{M} 48'07	
morning set	4243 Jan 10 13:13	10° \mathfrak{Z} 18'58		morning rise	4243 Nov 22 05:43	18° \mathfrak{M} 10'07	
	4243 Jan 23 03:50	0° \approx		direct	4243 Nov 25 03:35	17° \mathfrak{M} 22'43	
max. Earth dist.	4243 Jan 24 10:42	2° \approx 01'30	1.44882 AU	morning max el	4243 Dec 01 18:06	20° \mathfrak{M} 58'31	18°27'06
					4243 Dec 08 19:44	0° \mathfrak{X}	
superior conj	4243 Jan 27 06:27	6° \approx 29'10	-1°45'50	morning set	4243 Dec 21 15:50	20° \mathfrak{X} 09'31	
minimum elong	4243 Jan 26 21:54	5° \approx 55'17	1°45'08	desc. node	4243 Dec 26 20:54	28° \mathfrak{X} 28'39	
evening rise	4243 Feb 10 21:10	0° \mathfrak{H} 07'09			4243 Dec 27 19:54	0° \mathfrak{Z}	
	4243 Feb 10 19:26	0° \mathfrak{H}					
asc. node	4243 Mar 01 01:53	28° \mathfrak{H} 12'05		superior conj	4244 Jan 06 09:09	15° \mathfrak{Z} 03'49	-1°08'00
evening max el	4243 Mar 02 14:16	29° \mathfrak{H} 51'25	18°28'22	minimum elong	4244 Jan 06 01:00	14° \mathfrak{Z} 31'50	1°07'01

max. Earth dist.	4244 Jan 07 05:02	16°  21'48	1.45278 AU	evening rise	4245 Jan 01 01:38	19°  33'43	
	4244 Jan 15 21:44	0° 			4245 Jan 07 20:59	0° 	
evening rise	4244 Jan 22 08:59	10°  11'23		greatest brilliancy	4245 Jan 15 06:53	11°  09'26	-0.6m
greatest brilliancy	4244 Feb 01 05:19	25°  42'05	-0.8m	evening max el	4245 Jan 27 05:10	26°  53'03	19°57'51
	4244 Feb 04 00:21	0° 			4245 Jan 30 21:40	0° 	
evening max el	4244 Feb 13 23:56	13°  20'50	19°05'08	asc. node	4245 Feb 01 19:59	0°  57'22	
asc. node	4244 Feb 15 22:57	15°  08'34		retrograde	4245 Feb 03 19:39	1°  18'37	
retrograde	4244 Feb 20 21:54	17°  15'49			4245 Feb 07 11:44	30° 	
evening set	4244 Feb 24 06:42	16°  09'56		evening set	4245 Feb 07 12:27	29°  58'44	
inferior conj	4244 Feb 29 20:14	10°  22'44	3°26'18	inferior conj	4245 Feb 12 22:22	23°  57'21	3°04'37
minimum elong	4244 Feb 29 18:42	10°  27'37	3°26'07	minimum elong	4245 Feb 12 20:06	24°  04'55	3°04'09
min. Earth dist.	4244 Mar 02 08:52	8°  26'27	0.65998 AU	min. Earth dist.	4245 Feb 13 20:39	22°  42'41	0.67083 AU
morning rise	4244 Mar 06 06:20	4°  09'07		morning rise	4245 Feb 18 03:32	17°  43'18	
direct	4244 Mar 12 16:41	1°  19'38		direct	4245 Feb 24 01:30	15°  04'39	
desc. node	4244 Mar 23 20:08	7°  17'20		morning max el	4245 Mar 07 22:10	22°  09'52	25°09'15
morning max el	4244 Mar 25 13:20	8°  57'21	26°26'39	desc. node	4245 Mar 10 17:10	25°  09'12	
	4244 Apr 11 01:27	0° 			4245 Mar 14 18:46	0° 	
	4244 Apr 29 02:59	0° 			4245 Apr 04 08:19	0° 	
morning set	4244 Apr 30 14:31	2°  45'34		morning set	4245 Apr 13 02:25	15°  00'24	
max. Earth dist.	4244 May 04 16:42	10°  38'00	1.34816 AU	max. Earth dist.	4245 Apr 16 17:55	21°  04'19	1.36627 AU
					4245 Apr 21 02:55	0° 	
superior conj	4244 May 09 10:53	20°  12'54	-0°45'02				
minimum elong	4244 May 09 13:18	20°  25'19	0°44'33	superior conj	4245 Apr 22 23:44	3°  39'24	-1°13'53
asc. node	4244 May 13 22:13	29°  30'39		minimum elong	4245 Apr 23 03:40	3°  58'52	1°13'14
	4244 May 14 03:50	0° 		asc. node	4245 Apr 30 19:15	19°  22'32	
evening rise	4244 May 17 02:27	6°  07'52		evening rise	4245 May 01 06:32	20°  19'27	
	4244 May 30 06:33	0° 			4245 May 06 04:42	0° 	
evening max el	4244 Jun 05 00:21	6°  55'11	20°48'55	evening max el	4245 May 18 12:17	18°  21'43	19°38'20
retrograde	4244 Jun 16 11:50	12°  32'17		retrograde	4245 May 28 05:47	23°  05'57	
evening set	4244 Jun 18 14:16	12°  21'44		evening set	4245 May 30 04:44	22°  15'19	
desc. node	4244 Jun 19 19:20	12°  06'32		desc. node	4245 Jun 06 16:21	19°  23'16	
inferior conj	4244 Jun 27 21:44	8°  24'34	-2°21'57	inferior conj	4245 Jun 07 22:49	18°  21'55	-0°22'34
minimum elong	4244 Jun 27 15:12	8°  33'53	2°19'40	minimum elong	4245 Jun 07 21:48	18°  23'30	0°22'11
min. Earth dist.	4244 Jun 28 18:31	7°  54'59	0.54855 AU	min. Earth dist.	4245 Jun 10 07:53	17°  22'33	0.55613 AU
morning rise	4244 Jul 06 15:46	4°  21'19		morning rise	4245 Jun 16 12:25	14°  21'56	
direct	4244 Jul 10 07:38	3°  52'26		direct	4245 Jun 21 00:26	13°  23'46	
morning max el	4244 Jul 23 09:41	10°  20'23	22°58'39	morning max el	4245 Jul 04 23:40	20°  23'18	24°41'50
	4244 Aug 06 21:08	0° 			4245 Jul 13 02:07	0° 	
asc. node	4244 Aug 09 21:27	5°  03'51		asc. node	4245 Jul 27 18:29	25°  09'46	
morning set	4244 Aug 15 04:10	16°  01'30			4245 Jul 30 02:38	0° 	
	4244 Aug 21 14:02	0° 		morning set	4245 Jul 30 15:56	1°  10'11	
superior conj	4244 Aug 22 05:45	1°  02'40	1°38'08	superior conj	4245 Aug 06 14:45	16°  01'28	1°26'57
minimum elong	4244 Aug 22 04:11	1°  15'47	1°38'02	minimum elong	4245 Aug 06 12:34	16°  02'33	1°26'42
max. Earth dist.	4244 Aug 25 01:57	7°  25'02	1.33806 AU	max. Earth dist.	4245 Aug 08 05:46	19°  04'29	1.32791 AU
evening rise	4244 Aug 29 23:23	17°  23'12			4245 Aug 13 01:34	0° 	
	4244 Sep 05 16:00	0° 		evening rise	4245 Aug 13 20:32	1°  07'22	
desc. node	4244 Sep 15 18:38	16°  04'40			4245 Aug 29 13:42	0° 	
	4244 Sep 25 07:13	0° 		desc. node	4245 Sep 02 15:39	6°  07'49	
evening max el	4244 Oct 03 09:54	9°  01'34	27°15'51	evening max el	4245 Sep 15 20:29	22°  05'59	27°26'31
retrograde	4244 Oct 16 20:25	16°  19'48		retrograde	4245 Sep 29 13:31	29°  01'39	
evening set	4244 Oct 23 19:25	13°  39'00		evening set	4245 Oct 06 17:55	26°  04'33	
min. Earth dist.	4244 Oct 27 15:08	10°  03'40	0.64754 AU	min. Earth dist.	4245 Oct 10 09:21	23°  04'40	0.63086 AU
inferior conj	4244 Oct 29 21:02	7°  36'33	-2°18'42	inferior conj	4245 Oct 13 03:07	21°  03'34	-3°19'51
minimum elong	4244 Oct 30 00:58	7°  25'47	2°17'11	minimum elong	4245 Oct 13 08:36	20°  05'05	3°18'04
morning rise	4244 Nov 05 07:38	2°  06'46		morning rise	4245 Oct 20 00:47	15°  05'52	
asc. node	4244 Nov 05 20:41	1°  15'33		direct	4245 Oct 22 10:50	15°  02'23	
direct	4244 Nov 07 22:16	1°  31'08		asc. node	4245 Oct 23 17:42	15°  03'21	
morning max el	4244 Nov 14 09:54	4°  15'50	17°59'46	morning max el	4245 Oct 29 02:28	18°  04'17	17°50'02
	4244 Dec 01 02:53	0° 			4245 Nov 06 06:06	0° 	
morning set	4244 Dec 02 00:00	1°  28'22		morning set	4245 Nov 14 08:39	13°  05'39	
desc. node	4244 Dec 12 17:56	19°  11'15			4245 Nov 23 15:08	0° 	
superior conj	4244 Dec 15 19:12	24°  05'51	-0°20'56	superior conj	4245 Nov 26 04:12	4°  16'20	0°23'54
minimum elong	4244 Dec 15 16:39	23°  05'53	0°20'34	minimum elong	4245 Nov 26 06:34	4°  26'10	0°23'35
	4244 Dec 19 12:18	0° 		desc. node	4245 Nov 29 14:57	9°  07'43	
max. Earth dist.	4244 Dec 20 00:09	0°  34'48	1.44937 AU	max. Earth dist.	4245 Dec 02 17:23	14°  05'18	1.43895 AU

evening rise	4245 Dec 11 11:19	28°  45'26		minimum elong	4246 Nov 07 19:56	16°  02'33	0°59'02
	4245 Dec 12 06:39	0° 		max. Earth dist.	4246 Nov 15 05:57	28°  41'03	1.42280 AU
	4246 Jan 01 16:19	0° 		desc. node	4246 Nov 16 11:57	0°  44'43	
evening max el	4246 Jan 10 04:58	10°  26'27	21°03'54		4246 Nov 16 01:05	0° 	
retrograde	4246 Jan 18 17:36	15°  29'18		evening rise	4246 Nov 21 06:04	8°  25'13	
asc. node	4246 Jan 19 16:59	15°  24'08			4246 Dec 05 11:04	0° 	
evening set	4246 Jan 22 19:57	13°  54'20		evening max el	4246 Dec 23 23:23	24°  00'48	22°19'28
inferior conj	4246 Jan 28 04:18	7°  41'25	2°33'12	retrograde	4247 Jan 02 14:01	29°  343'50	
minimum elong	4246 Jan 28 01:50	7°  49'56	2°32'30	asc. node	4247 Jan 06 14:00	28°  319'07	
min. Earth dist.	4246 Jan 28 13:40	7°  09'08	0.67749 AU	evening set	4247 Jan 07 03:32	27°  353'02	
morning rise	4246 Feb 02 07:32	1°  28'35		inferior conj	4247 Jan 12 12:00	21°  31'55	1°53'40
	4246 Feb 04 08:53	30°  R 		minimum elong	4247 Jan 12 09:48	21°  39'34	1°52'53
direct	4246 Feb 07 15:05	29°  308'32		min. Earth dist.	4247 Jan 12 09:41	21°  39'56	0.68021 AU
	4246 Feb 11 03:50	0° 		morning rise	4247 Jan 17 15:56	15°  321'43	
morning max el	4246 Feb 18 06:49	5°  29'12	23°41'37	direct	4247 Jan 22 08:38	13°  324'01	
desc. node	4246 Feb 25 14:12	13°  55'49		morning max el	4247 Jan 31 18:11	18°  355'31	22°13'22
	4246 Mar 09 04:51	0° 			4247 Feb 09 23:56	0° 	
morning set	4246 Mar 25 15:54	26°  X07'32		desc. node	4247 Feb 12 11:13	3°  21'18	
	4246 Mar 27 21:56	0° 			4247 Mar 02 09:02	0° 	
max. Earth dist.	4246 Mar 29 13:36	2°  Y53'38	1.38742 AU	morning set	4247 Mar 06 01:28	5°  X53'42	
				max. Earth dist.	4247 Mar 11 10:52	14°  X47'50	1.40915 AU
superior conj	4246 Apr 05 23:29	16°  Y24'35	-1°39'55	superior conj	4247 Mar 19 05:27	28°  X16'25	-1°59'33
minimum elong	4246 Apr 06 04:16	16°  Y47'09	1°39'21	minimum elong	4247 Mar 19 09:25	28°  X34'05	1°59'19
	4246 Apr 13 01:02	0° 			4247 Mar 20 04:36	0° 	
evening rise	4246 Apr 15 03:14	4°  804'52		evening rise	4247 Mar 29 13:10	17°  Y15'03	
asc. node	4246 Apr 17 16:17	9°  800'08		asc. node	4247 Apr 04 13:18	28°  Y17'26	
	4246 Apr 30 23:54	0° 			4247 Apr 05 12:39	0° 	
evening max el	4246 May 01 11:16	0°  II28'27	18°47'44	evening max el	4247 Apr 14 18:09	13°  807'30	18°17'24
retrograde	4246 May 09 16:21	4°  II29'56		retrograde	4247 Apr 21 21:55	16°  841'50	
evening set	4246 May 11 20:06	4°  II14'20		evening set	4247 Apr 24 08:15	16°  818'01	
inferior conj	4246 May 19 18:32	29°  853'57	1°21'10	inferior conj	4247 May 01 11:45	11°  837'25	2°34'08
minimum elong	4246 May 19 21:23	29°  848'43	1°20'13	minimum elong	4247 May 01 15:20	11°  829'44	2°33'15
	4246 May 19 15:13	30°  R 		min. Earth dist.	4247 May 04 21:59	8°  842'43	0.59216 AU
min. Earth dist.	4246 May 23 00:19	27°  832'44	0.57169 AU	morning rise	4247 May 08 19:35	5°  859'11	
desc. node	4246 May 24 13:23	26°  830'50		desc. node	4247 May 11 10:26	4°  848'21	
morning rise	4246 May 27 19:27	24°  845'13		direct	4247 May 15 02:34	4°  811'32	
direct	4246 Jun 02 06:40	23°  832'35		morning max el	4247 May 29 11:47	12°  800'01	27°19'51
	4246 Jun 15 12:30	0° 			4247 Jun 12 14:31	0° 	
morning max el	4246 Jun 16 14:59	1°  II02'07	26°13'53	morning set	4247 Jun 29 11:22	0°  841'10	
	4246 Jul 07 00:55	0° 			4247 Jun 29 03:28	0° 	
asc. node	4246 Jul 14 15:31	15°  800'32		asc. node	4247 Jul 01 12:34	5°  801'30	
morning set	4246 Jul 15 02:53	16°  800'22		max. Earth dist.	4247 Jul 06 02:55	15°  803'03	1.31997 AU
	4246 Jul 21 13:25	0° 					
superior conj	4246 Jul 22 02:02	1°  809'32	1°10'58	superior conj	4247 Jul 06 13:48	16°  803'05	0°50'50
minimum elong	4246 Jul 21 23:43	0°  856'44	1°10'36	minimum elong	4247 Jul 06 11:49	15°  852'07	0°50'26
max. Earth dist.	4246 Jul 22 15:20	2°  822'48	1.32193 AU		4247 Jul 12 23:06	0° 	
evening rise	4246 Jul 29 00:45	16°  810'48		evening rise	4247 Jul 13 09:31	0°  855'23	
	4246 Aug 04 23:56	0° 			4247 Jul 29 03:59	0° 	
desc. node	4246 Aug 20 12:39	24°  846'13		desc. node	4247 Aug 07 09:41	12°  821'50	
	4246 Aug 24 18:36	0° 		evening max el	4247 Aug 11 01:26	16°  810'40	26°09'59
evening max el	4246 Aug 29 02:27	4°  832'01	27°04'43	retrograde	4247 Aug 25 00:45	23°  819'38	
retrograde	4246 Sep 11 23:16	11°  844'02		evening set	4247 Aug 31 11:38	21°  838'15	
evening set	4246 Sep 19 00:54	9°  830'41		min. Earth dist.	4247 Sep 04 14:16	19°  803'09	0.59070 AU
min. Earth dist.	4246 Sep 22 16:45	6°  849'07	0.61146 AU	inferior conj	4247 Sep 07 20:34	16°  835'59	-4°57'23
inferior conj	4246 Sep 25 20:08	4°  806'23	-4°15'33	minimum elong	4247 Sep 08 00:51	16°  827'54	4°56'50
minimum elong	4246 Sep 26 02:08	3°  853'22	4°14'06	morning rise	4247 Sep 15 16:17	12°  806'54	
	4246 Oct 01 09:42	30°  R 		direct	4247 Sep 18 02:06	11°  847'11	
morning rise	4246 Oct 03 05:13	29°  814'22		morning max el	4247 Sep 26 01:27	15°  837'44	18°27'41
direct	4246 Oct 05 13:35	28°  852'00		asc. node	4247 Sep 27 11:47	17°  806'46	
	4246 Oct 09 13:43	0° 			4247 Oct 06 02:41	0° 	
asc. node	4246 Oct 10 14:44	0°  839'51		morning set	4247 Oct 12 02:46	11°  814'21	
morning max el	4246 Oct 12 16:43	2°  825'22	17°58'54				
morning set	4246 Oct 28 11:18	27°  817'49		superior conj	4247 Oct 21 02:22	28°  819'50	1°24'11
	4246 Oct 29 22:31	0° 		minimum elong	4247 Oct 21 05:53	28°  836'09	1°23'50
					4247 Oct 22 00:05	0° 	
superior conj	4246 Nov 07 15:50	15°  844'35	0°59'34	max. Earth dist.	4247 Oct 28 13:00	11°  839'53	1.40297 AU

evening rise	4247 Nov 01 21:19	19° \mathbb{M} 01'56		max. Earth dist.	4248 Oct 09 17:19	23° \mathbb{A} 57'47	1.38206 AU
desc. node	4247 Nov 03 08:59	21° \mathbb{M} 29'04		evening rise	4248 Oct 13 11:50	0° \mathbb{M} 42'24	
	4247 Nov 08 16:36	0° \mathbb{A}			4248 Oct 13 02:11	0° \mathbb{M}	
	4247 Nov 29 19:51	0° \mathbb{B}		desc. node	4248 Oct 20 06:00	12° \mathbb{M} 06'24	
evening max el	4247 Dec 06 13:53	7° \mathbb{B} 38'28	23°39'20		4248 Oct 31 23:12	0° \mathbb{A}	
retrograde	4247 Dec 17 07:31	13° \mathbb{B} 58'52		evening max el	4248 Nov 18 02:37	21° \mathbb{A} 19'52	24°57'07
evening set	4247 Dec 22 09:38	11° \mathbb{B} 52'12		retrograde	4248 Nov 29 20:53	28° \mathbb{A} 09'21	
asc. node	4247 Dec 24 11:01	9° \mathbb{B} 48'08		evening set	4248 Dec 05 12:36	25° \mathbb{A} 47'49	
inferior conj	4247 Dec 27 19:40	5° \mathbb{B} 26'51	1°07'13	min. Earth dist.	4248 Dec 10 01:31	20° \mathbb{A} 41'38	0.67490 AU
minimum elong	4247 Dec 27 18:10	5° \mathbb{B} 31'59	1°06'37	asc. node	4248 Dec 10 08:05	20° \mathbb{A} 20'06	
min. Earth dist.	4247 Dec 27 06:27	6° \mathbb{B} 12'01	0.67929 AU	inferior conj	4248 Dec 11 01:29	19° \mathbb{A} 22'47	0°14'49
	4248 Jan 01 08:16	30° \mathbb{R} \mathbb{A}		minimum elong	4248 Dec 11 01:07	19° \mathbb{A} 24'00	0°14'41
morning rise	4248 Jan 02 02:41	29° \mathbb{A} 21'03		transit middle	4248 Dec 11 01:07	19° \mathbb{A} 24'00	0°14'41
direct	4248 Jan 06 05:19	27° \mathbb{A} 46'06		transit begin	4248 Dec 10 23:56	19° \mathbb{A} 27'51	
	4248 Jan 11 15:02	0° \mathbb{B}		transit end	4248 Dec 11 02:17	19° \mathbb{A} 20'09	
morning max el	4248 Jan 14 11:38	2° \mathbb{B} 32'08	20°52'24	morning rise	4248 Dec 16 13:47	13° \mathbb{A} 23'33	
desc. node	4248 Jan 30 08:15	23° \mathbb{B} 15'08		direct	4248 Dec 20 03:47	12° \mathbb{A} 09'32	
	4248 Feb 03 21:36	0° \mathbb{A}		morning max el	4248 Dec 27 12:53	16° \mathbb{A} 19'25	19°43'51
morning set	4248 Feb 13 08:14	14° \mathbb{A} 26'57			4249 Jan 07 04:39	0° \mathbb{B}	
max. Earth dist.	4248 Feb 21 14:35	27° \mathbb{A} 36'18	1.42863 AU	greatest brilliancy	4249 Jan 09 16:38	3° \mathbb{B} 39'39	-0.7m
	4248 Feb 23 01:49	0° \mathbb{H}		desc. node	4249 Jan 16 05:17	13° \mathbb{B} 28'56	
				morning set	4249 Jan 22 04:18	22° \mathbb{B} 37'23	
superior conj	4248 Feb 28 12:44	9° \mathbb{H} 04'35	-2°07'55		4249 Jan 26 22:28	0° \mathbb{A}	
minimum elong	4248 Feb 28 12:59	9° \mathbb{H} 05'37	2°07'55	max. Earth dist.	4249 Feb 03 01:51	11° \mathbb{A} 13'48	1.44331 AU
evening rise	4248 Mar 11 08:20	29° \mathbb{H} 41'16					
	4248 Mar 11 12:32	0° \mathbb{Y}		superior conj	4249 Feb 07 18:14	18° \mathbb{A} 43'37	-1°59'36
asc. node	4248 Mar 21 10:21	17° \mathbb{Y} 07'58		minimum elong	4249 Feb 07 12:25	18° \mathbb{A} 20'12	1°59'17
evening max el	4248 Mar 28 05:36	26° \mathbb{Y} 10'31	18°06'46		4249 Feb 14 15:32	0° \mathbb{H}	
retrograde	4248 Apr 03 19:26	29° \mathbb{Y} 33'21		evening rise	4249 Feb 21 08:12	11° \mathbb{H} 14'31	
evening set	4248 Apr 06 12:08	28° \mathbb{Y} 59'06			4249 Mar 04 14:48	0° \mathbb{Y}	
inferior conj	4248 Apr 13 00:14	23° \mathbb{Y} 58'13	3°16'33	asc. node	4249 Mar 08 07:24	5° \mathbb{Y} 23'05	
minimum elong	4248 Apr 13 02:36	23° \mathbb{Y} 52'22	3°16'13	evening max el	4249 Mar 11 18:28	9° \mathbb{Y} 29'00	18°15'15
min. Earth dist.	4248 Apr 16 03:03	20° \mathbb{Y} 54'54	0.61412 AU	retrograde	4249 Mar 18 04:36	12° \mathbb{Y} 54'37	
morning rise	4248 Apr 19 15:12	18° \mathbb{Y} 01'16		evening set	4249 Mar 21 03:18	12° \mathbb{Y} 08'39	
direct	4248 Apr 26 09:53	15° \mathbb{Y} 40'51		inferior conj	4249 Mar 27 03:57	6° \mathbb{Y} 48'23	3°34'20
desc. node	4248 Apr 27 07:28	15° \mathbb{Y} 43'12		minimum elong	4249 Mar 27 04:35	6° \mathbb{Y} 46'37	3°34'18
morning max el	4248 May 10 14:50	23° \mathbb{Y} 38'46	27°50'17	min. Earth dist.	4249 Mar 29 16:58	3° \mathbb{Y} 59'41	0.63461 AU
	4248 May 16 07:35	0° \mathbb{B}		morning rise	4249 Apr 02 04:52	0° \mathbb{Y} 41'18	
	4248 Jun 04 20:39	0° \mathbb{II}			4249 Apr 03 03:17	30° \mathbb{R} \mathbb{H}	
morning set	4248 Jun 12 15:29	15° \mathbb{II} 06'22		direct	4249 Apr 09 02:01	27° \mathbb{H} 58'57	
asc. node	4248 Jun 17 09:37	25° \mathbb{II} 08'04		desc. node	4249 Apr 14 04:31	29° \mathbb{H} 15'37	
max. Earth dist.	4248 Jun 18 12:45	27° \mathbb{II} 35'04	1.32215 AU		4249 Apr 15 13:59	0° \mathbb{Y}	
	4248 Jun 19 15:20	0° \mathbb{E}		morning max el	4249 Apr 22 22:31	5° \mathbb{Y} 57'13	27°43'16
					4249 May 11 04:48	0° \mathbb{B}	
superior conj	4248 Jun 20 00:21	0° \mathbb{E} 49'16	0°27'07	morning set	4249 May 27 12:57	29° \mathbb{B} 08'58	
minimum elong	4248 Jun 19 23:08	0° \mathbb{E} 42'39	0°26'50		4249 May 27 23:09	0° \mathbb{II}	
evening rise	4248 Jun 26 20:46	15° \mathbb{E} 44'21		max. Earth dist.	4249 Jun 01 16:59	9° \mathbb{II} 47'07	1.32866 AU
	4248 Jul 03 22:28	0° \mathbb{Q}					
evening max el	4248 Jul 22 17:22	27° \mathbb{Q} 03'40	24°48'08	superior conj	4249 Jun 04 07:51	15° \mathbb{II} 22'28	0°00'31
desc. node	4248 Jul 24 06:43	28° \mathbb{Q} 28'59		minimum elong	4249 Jun 04 07:49	15° \mathbb{II} 22'20	0°00'30
	4248 Jul 26 03:36	0° \mathbb{M}		behind sun begin	4249 Jun 04 02:31	14° \mathbb{II} 53'51	
retrograde	4248 Aug 05 15:37	4° \mathbb{M} 06'00		behind sun end	4249 Jun 04 13:07	15° \mathbb{II} 50'50	
evening set	4248 Aug 10 22:13	3° \mathbb{M} 03'04		asc. node	4249 Jun 04 06:41	15° \mathbb{II} 16'11	
min. Earth dist.	4248 Aug 16 04:46	0° \mathbb{M} 15'39	0.57116 AU	evening rise	4249 Jun 11 08:37	0° \mathbb{E} 31'40	
	4248 Aug 16 14:34	30° \mathbb{R} \mathbb{Q}			4249 Jun 11 02:39	0° \mathbb{E}	
inferior conj	4248 Aug 19 01:27	28° \mathbb{Q} 23'18	-5°12'11		4249 Jun 27 20:23	0° \mathbb{Q}	
minimum elong	4248 Aug 19 00:54	28° \mathbb{Q} 24'12	5°12'11	evening max el	4249 Jul 04 06:25	7° \mathbb{Q} 29'57	23°12'06
morning rise	4248 Aug 27 06:04	24° \mathbb{Q} 15'57		desc. node	4249 Jul 11 03:45	12° \mathbb{Q} 35'11	
direct	4248 Aug 29 20:29	23° \mathbb{Q} 56'51		retrograde	4249 Jul 17 17:39	14° \mathbb{Q} 13'40	
morning max el	4248 Sep 08 01:14	28° \mathbb{Q} 15'49	19°17'44	evening set	4249 Jul 21 12:03	13° \mathbb{Q} 42'41	
	4248 Sep 09 17:57	0° \mathbb{M}		min. Earth dist.	4249 Jul 28 15:46	10° \mathbb{Q} 27'56	0.55611 AU
asc. node	4248 Sep 13 08:51	4° \mathbb{M} 36'22		inferior conj	4249 Jul 30 10:40	9° \mathbb{Q} 25'17	-4°44'08
morning set	4248 Sep 25 03:01	25° \mathbb{M} 35'47		minimum elong	4249 Jul 30 04:06	9° \mathbb{Q} 34'55	4°43'04
	4248 Sep 27 07:52	0° \mathbb{A}		morning rise	4249 Aug 07 22:28	5° \mathbb{Q} 32'48	
				direct	4249 Aug 10 20:12	5° \mathbb{Q} 12'31	
superior conj	4248 Oct 03 06:12	11° \mathbb{A} 45'36	1°38'30	morning max el	4249 Aug 21 13:34	10° \mathbb{Q} 11'23	20°29'26
minimum elong	4248 Oct 03 08:12	11° \mathbb{A} 55'18	1°38'22	asc. node	4249 Aug 31 05:54	22° \mathbb{Q} 54'53	

	4249 Sep 04 05:09	0°♍		morning set	4250 Aug 24 18:56	25°♏03'21	
morning set	4249 Sep 09 09:11	10°♍14'34			4250 Aug 27 03:15	0°♍	
superior conj	4249 Sep 16 22:35	25°♍48'37	1°43'58	superior conj	4250 Aug 31 23:37	10°♍16'53	1°42'05
minimum elong	4249 Sep 16 22:56	25°♍50'26	1°43'58	minimum elong	4250 Aug 31 22:38	10°♍11'41	1°42'03
	4249 Sep 19 00:30	0°♎		max. Earth dist.	4250 Sep 04 14:45	17°♍48'37	1.34586 AU
max. Earth dist.	4249 Sep 22 00:25	5°♎53'28	1.36246 AU	evening rise	4250 Sep 09 02:37	26°♍44'25	
evening rise	4249 Sep 25 23:05	13°♎20'35			4250 Sep 10 19:35	0°♎	
	4249 Oct 05 13:19	0°♎		desc. node	4250 Sep 24 00:04	22°♎40'33	
desc. node	4249 Oct 07 03:02	2°♎32'19			4250 Sep 28 21:29	0°♎	
	4249 Oct 26 21:19	0°♏		evening max el	4250 Oct 14 03:49	18°♎39'04	26°56'41
evening max el	4249 Oct 31 15:11	5°♏02'39	26°05'22	retrograde	4250 Oct 27 08:09	25°♎55'40	
retrograde	4249 Nov 13 05:14	12°♏10'28		evening set	4250 Nov 03 01:50	23°♎14'55	
evening set	4249 Nov 19 10:42	9°♏36'45		min. Earth dist.	4250 Nov 07 00:55	19°♎19'57	0.65571 AU
min. Earth dist.	4249 Nov 23 16:28	5°♏05'52	0.66708 AU	inferior conj	4250 Nov 08 23:54	17°♎04'53	-1°43'02
inferior conj	4249 Nov 25 03:35	3°♏16'48	-0°42'24	minimum elong	4250 Nov 09 02:48	16°♎56'32	1°41'51
minimum elong	4249 Nov 25 04:43	3°♏13'17	0°41'54	asc. node	4250 Nov 14 02:10	12°♎06'12	
asc. node	4249 Nov 27 05:08	0°♏47'50		morning rise	4250 Nov 15 04:37	11°♎27'02	
	4249 Nov 27 22:34	30°♎		direct	4250 Nov 17 23:13	10°♎45'01	
morning rise	4249 Nov 30 23:12	27°♎26'47		morning max el	4250 Nov 24 11:30	14°♎15'29	18°13'25
direct	4249 Dec 04 02:27	26°♎30'37			4250 Dec 05 19:03	0°♏	
	4249 Dec 10 15:14	0°♏		morning set	4250 Dec 13 06:30	12°♏08'16	
morning max el	4249 Dec 10 21:30	0°♏15'27	18°50'25	desc. node	4250 Dec 20 23:18	24°♏35'33	
	4249 Dec 31 13:50	0°♐			4250 Dec 24 08:37	0°♐	
morning set	4250 Jan 01 15:05	1°♐39'02		superior conj	4250 Dec 28 05:28	6°♐07'21	-0°48'26
desc. node	4250 Jan 03 02:17	3°♐57'08		minimum elong	4250 Dec 27 23:24	5°♐43'27	0°47'37
max. Earth dist.	4250 Jan 16 18:56	25°♐25'23	1.45146 AU	max. Earth dist.	4250 Dec 30 14:29	9°♐51'38	1.45222 AU
					4251 Jan 12 11:52	0°♑	
superior conj	4250 Jan 18 02:17	27°♐28'35	-1°31'38	evening rise	4251 Jan 13 12:04	1°♑34'19	
minimum elong	4250 Jan 17 16:59	26°♐52'01	1°30'43	greatest brilliancy	4251 Jan 25 09:48	19°♑59'59	-0.7m
	4250 Jan 19 16:45	0°♑			4251 Feb 01 06:44	0°♒	
evening rise	4250 Feb 02 09:20	21°♑50'24		evening max el	4251 Feb 06 13:51	6°♒26'16	19°25'43
	4250 Feb 07 10:23	0°♒		asc. node	4251 Feb 10 01:28	9°♒21'23	
evening max el	4250 Feb 23 05:56	22°♒55'41	18°41'58	retrograde	4251 Feb 13 18:02	10°♒33'26	
asc. node	4250 Feb 23 04:26	22°♒51'51		evening set	4251 Feb 17 06:05	9°♒21'35	
retrograde	4250 Mar 01 21:15	26°♒36'44		inferior conj	4251 Feb 22 17:46	3°♒27'46	3°18'26
evening set	4250 Mar 05 02:12	25°♒38'11		minimum elong	4251 Feb 22 15:51	3°♒33'59	3°18'08
inferior conj	4250 Mar 10 18:54	20°♒00'04	3°33'28	min. Earth dist.	4251 Feb 24 00:01	1°♒49'08	0.66505 AU
minimum elong	4250 Mar 10 18:01	20°♒02'45	3°33'24		4251 Feb 25 10:51	30°♒	
min. Earth dist.	4250 Mar 12 16:15	17°♒42'10	0.65186 AU	morning rise	4251 Feb 28 01:22	27°♒13'43	
morning rise	4250 Mar 16 09:23	13°♒48'00		direct	4251 Mar 06 06:40	24°♒27'59	
direct	4250 Mar 23 01:12	10°♒57'35			4251 Mar 16 18:57	0°♒	
desc. node	4250 Apr 01 01:32	14°♒53'54		desc. node	4251 Mar 18 22:31	2°♒04'54	
morning max el	4250 Apr 05 08:20	18°♒45'59	27°02'34	morning max el	4251 Mar 18 18:06	1°♒53'40	25°55'48
	4250 Apr 14 20:26	0°♓			4251 Apr 08 23:04	0°♓	
	4250 May 04 04:16	0°♓		morning set	4251 Apr 23 22:45	25°♓25'29	
morning set	4250 May 11 00:41	12°♓39'00			4251 Apr 26 09:29	0°♔	
max. Earth dist.	4250 May 15 12:00	21°♔29'32	1.33975 AU	max. Earth dist.	4251 Apr 27 19:35	2°♔42'45	1.35540 AU
				superior conj	4251 May 03 04:45	13°♔20'38	-0°57'25
superior conj	4250 May 19 10:08	29°♔35'10	-0°28'07	minimum elong	4251 May 03 07:50	13°♔36'18	0°56'51
minimum elong	4250 May 19 11:37	29°♔42'54	0°27'48	asc. node	4251 May 09 00:45	25°♔18'57	
	4250 May 19 14:52	0°♕		evening rise	4251 May 11 02:12	29°♔33'21	
asc. node	4250 May 22 03:43	5°♕21'06			4251 May 11 07:24	0°♕	
evening rise	4250 May 26 19:06	15°♕10'03		evening max el	4251 May 29 04:42	29°♕01'53	20°16'28
	4250 Jun 03 07:14	0°♖			4251 May 30 05:40	0°♖	
evening max el	4250 Jun 16 00:04	17°♖59'53	21°37'33	retrograde	4251 Jun 08 22:34	4°♖16'40	
retrograde	4250 Jun 28 08:53	24°♖06'13		evening set	4251 Jun 10 21:47	4°♖06'52	
desc. node	4250 Jun 28 00:48	24°♖05'57		desc. node	4251 Jun 14 21:47	2°♖52'49	
evening set	4250 Jun 30 21:14	23°♖51'53		inferior conj	4251 Jun 20 00:52	0°♖08'24	-1°31'11
inferior conj	4250 Jul 10 06:03	19°♖50'47	-3°25'21	minimum elong	4251 Jun 19 20:34	0°♖14'42	1°29'37
minimum elong	4250 Jul 09 21:37	20°♖02'34	3°22'50		4251 Jun 20 06:33	30°♒♕	
min. Earth dist.	4250 Jul 10 02:11	19°♖56'12	0.54865 AU	min. Earth dist.	4251 Jun 21 14:18	29°♕13'17	0.55066 AU
morning rise	4250 Jul 18 23:10	15°♖57'51		morning rise	4251 Jun 28 18:05	25°♕54'05	
direct	4250 Jul 22 06:52	15°♖33'51		direct	4251 Jul 02 17:28	25°♕19'54	
morning max el	4250 Aug 03 14:11	21°♖21'12	22°00'26		4251 Jul 14 01:14	0°♗	
	4250 Aug 10 22:04	0°♗					
asc. node	4250 Aug 18 02:57	11°♗49'46					

morning max el	4251 Jul 16 06:33	1°☿56'09	23°42'52	direct	4252 Jun 12 15:47	5°♊04'13	
	4251 Aug 04 09:18	0°♊		morning max el	4252 Jun 26 20:29	12°♊19'02	25°23'17
asc. node	4251 Aug 04 23:58	1°♊11'57			4252 Jul 10 12:56	0°☿	
morning set	4251 Aug 09 06:25	9°♊56'40		asc. node	4252 Jul 21 21:01	20°☿54'16	
				morning set	4252 Jul 23 18:03	24°☿49'43	
					4252 Jul 26 03:54	0°♊	
superior conj	4251 Aug 16 06:25	25°♊01'28	1°34'02				
minimum elong	4251 Aug 16 04:31	24°♊51'17	1°33'51				
max. Earth dist.	4251 Aug 18 13:49	29°♊58'20	1.33323 AU	superior conj	4252 Jul 30 16:39	9°♊55'07	1°20'45
	4251 Aug 18 14:07	0°♊		minimum elong	4252 Jul 30 14:21	9°♊42'30	1°20'25
evening rise	4251 Aug 23 18:22	10°♊43'02		max. Earth dist.	4252 Jul 31 20:17	12°♊26'21	1.32482 AU
	4251 Sep 03 03:18	0°♊		evening rise	4252 Aug 06 18:52	25°♊06'50	
desc. node	4251 Sep 10 21:06	12°♊23'08			4252 Aug 09 04:37	0°♊	
	4251 Sep 24 15:58	0°♊			4252 Aug 26 16:43	0°♊	
evening max el	4251 Sep 26 15:29	1°♊58'04	27°24'01	desc. node	4252 Aug 27 18:07	1°♊29'31	
retrograde	4251 Oct 10 05:11	9°♊16'12		evening max el	4252 Sep 08 00:23	14°♊47'58	27°21'22
evening set	4251 Oct 17 07:23	6°♊36'55		retrograde	4252 Sep 21 19:41	22°♊02'53	
min. Earth dist.	4251 Oct 21 00:47	3°♊15'59	0.64082 AU	evening set	4252 Sep 28 23:55	19°♊36'37	
inferior conj	4251 Oct 23 11:59	0°♊41'23	-2°44'59	min. Earth dist.	4252 Oct 02 14:37	16°♊43'35	0.62282 AU
minimum elong	4251 Oct 23 16:39	0°♊29'11	2°43'17	inferior conj	4252 Oct 05 12:58	13°♊59'45	-3°44'35
	4251 Oct 24 03:53	30°♊		minimum elong	4252 Oct 05 18:52	13°♊45'59	3°42'51
morning rise	4251 Oct 30 03:14	25°♊18'48		morning rise	4252 Oct 12 15:32	8°♊55'32	
asc. node	4251 Oct 31 23:11	24°♊49'30		direct	4252 Oct 15 00:21	8°♊30'43	
direct	4251 Nov 01 15:32	24°♊47'08		asc. node	4252 Oct 17 20:13	9°♊07'17	
morning max el	4251 Nov 08 04:03	28°♊12'26	17°53'28	morning max el	4252 Oct 21 20:07	11°♊59'06	17°51'26
	4251 Nov 09 19:35	0°♊			4252 Nov 02 22:30	0°♊	
morning set	4251 Nov 25 01:49	23°♊58'54		morning set	4252 Nov 06 18:57	6°♊52'26	
	4251 Nov 28 14:41	0°♊					
desc. node	4251 Dec 07 20:18	15°♊19'56		superior conj	4252 Nov 17 20:41	26°♊20'05	0°40'21
				minimum elong	4252 Nov 18 00:09	26°♊34'51	0°39'51
superior conj	4251 Dec 08 00:06	15°♊35'24	-0°01'06		4252 Nov 20 00:43	0°♊	
minimum elong	4251 Dec 07 23:59	15°♊34'53	0°01'04	desc. node	4252 Nov 23 17:23	6°♊07'34	
behind sun begin	4251 Dec 07 13:59	14°♊54'14		max. Earth dist.	4252 Nov 24 23:52	8°♊11'57	1.43266 AU
behind sun end	4251 Dec 08 09:59	16°♊15'28		evening rise	4252 Dec 02 11:30	20°♊06'09	
max. Earth dist.	4251 Dec 13 08:53	24°♊12'17	1.44566 AU		4252 Dec 08 22:23	0°♊	
	4251 Dec 17 01:04	0°♊			4252 Dec 30 09:27	0°♊	
evening rise	4251 Dec 23 23:46	10°♊46'39		evening max el	4253 Jan 02 14:08	3°♊31'57	21°35'11
	4252 Jan 05 16:50	0°♊		retrograde	4253 Jan 11 13:41	8°♊51'58	
evening max el	4252 Jan 20 16:41	19°♊58'06	20°24'31	asc. node	4253 Jan 13 19:29	8°♊24'49	
asc. node	4252 Jan 27 22:29	24°♊36'33		evening set	4253 Jan 15 20:29	7°♊10'36	
retrograde	4252 Jan 28 16:11	24°♊39'31		inferior conj	4253 Jan 21 04:43	0°♊53'50	2°17'20
evening set	4252 Feb 01 12:46	23°♊13'25		minimum elong	4253 Jan 21 02:18	1°♊02'13	2°16'35
inferior conj	4252 Feb 06 21:46	17°♊06'35	2°52'22	min. Earth dist.	4253 Jan 21 09:04	0°♊38'44	0.67913 AU
minimum elong	4252 Feb 06 19:22	17°♊14'47	2°51'47		4253 Jan 21 20:16	30°♊	
min. Earth dist.	4252 Feb 07 14:23	16°♊10'01	0.67409 AU	morning rise	4253 Jan 26 07:56	24°♊41'43	
morning rise	4252 Feb 12 01:45	10°♊52'37		direct	4253 Jan 31 09:11	22°♊30'41	
direct	4252 Feb 17 17:36	8°♊21'11		morning max el	4253 Feb 10 11:55	28°♊30'44	23°03'28
morning max el	4252 Feb 29 02:43	15°♊09'27	24°32'38		4253 Feb 11 22:07	0°♊	
desc. node	4252 Mar 04 19:33	20°♊21'56		desc. node	4253 Feb 19 16:36	9°♊26'34	
	4252 Mar 12 06:56	0°♊			4253 Mar 06 00:33	0°♊	
	4252 Mar 31 21:04	0°♊		morning set	4253 Mar 17 03:54	17°♊46'26	
morning set	4252 Apr 05 01:52	7°♊13'15		max. Earth dist.	4253 Mar 21 12:09	25°♊08'29	1.39676 AU
max. Earth dist.	4252 Apr 08 17:15	13°♊43'36	1.37497 AU		4253 Mar 24 06:54	0°♊	
superior conj	4252 Apr 15 12:27	26°♊30'01	-1°25'27	superior conj	4253 Mar 29 05:14	8°♊53'41	-1°49'18
minimum elong	4252 Apr 15 16:53	26°♊51'30	1°24'49	minimum elong	4253 Mar 29 09:58	9°♊15'24	1°48'52
	4252 Apr 17 07:33	0°♊		evening rise	4253 Apr 07 19:59	27°♊04'56	
evening rise	4252 Apr 24 03:27	13°♊34'06			4253 Apr 09 08:37	0°♊	
asc. node	4252 Apr 24 21:47	15°♊05'02		asc. node	4253 Apr 11 18:49	4°♊34'22	
	4252 May 02 22:00	0°♊		evening max el	4253 Apr 24 00:27	23°♊07'26	18°32'27
evening max el	4252 May 10 21:37	10°♊45'47	19°14'22	retrograde	4253 May 01 17:09	26°♊54'56	
retrograde	4252 May 19 22:45	15°♊10'14		evening set	4253 May 03 23:47	26°♊36'07	
evening set	4252 May 21 22:59	14°♊58'06		inferior conj	4253 May 11 13:51	22°♊07'36	1°56'06
inferior conj	4252 May 30 09:01	10°♊48'36	0°24'40	minimum elong	4253 May 11 17:21	22°♊00'44	1°55'03
minimum elong	4252 May 30 10:02	10°♊46'53	0°24'17	min. Earth dist.	4253 May 14 23:33	19°♊29'10	0.58000 AU
desc. node	4252 May 31 18:47	9°♊51'56		desc. node	4253 May 18 15:49	17°♊05'46	
min. Earth dist.	4252 Jun 02 05:09	8°♊55'16	0.56187 AU	morning rise	4253 May 19 07:45	16°♊45'20	
morning rise	4252 Jun 07 18:00	5°♊59'52		direct	4253 May 25 04:26	15°♊17'51	

morning max el	4253 Jun 08 13:34	22°♄56'47	26°45'52	direct	4254 May 07 05:21	26°♄18'33	
	4253 Jun 14 20:32	0°♄			4254 May 16 16:32	0°♄	
	4253 Jul 03 10:48	0°♄		morning max el	4254 May 21 12:59	4°♄11'09	27°37'31
morning set	4253 Jul 08 04:09	9°♄36'25			4254 Jun 09 14:05	0°♄	
asc. node	4253 Jul 08 18:04	10°♄49'55		morning set	4254 Jun 22 11:02	24°♄11'23	
					4254 Jun 25 05:05	0°♄	
superior conj	4253 Jul 15 04:21	24°♄50'22	1°02'55	asc. node	4254 Jun 25 15:08	0°♄53'57	
minimum elong	4253 Jul 15 02:07	24°♄38'01	1°02'31	max. Earth dist.	4254 Jun 28 18:36	7°♄44'46	1.32042 AU
max. Earth dist.	4253 Jul 15 07:07	25°♄05'38	1.32057 AU				
	4253 Jul 17 12:34	0°♄		superior conj	4254 Jun 29 15:49	9°♄41'29	0°41'10
evening rise	4253 Jul 22 01:18	9°♄46'11		minimum elong	4254 Jun 29 14:07	9°♄32'04	0°40'49
	4253 Aug 01 12:05	0°♄		evening rise	4254 Jul 06 11:24	24°♄33'45	
desc. node	4253 Aug 14 15:08	19°♄44'06			4254 Jul 09 01:50	0°♄	
evening max el	4253 Aug 21 03:51	26°♄55'43	26°45'25		4254 Jul 26 18:13	0°♄	
	4253 Aug 24 18:37	0°♄		desc. node	4254 Aug 01 12:08	6°♄45'40	
retrograde	4253 Sep 04 02:07	4°♄05'59		evening max el	4254 Aug 02 23:47	8°♄14'14	25°37'52
evening set	4253 Sep 10 22:55	2°♄05'18		retrograde	4254 Aug 16 22:53	15°♄20'19	
	4253 Sep 14 01:29	30°♄		evening set	4254 Aug 22 23:34	13°♄55'09	
min. Earth dist.	4253 Sep 14 17:52	29°♄28'24	0.60268 AU	min. Earth dist.	4254 Aug 27 11:47	11°♄17'13	0.58215 AU
inferior conj	4253 Sep 17 23:26	26°♄50'14	-4°35'39	inferior conj	4254 Aug 30 15:50	9°♄02'50	-5°07'52
minimum elong	4253 Sep 18 05:03	26°♄38'43	4°34'34	minimum elong	4254 Aug 30 18:26	8°♄58'12	5°07'42
morning rise	4253 Sep 25 13:10	22°♄07'24		morning rise	4254 Sep 07 15:33	4°♄43'16	
direct	4253 Sep 27 21:43	21°♄46'26		direct	4254 Sep 10 03:12	4°♄23'53	
asc. node	4253 Oct 04 17:16	24°♄50'56		morning max el	4254 Sep 18 13:37	8°♄24'43	18°46'15
morning max el	4253 Oct 05 08:24	25°♄26'10	18°08'31	asc. node	4254 Sep 21 14:20	11°♄46'12	
	4253 Oct 09 05:04	0°♄			4254 Oct 02 13:50	0°♄	
morning set	4253 Oct 21 03:39	20°♄29'58		morning set	4254 Oct 04 23:16	4°♄38'24	
	4253 Oct 26 05:32	0°♄					
superior conj	4253 Oct 30 18:41	8°♄18'24	1°11'21	superior conj	4254 Oct 13 13:13	21°♄16'56	1°31'25
minimum elong	4253 Oct 30 22:44	8°♄36'35	1°10'51	minimum elong	4254 Oct 13 16:09	21°♄30'48	1°31'11
max. Earth dist.	4253 Nov 07 10:08	21°♄36'44	1.41476 AU		4254 Oct 18 06:08	0°♄	
desc. node	4253 Nov 10 14:25	26°♄53'58		max. Earth dist.	4254 Oct 20 16:01	4°♄19'00	1.39415 AU
evening rise	4253 Nov 12 14:10	0°♄08'26		evening rise	4254 Oct 24 15:22	11°♄12'09	
	4253 Nov 12 12:05	0°♄		desc. node	4254 Oct 28 11:27	17°♄35'47	
	4253 Dec 02 11:06	0°♄			4254 Nov 05 08:27	0°♄	
evening max el	4253 Dec 16 06:51	17°♄08'15	22°53'19		4254 Nov 28 01:33	0°♄	
retrograde	4253 Dec 26 08:54	23°♄07'12		evening max el	4254 Nov 28 20:22	0°♄47'32	24°13'05
evening set	4253 Dec 31 03:39	21°♄09'44		retrograde	4254 Dec 10 00:39	7°♄20'59	
asc. node	4253 Dec 31 16:31	20°♄41'27		evening set	4254 Dec 15 08:37	5°♄07'36	
min. Earth dist.	4254 Jan 05 05:41	15°♄10'37	0.68032 AU	asc. node	4254 Dec 18 13:35	1°♄40'51	
inferior conj	4254 Jan 05 12:39	14°♄46'36	1°34'45		4254 Dec 19 20:32	30°♄	
minimum elong	4254 Jan 05 10:41	14°♄53'22	1°34'01	min. Earth dist.	4254 Dec 20 01:54	29°♄42'00	0.67791 AU
morning rise	4254 Jan 10 17:37	8°♄38'05		inferior conj	4254 Dec 20 19:44	28°♄41'57	0°45'39
direct	4254 Jan 15 04:18	6°♄49'57		minimum elong	4254 Dec 20 18:40	28°♄45'34	0°45'13
morning max el	4254 Jan 24 01:25	12°♄00'42	21°37'36	morning rise	4254 Dec 26 04:46	22°♄38'57	
desc. node	4254 Feb 06 13:39	29°♄05'25		direct	4254 Dec 30 01:51	21°♄13'17	
	4254 Feb 07 05:01	0°♄		morning max el	4255 Jan 06 22:10	25°♄42'07	20°21'31
morning set	4254 Feb 25 01:12	26°♄58'23			4255 Jan 10 18:00	0°♄	
	4254 Feb 26 22:36	0°♄		desc. node	4255 Jan 24 10:41	19°♄08'30	
max. Earth dist.	4254 Mar 03 12:08	7°♄26'57	1.41793 AU		4255 Jan 31 15:05	0°♄	
superior conj	4254 Mar 11 02:14	20°♄20'21	-2°04'49	morning set	4255 Feb 04 00:31	5°♄13'19	
minimum elong	4254 Mar 11 05:00	20°♄32'27	2°04'43	max. Earth dist.	4255 Feb 13 19:45	20°♄40'02	1.43559 AU
	4254 Mar 16 12:57	0°♄		superior conj	4255 Feb 19 22:35	0°♄38'39	-2°06'43
evening rise	4254 Mar 22 00:11	9°♄57'48		minimum elong	4255 Feb 19 20:22	0°♄29'28	2°06'40
asc. node	4254 Mar 29 15:51	23°♄41'20			4255 Feb 19 13:14	0°♄	
	4254 Apr 02 14:37	0°♄		evening rise	4255 Mar 04 11:41	22°♄02'44	
evening max el	4254 Apr 07 09:45	5°♄58'16	18°10'30		4255 Mar 09 01:15	0°♄	
retrograde	4254 Apr 14 06:03	9°♄25'39		asc. node	4255 Mar 16 12:54	12°♄17'59	
evening set	4254 Apr 16 19:18	8°♄57'25		evening max el	4255 Mar 21 22:06	19°♄08'26	18°08'01
inferior conj	4254 Apr 23 15:43	4°♄07'54	2°55'34	retrograde	4255 Mar 28 09:15	22°♄31'07	
minimum elong	4254 Apr 23 18:55	4°♄00'35	2°54'55	evening set	4255 Mar 31 04:30	21°♄51'58	
min. Earth dist.	4254 Apr 26 23:49	1°♄06'45	0.60153 AU	inferior conj	4255 Apr 06 11:12	16°♄42'21	3°26'45
	4254 Apr 28 08:03	30°♄		minimum elong	4255 Apr 06 12:51	16°♄38'05	3°26'34
morning rise	4254 Apr 30 16:11	28°♄20'46		min. Earth dist.	4255 Apr 09 08:28	13°♄42'58	0.62312 AU
desc. node	4254 May 05 12:51	26°♄26'34		morning rise	4255 Apr 12 19:46	10°♄40'05	
				direct	4255 Apr 19 16:21	8°♄09'04	

desc. node	4255 Apr 22 09:53	8° Υ 30'55		min. Earth dist.	4256 Mar 22 02:37	27° Υ 05'36	0.64241 AU
morning max el	4255 May 03 18:29	16° Υ 08'07	27°51'52	morning rise	4256 Mar 25 16:10	23° Υ 32'55	
	4255 May 15 03:49	0° \mathcal{B}		direct	4256 Apr 01 11:44	20° Υ 45'17	
	4255 Jun 02 05:36	0° Π		desc. node	4256 Apr 08 06:55	23° Υ 01'02	
morning set	4255 Jun 06 12:37	8° Π 27'42		morning max el	4256 Apr 15 03:35	28° Υ 41'43	27°29'36
max. Earth dist.	4255 Jun 12 02:41	20° Π 10'11	1.32440 AU		4256 Apr 16 09:55	0° Υ	
asc. node	4255 Jun 12 12:11	21° Π 01'26			4256 May 07 23:38	0° \mathcal{B}	
				morning set	4256 May 20 06:20	22° \mathcal{B} 17'42	
superior conj	4255 Jun 14 01:15	24° Π 22'18	0°16'07		4256 May 24 02:10	0° Π	
minimum elong	4255 Jun 14 00:30	24° Π 18'13	0°15'58	max. Earth dist.	4256 May 25 03:16	2° Π 09'45	1.33279 AU
	4255 Jun 16 15:09	0° \mathcal{B}					
evening rise	4255 Jun 20 23:06	9° \mathcal{B} 22'22		superior conj	4256 May 28 06:46	8° Π 47'19	-0°11'29
	4255 Jul 01 14:04	0° Ω		minimum elong	4256 May 28 07:21	8° Π 50'25	0°11'22
evening max el	4255 Jul 15 13:25	18° Ω 51'08	24°07'58	behind sun begin	4256 May 28 03:30	8° Π 29'57	
desc. node	4255 Jul 19 09:09	22° Ω 05'20		behind sun end	4256 May 28 11:12	9° Π 10'55	
retrograde	4255 Jul 29 08:28	25° Ω 48'08		asc. node	4256 May 29 09:13	11° Π 08'32	
evening set	4255 Aug 03 00:10	25° Ω 00'05		evening rise	4256 Jun 04 10:34	24° Π 06'10	
min. Earth dist.	4255 Aug 08 23:59	22° Ω 02'45	0.56399 AU		4256 Jun 07 06:45	0° \mathcal{B}	
inferior conj	4255 Aug 11 11:56	20° Ω 29'53	-5°06'22	evening max el	4256 Jun 26 03:17	29° \mathcal{B} 14'14	22°30'47
minimum elong	4255 Aug 11 08:43	20° Ω 34'54	5°06'07		4256 Jun 26 22:38	0° Ω	
morning rise	4255 Aug 19 19:52	16° Ω 30'40		desc. node	4256 Jul 05 06:10	5° Ω 08'32	
direct	4255 Aug 22 13:09	16° Ω 11'19		retrograde	4256 Jul 09 05:44	5° Ω 45'04	
morning max el	4255 Sep 01 08:45	20° Ω 45'28	19°45'46	evening set	4256 Jul 12 09:19	5° Ω 23'13	
asc. node	4255 Sep 08 11:24	29° Ω 38'01		min. Earth dist.	4256 Jul 20 10:37	1° Ω 52'35	0.55176 AU
	4255 Sep 08 17:05	0° \mathcal{M}		inferior conj	4256 Jul 21 13:59	1° Ω 13'42	-4°16'39
morning set	4255 Sep 19 02:20	19° \mathcal{M} 08'13		minimum elong	4256 Jul 21 05:50	1° Ω 25'18	4°14'49
	4255 Sep 24 10:53	0° $\underline{\Omega}$			4256 Jul 23 18:46	30° $\mathcal{R}\mathcal{B}$	
				morning rise	4256 Jul 30 04:23	27° \mathcal{B} 23'15	
superior conj	4255 Sep 26 22:57	5° $\underline{\Omega}$ 00'37	1°41'47	direct	4256 Aug 02 05:33	27° \mathcal{B} 02'02	
minimum elong	4255 Sep 27 00:14	5° $\underline{\Omega}$ 06'58	1°41'45		4256 Aug 10 18:23	0° Ω	
max. Earth dist.	4255 Oct 02 20:47	16° $\underline{\Omega}$ 24'49	1.37338 AU	morning max el	4256 Aug 13 16:00	2° Ω 21'25	21°06'16
evening rise	4255 Oct 06 15:09	23° $\underline{\Omega}$ 18'23		asc. node	4256 Aug 25 08:27	18° Ω 13'07	
	4255 Oct 10 10:53	0° \mathcal{M}			4256 Aug 31 13:00	0° \mathcal{M}	
desc. node	4255 Oct 15 08:27	8° \mathcal{M} 09'08		morning set	4256 Sep 02 10:13	3° \mathcal{M} 51'35	
	4255 Oct 30 02:29	0° \mathcal{X}					
evening max el	4255 Nov 11 08:42	14° \mathcal{X} 29'56	25°27'40	superior conj	4256 Sep 09 19:23	19° \mathcal{M} 15'35	1°43'59
retrograde	4255 Nov 23 12:04	21° \mathcal{X} 29'05		minimum elong	4256 Sep 09 19:07	19° \mathcal{M} 14'14	1°43'59
evening set	4255 Nov 29 09:46	19° \mathcal{X} 01'35		max. Earth dist.	4256 Sep 14 06:04	28° \mathcal{M} 15'42	1.35485 AU
min. Earth dist.	4255 Dec 03 19:27	14° \mathcal{X} 10'30	0.67200 AU		4256 Sep 15 03:15	0° $\underline{\Omega}$	
inferior conj	4255 Dec 05 00:12	12° \mathcal{X} 37'59	-0°08'55	evening rise	4256 Sep 18 09:49	6° $\underline{\Omega}$ 17'25	
minimum elong	4255 Dec 05 00:25	12° \mathcal{X} 37'15	0°08'49	desc. node	4256 Oct 01 05:28	28° $\underline{\Omega}$ 28'21	
transit middle	4255 Dec 05 00:25	12° \mathcal{X} 37'15	0°08'49		4256 Oct 02 04:46	0° \mathcal{M}	
transit begin	4255 Dec 04 22:05	12° \mathcal{X} 44'48		evening max el	4256 Oct 23 21:11	28° \mathcal{M} 10'57	26°29'46
transit end	4255 Dec 05 02:46	12° \mathcal{X} 29'41			4256 Oct 25 20:39	0° \mathcal{X}	
asc. node	4255 Dec 05 10:37	12° \mathcal{X} 04'31		retrograde	4256 Nov 05 18:23	5° \mathcal{X} 24'30	
morning rise	4255 Dec 10 15:24	6° \mathcal{X} 42'33		evening set	4256 Nov 12 05:11	2° \mathcal{X} 47'00	
direct	4255 Dec 14 00:30	5° \mathcal{X} 36'45			4256 Nov 15 01:16	30° $\mathcal{R}\mathcal{M}$	
morning max el	4255 Dec 21 02:52	9° \mathcal{X} 34'45	19°19'11	min. Earth dist.	4256 Nov 16 08:00	28° \mathcal{M} 31'16	0.66260 AU
greatest brilliancy	4256 Jan 03 13:03	27° \mathcal{X} 35'01	-0.7m	inferior conj	4256 Nov 18 00:06	26° \mathcal{M} 30'22	-1°07'49
	4256 Jan 05 03:20	0° \mathcal{B}		minimum elong	4256 Nov 18 01:57	26° \mathcal{M} 24'44	1°07'01
desc. node	4256 Jan 11 07:42	9° \mathcal{B} 29'25		asc. node	4256 Nov 21 07:39	22° \mathcal{M} 48'00	
morning set	4256 Jan 14 00:04	13° \mathcal{B} 38'24		morning rise	4256 Nov 23 23:23	20° \mathcal{M} 45'04	
	4256 Jan 24 12:02	0° \approx		direct	4256 Nov 26 22:34	19° \mathcal{M} 55'31	
max. Earth dist.	4256 Jan 27 09:43	4° \approx 34'10	1.44762 AU	morning max el	4256 Dec 03 14:04	23° \mathcal{M} 33'28	18°32'36
					4256 Dec 08 20:51	0° \mathcal{X}	
superior conj	4256 Jan 30 17:44	9° \approx 51'10	-1°50'05	morning set	4256 Dec 23 22:20	23° \mathcal{X} 15'51	
minimum elong	4256 Jan 30 09:44	9° \approx 19'23	1°49'30	desc. node	4256 Dec 28 04:43	0° \mathcal{B} 02'36	
	4256 Feb 12 03:48	0° \mathcal{X}			4256 Dec 28 04:04	0° \mathcal{B}	
evening rise	4256 Feb 14 02:14	3° \mathcal{X} 12'19					
asc. node	4256 Mar 02 09:56	0° Υ 15'01		superior conj	4257 Jan 08 21:12	18° \mathcal{B} 27'01	-1°14'37
	4256 Mar 02 05:01	0° Υ		minimum elong	4257 Jan 08 12:31	17° \mathcal{B} 52'59	1°13'36
evening max el	4256 Mar 04 10:37	2° Υ 30'58	18°24'23	max. Earth dist.	4257 Jan 09 03:37	18° \mathcal{B} 52'13	1.45271 AU
retrograde	4256 Mar 10 22:08	6° Υ 02'04			4257 Jan 16 05:47	0° \approx	
evening set	4256 Mar 13 23:18	5° Υ 11'00		evening rise	4257 Jan 24 17:23	13° \approx 24'25	
inferior conj	4256 Mar 19 20:11	29° \mathcal{X} 42'56	3°35'55	greatest brilliancy	4257 Feb 02 18:24	27° \approx 44'41	-0.8m
minimum elong	4256 Mar 19 20:07	29° \mathcal{X} 43'06	3°35'54		4257 Feb 04 05:02	0° \mathcal{X}	
	4256 Mar 19 14:17	30° $\mathcal{R}\mathcal{X}$		evening max el	4257 Feb 15 20:49	16° \mathcal{X} 00'02	18°58'37

asc. node	4257 Feb 17 06:56	17° K 20'33		retrograde	4258 Feb 06 14:20	3° K 52'27	
retrograde	4257 Feb 22 16:49	19° K 50'59		evening set	4258 Feb 10 05:54	2° K 34'36	
evening set	4257 Feb 26 00:36	18° K 47'03			4258 Feb 12 23:24	30° R \approx	
inferior conj	4257 Mar 03 14:52	13° K 02'14	3°28'34	inferior conj	4258 Feb 15 16:13	26° \approx 35'08	3°08'33
minimum elong	4257 Mar 03 13:30	13° K 06'34	3°28'25	minimum elong	4258 Feb 15 14:02	26° \approx 42'23	3°08'08
min. Earth dist.	4257 Mar 05 05:46	11° K 00'03	0.65803 AU	min. Earth dist.	4258 Feb 16 16:30	25° \approx 14'18	0.66948 AU
morning rise	4257 Mar 09 02:00	6° K 49'00		morning rise	4258 Feb 20 21:56	20° \approx 21'07	
direct	4257 Mar 15 13:58	3° K 58'48		direct	4258 Feb 26 21:53	17° \approx 40'25	
desc. node	4257 Mar 26 03:56	9° K 22'29		morning max el	4258 Mar 10 22:29	24° \approx 51'06	25°21'44
morning max el	4257 Mar 28 13:28	11° K 39'42	26°36'40	desc. node	4258 Mar 13 00:57	27° \approx 04'24	
	4257 Apr 12 04:49	0° Y			4258 Mar 15 14:18	0° K	
	4257 Apr 30 13:34	0° B			4258 Apr 05 16:05	0° Y	
morning set	4257 May 03 12:50	5° B 31'23		morning set	4258 Apr 16 03:31	17° Y 54'46	
max. Earth dist.	4257 May 07 17:11	13° B 37'46	1.34582 AU	max. Earth dist.	4258 Apr 19 20:01	24° Y 42'27	1.36336 AU
					4258 Apr 22 14:41	0° B	
superior conj	4257 May 12 06:10	22° B 50'05	-0°40'34	superior conj	4258 Apr 25 20:36	6° B 21'49	-1°09'36
minimum elong	4257 May 12 08:20	23° B 01'17	0°40'08	minimum elong	4258 Apr 26 00:20	6° B 40'23	1°08'59
	4257 May 15 16:39	0° II			4258 May 03 03:16	21° B 05'00	
asc. node	4257 May 16 06:15	1° II 11'23		asc. node	4258 May 03 03:16	21° B 05'00	
evening rise	4257 May 19 19:52	8° II 39'19		evening rise	4258 May 04 00:49	22° B 54'15	
	4257 May 31 06:12	0° E			4258 May 07 14:20	0° II	
evening max el	4257 Jun 08 01:20	9° E 56'55	21°01'03	evening max el	4258 May 21 11:23	21° II 16'56	19°47'35
retrograde	4257 Jun 19 18:34	15° E 41'41		retrograde	4258 May 31 11:03	26° II 08'53	
evening set	4257 Jun 21 23:03	15° E 30'27		evening set	4258 Jun 02 09:47	25° II 58'36	
desc. node	4257 Jun 22 03:11	15° E 28'38		desc. node	4258 Jun 09 00:12	23° II 18'21	
inferior conj	4257 Jul 01 07:25	11° E 32'55	-2°39'26	inferior conj	4258 Jun 11 06:27	21° II 56'47	-0°40'16
minimum elong	4257 Jul 01 00:12	11° E 43'06	2°37'00	minimum elong	4258 Jun 11 04:37	21° II 59'37	0°39'35
min. Earth dist.	4257 Jul 01 21:56	11° E 12'25	0.54828 AU	min. Earth dist.	4258 Jun 13 10:49	20° II 36'16	0.55445 AU
morning rise	4257 Jul 10 01:23	7° E 32'58		morning rise	4258 Jun 19 21:17	17° II 29'06	
direct	4257 Jul 13 15:02	7° E 05'31		direct	4258 Jun 24 05:55	16° II 47'12	
morning max el	4257 Jul 26 12:28	13° E 14'54	22°43'15	morning max el	4258 Jul 08 02:50	23° II 40'46	24°26'45
	4257 Aug 08 03:41	0° O			4258 Jul 13 20:07	0° E	
asc. node	4257 Aug 12 05:29	7° O 21'09		asc. node	4258 Jul 30 02:31	26° E 52'52	
morning set	4257 Aug 17 20:55	18° O 43'15			4258 Jul 31 15:10	0° O	
	4257 Aug 23 03:45	0° np		morning set	4258 Aug 02 08:40	3° O 37'09	
superior conj	4257 Aug 24 23:11	3° np 52'08	1°39'22	superior conj	4258 Aug 09 07:41	18° O 41'11	1°28'59
minimum elong	4257 Aug 24 21:46	3° np 44'32	1°39'16	minimum elong	4258 Aug 09 05:34	18° O 29'38	1°28'44
max. Earth dist.	4257 Aug 28 00:07	10° np 16'14	1.33998 AU	max. Earth dist.	4258 Aug 11 02:54	22° O 35'15	1.32920 AU
evening rise	4257 Sep 01 19:04	19° np 58'07			4258 Aug 14 14:41	0° np	
	4257 Sep 07 02:12	0° A		evening rise	4258 Aug 16 14:56	4° np 08'34	
desc. node	4257 Sep 18 02:30	18° A 26'58			4258 Aug 30 19:19	0° A	
	4257 Sep 26 05:00	0° M		desc. node	4258 Sep 04 23:32	7° A 55'37	
evening max el	4257 Oct 06 09:49	11° M 42'23	27°11'44	evening max el	4258 Sep 18 20:47	24° A 50'59	27°26'51
retrograde	4257 Oct 19 18:51	19° M 00'07			4258 Sep 25 13:03	0° M	
evening set	4257 Oct 26 16:35	16° M 19'09		retrograde	4258 Oct 02 12:53	2° M 07'08	
min. Earth dist.	4257 Oct 30 13:11	12° M 38'45	0.64977 AU		4258 Oct 09 00:41	30° R A	
inferior conj	4257 Nov 01 17:14	10° M 14'39	-2°09'21	evening set	4258 Oct 09 17:01	29° A 32'02	
minimum elong	4257 Nov 01 20:54	10° M 04'29	2°07'53	min. Earth dist.	4258 Oct 13 08:52	26° A 24'01	0.63354 AU
morning rise	4257 Nov 08 02:16	4° M 42'34		inferior conj	4258 Oct 16 00:59	23° A 44'19	-3°10'52
asc. node	4257 Nov 08 04:40	4° M 39'50		minimum elong	4258 Oct 16 06:17	23° A 31'05	3°09'04
direct	4257 Nov 10 17:52	4° M 05'21		morning rise	4258 Oct 22 20:58	18° A 28'59	
morning max el	4257 Nov 17 05:25	7° M 32'43	18°02'44	direct	4258 Oct 25 07:33	18° A 00'29	
	4257 Dec 02 11:10	0° X		asc. node	4258 Oct 26 01:42	18° A 03'17	
morning set	4257 Dec 05 02:15	4° X 22'06		morning max el	4258 Oct 31 22:05	21° A 25'50	17°50'23
desc. node	4257 Dec 15 01:44	20° X 44'07			4258 Nov 07 10:47	0° M	
				morning set	4258 Nov 17 07:40	16° M 42'11	
superior conj	4257 Dec 19 04:47	27° X 21'01	-0°28'09		4258 Nov 25 00:46	0° X	
minimum elong	4257 Dec 19 01:18	27° X 07'08	0°27'39	superior conj	4258 Nov 29 09:54	7° X 20'13	0°17'38
	4257 Dec 20 20:49	0° Z		minimum elong	4258 Nov 29 11:43	7° X 27'43	0°17'22
max. Earth dist.	4257 Dec 22 23:04	3° Z 18'33	1.45036 AU	desc. node	4258 Dec 01 22:48	11° X 30'28	
evening rise	4258 Jan 04 12:16	22° Z 51'22		max. Earth dist.	4258 Dec 05 16:54	17° X 34'35	1.44086 AU
	4258 Jan 09 03:34	0° \approx			4258 Dec 13 14:20	0° Z	
greatest brilliancy	4258 Jan 18 05:07	13° \approx 45'19	-0.7m	evening rise	4258 Dec 14 22:00	2° Z 02'18	
evening max el	4258 Jan 30 02:48	29° \approx 32'03	19°49'05		4259 Jan 02 17:47	0° \approx	
	4258 Jan 30 13:55	0° K		evening max el	4259 Jan 13 03:24	13° \approx 05'18	20°53'20
asc. node	4258 Feb 04 03:57	3° K 20'41					

retrograde	4259 Jan 21 12:28	18° \approx 02'32		retrograde	4260 Jan 05 09:16	2° \approx 16'47	
asc. node	4259 Jan 22 00:58	18° \approx 01'03		asc. node	4260 Jan 08 22:01	1° \approx 10'17	
evening set	4259 Jan 25 13:17	16° \approx 29'49		evening set	4260 Jan 09 20:59	0° \approx 28'27	
inferior conj	4259 Jan 30 21:44	10° \approx 18'17	2°38'30		4260 Jan 10 10:08	30° \approx 00'	
minimum elong	4259 Jan 30 19:16	10° \approx 26'47	2°37'50	inferior conj	4260 Jan 15 05:20	24° \approx 08'15	2°00'09
min. Earth dist.	4259 Jan 31 08:54	9° \approx 39'53	0.67672 AU	minimum elong	4260 Jan 15 03:03	24° \approx 16'10	1°59'22
morning rise	4259 Feb 05 01:05	4° \approx 05'09		min. Earth dist.	4260 Jan 15 04:42	24° \approx 10'24	0.68001 AU
direct	4259 Feb 10 10:46	1° \approx 42'07		morning rise	4260 Jan 20 08:59	17° \approx 57'26	
morning max el	4259 Feb 21 07:08	8° \approx 10'09	23°54'58	direct	4260 Jan 25 03:50	15° \approx 56'17	
desc. node	4259 Feb 27 21:59	15° \approx 44'03		morning max el	4260 Feb 03 17:53	21° \approx 35'22	22°26'12
	4259 Mar 10 09:26	0° \approx			4260 Feb 10 23:14	0° \approx	
morning set	4259 Mar 28 20:46	29° \approx 13'14		desc. node	4260 Feb 14 19:02	5° \approx 04'37	
	4259 Mar 29 07:39	0° \approx			4260 Mar 02 16:36	0° \approx	
max. Earth dist.	4259 Apr 01 16:07	5° \approx 52'12	1.38418 AU	morning set	4260 Mar 08 10:44	9° \approx 12'10	
				max. Earth dist.	4260 Mar 13 12:31	17° \approx 38'06	1.40598 AU
					4260 Mar 20 14:57	0° \approx	
superior conj	4259 Apr 08 22:34	19° \approx 13'44	-1°36'17				
minimum elong	4259 Apr 09 03:19	19° \approx 36'15	1°35'42	superior conj	4260 Mar 21 07:32	1° \approx 14'26	-1°57'12
	4259 Apr 14 12:26	0° \approx		minimum elong	4260 Mar 21 11:47	1° \approx 33'32	1°56'54
evening rise	4259 Apr 17 22:50	6° \approx 44'13		evening rise	4260 Mar 31 10:38	20° \approx 00'17	
asc. node	4259 Apr 20 00:18	10° \approx 45'09		asc. node	4260 Apr 05 21:20	0° \approx 06'03	
	4259 May 01 10:45	0° \approx			4260 Apr 05 20:00	0° \approx	
evening max el	4259 May 04 08:51	3° \approx 17'46	18°53'57	evening max el	4260 Apr 16 14:49	15° \approx 52'55	18°20'39
retrograde	4259 May 12 18:54	7° \approx 24'53		retrograde	4260 Apr 23 21:36	19° \approx 30'09	
evening set	4259 May 14 21:34	7° \approx 10'21		evening set	4260 Apr 26 06:57	19° \approx 07'45	
inferior conj	4259 May 22 23:01	2° \approx 52'50	1°07'15	inferior conj	4260 May 03 13:06	14° \approx 30'26	2°25'07
minimum elong	4259 May 23 01:30	2° \approx 48'22	1°06'24	minimum elong	4260 May 03 16:44	14° \approx 22'49	2°24'10
min. Earth dist.	4259 May 26 02:47	0° \approx 38'21	0.56898 AU	min. Earth dist.	4260 May 06 23:41	11° \approx 39'01	0.58893 AU
desc. node	4259 May 26 21:13	0° \approx 07'29		morning rise	4260 May 10 23:34	8° \approx 55'53	
	4259 May 27 01:47	30° \approx 00'		desc. node	4260 May 12 18:14	8° \approx 05'43	
morning rise	4259 May 31 02:12	27° \approx 49'03		direct	4260 May 17 04:06	7° \approx 13'23	
direct	4259 Jun 05 09:53	26° \approx 41'10		morning max el	4260 May 31 13:34	15° \approx 00'03	27°12'09
	4259 Jun 14 17:58	0° \approx			4260 Jun 12 16:07	0° \approx	
morning max el	4259 Jun 19 17:42	4° \approx 07'20	26°01'32		4260 Jun 29 15:57	0° \approx	
	4259 Jul 08 09:12	0° \approx		morning set	4260 Jul 01 04:53	3° \approx 11'27	
asc. node	4259 Jul 16 23:35	16° \approx 41'39		asc. node	4260 Jul 02 20:39	6° \approx 41'51	
morning set	4259 Jul 17 19:53	18° \approx 28'23					
	4259 Jul 23 03:31	0° \approx		superior conj	4260 Jul 08 06:39	18° \approx 31'00	0°54'08
superior conj	4259 Jul 24 18:47	3° \approx 36'11	1°13'41	minimum elong	4260 Jul 08 04:35	18° \approx 19'35	0°53'45
minimum elong	4259 Jul 24 16:27	3° \approx 23'21	1°13'19	max. Earth dist.	4260 Jul 07 23:16	17° \approx 50'19	1.31996 AU
max. Earth dist.	4259 Jul 25 11:46	5° \approx 09'37	1.32255 AU		4260 Jul 13 12:24	0° \approx	
evening rise	4259 Jul 31 18:16	18° \approx 39'44		evening rise	4260 Jul 15 02:32	3° \approx 23'43	
	4259 Aug 06 10:21	0° \approx			4260 Jul 29 07:18	0° \approx	
desc. node	4259 Aug 22 20:33	26° \approx 42'04		desc. node	4260 Aug 08 17:33	14° \approx 29'11	
	4259 Aug 25 10:00	0° \approx		evening max el	4260 Aug 13 03:44	19° \approx 10'24	26°20'09
evening max el	4259 Sep 01 03:30	7° \approx 23'23	27°10'04	retrograde	4260 Aug 27 03:01	26° \approx 19'57	
retrograde	4259 Sep 14 23:58	14° \approx 36'22		evening set	4260 Sep 02 16:49	24° \approx 33'17	
evening set	4259 Sep 22 02:40	12° \approx 19'08		min. Earth dist.	4260 Sep 06 16:57	21° \approx 58'17	0.59378 AU
min. Earth dist.	4259 Sep 25 17:53	9° \approx 35'09	0.61444 AU	inferior conj	4260 Sep 09 23:24	19° \approx 27'34	-4°52'27
inferior conj	4259 Sep 28 20:11	6° \approx 51'30	-4°07'49	minimum elong	4260 Sep 10 04:08	19° \approx 18'25	4°51'46
minimum elong	4259 Sep 29 02:13	6° \approx 38'10	4°06'17	morning rise	4260 Sep 17 17:38	14° \approx 54'55	
morning rise	4259 Oct 06 03:37	1° \approx 56'24		direct	4260 Sep 20 02:57	14° \approx 35'00	
direct	4259 Oct 08 11:59	1° \approx 33'30		morning max el	4260 Sep 27 22:48	18° \approx 22'32	18°22'00
asc. node	4259 Oct 12 22:46	2° \approx 59'03		asc. node	4260 Sep 28 19:51	19° \approx 15'44	
morning max el	4259 Oct 15 12:59	5° \approx 05'16	17°56'23		4260 Oct 06 09:44	0° \approx	
morning set	4259 Oct 31 08:03	29° \approx 55'59		morning set	4260 Oct 13 21:55	13° \approx 48'25	
	4259 Oct 31 08:55	0° \approx			4260 Oct 22 11:17	0° \approx	
superior conj	4259 Nov 10 17:45	18° \approx 37'39	0°54'52	superior conj	4260 Oct 23 01:14	1° \approx 04'15	1°21'07
minimum elong	4259 Nov 10 21:46	18° \approx 55'07	0°54'20	minimum elong	4260 Oct 23 04:56	1° \approx 21'15	1°20'44
	4259 Nov 17 10:25	0° \approx		max. Earth dist.	4260 Oct 30 13:44	14° \approx 26'29	1.40610 AU
max. Earth dist.	4259 Nov 18 06:01	1° \approx 20'59	1.42544 AU	evening rise	4260 Nov 04 02:22	22° \approx 03'32	
desc. node	4259 Nov 18 19:50	2° \approx 17'50		desc. node	4260 Nov 04 16:53	23° \approx 03'10	
evening rise	4259 Nov 24 14:29	11° \approx 35'38			4260 Nov 09 00:26	0° \approx	
	4259 Dec 06 16:20	0° \approx			4260 Nov 29 18:00	0° \approx	
evening max el	4259 Dec 26 22:31	26° \approx 39'23	22°07'49	evening max el	4260 Dec 08 13:33	10° \approx 16'42	23°27'27
	4259 Dec 30 17:11	0° \approx		retrograde	4260 Dec 19 03:17	16° \approx 31'50	

evening set	4260 Dec 24 03:24	14° ♄ 27'37			4261 Nov 29 07:37	0° ♄	
asc. node	4260 Dec 25 19:04	12° ♄ 51'01		retrograde	4261 Dec 02 17:13	0° ♄ 43'24	
min. Earth dist.	4260 Dec 29 01:33	8° ♄ 42'24	0.67968 AU		4261 Dec 05 20:55	30° ♄	
inferior conj	4260 Dec 29 13:07	8° ♄ 02'42	1°14'41	evening set	4261 Dec 08 06:55	28° ♄ 24'00	
minimum elong	4260 Dec 29 11:29	8° ♄ 08'18	1°14'03	asc. node	4261 Dec 12 16:06	23° ♄ 28'46	
morning rise	4261 Jan 03 19:32	1° ♄ 56'02		min. Earth dist.	4261 Dec 12 20:59	23° ♄ 12'43	0.67582 AU
direct	4261 Jan 08 00:13	0° ♄ 17'38		inferior conj	4261 Dec 13 19:19	21° ♄ 58'44	0°23'09
morning max el	4261 Jan 16 10:11	5° ♄ 09'54	21°03'41	minimum elong	4261 Dec 13 18:45	22° ♄ 00'37	0°22'54
desc. node	4261 Jan 31 16:05	24° ♄ 54'45		morning rise	4261 Dec 19 06:42	15° ♄ 58'26	
	4261 Feb 04 03:19	0° ♄		direct	4261 Dec 22 22:31	14° ♄ 41'25	
morning set	4261 Feb 15 20:48	17° ♄ 53'42		morning max el	4261 Dec 30 10:12	18° ♄ 55'40	19°53'06
	4261 Feb 23 10:35	0° ♄			4262 Jan 08 07:10	0° ♄	
max. Earth dist.	4261 Feb 23 14:57	0° ♄ 17'50	1.42598 AU	desc. node	4262 Jan 18 13:07	15° ♄ 06'13	
				morning set	4262 Jan 25 16:51	26° ♄ 02'55	
superior conj	4261 Mar 02 18:28	12° ♄ 12'42	-2°07'38		4262 Jan 28 06:08	0° ♄	
minimum elong	4261 Mar 02 19:29	12° ♄ 17'00	2°07'36	max. Earth dist.	4262 Feb 06 01:24	13° ♄ 50'00	1.44149 AU
	4261 Mar 12 22:02	0° ♄					
evening rise	4261 Mar 14 08:14	2° ♄ 33'27		superior conj	4262 Feb 11 03:46	22° ♄ 01'56	-2°02'07
asc. node	4261 Mar 23 18:22	19° ♄ 01'11		minimum elong	4262 Feb 10 22:52	21° ♄ 42'04	2°01'54
evening max el	4261 Mar 31 01:50	28° ♄ 53'16	18°07'10		4262 Feb 16 00:17	0° ♄	
	4261 Apr 01 07:18	0° ♄		evening rise	4262 Feb 24 11:14	14° ♄ 15'18	
retrograde	4261 Apr 06 16:58	2° ♄ 16'41			4262 Mar 05 18:57	0° ♄	
evening set	4261 Apr 09 08:49	1° ♄ 44'01		asc. node	4262 Mar 10 15:24	7° ♄ 22'30	
	4261 Apr 12 07:24	30° ♄		evening max el	4262 Mar 14 14:40	12° ♄ 10'12	18°12'49
inferior conj	4261 Apr 15 22:57	26° ♄ 46'09	3°11'51	retrograde	4262 Mar 21 00:43	15° ♄ 34'35	
minimum elong	4261 Apr 16 01:33	26° ♄ 39'49	3°11'25	evening set	4262 Mar 23 22:34	14° ♄ 50'20	
min. Earth dist.	4261 Apr 19 03:24	23° ♄ 42'35	0.61087 AU	inferior conj	4262 Mar 30 00:39	9° ♄ 32'44	3°32'56
morning rise	4261 Apr 22 16:19	20° ♄ 51'32		minimum elong	4262 Mar 30 01:33	9° ♄ 30'18	3°32'53
direct	4261 Apr 29 09:57	18° ♄ 35'27		min. Earth dist.	4262 Apr 01 15:52	6° ♄ 40'49	0.63171 AU
desc. node	4261 Apr 29 15:16	18° ♄ 35'36		morning rise	4262 Apr 05 03:27	3° ♄ 26'49	
morning max el	4261 May 13 15:36	26° ♄ 32'15	27°48'12	direct	4262 Apr 12 00:42	0° ♄ 47'03	
	4261 May 16 21:38	0° ♄		desc. node	4262 Apr 16 12:17	1° ♄ 46'09	
	4261 Jun 06 05:38	0° ♄		morning max el	4262 Apr 25 22:44	8° ♄ 45'31	27°46'40
morning set	4261 Jun 15 09:46	17° ♄ 39'29			4262 May 12 09:09	0° ♄	
asc. node	4261 Jun 19 17:41	26° ♄ 47'59			4262 May 29 11:06	0° ♄	
	4261 Jun 21 05:05	0° ♄		morning set	4262 May 30 08:21	1° ♄ 45'58	
max. Earth dist.	4261 Jun 21 09:35	0° ♄ 24'31	1.32155 AU	max. Earth dist.	4262 Jun 04 15:00	12° ♄ 40'54	1.32744 AU
				asc. node	4262 Jun 06 14:42	16° ♄ 56'08	
superior conj	4261 Jun 22 17:28	3° ♄ 18'54	0°30'55				
minimum elong	4261 Jun 22 16:07	3° ♄ 11'28	0°30'38	superior conj	4262 Jun 07 01:30	17° ♄ 54'23	0°04'43
evening rise	4261 Jun 29 13:32	18° ♄ 12'46		minimum elong	4262 Jun 07 01:16	17° ♄ 53'08	0°04'40
	4261 Jul 05 08:10	0° ♄		behind sun begin	4262 Jun 06 20:12	17° ♄ 25'49	
	4261 Jul 25 16:29	0° ♄		behind sun end	4262 Jun 07 06:20	18° ♄ 20'28	
evening max el	4261 Jul 25 20:42	0° ♄ 10'08	25°01'41		4262 Jun 12 15:32	0° ♄	
desc. node	4261 Jul 26 14:34	0° ♄ 51'57		evening rise	4262 Jun 14 01:24	3° ♄ 00'49	
retrograde	4261 Aug 08 19:27	7° ♄ 13'32			4262 Jun 28 17:47	0° ♄	
evening set	4261 Aug 14 07:04	6° ♄ 05'00		evening max el	4262 Jul 07 09:37	10° ♄ 38'00	23°26'36
min. Earth dist.	4261 Aug 19 08:19	3° ♄ 20'34	0.57391 AU	desc. node	4262 Jul 13 11:33	15° ♄ 18'31	
inferior conj	4261 Aug 22 07:20	1° ♄ 22'05	-5°12'23	retrograde	4262 Jul 20 23:10	17° ♄ 25'34	
minimum elong	4261 Aug 22 07:42	1° ♄ 21'28	5°12'23	evening set	4262 Jul 24 23:09	16° ♄ 50'34	
	4261 Aug 24 09:30	30° ♄		min. Earth dist.	4262 Jul 31 19:20	13° ♄ 40'48	0.55798 AU
morning rise	4261 Aug 30 10:44	27° ♄ 11'35		inferior conj	4262 Aug 02 19:10	12° ♄ 30'03	-4°51'42
direct	4261 Sep 02 00:21	26° ♄ 52'27		minimum elong	4262 Aug 02 13:23	12° ♄ 38'39	4°50'52
	4261 Sep 09 17:49	0° ♄		morning rise	4262 Aug 11 06:01	8° ♄ 36'17	
morning max el	4261 Sep 11 00:04	1° ♄ 06'25	19°08'48	direct	4262 Aug 14 02:38	8° ♄ 16'16	
asc. node	4261 Sep 15 16:55	6° ♄ 37'01		morning max el	4262 Aug 24 14:06	13° ♄ 08'13	20°17'27
morning set	4261 Sep 27 21:05	28° ♄ 07'06		asc. node	4262 Sep 02 13:57	24° ♄ 48'42	
	4261 Sep 28 19:49	0° ♄			4262 Sep 05 13:53	0° ♄	
				morning set	4262 Sep 12 02:30	12° ♄ 43'41	
superior conj	4261 Oct 06 02:50	14° ♄ 23'37	1°36'54				
minimum elong	4261 Oct 06 05:04	14° ♄ 34'28	1°36'46	superior conj	4262 Sep 19 17:35	28° ♄ 21'50	1°43'38
max. Earth dist.	4261 Oct 12 18:22	26° ♄ 50'46	1.38522 AU	minimum elong	4262 Sep 19 18:10	28° ♄ 24'49	1°43'37
	4261 Oct 14 12:34	0° ♄			4262 Sep 20 13:05	0° ♄	
evening rise	4261 Oct 16 13:33	3° ♄ 35'04		max. Earth dist.	4262 Sep 25 00:46	8° ♄ 48'41	1.36523 AU
desc. node	4261 Oct 22 13:54	13° ♄ 42'03		evening rise	4262 Sep 28 21:55	16° ♄ 05'04	
	4261 Nov 02 03:36	0° ♄			4262 Oct 06 21:34	0° ♄	
evening max el	4261 Nov 21 02:29	23° ♄ 58'01	24°45'57	desc. node	4262 Oct 09 10:54	4° ♄ 10'03	

	4262 Oct 27 15:43	0°♊		evening max el	4263 Oct 17 03:31	21°♊18'58	26°50'23
evening max el	4262 Nov 03 14:58	7°♊40'56	25°56'02	retrograde	4263 Oct 30 06:09	28°♊35'16	
retrograde	4262 Nov 16 02:19	14°♊46'38		evening set	4263 Nov 05 22:11	25°♊55'01	
evening set	4262 Nov 22 05:51	12°♊14'20		min. Earth dist.	4263 Nov 09 22:10	21°♊54'47	0.65761 AU
min. Earth dist.	4262 Nov 26 12:36	7°♊38'17	0.66850 AU	inferior conj	4263 Nov 11 19:24	19°♊43'05	-1°33'43
inferior conj	4262 Nov 27 22:04	5°♊53'21	-0°33'27	minimum elong	4263 Nov 11 22:01	19°♊35'26	1°32'37
minimum elong	4262 Nov 27 22:57	5°♊50'35	0°33'04	asc. node	4263 Nov 16 10:11	15°♊01'42	
asc. node	4262 Nov 29 13:09	3°♊53'28		morning rise	4263 Nov 17 22:40	14°♊03'19	
morning rise	4262 Dec 03 16:29	0°♊01'57		direct	4263 Nov 20 18:21	13°♊19'31	
	4262 Dec 03 17:46	30°♋♊		morning max el	4263 Nov 27 07:18	16°♊51'38	18°17'52
direct	4262 Dec 06 21:13	29°♋03'23			4263 Dec 07 00:29	0°♊	
	4262 Dec 10 03:36	0°♊		morning set	4263 Dec 16 11:07	15°♊09'53	
morning max el	4262 Dec 13 17:52	2°♊51'07	18°57'22	desc. node	4263 Dec 23 07:11	26°♊10'16	
	4263 Jan 01 20:56	0°♋			4263 Dec 25 16:50	0°♋	
morning set	4263 Jan 05 00:07	4°♋53'37					
desc. node	4263 Jan 05 10:09	5°♋32'47		superior conj	4263 Dec 31 16:51	9°♋29'07	-0°55'33
max. Earth dist.	4263 Jan 19 18:00	27°♋58'28	1.45069 AU	minimum elong	4263 Dec 31 09:57	9°♋02'01	0°54'39
	4263 Jan 21 00:53	0°♌		max. Earth dist.	4264 Jan 02 13:11	12°♋23'17	1.45260 AU
					4264 Jan 13 19:20	0°♌	
superior conj	4263 Jan 21 14:12	0°♌52'29	-1°37'03	evening rise	4264 Jan 16 21:41	4°♌50'49	
minimum elong	4263 Jan 21 05:01	0°♌16'15	1°36'11	greatest brilliancy	4264 Jan 28 02:41	22°♌17'48	-0.8m
evening rise	4263 Feb 05 15:51	24°♌59'49			4264 Feb 02 06:46	0°♍	
	4263 Feb 08 17:34	0°♍		evening max el	4264 Feb 09 10:58	9°♍05'43	19°18'09
asc. node	4263 Feb 25 12:25	24°♍58'58		asc. node	4264 Feb 12 09:26	11°♍38'22	
evening max el	4263 Feb 26 02:27	25°♍35'39	18°36'52	retrograde	4264 Feb 16 12:52	13°♍08'32	
retrograde	4263 Mar 04 16:31	29°♍13'51		evening set	4264 Feb 19 23:45	11°♍58'49	
evening set	4263 Mar 07 20:28	28°♍17'15		inferior conj	4264 Feb 25 12:01	6°♍07'14	3°21'26
inferior conj	4263 Mar 13 14:08	22°♍41'34	3°34'32	minimum elong	4264 Feb 25 10:14	6°♍12'59	3°21'12
minimum elong	4263 Mar 13 13:28	22°♍43'37	3°34'31	min. Earth dist.	4264 Feb 26 20:29	4°♍22'17	0.66338 AU
min. Earth dist.	4263 Mar 15 13:48	20°♍18'22	0.64950 AU	morning rise	4264 Mar 01 20:26	29°♌53'11	
morning rise	4263 Mar 19 05:56	16°♍29'53			4264 Mar 01 17:25	30°♌♌	
direct	4263 Mar 25 22:50	13°♍39'54		direct	4264 Mar 08 03:32	27°♌05'56	
desc. node	4263 Apr 03 09:19	17°♍07'27			4264 Mar 15 12:01	0°♍	
morning max el	4263 Apr 08 08:31	21°♍30'49	27°10'33	desc. node	4264 Mar 20 06:22	4°♍06'14	
	4263 Apr 15 17:54	0°♎		morning max el	4264 Mar 20 18:24	4°♍36'19	26°06'57
	4263 May 05 13:15	0°♏			4264 Apr 09 04:40	0°♎	
morning set	4263 May 13 21:44	15°♏21'25		morning set	4264 Apr 25 22:08	28°♎15'03	
max. Earth dist.	4263 May 18 11:37	24°♏28'11	1.33780 AU		4264 Apr 26 20:37	0°♏	
	4263 May 21 03:50	0°♐		max. Earth dist.	4264 Apr 29 20:42	5°♏43'54	1.35275 AU
superior conj	4263 May 22 04:40	2°♐10'16	-0°23'41	superior conj	4264 May 05 00:35	16°♏00'00	-0°53'00
minimum elong	4263 May 22 05:54	2°♐16'46	0°23'26	minimum elong	4264 May 05 03:27	16°♏14'33	0°52'29
asc. node	4263 May 24 11:43	7°♐01'38		asc. node	4264 May 10 08:44	27°♏00'34	
evening rise	4263 May 29 12:10	17°♐40'43			4264 May 11 19:23	0°♐	
	4263 Jun 04 15:24	0°♑		evening rise	4264 May 12 19:53	2°♐06'21	
evening max el	4263 Jun 19 01:58	21°♑04'52	21°50'57		4264 May 29 06:59	0°♑	
desc. node	4263 Jun 30 08:33	27°♑14'21		evening max el	4264 May 31 04:48	2°♑01'14	20°27'30
retrograde	4263 Jul 01 15:52	27°♑18'19		retrograde	4264 Jun 11 05:02	7°♑24'01	
evening set	4263 Jul 04 07:38	27°♑02'27		evening set	4264 Jun 13 04:59	7°♑14'07	
min. Earth dist.	4263 Jul 13 05:38	23°♑13'44	0.54916 AU	desc. node	4264 Jun 16 05:34	6°♑24'36	
inferior conj	4263 Jul 13 15:52	22°♑59'25	-3°40'13	inferior conj	4264 Jun 22 09:52	3°♑16'26	-1°49'28
minimum elong	4263 Jul 13 07:17	23°♑11'26	3°37'49	minimum elong	4264 Jun 22 04:44	3°♑23'53	1°47'36
morning rise	4263 Jul 22 08:24	19°♑07'54		min. Earth dist.	4264 Jun 23 17:40	2°♑30'14	0.54969 AU
direct	4263 Jul 25 14:13	18°♑44'48			4264 Jun 28 14:02	30°♒♐	
morning max el	4263 Aug 06 16:22	24°♑24'42	21°45'59	morning rise	4264 Jul 01 03:30	29°♐06'16	
	4263 Aug 11 17:31	0°♓		direct	4264 Jul 05 00:02	28°♐34'09	
asc. node	4263 Aug 20 10:58	13°♓38'44			4264 Jul 11 04:54	0°♑	
morning set	4263 Aug 27 11:49	27°♓31'25		morning max el	4264 Jul 18 09:40	5°♑04'00	23°27'23
	4263 Aug 28 16:12	0°♑			4264 Aug 04 19:07	0°♓	
				asc. node	4264 Aug 06 08:00	2°♓57'28	
superior conj	4263 Sep 03 17:32	12°♑47'13	1°42'48	morning set	4264 Aug 10 23:09	12°♓24'28	
minimum elong	4263 Sep 03 16:43	12°♑42'59	1°42'46				
max. Earth dist.	4263 Sep 07 13:43	20°♑42'18	1.34805 AU	superior conj	4264 Aug 17 23:37	27°♓30'04	1°35'37
evening rise	4263 Sep 11 23:17	29°♑23'00		minimum elong	4264 Aug 17 21:51	27°♓20'30	1°35'28
	4263 Sep 12 07:01	0°♒			4264 Aug 19 03:35	0°♑	
desc. node	4263 Sep 26 07:54	24°♒21'31		max. Earth dist.	4264 Aug 20 11:24	2°♑49'04	1.33481 AU
	4263 Sep 30 00:56	0°♒		evening rise	4264 Aug 25 13:27	13°♑17'20	

	4264 Sep 03 11:48	0°♄		superior conj	4265 Aug 02 09:30	12°♄22'55	1°23'04
desc. node	4264 Sep 12 04:55	14°♄08'35		minimum elong	4265 Aug 02 07:14	12°♄10'29	1°22'46
	4264 Sep 24 03:46	0°♄		max. Earth dist.	4265 Aug 03 17:03	15°♄15'09	1.32582 AU
evening max el	4264 Sep 28 15:28	4°♄41'35	27°21'45	evening rise	4265 Aug 09 12:53	27°♄38'13	
retrograde	4264 Oct 12 04:15	12°♄00'05			4265 Aug 10 16:40	0°♄	
evening set	4264 Oct 19 05:23	9°♄20'02			4265 Aug 27 18:21	0°♄	
min. Earth dist.	4264 Oct 22 23:31	5°♄54'10	0.64322 AU	desc. node	4265 Aug 30 01:56	3°♄21'13	
inferior conj	4264 Oct 25 08:54	3°♄21'55	-2°35'40	evening max el	4265 Sep 11 01:05	17°♄37'01	27°23'51
minimum elong	4264 Oct 25 13:19	3°♄10'11	2°34'00	retrograde	4265 Sep 24 19:40	24°♄52'07	
	4264 Oct 28 19:01	30°♄		evening set	4265 Oct 02 00:06	22°♄23'16	
morning rise	4264 Oct 31 22:31	27°♄56'46		min. Earth dist.	4265 Oct 05 15:00	19°♄26'32	0.62571 AU
asc. node	4264 Nov 02 07:14	27°♄30'59		inferior conj	4265 Oct 08 11:46	16°♄43'26	-3°35'56
direct	4264 Nov 03 11:32	27°♄23'50		minimum elong	4265 Oct 08 17:33	16°♄29'41	3°34'10
	4264 Nov 09 02:35	0°♄		morning rise	4265 Oct 15 12:37	11°♄36'05	
morning max el	4264 Nov 09 23:39	0°♄49'33	17°55'19	direct	4265 Oct 17 21:46	11°♄10'24	
morning set	4264 Nov 27 02:39	26°♄49'44		asc. node	4265 Oct 20 04:17	11°♄34'26	
	4264 Nov 28 23:37	0°♄		morning max el	4265 Oct 24 15:57	14°♄37'47	17°50'30
desc. node	4264 Dec 09 04:13	16°♄54'10			4265 Nov 04 06:35	0°♄	
				morning set	4265 Nov 09 16:55	9°♄34'50	
superior conj	4264 Dec 10 08:14	18°♄47'31	-0°08'05				
minimum elong	4264 Dec 10 07:17	18°♄43'42	0°07'57	superior conj	4265 Nov 21 00:42	29°♄19'43	0°34'41
behind sun begin	4264 Dec 09 22:19	18°♄07'28		minimum elong	4265 Nov 21 03:50	29°♄32'59	0°34'15
behind sun end	4264 Dec 10 16:15	19°♄19'52			4265 Nov 21 10:14	0°♄	
max. Earth dist.	4264 Dec 15 07:46	26°♄45'22	1.44712 AU	desc. node	4265 Nov 26 01:16	7°♄41'05	
	4264 Dec 17 09:05	0°♄		max. Earth dist.	4265 Nov 27 23:32	10°♄49'24	1.43500 AU
evening rise	4264 Dec 26 10:50	14°♄06'00		evening rise	4265 Dec 05 21:29	23°♄21'37	
	4265 Jan 05 21:48	0°♄			4265 Dec 10 05:09	0°♄	
greatest brilliancy	4265 Jan 09 22:38	5°♄59'14	-0.6m		4265 Dec 31 04:31	0°♄	
evening max el	4265 Jan 22 14:41	22°♄37'55	20°14'54	evening max el	4266 Jan 05 12:59	6°♄11'38	21°24'05
asc. node	4265 Jan 29 06:29	27°♄06'03		retrograde	4266 Jan 14 08:38	11°♄25'31	
retrograde	4265 Jan 30 10:57	27°♄13'41		asc. node	4266 Jan 16 03:32	11°♄08'12	
evening set	4265 Feb 03 06:10	25°♄49'49		evening set	4266 Jan 18 13:52	9°♄46'25	
inferior conj	4265 Feb 08 15:27	19°♄44'53	2°56'56	inferior conj	4266 Jan 23 22:06	3°♄31'00	2°23'11
minimum elong	4265 Feb 08 13:05	19°♄52'53	2°56'23	minimum elong	4266 Jan 23 19:39	3°♄39'28	2°22'25
min. Earth dist.	4265 Feb 09 10:03	18°♄41'52	0.67306 AU	min. Earth dist.	4266 Jan 24 04:12	3°♄09'54	0.67866 AU
morning rise	4265 Feb 13 19:47	13°♄30'47			4266 Jan 26 13:12	30°♄	
direct	4265 Feb 19 13:49	10°♄56'38		morning rise	4266 Jan 29 01:16	27°♄18'38	
morning max el	4265 Mar 03 03:05	17°♄51'11	24°45'33	direct	4266 Feb 03 04:46	25°♄04'19	
desc. node	4265 Mar 07 03:25	22°♄14'53			4266 Feb 12 06:37	0°♄	
	4265 Mar 13 07:33	0°♄		morning max el	4266 Feb 13 11:59	1°♄11'33	23°16'44
	4265 Apr 02 05:42	0°♄		desc. node	4266 Feb 22 00:29	11°♄13'21	
morning set	4265 Apr 08 04:29	10°♄12'51			4266 Mar 07 06:34	0°♄	
max. Earth dist.	4265 Apr 11 19:25	16°♄44'18	1.37184 AU	morning set	4266 Mar 20 10:38	20°♄58'04	
				max. Earth dist.	4266 Mar 24 14:27	28°♄04'30	1.39352 AU
superior conj	4265 Apr 18 10:13	29°♄15'47	-1°21'24		4266 Mar 25 16:53	0°♄	
minimum elong	4265 Apr 18 14:30	29°♄36'39	1°20'46				
	4265 Apr 18 19:17	0°♄		superior conj	4266 Apr 01 05:34	11°♄47'15	-1°46'07
evening rise	4265 Apr 26 22:14	16°♄11'10		minimum elong	4266 Apr 01 10:22	12°♄09'29	1°45'38
asc. node	4265 Apr 27 05:47	16°♄48'51		evening rise	4266 Apr 10 16:19	29°♄47'13	
	4265 May 04 03:34	0°♄			4266 Apr 10 18:58	0°♄	
evening max el	4265 May 13 20:05	13°♄39'26	19°22'25	asc. node	4266 Apr 14 02:50	6°♄21'09	
retrograde	4265 May 23 02:47	18°♄10'30		evening max el	4266 Apr 26 21:39	25°♄55'46	18°37'22
evening set	4265 May 25 02:27	17°♄59'00		retrograde	4266 May 04 18:22	29°♄47'44	
inferior conj	4265 Jun 02 15:25	13°♄51'56	0°08'14	evening set	4266 May 07 00:00	29°♄30'05	
minimum elong	4265 Jun 02 15:46	13°♄51'22	0°08'06	inferior conj	4266 May 14 16:58	25°♄04'25	1°44'19
transit middle	4265 Jun 02 15:46	13°♄51'22	0°08'06	minimum elong	4266 May 14 20:18	24°♄58'02	1°43'15
transit begin	4265 Jun 02 12:26	13°♄56'49		min. Earth dist.	4266 May 18 01:37	22°♄31'38	0.57702 AU
transit end	4265 Jun 02 19:06	13°♄45'54		desc. node	4266 May 20 23:39	20°♄36'21	
desc. node	4265 Jun 03 02:36	13°♄33'35		morning rise	4266 May 22 13:23	19°♄46'49	
min. Earth dist.	4265 Jun 05 08:03	12°♄06'46	0.55967 AU	direct	4266 May 28 06:56	18°♄24'38	
morning rise	4265 Jun 11 02:09	9°♄08'46		morning max el	4266 Jun 11 15:49	26°♄00'18	26°35'22
direct	4265 Jun 15 20:32	8°♄16'59			4266 Jun 15 09:59	0°♄	
morning max el	4265 Jun 29 23:31	15°♄26'51	25°09'05		4266 Jul 04 21:15	0°♄	
	4265 Jul 11 15:17	0°♄		morning set	4266 Jul 10 21:21	12°♄05'43	
asc. node	4265 Jul 24 05:04	22°♄37'14		asc. node	4266 Jul 11 02:07	12°♄30'53	
morning set	4265 Jul 26 10:53	27°♄18'00					
	4265 Jul 27 17:16	0°♄		superior conj	4266 Jul 17 21:07	27°♄17'55	1°05'53

minimum elong	4266 Jul 17 18:50	27° Ω 05'21	1°05'30	max. Earth dist.	4267 Jul 01 15:08	10° Ω 32'49	1.32016 AU
max. Earth dist.	4266 Jul 18 03:32	27° Ω 53'18	1.32096 AU				
	4266 Jul 19 02:30	0° Ω		superior conj	4267 Jul 02 08:42	12° Ω 09'34	0°44'42
evening rise	4266 Jul 24 18:35	12° Ω 15'25		minimum elong	4267 Jul 02 06:53	11° Ω 59'32	0°44'20
	4266 Aug 02 20:13	0° Π		evening rise	4267 Jul 09 04:14	27° Ω 01'40	
desc. node	4266 Aug 16 22:57	21° Π 44'29			4267 Jul 10 14:06	0° Ω	
evening max el	4266 Aug 24 05:31	29° Π 51'22	26°52'53		4267 Jul 27 14:43	0° Π	
	4266 Aug 24 09:11	0° Ω		desc. node	4267 Aug 03 19:57	8° Π 58'25	
retrograde	4266 Sep 07 03:14	7° Ω 02'01		evening max el	4267 Aug 06 02:28	11° Π 16'23	25°49'37
evening set	4266 Sep 14 02:01	4° Ω 56'42		retrograde	4267 Aug 20 01:39	18° Π 23'33	
min. Earth dist.	4266 Sep 17 19:41	2° Ω 18'30	0.60578 AU	evening set	4267 Aug 26 06:14	16° Π 52'32	
	4266 Sep 20 14:21	30° \mathbb{R} Π		min. Earth dist.	4267 Aug 30 14:39	14° Π 16'06	0.58508 AU
inferior conj	4266 Sep 21 00:36	29° Π 38'27	-4°28'52	inferior conj	4267 Sep 02 19:49	11° Π 56'50	-5°04'52
minimum elong	4266 Sep 21 06:25	29° Π 26'18	4°27'38	minimum elong	4267 Sep 02 23:06	11° Π 50'53	5°04'34
morning rise	4266 Sep 28 12:44	24° Π 52'19		morning rise	4267 Sep 10 18:12	7° Π 34'03	
direct	4266 Sep 30 21:11	24° Π 30'52		direct	4267 Sep 13 05:09	7° Π 14'35	
asc. node	4266 Oct 07 01:21	27° Π 05'49		morning max el	4267 Sep 21 11:30	11° Π 11'31	18°39'21
morning max el	4266 Oct 08 05:00	28° Π 08'08	18°04'43	asc. node	4267 Sep 23 22:24	13° Π 51'05	
	4266 Oct 09 22:43	0° Ω			4267 Oct 03 23:55	0° Ω	
morning set	4266 Oct 23 23:39	23° Ω 06'48		morning set	4267 Oct 07 17:52	7° Ω 11'11	
	4266 Oct 27 16:25	0° Π					
				superior conj	4267 Oct 16 11:01	23° Ω 58'36	1°29'01
superior conj	4266 Nov 02 19:11	11° Π 07'54	1°07'21	minimum elong	4267 Oct 16 14:10	24° Ω 13'23	1°28'45
minimum elong	4266 Nov 02 23:17	11° Π 26'10	1°06'51		4267 Oct 19 17:05	0° Π	
max. Earth dist.	4266 Nov 10 10:46	24° Π 20'58	1.41765 AU	max. Earth dist.	4267 Oct 23 17:03	7° Π 09'14	1.39723 AU
desc. node	4266 Nov 12 22:17	28° Π 27'45		evening rise	4267 Oct 27 18:53	14° Π 09'47	
	4266 Nov 13 20:50	0° \mathbb{X}		desc. node	4267 Oct 30 19:16	19° Π 10'23	
evening rise	4266 Nov 15 21:13	3° \mathbb{X} 15'45			4267 Nov 06 15:04	0° \mathbb{X}	
	4266 Dec 03 14:15	0° Ω			4267 Nov 28 14:41	0° Ω	
evening max el	4266 Dec 19 06:17	19° Ω 47'22	22°41'25	evening max el	4267 Dec 01 20:02	3° Ω 25'47	24°01'20
retrograde	4266 Dec 29 04:16	25° Ω 40'43		retrograde	4267 Dec 12 20:39	9° Ω 54'55	
evening set	4267 Jan 02 21:12	23° Ω 45'31		evening set	4267 Dec 18 02:34	7° Ω 43'47	
asc. node	4267 Jan 03 00:35	23° Ω 38'25		asc. node	4267 Dec 20 21:37	4° Ω 47'24	
inferior conj	4267 Jan 08 05:59	17° Ω 23'01	1°41'40	min. Earth dist.	4267 Dec 22 21:02	2° Ω 13'07	0.67848 AU
minimum elong	4267 Jan 08 03:56	17° Ω 30'09	1°40'55	inferior conj	4267 Dec 23 13:17	1° Ω 18'06	0°53'29
min. Earth dist.	4267 Jan 08 00:38	17° Ω 41'34	0.68038 AU	minimum elong	4267 Dec 23 12:03	1° Ω 22'16	0°52'59
morning rise	4267 Jan 13 10:33	11° Ω 13'59			4267 Dec 24 12:32	30° \mathbb{R} \mathbb{X}	
direct	4267 Jan 17 23:20	9° Ω 22'30		morning rise	4267 Dec 28 21:34	25° \mathbb{X} 14'07	
morning max el	4267 Jan 27 00:40	14° Ω 40'14	21°49'56	direct	4268 Jan 01 20:33	23° \mathbb{X} 45'17	
	4267 Feb 08 07:55	0° \approx		morning max el	4268 Jan 09 20:15	28° \mathbb{X} 19'55	20°32'01
desc. node	4267 Feb 08 21:31	0° \approx 47'37			4268 Jan 11 10:11	0° Ω	
	4267 Feb 28 06:44	0° \mathbb{H}		desc. node	4268 Jan 26 18:31	20° Ω 47'16	
morning set	4267 Feb 28 12:11	0° \mathbb{H} 21'49			4268 Feb 01 21:46	0° \approx	
max. Earth dist.	4267 Mar 06 13:35	10° \mathbb{H} 15'06	1.41495 AU	morning set	4268 Feb 07 13:36	8° \approx 41'30	
				max. Earth dist.	4268 Feb 16 19:48	23° \approx 19'30	1.43327 AU
superior conj	4267 Mar 14 05:49	23° \mathbb{H} 23'02	-2°03'13		4268 Feb 20 22:06	0° \mathbb{H}	
minimum elong	4267 Mar 14 09:05	23° \mathbb{H} 37'23	2°03'04				
	4267 Mar 17 23:03	0° \mathbb{Y}		superior conj	4268 Feb 23 05:57	3° \mathbb{H} 51'20	-2°07'32
evening rise	4267 Mar 24 22:38	12° \mathbb{Y} 46'28		minimum elong	4268 Feb 23 04:39	3° \mathbb{H} 45'55	2°07'31
asc. node	4267 Mar 31 23:53	25° \mathbb{Y} 32'01		evening rise	4268 Mar 06 12:51	24° \mathbb{H} 58'42	
	4267 Apr 03 16:09	0° \mathbb{B}			4268 Mar 09 09:23	0° \mathbb{Y}	
evening max el	4267 Apr 10 06:10	8° \mathbb{B} 42'30	18°12'26	asc. node	4268 Mar 17 20:54	14° \mathbb{Y} 13'40	
retrograde	4267 Apr 17 04:49	12° \mathbb{B} 12'02		evening max el	4268 Mar 23 18:13	21° \mathbb{Y} 50'06	18°07'11
evening set	4267 Apr 19 17:04	11° \mathbb{B} 45'23		retrograde	4268 Mar 30 06:09	25° \mathbb{Y} 12'37	
inferior conj	4267 Apr 26 15:52	6° \mathbb{B} 58'51	2°48'30	evening set	4268 Apr 02 00:28	24° \mathbb{Y} 35'15	
minimum elong	4267 Apr 26 19:14	6° \mathbb{B} 51'20	2°47'45	inferior conj	4268 Apr 08 08:59	19° \mathbb{Y} 28'40	3°23'30
min. Earth dist.	4267 Apr 30 00:54	3° \mathbb{B} 59'28	0.59827 AU	minimum elong	4268 Apr 08 10:53	19° \mathbb{Y} 23'48	3°23'17
morning rise	4267 May 03 18:54	1° \mathbb{B} 14'35		min. Earth dist.	4268 Apr 11 08:17	16° \mathbb{Y} 27'23	0.62000 AU
	4267 May 06 08:35	30° \mathbb{R} \mathbb{Y}		morning rise	4268 Apr 14 19:43	13° \mathbb{Y} 27'59	
desc. node	4267 May 07 20:41	29° \mathbb{Y} 33'22		direct	4268 Apr 21 15:47	11° \mathbb{Y} 00'26	
direct	4267 May 10 06:01	29° \mathbb{Y} 17'26		desc. node	4268 Apr 23 17:42	11° \mathbb{Y} 13'06	
	4267 May 14 06:32	0° \mathbb{B}		morning max el	4268 May 05 19:05	18° \mathbb{Y} 59'32	27°52'07
morning max el	4267 May 24 14:21	7° \mathbb{B} 08'38	27°32'09		4268 May 15 02:33	0° \mathbb{B}	
	4267 Jun 10 19:42	0° Π			4268 Jun 02 16:08	0° Π	
morning set	4267 Jun 25 04:48	26° Π 42'31		morning set	4268 Jun 08 07:19	11° Π 02'13	
	4267 Jun 26 18:23	0° Ω		asc. node	4268 Jun 13 20:11	22° Π 40'55	
asc. node	4267 Jun 27 23:09	2° Ω 33'36		max. Earth dist.	4268 Jun 13 23:53	23° Π 00'53	1.32349 AU

superior conj	4268 Jun 15 18:32	26° Π 52'28	0°20'07			4269 May 25 14:46	0° Π	
minimum elong	4268 Jun 15 17:37	26° Π 47'26	0°19'55	max. Earth dist.		4269 May 28 01:44	5° Π 04'31	1.33122 AU
	4268 Jun 17 04:52	0° \mathfrak{S}						
evening rise	4268 Jun 22 15:49	11° \mathfrak{S} 50'33		superior conj		4269 May 31 00:46	11° Π 20'19	-0°07'09
	4268 Jul 01 20:36	0° Ω		minimum elong		4269 May 31 01:08	11° Π 22'14	0°07'06
evening max el	4268 Jul 17 16:45	21° Ω 58'31	24°22'17	behind sun begin		4269 May 30 20:16	10° Π 56'17	
desc. node	4268 Jul 20 16:57	24° Ω 35'53		behind sun end		4269 May 31 05:59	11° Π 48'12	
retrograde	4268 Jul 31 13:14	28° Ω 57'54		asc. node		4269 May 31 17:12	12° Π 48'17	
evening set	4268 Aug 05 10:16	28° Ω 04'47		evening rise		4269 Jun 07 03:25	26° Π 35'31	
min. Earth dist.	4268 Aug 11 03:38	25° Ω 11'13	0.56636 AU			4269 Jun 08 18:27	0° \mathfrak{S}	
inferior conj	4268 Aug 13 19:01	23° Ω 31'12	-5°09'32			4269 Jun 26 23:55	0° Ω	
minimum elong	4268 Aug 13 16:45	23° Ω 34'47	5°09'24	evening max el		4269 Jun 29 06:09	2° Ω 21'53	22°45'11
morning rise	4268 Aug 22 01:49	19° Ω 29'23		desc. node		4269 Jul 07 13:58	8° Ω 02'07	
direct	4268 Aug 24 18:00	19° Ω 10'12		retrograde		4269 Jul 12 12:06	8° Ω 57'39	
morning max el	4268 Sep 03 08:20	23° Ω 38'49	19°35'31	evening set		4269 Jul 15 20:37	8° Ω 32'59	
	4268 Sep 08 17:18	0° \mathfrak{M}		min. Earth dist.		4269 Jul 23 14:24	5° Ω 08'10	0.55310 AU
asc. node	4268 Sep 09 19:25	1° \mathfrak{M} 35'21		inferior conj		4269 Jul 24 23:24	4° Ω 20'54	-4°27'34
morning set	4268 Sep 20 20:01	21° \mathfrak{M} 38'20		minimum elong		4269 Jul 24 15:41	4° Ω 31'59	4°26'00
	4268 Sep 24 23:22	0° \mathfrak{L}		morning rise		4269 Aug 02 12:54	0° Ω 30'02	
				direct		4269 Aug 05 12:48	0° Ω 09'11	
superior conj	4268 Sep 28 18:48	7° \mathfrak{L} 36'31	1°40'47	morning max el		4269 Aug 16 17:20	5° Ω 21'23	20°52'59
minimum elong	4268 Sep 28 20:20	7° \mathfrak{L} 44'04	1°40'42	asc. node		4269 Aug 27 16:27	20° Ω 04'29	
max. Earth dist.	4268 Oct 04 21:27	19° \mathfrak{L} 18'34	1.37637 AU			4269 Sep 02 00:19	0° \mathfrak{M}	
evening rise	4268 Oct 08 15:32	26° \mathfrak{L} 07'26		morning set		4269 Sep 05 03:19	6° \mathfrak{M} 19'55	
	4268 Oct 10 20:34	0° \mathfrak{M}						
desc. node	4268 Oct 16 16:17	9° \mathfrak{M} 45'18		superior conj		4269 Sep 12 13:53	21° \mathfrak{M} 47'13	1°44'08
	4268 Oct 30 04:06	0° \mathfrak{J}		minimum elong		4269 Sep 12 13:50	21° \mathfrak{M} 46'59	1°44'07
evening max el	4268 Nov 13 08:27	17° \mathfrak{J} 07'50	25°17'10			4269 Sep 16 15:35	0° \mathfrak{L}	
retrograde	4268 Nov 25 08:48	24° \mathfrak{J} 04'01		max. Earth dist.		4269 Sep 17 05:48	1° \mathfrak{L} 10'04	1.35745 AU
evening set	4268 Dec 01 04:24	21° \mathfrak{J} 38'32		evening rise		4269 Sep 21 07:42	8° \mathfrak{L} 59'16	
min. Earth dist.	4268 Dec 05 15:11	16° \mathfrak{J} 42'05	0.67311 AU			4269 Oct 03 11:35	0° \mathfrak{M}	
inferior conj	4268 Dec 06 18:15	15° \mathfrak{J} 14'13	-0°00'19	desc. node		4269 Oct 03 13:18	0° \mathfrak{M} 06'49	
minimum elong	4268 Dec 06 18:16	15° \mathfrak{J} 14'12	0°00'19			4269 Oct 26 00:49	0° \mathfrak{J}	
transit middle	4268 Dec 06 18:16	15° \mathfrak{J} 14'12	0°00'19	evening max el		4269 Oct 26 21:01	0° \mathfrak{J} 49'43	26°21'36
transit begin	4268 Dec 06 15:28	15° \mathfrak{J} 23'15		retrograde		4269 Nov 08 15:53	8° \mathfrak{J} 01'25	
transit end	4268 Dec 06 21:03	15° \mathfrak{J} 05'09		evening set		4269 Nov 15 00:48	5° \mathfrak{J} 25'14	
asc. node	4268 Dec 06 18:38	15° \mathfrak{J} 12'59		min. Earth dist.		4269 Nov 19 04:39	1° \mathfrak{J} 04'07	0.66424 AU
morning rise	4268 Dec 12 08:24	9° \mathfrak{J} 17'21				4269 Nov 20 01:45	30° \mathfrak{R} \mathfrak{M}	
direct	4268 Dec 15 19:09	8° \mathfrak{J} 08'47		inferior conj		4269 Nov 20 18:59	29° \mathfrak{M} 07'17	-0°58'39
morning max el	4268 Dec 22 23:45	12° \mathfrak{J} 10'46	19°27'26	minimum elong		4269 Nov 20 20:34	29° \mathfrak{M} 02'25	0°57'58
greatest brilliancy	4269 Jan 05 04:32	29° \mathfrak{J} 44'53	-0.7m	asc. node		4269 Nov 23 15:40	25° \mathfrak{M} 49'45	
	4269 Jan 05 08:34	0° \mathfrak{Z}		morning rise		4269 Nov 26 16:56	23° \mathfrak{M} 20'12	
desc. node	4269 Jan 12 15:33	11° \mathfrak{Z} 05'42		direct		4269 Nov 29 17:30	22° \mathfrak{M} 28'24	
morning set	4269 Jan 16 11:21	16° \mathfrak{Z} 59'42		morning max el		4269 Dec 06 10:05	26° \mathfrak{M} 08'34	18°38'29
	4269 Jan 24 20:01	0° \approx				4269 Dec 09 18:40	0° \mathfrak{J}	
max. Earth dist.	4269 Jan 29 08:37	7° \approx 07'10	1.44627 AU	morning set		4269 Dec 27 05:30	26° \mathfrak{J} 24'32	
						4269 Dec 29 11:58	0° \mathfrak{Z}	
superior conj	4269 Feb 02 04:32	13° \approx 12'28	-1°53'53	desc. node		4269 Dec 30 12:36	1° \mathfrak{Z} 37'22	
minimum elong	4269 Feb 01 21:13	12° \approx 43'16	1°53'24					
	4269 Feb 12 12:15	0° \mathfrak{H}		superior conj		4270 Jan 12 09:19	21° \mathfrak{Z} 50'56	-1°20'58
evening rise	4269 Feb 16 06:40	6° \mathfrak{H} 16'15		minimum elong		4270 Jan 12 00:16	21° \mathfrak{Z} 15'26	1°19'58
	4269 Mar 03 00:36	0° \mathfrak{Y}		max. Earth dist.		4270 Jan 12 02:23	21° \mathfrak{Z} 23'42	1.45243 AU
asc. node	4269 Mar 04 17:55	2° \mathfrak{Y} 17'13				4270 Jan 17 13:50	0° \approx	
evening max el	4269 Mar 07 06:53	5° \mathfrak{Y} 11'05	18°20'51	evening rise		4270 Jan 28 01:20	16° \approx 36'53	
retrograde	4269 Mar 13 17:45	8° \mathfrak{Y} 40'02		greatest brilliancy		4270 Feb 05 05:13	29° \approx 38'39	-0.8m
evening set	4269 Mar 16 18:03	7° \mathfrak{Y} 50'48				4270 Feb 05 10:36	0° \mathfrak{H}	
inferior conj	4269 Mar 22 16:11	2° \mathfrak{Y} 25'29	3°35'38	evening max el		4270 Feb 18 17:37	18° \mathfrak{H} 39'51	18°52'27
minimum elong	4269 Mar 22 16:22	2° \mathfrak{Y} 24'58	3°35'38	asc. node		4270 Feb 19 14:56	19° \mathfrak{H} 31'36	
	4269 Mar 24 19:09	30° \mathfrak{R} \mathfrak{H}		retrograde		4270 Feb 25 11:46	22° \mathfrak{H} 26'58	
min. Earth dist.	4269 Mar 25 00:58	29° \mathfrak{H} 43'47	0.63975 AU	evening set		4270 Feb 28 18:34	21° \mathfrak{H} 24'55	
morning rise	4269 Mar 28 13:49	26° \mathfrak{H} 16'24		inferior conj		4270 Mar 06 09:38	15° \mathfrak{H} 42'28	3°30'32
direct	4269 Apr 04 10:06	23° \mathfrak{H} 30'13		minimum elong		4270 Mar 06 08:26	15° \mathfrak{H} 46'14	3°30'26
desc. node	4269 Apr 10 14:44	25° \mathfrak{H} 23'07		min. Earth dist.		4270 Mar 08 02:48	13° \mathfrak{H} 34'37	0.65597 AU
	4269 Apr 16 15:32	0° \mathfrak{Y}		morning rise		4270 Mar 11 21:53	9° \mathfrak{H} 29'38	
morning max el	4269 Apr 18 03:41	1° \mathfrak{Y} 27'41	27°35'03	direct		4270 Mar 18 11:20	6° \mathfrak{H} 39'05	
	4269 May 09 06:32	0° \mathfrak{B}		desc. node		4270 Mar 28 11:47	11° \mathfrak{H} 30'04	
morning set	4269 May 23 02:22	24° \mathfrak{B} 56'37		morning max el		4270 Mar 31 13:34	14° \mathfrak{H} 22'45	26°46'12

	4270 Apr 13 06:53	0°♿			4271 Mar 16 06:20	0°♿	
	4270 May 01 23:46	0°♿			4271 Apr 06 23:20	0°♿	
morning set	4270 May 06 10:47	8°♿16'12		morning set	4271 Apr 19 04:11	20°♿47'49	
max. Earth dist.	4270 May 10 17:28	16°♿37'29	1.34362 AU	max. Earth dist.	4271 Apr 22 21:59	27°♿44'47	1.36053 AU
					4271 Apr 24 02:21	0°♿	
superior conj	4270 May 15 01:15	25°♿26'46	-0°36'06				
minimum elong	4270 May 15 03:10	25°♿36'44	0°35'43	superior conj	4271 Apr 28 17:14	9°♿03'20	-1°05'18
	4270 May 17 05:33	0°♿		minimum elong	4271 Apr 28 20:45	9°♿20'55	1°04'41
asc. node	4270 May 18 14:14	2°♿51'57		asc. node	4271 May 05 11:16	22°♿47'03	
evening rise	4270 May 22 13:12	11°♿10'37		evening rise	4271 May 06 18:57	25°♿28'32	
	4270 Jun 01 09:14	0°♿			4271 May 09 00:53	0°♿	
evening max el	4270 Jun 11 02:35	12°♿59'32	21°13'29	evening max el	4271 May 24 10:43	24°♿12'48	19°57'15
retrograde	4270 Jun 23 01:25	18°♿51'54		retrograde	4271 Jun 03 16:41	29°♿12'42	
desc. node	4270 Jun 24 10:59	18°♿47'19		evening set	4271 Jun 05 15:22	29°♿02'41	
evening set	4270 Jun 25 08:19	18°♿39'47		desc. node	4271 Jun 11 08:02	26°♿55'47	
inferior conj	4270 Jul 04 17:11	14°♿41'23	-2°56'25	inferior conj	4271 Jun 14 14:28	25°♿02'13	-0°58'17
minimum elong	4270 Jul 04 09:25	14°♿52'16	2°53'53	minimum elong	4271 Jun 14 11:46	25°♿06'19	0°57'16
min. Earth dist.	4270 Jul 05 01:18	14°♿29'59	0.54824 AU	min. Earth dist.	4271 Jun 16 13:51	23°♿50'34	0.55294 AU
morning rise	4270 Jul 13 10:58	10°♿44'19		morning rise	4271 Jun 23 06:19	20°♿39'31	
direct	4270 Jul 16 22:29	10°♿18'10		direct	4271 Jun 27 11:35	20°♿00'35	
morning max el	4270 Jul 29 15:06	16°♿19'49	22°28'05	morning max el	4271 Jul 11 06:03	26°♿48'11	24°11'35
	4270 Aug 09 08:14	0°♿			4271 Jul 14 08:20	0°♿	
asc. node	4270 Aug 14 13:30	9°♿07'49		asc. node	4271 Aug 01 10:34	28°♿36'18	
morning set	4270 Aug 20 13:44	21°♿10'21			4271 Aug 02 03:11	0°♿	
	4270 Aug 24 17:24	0°♿		morning set	4271 Aug 05 01:27	6°♿04'17	
superior conj	4270 Aug 27 16:46	6°♿20'37	1°40'27	superior conj	4271 Aug 12 00:44	21°♿08'17	1°30'53
minimum elong	4270 Aug 27 15:29	6°♿13'50	1°40'23	minimum elong	4271 Aug 11 22:41	20°♿57'11	1°30'41
max. Earth dist.	4270 Aug 30 22:36	13°♿08'23	1.34197 AU	max. Earth dist.	4271 Aug 14 00:11	25°♿24'23	1.33050 AU
evening rise	4270 Sep 04 15:01	22°♿33'53			4271 Aug 16 04:01	0°♿	
	4270 Sep 08 12:51	0°♿		evening rise	4271 Aug 19 09:31	6°♿40'23	
desc. node	4270 Sep 20 10:19	20°♿08'37			4271 Sep 01 01:54	0°♿	
	4270 Sep 27 04:53	0°♿		desc. node	4271 Sep 07 07:20	9°♿42'29	
evening max el	4270 Oct 09 09:44	14°♿23'01	27°07'02	evening max el	4271 Sep 21 20:59	27°♿35'36	27°26'32
retrograde	4270 Oct 22 17:09	21°♿40'16			4271 Sep 24 14:28	0°♿	
evening set	4270 Oct 29 13:33	18°♿59'16		retrograde	4271 Oct 05 12:15	4°♿52'30	
min. Earth dist.	4270 Nov 02 11:02	15°♿13'48	0.65190 AU	evening set	4271 Oct 12 15:54	2°♿15'40	
inferior conj	4270 Nov 04 13:17	12°♿52'48	-1°59'56		4271 Oct 15 08:37	30°♿42	
minimum elong	4270 Nov 04 16:41	12°♿43'15	1°58'35	min. Earth dist.	4271 Oct 16 08:12	29°♿03'21	0.63614 AU
morning rise	4270 Nov 10 20:46	7°♿18'36		inferior conj	4271 Oct 18 22:39	26°♿25'10	-3°01'42
asc. node	4270 Nov 10 12:43	7°♿28'44		minimum elong	4271 Oct 19 03:45	26°♿12'15	2°59'56
direct	4270 Nov 13 13:24	6°♿39'44		morning rise	4271 Oct 25 16:59	21°♿07'19	
morning max el	4270 Nov 20 01:02	10°♿07'58	18°06'09	direct	4271 Oct 28 04:07	20°♿37'47	
	4270 Dec 03 18:54	0°♿		asc. node	4271 Oct 28 09:48	20°♿38'03	
morning set	4270 Dec 08 05:09	7°♿18'05		morning max el	4271 Nov 03 17:46	24°♿02'50	17°51'07
desc. node	4270 Dec 17 09:38	22°♿17'42			4271 Nov 08 12:51	0°♿	
	4270 Dec 22 05:18	0°♿		morning set	4271 Nov 20 07:11	19°♿28'23	
					4271 Nov 26 10:17	0°♿	
superior conj	4270 Dec 22 14:58	0°♿38'21	-0°35'24				
minimum elong	4270 Dec 22 10:33	0°♿20'47	0°34'47	superior conj	4271 Dec 02 16:18	10°♿26'26	0°11'06
max. Earth dist.	4270 Dec 25 22:07	5°♿50'55	1.45116 AU	minimum elong	4271 Dec 02 17:29	10°♿31'19	0°10'57
evening rise	4271 Jan 07 22:49	26°♿09'20		behind sun begin	4271 Dec 02 10:18	10°♿01'46	
	4271 Jan 10 10:27	0°♿		behind sun end	4271 Dec 03 00:40	11°♿00'49	
greatest brilliancy	4271 Jan 21 01:26	16°♿14'43	-0.7m	desc. node	4271 Dec 04 06:39	13°♿03'23	
	4271 Jan 31 00:45	0°♿		max. Earth dist.	4271 Dec 08 16:16	20°♿09'15	1.44266 AU
evening max el	4271 Feb 02 00:20	2°♿11'27	19°40'35		4271 Dec 14 22:13	0°♿	
asc. node	4271 Feb 06 11:59	5°♿42'38		evening rise	4271 Dec 18 08:56	5°♿20'05	
retrograde	4271 Feb 09 09:07	6°♿26'59			4272 Jan 03 20:35	0°♿	
evening set	4271 Feb 12 23:28	5°♿11'11		evening max el	4272 Jan 16 01:44	15°♿44'15	20°42'58
	4271 Feb 17 20:06	30°♿44		retrograde	4272 Jan 24 07:22	20°♿35'56	
inferior conj	4271 Feb 18 10:11	29°♿13'36	3°12'18	asc. node	4272 Jan 24 09:02	20°♿35'54	
minimum elong	4271 Feb 18 08:06	29°♿20'30	3°11'55	evening set	4272 Jan 28 06:41	19°♿05'31	
min. Earth dist.	4271 Feb 19 12:31	27°♿46'35	0.66804 AU	inferior conj	4272 Feb 02 15:16	12°♿55'29	2°43'40
morning rise	4271 Feb 23 16:31	22°♿59'35		minimum elong	4272 Feb 02 12:49	13°♿03'54	2°43'01
direct	4271 Mar 01 18:24	20°♿17'00		min. Earth dist.	4272 Feb 03 04:18	12°♿10'48	0.67590 AU
morning max el	4271 Mar 13 22:53	27°♿33'02	25°33'56	morning rise	4272 Feb 07 18:47	6°♿41'58	
desc. node	4271 Mar 15 08:51	29°♿01'30		direct	4272 Feb 13 06:36	4°♿15'59	

morning max el	4272 Feb 24 07:34	10° \approx 51'18	24°08'12	direct	4273 Jan 26 23:11	18° \approx 28'20	
desc. node	4272 Mar 01 05:54	17° \approx 33'33		morning max el	4273 Feb 05 17:41	24° \approx 14'57	22°39'07
	4272 Mar 10 13:17	0° \approx			4273 Feb 10 20:22	0° \approx	
	4272 Mar 29 17:10	0° \approx		desc. node	4273 Feb 16 02:55	6° \approx 48'31	
morning set	4272 Mar 31 01:03	2° \approx 16'59			4273 Mar 03 23:57	0° \approx	
max. Earth dist.	4272 Apr 03 18:34	8° \approx 51'01	1.38095 AU	morning set	4273 Mar 11 19:21	12° \approx 28'19	
				max. Earth dist.	4273 Mar 16 14:11	20° \approx 28'47	1.40276 AU
					4273 Mar 22 01:19	0° \approx	
superior conj	4272 Apr 10 21:18	22° \approx 01'31	-1°32'32				
minimum elong	4272 Apr 11 01:58	22° \approx 23'49	1°31'55				
	4272 Apr 15 00:05	0° \approx		superior conj	4273 Mar 24 09:09	4° \approx 10'46	-1°54'35
evening rise	4272 Apr 19 18:12	9° \approx 22'30		minimum elong	4273 Mar 24 13:37	4° \approx 31'03	1°54'14
asc. node	4272 Apr 21 08:19	12° \approx 29'20		evening rise	4273 Apr 03 07:46	22° \approx 44'13	
	4272 May 01 06:42	0° \approx			4273 Apr 07 04:36	0° \approx	
evening max el	4272 May 06 06:38	6° \approx 07'38	19°00'37	asc. node	4273 Apr 08 05:22	1° \approx 53'41	
retrograde	4272 May 14 21:48	10° \approx 20'36		evening max el	4273 Apr 19 11:37	18° \approx 38'47	18°24'22
evening set	4272 May 16 23:30	10° \approx 07'02		retrograde	4273 Apr 26 21:38	22° \approx 19'13	
inferior conj	4272 May 25 03:59	5° \approx 52'24	0°52'42	evening set	4273 Apr 29 06:00	21° \approx 58'09	
minimum elong	4272 May 25 06:01	5° \approx 48'50	0°51'58	inferior conj	4273 May 06 14:53	17° \approx 24'01	2°15'24
min. Earth dist.	4272 May 28 05:26	3° \approx 44'56	0.56635 AU	minimum elong	4273 May 06 18:32	17° \approx 16'35	2°14'22
desc. node	4272 May 28 05:05	3° \approx 45'32		min. Earth dist.	4273 May 10 01:29	14° \approx 36'36	0.58575 AU
morning rise	4272 Jun 02 09:18	0° \approx 53'43		morning rise	4273 May 14 03:58	11° \approx 53'31	
	4272 Jun 05 13:18	30° \approx 8		desc. node	4273 May 15 02:06	11° \approx 26'31	
direct	4272 Jun 07 13:29	29° \approx 50'20		direct	4273 May 20 05:57	10° \approx 16'13	
	4272 Jun 09 13:50	0° \approx		morning max el	4273 Jun 03 15:24	18° \approx 00'32	27°03'38
morning max el	4272 Jun 21 20:32	7° \approx 12'57	25°48'40		4273 Jun 13 15:30	0° \approx	
	4272 Jul 08 16:21	0° \approx			4273 Jul 01 04:04	0° \approx	
asc. node	4272 Jul 18 07:36	18° \approx 22'42		morning set	4273 Jul 03 22:15	5° \approx 40'48	
morning set	4272 Jul 19 12:50	20° \approx 56'09		asc. node	4273 Jul 05 04:37	8° \approx 21'24	
	4272 Jul 23 17:32	0° \approx					
				superior conj	4273 Jul 10 23:25	20° \approx 58'13	0°57'22
superior conj	4272 Jul 26 11:34	6° \approx 02'53	1°16'18	minimum elong	4273 Jul 10 21:16	20° \approx 46'25	0°56'58
minimum elong	4272 Jul 26 09:14	5° \approx 50'04	1°15'57	max. Earth dist.	4273 Jul 10 19:32	20° \approx 36'50	1.32009 AU
max. Earth dist.	4272 Jul 27 08:15	7° \approx 56'30	1.32321 AU		4273 Jul 15 02:02	0° \approx	
evening rise	4272 Aug 02 11:54	21° \approx 08'56		evening rise	4273 Jul 17 19:35	5° \approx 51'40	
	4272 Aug 06 21:23	0° \approx			4273 Jul 30 12:26	0° \approx	
desc. node	4272 Aug 24 04:21	28° \approx 36'23		desc. node	4273 Aug 11 01:22	16° \approx 33'49	
	4272 Aug 25 05:20	0° \approx		evening max el	4273 Aug 16 05:50	22° \approx 08'21	26°29'37
evening max el	4272 Sep 03 04:28	10° \approx 14'05	27°14'46	retrograde	4273 Aug 30 04:53	29° \approx 18'12	
retrograde	4272 Sep 17 00:39	17° \approx 27'58		evening set	4273 Sep 05 21:23	27° \approx 26'29	
evening set	4272 Sep 24 04:04	15° \approx 07'12		min. Earth dist.	4273 Sep 09 19:25	24° \approx 51'07	0.59690 AU
min. Earth dist.	4272 Sep 27 18:53	12° \approx 20'24	0.61740 AU	inferior conj	4273 Sep 13 01:43	22° \approx 17'25	-4°47'01
inferior conj	4272 Sep 30 19:57	9° \approx 36'16	-3°59'48	minimum elong	4273 Sep 13 06:51	22° \approx 07'19	4°46'10
minimum elong	4272 Oct 01 01:59	9° \approx 22'41	3°58'10	morning rise	4273 Sep 20 18:26	17° \approx 41'08	
morning rise	4272 Oct 08 01:43	4° \approx 37'59		direct	4273 Sep 23 03:22	17° \approx 20'56	
direct	4272 Oct 10 10:07	4° \approx 14'31		morning max el	4273 Sep 30 19:52	21° \approx 05'37	18°16'49
asc. node	4272 Oct 14 06:51	5° \approx 20'21		asc. node	4273 Oct 01 03:53	21° \approx 25'18	
morning max el	4272 Oct 17 09:09	7° \approx 44'57	17°54'13		4273 Oct 07 14:54	0° \approx	
	4272 Oct 31 18:56	0° \approx		morning set	4273 Oct 16 17:14	16° \approx 22'17	
morning set	4272 Nov 02 05:06	2° \approx 35'04			4273 Oct 23 22:38	0° \approx	
superior conj	4272 Nov 12 20:13	21° \approx 32'17	0°49'53	superior conj	4273 Oct 26 00:27	3° \approx 48'57	1°17'50
minimum elong	4272 Nov 13 00:06	21° \approx 49'02	0°49'23	minimum elong	4273 Oct 26 04:18	4° \approx 06'30	1°17'25
	4272 Nov 17 19:53	0° \approx		max. Earth dist.	4273 Nov 02 14:20	17° \approx 11'23	1.40919 AU
max. Earth dist.	4272 Nov 20 05:56	3° \approx 59'55	1.42805 AU	evening rise	4273 Nov 07 07:55	25° \approx 05'47	
desc. node	4272 Nov 20 03:39	3° \approx 50'32		desc. node	4273 Nov 07 00:39	24° \approx 36'02	
evening rise	4272 Nov 26 23:23	14° \approx 47'24			4273 Nov 10 08:43	0° \approx	
	4272 Dec 06 22:14	0° \approx			4273 Nov 30 18:13	0° \approx	
evening max el	4272 Dec 28 21:37	29° \approx 17'52	21°56'16	evening max el	4273 Dec 11 13:09	12° \approx 54'26	23°15'33
	4272 Dec 29 14:34	0° \approx		retrograde	4273 Dec 21 22:51	19° \approx 04'02	
retrograde	4273 Jan 07 04:28	4° \approx 49'22		evening set	4273 Dec 26 21:03	17° \approx 02'14	
asc. node	4273 Jan 10 06:06	3° \approx 58'53		asc. node	4273 Dec 28 03:08	15° \approx 51'25	
evening set	4273 Jan 11 14:24	3° \approx 03'30		inferior conj	4274 Jan 01 06:31	10° \approx 37'52	1°21'58
	4273 Jan 14 12:24	30° \approx 8		minimum elong	4274 Jan 01 04:45	10° \approx 43'56	1°21'18
inferior conj	4273 Jan 16 22:40	26° \approx 44'23	2°06'28	min. Earth dist.	4273 Dec 31 20:34	11° \approx 12'05	0.67998 AU
minimum elong	4273 Jan 16 20:20	26° \approx 52'30	2°05'41	morning rise	4274 Jan 06 12:21	4° \approx 30'29	
min. Earth dist.	4273 Jan 16 23:47	26° \approx 40'32	0.67978 AU	direct	4274 Jan 10 19:08	2° \approx 48'39	
morning rise	4273 Jan 22 02:06	20° \approx 33'01		morning max el	4274 Jan 19 08:51	7° \approx 47'11	21°15'17

desc. node	4274 Feb 02 23:55	26° Z 34'25		morning rise	4274 Dec 21 23:33	18° Z 32'40	
	4274 Feb 05 08:34	0° \approx		direct	4274 Dec 25 17:13	17° Z 12'37	
morning set	4274 Feb 19 09:02	21° \approx 19'15		morning max el	4275 Jan 02 07:43	21° Z 31'37	20°02'44
	4274 Feb 24 19:21	0° H			4275 Jan 09 08:15	0° Z	
max. Earth dist.	4274 Feb 26 15:35	3° H 00'24	1.42322 AU	desc. node	4275 Jan 20 20:56	16° Z 43'02	
				morning set	4275 Jan 29 05:41	29° Z 28'52	
superior conj	4274 Mar 05 23:38	15° H 18'52	-2°06'57		4275 Jan 29 13:45	0° \approx	
minimum elong	4274 Mar 06 01:20	15° H 26'12	2°06'55	max. Earth dist.	4275 Feb 09 01:14	16° \approx 26'52	1.43957 AU
	4274 Mar 14 07:53	0° Y					
evening rise	4274 Mar 17 07:42	5° Y 24'05		superior conj	4275 Feb 14 12:45	25° \approx 18'02	-2°04'11
asc. node	4274 Mar 26 02:24	20° Y 53'10		minimum elong	4275 Feb 14 08:48	25° \approx 01'54	2°04'01
	4274 Apr 01 10:21	0° B			4275 Feb 17 09:18	0° H	
evening max el	4274 Apr 02 22:06	1° B 35'57	18°07'58	evening rise	4275 Feb 27 13:43	17° H 13'58	
retrograde	4274 Apr 09 14:46	5° B 00'21			4275 Mar 07 00:52	0° Y	
evening set	4274 Apr 12 05:45	4° B 29'15		asc. node	4275 Mar 12 23:27	9° Y 20'06	
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inferior conj	4274 Apr 18 22:00	29° Y 34'18	3°06'31	retrograde	4275 Mar 23 21:02	18° Y 14'00	
minimum elong	4274 Apr 19 00:50	29° Y 27'34	3°06'01	evening set	4275 Mar 26 17:59	17° Y 31'30	
min. Earth dist.	4274 Apr 22 03:54	26° Y 31'06	0.60761 AU	inferior conj	4275 Apr 01 21:36	12° Y 16'36	3°31'04
morning rise	4274 Apr 25 17:49	23° Y 42'12		minimum elong	4275 Apr 01 22:46	12° Y 13'29	3°30'59
desc. node	4274 May 01 23:08	21° Y 31'23		min. Earth dist.	4275 Apr 04 14:58	9° Y 21'46	0.62875 AU
direct	4274 May 02 10:07	21° Y 30'47		morning rise	4275 Apr 08 02:21	6° Y 11'51	
morning max el	4274 May 16 16:26	29° Y 26'06	27°45'15	direct	4275 Apr 14 23:30	3° Y 34'59	
	4274 May 17 05:56	0° B		desc. node	4275 Apr 18 20:10	4° Y 18'47	
	4274 Jun 07 13:58	0° II		morning max el	4275 Apr 28 23:03	11° Y 33'41	27°49'15
morning set	4274 Jun 18 03:51	20° II 11'16			4275 May 13 12:34	0° B	
asc. node	4274 Jun 22 01:38	28° II 26'46			4275 May 30 22:55	0° II	
	4274 Jun 22 18:53	0° E		morning set	4275 Jun 02 03:32	4° II 21'11	
max. Earth dist.	4274 Jun 24 06:19	3° E 12'57	1.32109 AU	max. Earth dist.	4275 Jun 07 12:47	15° II 32'55	1.32631 AU
				asc. node	4275 Jun 08 22:41	18° II 34'43	
superior conj	4274 Jun 25 10:29	5° E 47'19	0°34'41				
minimum elong	4274 Jun 25 08:59	5° E 39'08	0°34'21	superior conj	4275 Jun 09 19:01	20° II 24'37	0°08'52
evening rise	4274 Jul 02 06:17	20° E 40'19		minimum elong	4275 Jun 09 18:36	20° II 22'19	0°08'46
	4274 Jul 06 18:53	0° O		behind sun begin	4275 Jun 09 14:12	19° II 58'30	
	4274 Jul 25 21:05	0° P		behind sun end	4275 Jun 09 23:00	20° II 46'11	
desc. node	4274 Jul 28 22:23	3° P 10'59			4275 Jun 14 04:56	0° E	
evening max el	4274 Jul 28 23:49	3° P 14'25	25°14'42	evening rise	4275 Jun 16 18:07	5° E 28'38	
retrograde	4274 Aug 11 22:47	10° P 18'39			4275 Jun 29 18:53	0° O	
evening set	4274 Aug 17 15:13	9° P 04'24		evening max el	4275 Jul 10 12:50	13° O 44'49	23°41'06
min. Earth dist.	4274 Aug 22 11:34	6° P 22'33	0.57674 AU	desc. node	4275 Jul 15 19:24	17° O 57'18	
inferior conj	4274 Aug 25 12:36	4° P 18'16	-5°11'39	retrograde	4275 Jul 24 04:29	20° O 35'57	
minimum elong	4274 Aug 25 13:49	4° P 16'11	5°11'37	evening set	4275 Jul 28 10:03	19° O 56'36	
morning rise	4274 Sep 02 14:45	0° P 04'36		min. Earth dist.	4275 Aug 03 22:50	16° O 51'29	0.55997 AU
	4274 Sep 02 22:40	30° R O		inferior conj	4275 Aug 06 03:16	15° O 32'47	-4°58'00
direct	4274 Sep 05 03:40	29° O 45'22		minimum elong	4275 Aug 05 22:21	15° O 40'13	4°57'26
	4274 Sep 07 07:22	0° P		morning rise	4275 Aug 14 13:08	11° O 37'25	
morning max el	4274 Sep 13 22:31	3° P 54'34	19°00'28	direct	4275 Aug 17 08:35	11° O 17'39	
asc. node	4274 Sep 18 00:53	8° P 37'22		morning max el	4275 Aug 27 14:21	16° O 02'59	20°05'58
	4274 Sep 30 07:35	0° O		asc. node	4275 Sep 04 21:54	26° O 42'06	
morning set	4274 Sep 30 15:14	0° O 37'41			4275 Sep 06 21:18	0° P	
				morning set	4275 Sep 14 19:51	15° P 12'03	
superior conj	4274 Oct 08 23:41	17° O 01'23	1°35'08		4275 Sep 22 01:52	0° O	
minimum elong	4274 Oct 09 02:10	17° O 13'21	1°34'57				
	4274 Oct 15 23:23	0° M		superior conj	4275 Sep 22 12:45	0° O 54'44	1°43'08
max. Earth dist.	4274 Oct 15 19:25	29° O 42'14	1.38834 AU	minimum elong	4275 Sep 22 13:35	0° O 58'55	1°43'06
evening rise	4274 Oct 19 15:39	6° M 27'51		max. Earth dist.	4275 Sep 28 01:14	11° O 42'49	1.36802 AU
desc. node	4274 Oct 24 21:40	15° M 16'11		evening rise	4275 Oct 01 21:05	18° O 49'40	
	4274 Nov 03 08:56	0° Z			4275 Oct 08 06:29	0° M	
evening max el	4274 Nov 24 02:18	26° Z 35'27	24°34'37	desc. node	4275 Oct 11 18:42	5° M 46'16	
	4274 Nov 27 22:39	0° Z			4275 Oct 28 13:02	0° Z	
retrograde	4274 Dec 05 13:23	3° Z 16'41		evening max el	4275 Nov 06 14:41	10° Z 18'14	25°46'24
evening set	4274 Dec 11 01:06	0° Z 59'21		retrograde	4275 Nov 18 23:18	17° Z 21'50	
	4274 Dec 12 02:38	30° R Z		evening set	4275 Nov 25 00:51	14° Z 51'04	
asc. node	4274 Dec 15 00:09	26° Z 36'08		min. Earth dist.	4275 Nov 29 08:36	10° Z 09'50	0.66980 AU
min. Earth dist.	4274 Dec 15 16:17	25° Z 43'06	0.67664 AU	inferior conj	4275 Nov 30 16:26	8° Z 29'05	-0°24'36
inferior conj	4274 Dec 16 13:02	24° Z 33'57	0°31'17	minimum elong	4275 Nov 30 17:04	8° Z 27'03	0°24'19
minimum elong	4274 Dec 16 12:17	24° Z 36'27	0°30'59	asc. node	4275 Dec 01 21:10	6° Z 59'17	

































































































































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direct	4275 Dec 09 15:55	1°♊35'19		minimum elong	4276 Nov 13 17:04	22°♍13'11	1°23'24
morning max el	4275 Dec 16 14:24	5°♊26'19	19°04'40	asc. node	4276 Nov 17 18:11	17°♍58'06	
	4276 Jan 03 03:51	0°♊		morning rise	4276 Nov 19 16:35	16°♍38'24	
desc. node	4276 Jan 07 17:57	7°♊07'41		direct	4276 Nov 22 13:25	15°♍52'43	
morning set	4276 Jan 08 09:50	8°♊09'31		morning max el	4276 Nov 29 03:09	19°♍26'41	18°22'40
	4276 Jan 22 09:11	0°♊			4276 Dec 07 04:51	0°♊	
max. Earth dist.	4276 Jan 22 17:02	0°♊30'54	1.44979 AU	morning set	4276 Dec 18 16:21	18°♊12'19	
				desc. node	4276 Dec 24 15:01	27°♊43'56	
					4276 Dec 26 01:13	0°♊	
superior conj	4276 Jan 25 01:57	4°♋15'20	-1°42'05				
minimum elong	4276 Jan 24 17:02	3°♋40'08	1°41'17				
evening rise	4276 Feb 08 21:51	28°♋07'11		superior conj	4277 Jan 03 04:30	12°♋50'52	-1°02'30
	4276 Feb 10 01:23	0°♋		minimum elong	4277 Jan 02 20:52	12°♋20'54	1°01'33
asc. node	4276 Feb 27 20:29	27°♋04'01		max. Earth dist.	4277 Jan 04 11:45	14°♋53'29	1.45280 AU
evening max el	4276 Feb 28 22:52	28°♋14'42	18°32'08		4277 Jan 14 03:13	0°♋	
	4276 Mar 01 22:00	0°♋		evening rise	4277 Jan 19 06:54	8°♋05'32	
retrograde	4276 Mar 06 11:55	1°♋50'16		greatest brilliancy	4277 Jan 29 18:42	24°♋31'38	-0.8m
evening set	4276 Mar 09 14:52	0°♋55'39			4277 Feb 02 09:09	0°♋	
	4276 Mar 10 23:11	30°♋		evening max el	4277 Feb 11 08:01	11°♋44'36	19°10'59
inferior conj	4276 Mar 15 09:35	25°♋22'31	3°35'18	asc. node	4277 Feb 13 17:31	13°♋53'08	
minimum elong	4276 Mar 15 09:07	25°♋23'54	3°35'18	retrograde	4277 Feb 18 07:45	15°♋43'08	
min. Earth dist.	4276 Mar 17 11:36	22°♋54'09	0.64709 AU	evening set	4277 Feb 21 17:30	14°♋35'29	
morning rise	4276 Mar 21 02:46	19°♋11'16		inferior conj	4277 Feb 27 06:26	8°♋46'15	3°24'13
direct	4276 Mar 27 20:41	16°♋21'53		minimum elong	4277 Feb 27 04:47	8°♋51'32	3°24'00
desc. node	4276 Apr 04 17:11	19°♋22'20		min. Earth dist.	4277 Feb 28 17:09	6°♋55'04	0.66160 AU
morning max el	4276 Apr 10 08:44	24°♋15'09	27°17'51	morning rise	4277 Mar 04 15:43	2°♋32'21	
	4276 Apr 15 13:02	0°♋			4277 Mar 08 23:55	30°♋	
	4276 May 05 21:58	0°♋		direct	4277 Mar 11 00:34	29°♋43'47	
morning set	4276 May 15 18:31	18°♋02'01			4277 Mar 13 03:24	0°♋	
max. Earth dist.	4276 May 20 10:53	27°♋24'42	1.33591 AU	desc. node	4277 Mar 22 14:15	6°♋08'28	
	4276 May 21 16:56	0°♋		morning max el	4277 Mar 23 18:40	7°♋18'23	26°17'43
					4277 Apr 10 09:40	0°♋	
superior conj	4276 May 23 23:04	4°♋43'52	-0°19'18		4277 Apr 28 07:39	0°♋	
minimum elong	4276 May 24 00:04	4°♋49'08	0°19'05	morning set	4277 Apr 28 21:10	1°♋02'57	
asc. node	4276 May 25 19:45	8°♋41'07		max. Earth dist.	4277 May 02 21:37	8°♋44'07	1.35019 AU
evening rise	4276 May 31 05:12	20°♋10'09					
	4276 Jun 05 01:01	0°♋		superior conj	4277 May 07 20:17	18°♋38'16	-0°48'35
evening max el	4276 Jun 21 04:11	24°♋10'07	22°04'46	minimum elong	4277 May 07 22:54	18°♋51'38	0°48'04
	4276 Jun 30 08:25	0°♋		asc. node	4277 May 12 16:48	28°♋41'34	
desc. node	4276 Jul 01 16:25	0°♋18'21			4277 May 13 07:52	0°♋	
retrograde	4276 Jul 03 22:52	0°♋30'19		evening rise	4277 May 15 13:32	4°♋38'24	
evening set	4276 Jul 06 18:28	0°♋12'38			4277 May 29 20:58	0°♋	
	4276 Jul 07 15:54	30°♋		evening max el	4277 Jun 03 05:17	5°♋01'11	20°38'56
min. Earth dist.	4276 Jul 15 09:18	26°♋30'35	0.54986 AU	retrograde	4277 Jun 14 11:41	10°♋31'50	
inferior conj	4276 Jul 16 01:44	26°♋07'29	-3°54'14	evening set	4277 Jun 16 12:47	10°♋21'40	
minimum elong	4276 Jul 15 17:09	26°♋19'32	3°51'59	desc. node	4277 Jun 18 13:28	9°♋52'48	
morning rise	4276 Jul 24 17:34	22°♋16'49		inferior conj	4277 Jun 25 19:12	6°♋24'28	-2°07'37
direct	4276 Jul 27 21:37	21°♋54'31		minimum elong	4277 Jun 25 13:15	6°♋33'00	2°05'30
morning max el	4276 Aug 08 18:26	27°♋27'07	21°31'45	min. Earth dist.	4277 Jun 26 21:07	5°♋47'14	0.54894 AU
	4276 Aug 11 06:26	0°♋		morning rise	4277 Jul 04 13:04	2°♋18'13	
asc. node	4276 Aug 21 18:58	15°♋27'28		direct	4277 Jul 08 07:03	1°♋47'55	
morning set	4276 Aug 29 04:46	29°♋59'00		morning max el	4277 Jul 21 12:45	8°♋11'00	23°11'53
	4276 Aug 29 04:58	0°♋			4277 Aug 06 03:59	0°♋	
				asc. node	4277 Aug 08 16:02	4°♋42'37	
superior conj	4276 Sep 05 11:36	15°♋17'23	1°43'21	morning set	4277 Aug 13 15:57	14°♋51'46	
minimum elong	4276 Sep 05 10:59	15°♋14'09	1°43'20				
max. Earth dist.	4276 Sep 09 12:51	23°♋35'28	1.35036 AU	superior conj	4277 Aug 20 16:59	29°♋58'22	1°37'04
	4276 Sep 12 18:53	0°♋		minimum elong	4277 Aug 20 15:19	29°♋49'27	1°36'57
evening rise	4276 Sep 13 20:16	2°♋01'50			4277 Aug 20 17:17	0°♋	
desc. node	4276 Sep 27 15:44	26°♋01'00		max. Earth dist.	4277 Aug 23 09:15	5°♋39'54	1.33653 AU
	4276 Sep 30 05:42	0°♋		evening rise	4277 Aug 28 08:48	15°♋51'48	
evening max el	4276 Oct 19 03:13	23°♋57'39	26°43'33		4277 Sep 04 21:07	0°♋	
	4276 Oct 27 06:32	0°♋		desc. node	4277 Sep 14 12:46	15°♋52'28	
retrograde	4276 Nov 01 04:06	1°♋13'22			4277 Sep 24 20:28	0°♋	
	4276 Nov 05 16:13	30°♋		evening max el	4277 Oct 01 15:29	7°♋23'52	27°18'48
evening set	4276 Nov 07 18:21	28°♋33'52		retrograde	4277 Oct 15 03:07	14°♋42'16	
min. Earth dist.	4276 Nov 11 19:17	24°♋28'15	0.65945 AU	evening set	4277 Oct 22 03:07	12°♋01'44	

min. Earth dist.	4277 Oct 25 22:06	8°♌30'45	0.64560 AU		4278 Aug 28 21:52	0°♊	
inferior conj	4277 Oct 28 05:36	6°♌01'11	-2°26'15	desc. node	4278 Sep 01 09:46	5°♊10'56	
minimum elong	4277 Oct 28 09:45	5°♌49'58	2°24'40	evening max el	4278 Sep 14 01:39	20°♊24'20	27°25'38
morning rise	4277 Nov 03 17:35	0°♌33'29		retrograde	4278 Sep 27 19:25	27°♊39'40	
asc. node	4277 Nov 04 15:14	0°♌13'44		evening set	4278 Oct 04 23:55	25°♊08'29	
	4277 Nov 05 21:41	30°♋♊		min. Earth dist.	4278 Oct 08 15:05	22°♊07'57	0.62851 AU
direct	4277 Nov 06 07:26	29°♊59'08		inferior conj	4278 Oct 11 10:14	19°♊25'50	-3°27'08
	4277 Nov 06 17:10	0°♌		minimum elong	4278 Oct 11 15:52	19°♊12'12	3°25'21
morning max el	4277 Nov 12 19:14	3°♌25'22	17°57'30	morning rise	4278 Oct 18 09:23	14°♊15'32	
morning set	4277 Nov 30 03:57	29°♌40'55		direct	4278 Oct 20 18:59	13°♊48'55	
	4277 Nov 30 08:29	0°♋		asc. node	4278 Oct 22 12:18	14°♊02'59	
desc. node	4277 Dec 11 12:04	18°♋♊27'08		morning max el	4278 Oct 27 11:42	17°♊15'25	17°50'01
					4278 Nov 05 13:43	0°♌	
superior conj	4277 Dec 13 16:52	22°♋00'08	-0°15'10	morning set	4278 Nov 12 15:14	12°♌17'46	
minimum elong	4277 Dec 13 15:03	21°♋52'49	0°14'54		4278 Nov 22 19:53	0°♋	
behind sun begin	4277 Dec 13 10:59	21°♋36'29					
behind sun end	4277 Dec 13 19:07	22°♋09'08		superior conj	4278 Nov 24 05:16	2°♋20'32	0°28'48
max. Earth dist.	4277 Dec 18 06:37	29°♋17'13	1.44839 AU	minimum elong	4278 Nov 24 08:00	2°♋32'00	0°28'25
	4277 Dec 18 17:27	0°♋		desc. node	4278 Nov 28 09:03	9°♋13'46	
evening rise	4277 Dec 29 21:48	17°♋24'20		max. Earth dist.	4278 Nov 30 23:10	13°♋26'01	1.43719 AU
	4278 Jan 07 03:35	0°♋		evening rise	4278 Dec 09 07:44	26°♋37'26	
greatest brilliancy	4278 Jan 13 10:56	9°♋25'53	-0.6m		4278 Dec 11 12:20	0°♋	
evening max el	4278 Jan 25 12:36	25°♋17'19	20°05'36		4279 Jan 01 02:46	0°♋	
asc. node	4278 Jan 31 14:32	29°♋33'06		evening max el	4279 Jan 08 11:41	8°♋50'51	21°13'10
retrograde	4278 Feb 02 05:42	29°♋47'30		retrograde	4279 Jan 17 03:30	13°♋58'45	
evening set	4278 Feb 05 23:36	28°♋25'49		asc. node	4279 Jan 18 11:34	13°♋49'03	
inferior conj	4278 Feb 11 09:12	22°♋22'47	3°01'18	evening set	4279 Jan 21 07:12	12°♋21'50	
minimum elong	4278 Feb 11 06:53	22°♋30'34	3°00'47	inferior conj	4279 Jan 26 15:28	6°♋07'47	2°28'49
min. Earth dist.	4278 Feb 12 05:47	21°♋13'28	0.67190 AU	minimum elong	4279 Jan 26 13:01	6°♋16'18	2°28'05
morning rise	4278 Feb 16 13:57	16°♋08'42		min. Earth dist.	4279 Jan 26 23:19	5°♋40'41	0.67808 AU
direct	4278 Feb 22 10:09	13°♋32'01		morning rise	4279 Jan 31 18:39	29°♋55'11	
morning max el	4278 Mar 06 03:26	20°♋32'30	24°58'24		4279 Jan 31 16:30	30°♋♋	
desc. node	4278 Mar 09 11:18	24°♋08'26		direct	4279 Feb 06 00:20	27°♋37'44	
	4278 Mar 14 06:41	0°♋			4279 Feb 12 01:43	0°♋	
	4278 Apr 03 14:07	0°♋		morning max el	4279 Feb 16 12:07	3°♋52'09	23°30'06
morning set	4278 Apr 11 06:35	13°♋10'24		desc. node	4279 Feb 24 08:18	13°♋00'21	
max. Earth dist.	4278 Apr 14 21:37	19°♋45'25	1.36883 AU		4279 Mar 08 12:07	0°♋	
	4278 Apr 20 07:06	0°♋		morning set	4279 Mar 23 16:41	24°♋07'26	
					4279 Mar 27 02:48	0°♋	
superior conj	4278 Apr 21 07:42	2°♋00'13	-1°17'16	max. Earth dist.	4279 Mar 27 16:54	1°♋01'40	1.39027 AU
minimum elong	4278 Apr 21 11:48	2°♋20'21	1°16'37				
evening rise	4278 Apr 29 16:52	18°♋47'10		superior conj	4279 Apr 04 05:26	14°♋39'06	-1°42'45
asc. node	4278 Apr 29 13:52	18°♋32'04		minimum elong	4279 Apr 04 10:15	15°♋01'37	1°42'14
	4278 May 05 11:10	0°♋			4279 Apr 12 05:48	0°♋	
evening max el	4278 May 16 18:47	16°♋33'05	19°30'46	evening rise	4279 Apr 13 12:22	2°♋28'17	
retrograde	4278 May 26 07:13	21°♋11'05		asc. node	4279 Apr 16 10:53	8°♋07'22	
evening set	4278 May 28 06:24	21°♋00'06		evening max el	4279 Apr 29 18:57	28°♋44'09	18°42'42
desc. node	4278 Jun 05 10:29	17°♋13'47			4279 May 01 04:56	0°♋	
inferior conj	4278 Jun 05 22:11	16°♋55'07	-0°08'39	retrograde	4279 May 07 20:02	2°♋41'04	
minimum elong	4278 Jun 05 21:48	16°♋55'44	0°08'31	evening set	4279 May 10 00:38	2°♋24'33	
transit middle	4278 Jun 05 21:48	16°♋55'44	0°08'31		4279 May 15 02:06	30°♋♋	
transit begin	4278 Jun 05 18:30	17°♋01'01		inferior conj	4279 May 17 20:32	28°♋01'42	1°31'45
transit end	4278 Jun 06 01:06	16°♋50'27		minimum elong	4279 May 17 23:38	27°♋55'54	1°30'44
min. Earth dist.	4278 Jun 08 10:55	15°♋18'24	0.55769 AU	min. Earth dist.	4279 May 21 03:48	25°♋34'57	0.57413 AU
morning rise	4278 Jun 14 10:31	12°♋17'32		desc. node	4279 May 23 07:31	24°♋08'57	
direct	4278 Jun 19 01:31	11°♋29'22		morning rise	4279 May 25 19:24	22°♋48'50	
morning max el	4278 Jul 03 02:33	18°♋33'47	24°54'35	direct	4279 May 31 09:36	21°♋31'50	
	4278 Jul 12 15:20	0°♋		morning max el	4279 Jun 14 18:13	29°♋04'11	26°24'09
asc. node	4278 Jul 26 13:06	24°♋19'33			4279 Jun 15 16:42	0°♋	
morning set	4278 Jul 29 03:42	29°♋45'13			4279 Jul 06 07:01	0°♋	
	4278 Jul 29 06:30	0°♋		asc. node	4279 Jul 13 10:08	14°♋11'36	
				morning set	4279 Jul 13 14:26	14°♋34'12	
superior conj	4278 Aug 05 02:23	14°♋49'42	1°25'17				
minimum elong	4278 Aug 05 00:10	14°♋37'32	1°25'00	superior conj	4279 Jul 20 13:50	29°♋44'43	1°08'46
max. Earth dist.	4278 Aug 06 13:55	18°♋03'12	1.32690 AU	minimum elong	4279 Jul 20 11:31	29°♋31'59	1°08'23
evening rise	4278 Aug 12 07:01	0°♋08'58			4279 Jul 20 16:36	0°♋	
	4278 Aug 12 05:16	0°♋		max. Earth dist.	4279 Jul 20 23:55	0°♋40'20	1.32140 AU

evening rise	4279 Jul 27 11:55	14°♎44'08		4280 Jul 11 02:50	0°♎	
	4279 Aug 04 05:21	0°♎		4280 Jul 27 14:18	0°♎	
desc. node	4279 Aug 19 06:47	23°♎43'01		desc. node	4280 Aug 05 03:49	11°♎09'19
	4279 Aug 24 13:35	0°♎		evening max el	4280 Aug 08 04:58	14°♎17'43 26°00'53
evening max el	4279 Aug 27 06:58	2°♎45'27 26°59'39		retrograde	4280 Aug 22 04:16	21°♎25'57
retrograde	4279 Sep 10 04:13	9°♎56'49		evening set	4280 Aug 28 12:23	19°♎49'14
evening set	4279 Sep 17 04:39	7°♎47'04		min. Earth dist.	4280 Sep 01 17:29	17°♎13'46 0.58806 AU
min. Earth dist.	4279 Sep 20 21:12	5°♎07'16 0.60881 AU		inferior conj	4280 Sep 04 23:24	14°♎50'04 -5°01'08
inferior conj	4279 Sep 24 01:23	2°♎25'36 -4°21'45		minimum elong	4280 Sep 05 03:16	14°♎42'53 5°00'42
minimum elong	4279 Sep 24 07:20	2°♎12'56 4°20'23		morning rise	4280 Sep 12 20:23	10°♎23'56
	4279 Sep 27 01:33	30°♎		direct	4280 Sep 15 06:40	10°♎04'23
morning rise	4279 Oct 01 11:53	27°♎36'19		morning max el	4280 Sep 23 09:11	13°♎57'47 18°32'53
direct	4279 Oct 03 20:16	27°♎14'23		asc. node	4280 Sep 25 06:22	15°♎57'22
asc. node	4279 Oct 09 09:21	29°♎22'13			4280 Oct 04 09:03	0°♎
	4279 Oct 10 03:56	0°♎		morning set	4280 Oct 09 12:39	9°♎44'33
morning max el	4279 Oct 11 01:28	0°♎49'28 18°01'23				
morning set	4279 Oct 26 19:53	25°♎44'15		superior conj	4280 Oct 18 09:12	26°♎41'29 1°26'24
	4279 Oct 29 03:07	0°♎		minimum elong	4280 Oct 18 12:34	26°♎57'10 1°26'04
					4280 Oct 20 04:08	0°♎
superior conj	4279 Nov 05 20:10	13°♎58'51 1°03'06		max. Earth dist.	4280 Oct 25 17:59	9°♎58'20 1.40034 AU
minimum elong	4279 Nov 06 00:17	14°♎17'01 1°02'35		evening rise	4280 Oct 29 22:59	17°♎09'09
max. Earth dist.	4279 Nov 13 11:18	27°♎04'18 1.42047 AU		desc. node	4280 Nov 01 03:05	20°♎44'46
desc. node	4279 Nov 15 06:03	0°♎01'01			4280 Nov 06 22:11	0°♎
	4279 Nov 15 05:48	0°♎			4280 Nov 28 08:14	0°♎
evening rise	4279 Nov 19 04:47	6°♎24'24		evening max el	4280 Dec 03 19:42	6°♎04'09 23°49'28
	4279 Dec 04 18:16	0°♎		retrograde	4280 Dec 14 16:35	12°♎28'44
evening max el	4279 Dec 22 05:36	22°♎26'14 22°29'31		evening set	4280 Dec 19 20:27	10°♎19'58
retrograde	4279 Dec 31 23:35	28°♎13'58		asc. node	4280 Dec 22 05:37	7°♎53'13
asc. node	4280 Jan 05 08:36	26°♎33'20		min. Earth dist.	4280 Dec 24 16:10	4°♎44'10 0.67900 AU
evening set	4280 Jan 05 14:41	26°♎21'07		inferior conj	4280 Dec 25 06:48	3°♎54'22 1°01'12
inferior conj	4280 Jan 10 23:17	19°♎59'17 1°48'24		minimum elong	4280 Dec 25 05:25	3°♎59'05 1°00'39
minimum elong	4280 Jan 10 21:08	20°♎06'43 1°47'39			4280 Dec 28 07:58	30°♎
min. Earth dist.	4280 Jan 10 19:32	20°♎12'15 0.68037 AU		morning rise	4280 Dec 30 14:23	27°♎49'22
morning rise	4280 Jan 16 03:29	13°♎49'39		direct	4281 Jan 03 15:17	26°♎17'17
direct	4280 Jan 20 18:23	11°♎54'50			4281 Jan 10 18:27	0°♎
morning max el	4280 Jan 30 00:05	17°♎19'50 22°02'24		morning max el	4281 Jan 11 18:30	0°♎57'57 20°42'47
	4280 Feb 09 09:45	0°♎		desc. node	4281 Jan 28 02:19	22°♎26'18
desc. node	4280 Feb 11 05:18	2°♎29'51			4281 Feb 02 04:07	0°♎
	4280 Feb 29 14:39	0°♎		morning set	4281 Feb 10 02:37	12°♎09'38
morning set	4280 Mar 02 22:30	3°♎43'10		max. Earth dist.	4281 Feb 18 19:48	25°♎59'13 1.43082 AU
max. Earth dist.	4280 Mar 08 15:03	13°♎03'41 1.41189 AU			4281 Feb 21 06:54	0°♎
superior conj	4280 Mar 16 08:46	26°♎23'34 -2°01'19		superior conj	4281 Feb 25 12:45	7°♎02'35 -2°07'57
minimum elong	4280 Mar 16 12:27	26°♎39'53 2°01'08		minimum elong	4281 Feb 25 12:19	7°♎00'48 2°07'56
	4280 Mar 18 09:17	0°♎		evening rise	4281 Mar 09 13:32	27°♎53'27
evening rise	4280 Mar 26 20:38	15°♎33'33			4281 Mar 10 18:06	0°♎
asc. node	4280 Apr 02 07:54	27°♎21'56		asc. node	4281 Mar 20 04:56	16°♎08'48
	4280 Apr 03 20:34	0°♎		evening max el	4281 Mar 26 14:21	24°♎32'21 18°06'49
evening max el	4280 Apr 12 02:35	11°♎26'52 18°14'54		retrograde	4281 Apr 02 03:15	27°♎54'57
retrograde	4280 Apr 19 03:53	14°♎58'53		evening set	4281 Apr 04 20:40	27°♎19'18
evening set	4280 Apr 21 15:06	14°♎33'46		inferior conj	4281 Apr 11 07:05	22°♎15'49 3°19'47
inferior conj	4280 Apr 28 16:24	9°♎50'23 2°40'44		minimum elong	4281 Apr 11 09:14	22°♎10'24 3°19'30
minimum elong	4280 Apr 28 19:53	9°♎42'45 2°39'54		min. Earth dist.	4281 Apr 14 08:20	19°♎13'12 0.61680 AU
min. Earth dist.	4280 May 02 02:10	6°♎53'16 0.59497 AU		morning rise	4281 Apr 17 20:04	16°♎17'02
morning rise	4280 May 05 22:00	4°♎09'12		direct	4281 Apr 24 15:26	13°♎53'13
desc. node	4280 May 09 04:32	2°♎43'42		desc. node	4281 Apr 26 01:33	13°♎59'07
direct	4280 May 12 06:56	2°♎17'10		morning max el	4281 May 08 19:43	21°♎51'57 27°51'34
morning max el	4280 May 26 15:51	10°♎07'02 27°25'56			4281 May 15 22:34	0°♎
	4280 Jun 11 00:00	0°♎			4281 Jun 04 02:04	0°♎
morning set	4280 Jun 26 22:26	29°♎13'19		morning set	4281 Jun 11 01:51	13°♎36'35
	4280 Jun 27 07:22	0°♎		asc. node	4281 Jun 16 04:12	24°♎20'52
asc. node	4280 Jun 29 07:10	4°♎13'30		max. Earth dist.	4281 Jun 16 20:56	25°♎51'24 1.32271 AU
max. Earth dist.	4280 Jul 03 11:34	13°♎20'36 1.31999 AU				
superior conj	4280 Jul 04 01:31	14°♎37'31 0°48'10		superior conj	4281 Jun 18 11:46	29°♎22'48 0°24'04
minimum elong	4280 Jul 03 23:36	14°♎26'56 0°47'46		minimum elong	4281 Jun 18 10:40	29°♎16'51 0°23'49
evening rise	4280 Jul 10 21:06	29°♎29'40		evening rise	4281 Jun 18 18:34	0°♎
					4281 Jun 25 08:32	14°♎19'07

	4281 Jul 03 04:30	0°♊		superior conj	4282 Jun 02 18:40	13°♊53'21	-0°02'53
evening max el	4281 Jul 20 20:05	25°♊05'45	24°36'20	minimum elong	4282 Jun 02 18:48	13°♊54'07	0°02'51
desc. node	4281 Jul 23 00:50	27°♊03'52		behind sun begin	4282 Jun 02 13:32	13°♊25'52	
	4281 Jul 27 06:14	0°♎		behind sun end	4282 Jun 03 00:05	14°♊22'24	
retrograde	4281 Aug 03 17:38	2°♎06'54		asc. node	4282 Jun 03 01:14	14°♊28'38	
evening set	4281 Aug 08 19:56	1°♎08'32		evening rise	4282 Jun 09 20:16	29°♊05'10	
	4281 Aug 11 09:03	30°♋♊			4282 Jun 10 06:39	0°♌	
min. Earth dist.	4281 Aug 14 07:17	28°♊18'24	0.56891 AU		4282 Jun 27 11:55	0°♊	
inferior conj	4281 Aug 17 01:39	26°♊31'37	-5°11'32	evening max el	4282 Jul 02 09:12	5°♊30'09	22°59'39
minimum elong	4281 Aug 17 00:21	26°♊33'43	5°11'30	desc. node	4282 Jul 09 21:52	10°♊52'21	
morning rise	4281 Aug 25 07:18	22°♊26'53		retrograde	4282 Jul 15 18:09	12°♊10'18	
direct	4281 Aug 27 22:30	22°♊07'47		evening set	4282 Jul 19 07:55	11°♊42'24	
morning max el	4281 Sep 06 07:38	26°♊31'08	19°25'44	min. Earth dist.	4282 Jul 26 18:06	8°♊23'07	0.55466 AU
	4281 Sep 09 12:15	0°♎		inferior conj	4282 Jul 28 08:32	7°♊27'32	-4°37'19
asc. node	4281 Sep 12 03:25	3°♎33'41		minimum elong	4282 Jul 28 01:24	7°♊37'53	4°36'01
morning set	4281 Sep 23 13:48	24°♎08'43		morning rise	4282 Aug 05 21:07	3°♊35'54	
	4281 Sep 26 11:44	0°♌		direct	4282 Aug 08 19:53	3°♊15'21	
				morning max el	4282 Aug 19 18:23	8°♊20'22	20°40'08
superior conj	4281 Oct 01 14:55	10°♌13'00	1°39'33	asc. node	4282 Aug 30 00:28	21°♊56'50	
minimum elong	4281 Oct 01 16:42	10°♌21'45	1°39'28		4282 Sep 03 10:48	0°♎	
max. Earth dist.	4281 Oct 07 22:08	22°♌11'31	1.37944 AU	morning set	4282 Sep 07 20:30	8°♎48'37	
evening rise	4281 Oct 11 16:22	28°♌57'40					
	4281 Oct 12 06:34	0°♍		superior conj	4282 Sep 15 08:33	24°♎19'25	1°44'05
desc. node	4281 Oct 19 00:07	11°♍21'08		minimum elong	4282 Sep 15 08:43	24°♎20'19	1°44'05
	4281 Oct 31 06:57	0°♎			4282 Sep 18 04:03	0°♌	
evening max el	4281 Nov 16 08:15	19°♎45'55	25°06'27	max. Earth dist.	4282 Sep 20 05:46	4°♌04'55	1.36011 AU
retrograde	4281 Nov 28 05:26	26°♎38'39		evening rise	4282 Sep 24 05:54	11°♌42'03	
evening set	4281 Dec 03 22:55	24°♎15'20			4282 Oct 04 18:59	0°♍	
min. Earth dist.	4281 Dec 08 10:51	19°♎13'35	0.67412 AU	desc. node	4282 Oct 05 21:10	1°♍45'12	
asc. node	4281 Dec 09 02:39	18°♎21'58			4282 Oct 26 12:20	0°♎	
inferior conj	4281 Dec 09 12:14	17°♎50'32	0°08'11	evening max el	4282 Oct 29 20:53	3°♎28'41	26°13'05
minimum elong	4281 Dec 09 12:02	17°♎51'12	0°08'06	retrograde	4282 Nov 11 13:14	10°♎38'23	
transit middle	4281 Dec 09 12:02	17°♎51'12	0°08'06	evening set	4282 Nov 17 20:16	8°♎03'32	
transit begin	4281 Dec 09 09:38	17°♎59'04		min. Earth dist.	4282 Nov 22 01:10	3°♎37'10	0.66578 AU
transit end	4281 Dec 09 14:26	17°♎43'20		inferior conj	4282 Nov 23 13:45	1°♎44'29	-0°49'32
morning rise	4281 Dec 15 01:22	11°♎52'21		minimum elong	4282 Nov 23 15:05	1°♎40'22	0°48'58
direct	4281 Dec 18 13:52	10°♎40'53			4282 Nov 25 00:17	30°♋♍	
morning max el	4281 Dec 25 20:48	14°♎46'59	19°36'04	asc. node	4282 Nov 25 23:41	28°♍53'34	
	4282 Jan 06 12:55	0°♎		morning rise	4282 Nov 29 10:25	25°♍55'46	
greatest brilliancy	4282 Jan 07 23:24	2°♎07'28	-0.7m	direct	4282 Dec 02 12:25	25°♍01'38	
desc. node	4282 Jan 14 23:21	12°♎42'20		morning max el	4282 Dec 09 06:16	28°♍44'14	18°44'46
morning set	4282 Jan 19 23:14	20°♎23'08			4282 Dec 10 10:56	0°♎	
	4282 Jan 26 03:51	0°♏		morning set	4282 Dec 30 13:23	29°♎35'52	
max. Earth dist.	4282 Feb 01 07:48	9°♏41'40	1.44475 AU		4282 Dec 30 19:31	0°♎	
				desc. node	4283 Jan 01 20:24	3°♎12'29	
superior conj	4282 Feb 05 15:01	16°♏33'25	-1°57'15	max. Earth dist.	4283 Jan 15 01:24	23°♎56'39	1.45200 AU
minimum elong	4282 Feb 05 08:30	16°♏07'16	1°56'52				
	4282 Feb 13 20:47	0°♏		superior conj	4283 Jan 15 21:30	25°♎15'36	-1°27'01
evening rise	4282 Feb 19 10:39	9°♏19'36		minimum elong	4283 Jan 15 12:14	24°♎39'13	1°26'03
	4282 Mar 04 00:34	0°♏			4283 Jan 18 21:50	0°♏	
asc. node	4282 Mar 07 01:58	4°♏18'58		evening rise	4283 Jan 31 08:52	19°♏48'58	
evening max el	4282 Mar 10 03:10	7°♏52'09	18°17'41		4283 Feb 06 16:50	0°♏	
retrograde	4282 Mar 16 13:33	11°♏19'09		greatest brilliancy	4283 Feb 07 11:11	1°♏13'26	-0.9m
evening set	4282 Mar 19 13:00	10°♏31'41		evening max el	4283 Feb 21 14:22	21°♏20'16	18°46'36
inferior conj	4282 Mar 25 12:26	5°♏09'07	3°35'01	asc. node	4283 Feb 21 23:00	21°♏41'48	
minimum elong	4282 Mar 25 12:52	5°♏07'54	3°34'59	retrograde	4283 Feb 28 06:53	25°♏03'54	
min. Earth dist.	4282 Mar 27 23:33	2°♏23'27	0.63701 AU	evening set	4283 Mar 03 12:42	24°♏03'43	
	4282 Mar 30 08:21	30°♋♏		inferior conj	4283 Mar 09 04:37	18°♏23'35	3°32'13
morning rise	4282 Mar 31 11:49	29°♏01'04		minimum elong	4283 Mar 09 03:35	18°♏26'45	3°32'08
direct	4282 Apr 07 08:38	26°♏16'47		min. Earth dist.	4283 Mar 11 00:01	16°♏10'16	0.65384 AU
desc. node	4282 Apr 12 22:36	27°♏48'34		morning rise	4283 Mar 14 18:03	12°♏11'08	
	4282 Apr 16 08:40	0°♏		direct	4283 Mar 21 08:50	9°♏20'35	
morning max el	4282 Apr 21 03:49	4°♏14'50	27°39'48	desc. node	4283 Mar 30 19:37	13°♏40'05	
	4282 May 10 12:29	0°♏		morning max el	4283 Apr 03 13:43	17°♏06'48	26°55'12
morning set	4282 May 25 22:11	27°♏35'15			4283 Apr 14 07:24	0°♏	
	4282 May 27 03:06	0°♏			4283 May 03 09:30	0°♏	
max. Earth dist.	4282 May 31 00:04	7°♏59'23	1.32979 AU	morning set	4283 May 09 08:25	11°♏00'23	

max. Earth dist.	4283 May 13 17:32	19° 8 37'03	1.34151 AU		max. Earth dist.	4284 Apr 24 13:45	0° 8	
						4284 Apr 24 23:43	0° 8 47'27	1.35774 AU
superior conj	4283 May 17 20:09	28° 8 03'08	-0°31'39		superior conj	4284 Apr 30 13:35	11° 8 44'34	-1°00'56
minimum elong	4283 May 17 21:49	28° 8 11'52	0°31'18		minimum elong	4284 Apr 30 16:53	12° 8 01'08	1°00'21
	4283 May 18 18:29	0° II				4284 Apr 30 16:53	12° 8 01'08	1°00'21
asc. node	4283 May 20 22:18	4° II 33'01			asc. node	4284 May 06 19:21	24° 8 29'46	
evening rise	4283 May 25 06:27	13° II 41'58			evening rise	4284 May 08 12:58	28° 8 02'57	
	4283 Jun 02 14:39	0° ☿				4284 May 09 11:59	0° II	
evening max el	4283 Jun 14 04:05	16° ☿ 03'16	21°26'17		evening max el	4284 May 26 10:18	27° II 10'23	20°07'24
retrograde	4283 Jun 26 08:21	22° ☿ 03'13				4284 May 29 21:09	0° ☿	
desc. node	4283 Jun 26 18:53	22° ☿ 02'46			retrograde	4284 Jun 05 22:42	2° ☿ 18'24	
evening set	4283 Jun 28 18:02	21° ☿ 50'00			evening set	4284 Jun 07 21:31	2° ☿ 08'34	
inferior conj	4283 Jul 08 03:02	17° ☿ 50'18	-3°12'44		desc. node	4284 Jun 12 15:53	0° ☿ 32'14	
minimum elong	4283 Jul 07 18:50	18° ☿ 01'45	3°10'12			4284 Jun 13 17:23	30° R II	
min. Earth dist.	4283 Jul 08 04:41	17° ☿ 47'59	0.54837 AU		inferior conj	4284 Jun 16 22:52	28° II 09'18	-1°16'27
morning rise	4283 Jul 16 20:28	13° ☿ 55'42			minimum elong	4284 Jun 16 19:17	28° II 14'39	1°15'08
direct	4283 Jul 20 05:56	13° ☿ 30'44			min. Earth dist.	4284 Jun 18 17:01	27° II 06'32	0.55158 AU
morning max el	4283 Aug 01 17:36	19° ☿ 24'37	22°13'09		morning rise	4284 Jun 25 15:30	23° II 51'18	
	4283 Aug 10 10:04	0° ♈			direct	4284 Jun 29 17:31	23° II 15'04	
asc. node	4283 Aug 16 21:31	10° ♈ 55'38				4284 Jul 13 10:42	0° ☿	
morning set	4283 Aug 23 06:34	23° ♈ 38'15			morning max el	4284 Jul 13 09:18	29° II 56'41	23°56'15
	4283 Aug 26 06:45	0° ♐			asc. node	4284 Aug 02 18:35	0° ♈ 21'06	
						4284 Aug 02 14:20	0° ♈	
superior conj	4283 Aug 30 10:27	8° ♐ 50'06	1°41'24		morning set	4284 Aug 06 18:13	8° ♈ 32'24	
minimum elong	4283 Aug 30 09:20	8° ♐ 44'12	1°41'21					
max. Earth dist.	4283 Sep 02 21:17	16° ♐ 01'44	1.34401 AU		superior conj	4284 Aug 13 17:49	23° ♈ 36'41	1°32'42
evening rise	4283 Sep 07 11:12	25° ♐ 10'59			minimum elong	4284 Aug 13 15:52	23° ♈ 26'05	1°32'30
	4283 Sep 09 23:45	0° ♊			max. Earth dist.	4284 Aug 15 21:34	28° ♈ 14'56	1.33189 AU
desc. node	4283 Sep 22 18:12	21° ♊ 50'44				4284 Aug 16 17:19	0° ♐	
	4283 Sep 28 06:15	0° ♌			evening rise	4284 Aug 21 04:16	9° ♐ 13'44	
evening max el	4283 Oct 12 09:34	17° ♌ 03'47	27°01'45			4284 Sep 01 09:10	0° ♊	
retrograde	4283 Oct 25 15:21	24° ♌ 20'44			desc. node	4284 Sep 08 15:13	11° ♊ 29'50	
evening set	4283 Nov 01 10:21	21° ♌ 39'49				4284 Sep 23 12:37	0° ♌	
min. Earth dist.	4283 Nov 05 08:40	17° ♌ 49'16	0.65397 AU		evening max el	4284 Sep 23 21:04	0° ♌ 20'13	27°25'27
inferior conj	4283 Nov 07 09:10	15° ♌ 31'24	-1°50'32		retrograde	4284 Oct 07 11:30	7° ♌ 37'49	
minimum elong	4283 Nov 07 12:17	15° ♌ 22'31	1°49'16		evening set	4284 Oct 14 14:27	4° ♌ 59'30	
asc. node	4283 Nov 12 20:45	10° ♌ 20'40			min. Earth dist.	4284 Oct 18 07:17	1° ♌ 42'40	0.63871 AU
morning rise	4283 Nov 13 15:09	9° ♌ 55'14				4284 Oct 19 23:19	30° R ♊	
direct	4283 Nov 16 08:49	9° ♌ 14'42			inferior conj	4284 Oct 20 20:02	29° ♊ 06'15	-2°52'29
morning max el	4283 Nov 22 20:43	12° ♌ 43'59	18°09'54		minimum elong	4284 Oct 21 00:54	28° ♊ 53'42	2°50'44
	4283 Dec 05 01:51	0° ♉			morning rise	4284 Oct 27 12:42	23° ♊ 45'51	
morning set	4283 Dec 11 08:37	10° ♉ 16'21			asc. node	4284 Oct 29 17:47	23° ♊ 15'36	
desc. node	4283 Dec 19 17:26	23° ♉ 51'46			direct	4284 Oct 30 00:26	23° ♊ 15'12	
	4283 Dec 23 13:37	0° ♊			morning max el	4284 Nov 05 13:24	26° ♊ 40'16	17°52'11
						4284 Nov 08 10:43	0° ♌	
superior conj	4283 Dec 26 01:37	3° ♊ 57'45	-0°42'39		morning set	4284 Nov 22 07:04	22° ♌ 16'12	
minimum elong	4283 Dec 25 20:16	3° ♊ 36'37	0°41'54			4284 Nov 26 19:34	0° ♉	
max. Earth dist.	4283 Dec 28 21:04	8° ♊ 23'33	1.45181 AU					
evening rise	4284 Jan 11 09:05	29° ♊ 27'23			superior conj	4284 Dec 04 23:14	13° ♉ 34'47	0°04'26
	4284 Jan 11 17:29	0° ♋			minimum elong	4284 Dec 04 23:44	13° ♉ 36'48	0°04'22
greatest brilliancy	4284 Jan 23 20:31	18° ♋ 40'29	-0.7m		behind sun begin	4284 Dec 04 14:10	12° ♉ 57'44	
	4284 Jan 31 18:51	0° ♌			behind sun end	4284 Dec 05 09:17	14° ♉ 15'47	
evening max el	4284 Feb 04 21:44	4° ♌ 51'19	19°32'22		desc. node	4284 Dec 05 14:28	14° ♉ 36'53	
asc. node	4284 Feb 08 20:03	8° ♌ 03'18			max. Earth dist.	4284 Dec 10 15:22	22° ♉ 43'11	1.44436 AU
retrograde	4284 Feb 12 03:58	9° ♌ 02'14				4284 Dec 15 06:08	0° ♊	
evening set	4284 Feb 15 17:05	7° ♌ 48'32			evening rise	4284 Dec 20 19:53	8° ♊ 38'28	
inferior conj	4284 Feb 21 04:17	1° ♌ 52'55	3°15'45			4285 Jan 04 00:18	0° ♋	
minimum elong	4284 Feb 21 02:18	1° ♌ 59'27	3°15'25		evening max el	4285 Jan 17 23:54	18° ♋ 23'31	20°32'54
min. Earth dist.	4284 Feb 22 08:42	0° ♌ 19'39	0.66652 AU		asc. node	4285 Jan 25 17:04	23° ♋ 08'52	
	4284 Feb 22 14:46	30° R ♋			retrograde	4285 Jan 26 02:12	23° ♋ 09'39	
morning rise	4284 Feb 26 11:17	25° ♋ 38'52			evening set	4285 Jan 30 00:01	21° ♋ 41'34	
direct	4284 Mar 03 15:01	22° ♋ 54'32			inferior conj	4285 Feb 04 08:48	15° ♋ 33'12	2°48'33
	4284 Mar 15 17:00	0° ♌			minimum elong	4285 Feb 04 06:23	15° ♋ 41'30	2°47'57
morning max el	4284 Mar 15 23:17	0° ♌ 15'48	25°45'47		min. Earth dist.	4285 Feb 04 23:45	14° ♋ 42'07	0.67498 AU
desc. node	4284 Mar 16 16:39	1° ♌ 00'21			morning rise	4285 Feb 09 12:32	9° ♋ 19'23	
	4284 Apr 07 05:52	0° ♍			direct	4285 Feb 15 02:32	6° ♋ 50'26	
morning set	4284 Apr 21 04:25	23° ♍ 40'11			morning max el	4285 Feb 26 07:57	13° ♋ 32'54	24°21'22

desc. node	4285 Mar 03 13:40	19°  24'14		desc. node	4286 Feb 18 10:42	8°  33'34	
	4285 Mar 11 15:58	0° 			4286 Mar 05 06:43	0° 	
	4285 Mar 31 02:14	0° 		morning set	4286 Mar 15 03:15	15°  43'18	
morning set	4285 Apr 03 04:43	5°  19'48		max. Earth dist.	4286 Mar 19 16:01	23°  21'37	1.39952 AU
max. Earth dist.	4285 Apr 06 20:54	11°  50'57	1.37771 AU		4286 Mar 23 11:25	0° 	
superior conj	4285 Apr 13 19:41	24°  49'06	-1°28'39	superior conj	4286 Mar 27 10:15	7°  06'31	-1°51'45
minimum elong	4285 Apr 14 00:14	25°  11'02	1°28'02	minimum elong	4286 Mar 27 14:53	7°  27'43	1°51'22
	4285 Apr 16 11:42	0° 		evening rise	4286 Apr 06 04:34	25°  27'54	
evening rise	4285 Apr 22 13:21	12°  00'53			4286 Apr 08 13:55	0° 	
asc. node	4285 Apr 23 16:23	14°  08'14		asc. node	4286 Apr 10 13:24	3°  04'36	
	4285 May 02 07:27	0° 		evening max el	4286 Apr 22 08:33	21°  06'00	18°28'31
evening max el	4285 May 09 04:38	8°  05'29	19°07'47	retrograde	4286 Apr 29 22:03	25°  08'03	
retrograde	4285 May 18 01:06	13°  00'18		evening set	4286 May 02 05:28	24°  05'14	
evening set	4285 May 20 01:56	13°  05'48		inferior conj	4286 May 09 17:08	20°  09'08	2°04'52
inferior conj	4285 May 28 09:26	8°  01'54	0°37'23	minimum elong	4286 May 09 20:43	20°  11'58	2°03'50
minimum elong	4285 May 28 10:56	8°  01'51	0°36'51	min. Earth dist.	4286 May 13 03:23	17°  03'22	0.58265 AU
desc. node	4285 May 30 12:54	7°  02'26		morning rise	4286 May 17 08:50	14°  03'53	
min. Earth dist.	4285 May 31 08:12	6°  02'54	0.56386 AU	desc. node	4286 May 17 09:54	14°  05'13	
morning rise	4285 Jun 05 16:46	4°  00'39		direct	4286 May 23 08:03	13°  02'57	
direct	4285 Jun 10 17:32	3°  01'13		morning max el	4286 Jun 06 17:20	21°  02'24	26°54'20
morning max el	4285 Jun 24 23:27	10°  02'10	25°35'16		4286 Jun 14 11:49	0° 	
	4285 Jul 09 21:49	0° 			4286 Jul 02 15:32	0° 	
asc. node	4285 Jul 20 15:37	20°  05'09		morning set	4286 Jul 06 15:31	8°  05'10	
morning set	4285 Jul 22 05:44	23°  04'46		asc. node	4286 Jul 07 12:40	10°  02'05	
	4285 Jul 25 07:13	0° 					
superior conj	4285 Jul 29 04:21	8°  03'30	1°18'50	superior conj	4286 Jul 13 16:08	23°  02'54	1°00'31
minimum elong	4285 Jul 29 02:02	8°  01'17	1°18'29	minimum elong	4286 Jul 13 13:56	23°  03'40	1°00'07
max. Earth dist.	4285 Jul 30 04:46	10°  04'43	1.32400 AU	max. Earth dist.	4286 Jul 13 15:47	23°  03'50	1.32033 AU
evening rise	4285 Aug 05 05:39	23°  03'39		evening rise	4286 Jul 16 15:45	0° 	
	4285 Aug 08 08:44	0° 			4286 Jul 20 12:41	8°  02'20	
	4285 Aug 26 03:23	0° 			4286 Jul 31 18:51	0° 	
desc. node	4285 Aug 26 12:13	0°  03'30		desc. node	4286 Aug 13 09:13	18°  03'37	
evening max el	4285 Sep 06 05:16	13°  04'36	27°18'39	evening max el	4286 Aug 19 07:47	25°  05'51	26°38'25
retrograde	4285 Sep 20 01:01	20°  01'19			4286 Aug 25 16:52	0° 	
evening set	4285 Sep 27 04:58	17°  05'51		retrograde	4286 Sep 02 06:28	2°  01'52	
min. Earth dist.	4285 Sep 30 19:40	15°  05'11	0.62035 AU	evening set	4286 Sep 09 01:22	0°  01'17	
inferior conj	4285 Oct 03 19:19	12°  02'21	-3°51'32		4286 Sep 09 14:42	30°  00'00	
minimum elong	4285 Oct 04 01:17	12°  07'19	3°49'50	min. Earth dist.	4286 Sep 12 21:38	27°  03'43	0.60000 AU
morning rise	4285 Oct 10 23:23	7°  01'19		inferior conj	4286 Sep 16 03:36	25°  06'59	-4°41'02
direct	4285 Oct 13 07:56	6°  05'55		minimum elong	4286 Sep 16 09:02	24°  06'56	4°40'03
asc. node	4285 Oct 16 14:49	7°  04'35		morning rise	4286 Sep 23 18:45	20°  06'27	
morning max el	4285 Oct 20 05:09	10°  02'24	17°52'30	direct	4286 Sep 26 03:25	20°  06'33	
	4285 Nov 02 04:15	0° 		asc. node	4286 Oct 03 11:52	23°  03'36	
morning set	4285 Nov 05 02:25	5°  01'15		morning max el	4286 Oct 03 16:43	23°  04'38	18°12'09
					4286 Oct 08 17:01	0° 	
superior conj	4285 Nov 15 23:10	24°  08'28	0°44'42	morning set	4286 Oct 19 12:46	18°  05'37	
minimum elong	4285 Nov 16 02:50	24°  08'44	0°44'11		4286 Oct 25 09:45	0° 	
	4285 Nov 19 05:18	0° 		superior conj	4286 Oct 29 00:05	6°  03'35	1°14'18
desc. node	4285 Nov 22 11:29	5°  07'24		minimum elong	4286 Oct 29 04:04	6°  03'53	1°13'51
max. Earth dist.	4285 Nov 23 05:36	6°  07'38	1.43059 AU	max. Earth dist.	4286 Nov 05 14:59	19°  03'56	1.41221 AU
evening rise	4285 Nov 30 08:39	18°  00'07		desc. node	4286 Nov 09 08:31	26°  03'10	
	4285 Dec 08 04:24	0° 		evening rise	4286 Nov 10 13:59	28°  03'10	
	4285 Dec 30 00:46	0° 			4286 Nov 11 17:05	0° 	
evening max el	4285 Dec 31 20:35	1°  05'57	21°44'55		4286 Dec 01 19:38	0° 	
retrograde	4286 Jan 09 23:32	7°  02'22		evening max el	4286 Dec 14 12:44	15°  03'33	23°03'38
asc. node	4286 Jan 12 14:05	6°  04'55		retrograde	4286 Dec 24 18:19	21°  03'37	
evening set	4286 Jan 14 07:45	5°  03'39		evening set	4286 Dec 29 14:40	19°  03'37	
	4286 Jan 19 04:47	30°  00'00		asc. node	4286 Dec 30 11:06	18°  03'51	
inferior conj	4286 Jan 19 15:59	29°  02'11	2°12'36	inferior conj	4287 Jan 03 23:52	13°  03'14	1°29'10
minimum elong	4286 Jan 19 13:36	29°  02'29	2°11'50	minimum elong	4287 Jan 03 22:00	13°  03'20	1°28'28
min. Earth dist.	4286 Jan 19 18:50	29°  03'11	0.67944 AU	min. Earth dist.	4287 Jan 03 15:32	13°  03'42	0.68020 AU
morning rise	4286 Jan 24 19:15	23°  09'24		morning rise	4287 Jan 09 05:13	7°  03'06	
direct	4286 Jan 29 18:35	21°  01'14		direct	4287 Jan 13 14:06	5°  03'20	
morning max el	4286 Feb 08 17:32	26°  05'53	22°52'12	morning max el	4287 Jan 22 07:42	10°  03'25	21°27'10
	4286 Feb 11 14:07	0° 		desc. node	4287 Feb 05 07:43	28°  03'15	

	4287 Feb 06 12:55	0°♊			4288 Jan 10 06:49	0°♊	
morning set	4287 Feb 22 20:52	24°♊44'35		desc. node	4288 Jan 23 04:47	18°♊20'59	
	4287 Feb 26 03:48	0°♋			4288 Jan 30 20:58	0°♋	
max. Earth dist.	4287 Mar 01 16:35	5°♋45'37	1.42040 AU	morning set	4288 Feb 01 18:43	2°♋56'17	
				max. Earth dist.	4288 Feb 12 01:14	19°♋05'09	1.43753 AU
superior conj	4287 Mar 09 04:12	18°♋24'07	-2°05'57				
minimum elong	4287 Mar 09 06:32	18°♋34'12	2°05'52	superior conj	4288 Feb 17 21:12	28°♋33'17	-2°05'47
	4287 Mar 15 17:46	0°♌		minimum elong	4288 Feb 17 18:13	28°♋20'59	2°05'41
evening rise	4287 Mar 20 06:47	8°♌14'15			4288 Feb 18 18:14	0°♋	
asc. node	4287 Mar 28 10:26	22°♌44'58		evening rise	4288 Mar 01 15:47	20°♋11'59	
	4287 Apr 02 03:07	0°♍			4288 Mar 07 07:48	0°♌	
evening max el	4287 Apr 05 18:25	4°♍19'28	18°09'10	asc. node	4288 Mar 14 07:27	11°♌16'58	
retrograde	4287 Apr 12 12:54	7°♍45'18		evening max el	4288 Mar 19 06:57	17°♌31'16	18°09'07
evening set	4287 Apr 15 02:59	7°♍15'44		retrograde	4288 Mar 25 17:34	20°♌54'11	
inferior conj	4287 Apr 21 21:26	2°♍23'41	3°00'36	evening set	4288 Mar 28 13:36	20°♌13'30	
minimum elong	4287 Apr 22 00:29	2°♍16'36	3°00'00	inferior conj	4288 Apr 03 18:51	15°♌01'23	3°28'47
	4287 Apr 24 11:19	30°♎♌		minimum elong	4288 Apr 03 20:16	14°♌57'37	3°28'39
min. Earth dist.	4287 Apr 25 04:36	29°♌21'24	0.60435 AU	min. Earth dist.	4288 Apr 06 14:19	12°♌03'56	0.62574 AU
morning rise	4287 Apr 28 19:45	26°♌34'11		morning rise	4288 Apr 10 01:37	8°♌57'52	
desc. node	4287 May 04 06:56	24°♌31'26		direct	4288 Apr 16 22:31	6°♌24'06	
direct	4287 May 05 10:27	24°♌27'42		desc. node	4288 Apr 20 03:59	6°♌54'41	
	4287 May 17 04:23	0°♏		morning max el	4288 Apr 30 23:31	14°♌23'05	27°51'03
morning max el	4287 May 19 17:28	2°♏21'30	27°41'26		4288 May 13 14:30	0°♏	
	4287 Jun 08 21:19	0°♐			4288 May 31 10:16	0°♐	
morning set	4287 Jun 20 21:50	22°♐43'01		morning set	4288 Jun 03 22:34	6°♐56'21	
asc. node	4287 Jun 24 09:43	0°♑06'32		max. Earth dist.	4288 Jun 09 10:24	18°♐24'41	1.32521 AU
	4287 Jun 24 08:30	0°♑		asc. node	4288 Jun 10 06:46	20°♐14'09	
max. Earth dist.	4287 Jun 27 03:00	6°♑01'40	1.32070 AU				
superior conj	4287 Jun 28 03:26	8°♑15'51	0°38'20	superior conj	4288 Jun 11 12:29	22°♐55'01	0°12'57
minimum elong	4287 Jun 28 01:49	8°♑06'57	0°38'00	minimum elong	4288 Jun 11 11:53	22°♐51'42	0°12'49
evening rise	4287 Jul 04 23:05	23°♑08'20		behind sun begin	4288 Jun 11 08:46	22°♐34'49	
	4287 Jul 08 06:14	0°♒		behind sun end	4288 Jun 11 14:59	23°♐08'35	
	4287 Jul 26 09:46	0°♓			4288 Jun 14 18:30	0°♑	
desc. node	4287 Jul 31 06:14	5°♓28'11		evening rise	4288 Jun 18 10:53	7°♑56'49	
evening max el	4287 Aug 01 02:52	6°♓18'38	25°27'22		4288 Jun 29 22:26	0°♒	
retrograde	4287 Aug 15 01:55	13°♓23'47		evening max el	4288 Jul 12 16:09	16°♒52'19	23°55'38
evening set	4287 Aug 20 22:56	12°♓03'39		desc. node	4288 Jul 17 03:16	20°♒33'25	
min. Earth dist.	4287 Aug 25 14:43	9°♓24'06	0.57961 AU	retrograde	4288 Jul 26 09:43	23°♒46'47	
inferior conj	4287 Aug 28 17:30	7°♓14'17	-5°10'02	evening set	4288 Jul 30 20:50	23°♒02'48	
minimum elong	4287 Aug 28 19:31	7°♓10'46	5°09'56	min. Earth dist.	4288 Aug 06 02:27	20°♒02'02	0.56208 AU
morning rise	4287 Sep 05 18:22	2°♓57'28		inferior conj	4288 Aug 08 11:07	18°♒35'36	-5°03'15
direct	4287 Sep 08 06:34	2°♓38'09		minimum elong	4288 Aug 08 07:06	18°♒41'44	5°02'52
morning max el	4287 Sep 16 20:48	6°♓42'47	18°52'39	morning rise	4288 Aug 16 19:57	14°♒38'18	
asc. node	4287 Sep 20 08:55	10°♓39'50		direct	4288 Aug 19 14:13	14°♒18'46	
	4287 Oct 01 18:43	0°♔		morning max el	4288 Aug 29 14:27	18°♒57'54	19°54'53
morning set	4287 Oct 03 09:34	3°♔09'43		asc. node	4288 Sep 06 05:59	28°♒37'29	
					4288 Sep 07 02:37	0°♕	
superior conj	4287 Oct 11 20:54	19°♔41'10	1°33'07	morning set	4288 Sep 16 13:23	17°♕41'33	
minimum elong	4287 Oct 11 23:38	19°♔54'12	1°32'55		4288 Sep 22 14:32	0°♕	
	4287 Oct 17 10:12	0°♖		superior conj	4288 Sep 24 08:13	3°♕29'15	1°42'26
max. Earth dist.	4287 Oct 18 20:39	2°♖34'31	1.39145 AU	minimum elong	4288 Sep 24 09:18	3°♕34'38	1°42'24
evening rise	4287 Oct 22 18:18	9°♖23'02		max. Earth dist.	4288 Sep 30 01:50	14°♕37'20	1.37089 AU
desc. node	4287 Oct 27 05:33	16°♖51'18		evening rise	4288 Oct 03 20:44	21°♕36'18	
	4287 Nov 04 14:41	0°♗			4288 Oct 08 15:43	0°♖	
evening max el	4287 Nov 27 02:07	29°♗13'49	24°23'02	desc. node	4288 Oct 13 02:35	7°♖22'59	
	4287 Nov 27 21:08	0°♘			4288 Oct 28 12:15	0°♗	
retrograde	4287 Dec 08 09:32	5°♘50'50		evening max el	4288 Nov 08 14:26	12°♗56'01	25°36'25
evening set	4287 Dec 13 19:14	3°♘35'35		retrograde	4288 Nov 20 20:16	19°♗57'24	
asc. node	4287 Dec 17 08:08	29°♗44'13		evening set	4288 Nov 26 19:46	17°♗28'20	
	4287 Dec 17 03:10	30°♘♗		min. Earth dist.	4288 Dec 01 04:32	12°♗41'49	0.67104 AU
min. Earth dist.	4287 Dec 18 11:32	28°♗14'21	0.67739 AU	inferior conj	4288 Dec 02 10:43	11°♗05'24	-0°15'48
inferior conj	4287 Dec 19 06:44	27°♗10'01	0°39'23	minimum elong	4288 Dec 02 11:08	11°♗04'05	0°15'37
minimum elong	4287 Dec 19 05:47	21°♗13'09	0°39'00	transit middle	4288 Dec 02 11:08	11°♗04'05	0°15'37
morning rise	4287 Dec 24 16:25	21°♗07'49		transit begin	4288 Dec 02 10:24	11°♗06'23	
direct	4287 Dec 28 11:56	19°♗44'44		transit end	4288 Dec 02 11:51	11°♗01'47	
morning max el	4288 Jan 05 05:28	24°♗08'49	20°12'41	asc. node	4288 Dec 03 05:11	10°♗06'47	

morning rise	4288 Dec 08 02:51	5°♊11'12		evening set	4289 Nov 10 14:19	1°♊12'15	
direct	4288 Dec 11 10:36	4°♊07'41			4289 Nov 11 22:30	30°♋♌	
morning max el	4288 Dec 18 11:07	8°♊02'17	19°12'19	min. Earth dist.	4289 Nov 14 16:15	27°♌01'11	0.66120 AU
greatest brilliancy	4289 Jan 01 06:49	26°♊43'49	-0.7m	inferior conj	4289 Nov 16 09:54	24°♌56'50	-1°15'09
	4289 Jan 03 10:12	0°♋		minimum elong	4289 Nov 16 11:59	24°♌50'38	1°14'16
desc. node	4289 Jan 09 01:50	8°♋43'29		asc. node	4289 Nov 20 02:14	20°♌56'10	
morning set	4289 Jan 10 20:13	11°♋27'55		morning rise	4289 Nov 22 10:22	19°♌13'10	
	4289 Jan 22 17:19	0°♌		direct	4289 Nov 25 08:25	18°♌25'27	
max. Earth dist.	4289 Jan 24 16:01	3°♌03'40	1.44871 AU	morning max el	4289 Dec 01 23:02	22°♌01'30	18°27'47
					4289 Dec 08 07:27	0°♊	
superior conj	4289 Jan 27 13:32	7°♌38'25	-1°46'41	morning set	4289 Dec 21 22:12	21°♊16'33	
minimum elong	4289 Jan 27 05:03	7°♌04'50	1°46'01	desc. node	4289 Dec 26 22:51	29°♊17'46	
	4289 Feb 10 09:26	0°♋			4289 Dec 27 09:29	0°♋	
evening rise	4289 Feb 11 03:23	1°♋13'58					
asc. node	4289 Mar 01 04:29	29°♋08'11		superior conj	4290 Jan 06 16:21	16°♋13'19	-1°09'17
	4289 Mar 01 22:39	0°♌		minimum elong	4290 Jan 06 08:05	15°♋40'54	1°08'17
evening max el	4289 Mar 02 19:15	0°♌54'31	18°27'48	max. Earth dist.	4290 Jan 07 10:17	17°♋23'40	1.45281 AU
retrograde	4289 Mar 09 07:25	4°♌27'38			4290 Jan 15 11:12	0°♌	
evening set	4289 Mar 12 09:24	3°♌34'56		evening rise	4290 Jan 22 15:40	11°♌19'21	
	4289 Mar 16 12:52	30°♋♌		greatest brilliancy	4290 Feb 01 09:28	26°♌40'56	-0.8m
inferior conj	4289 Mar 18 05:15	28°♋04'31	3°35'44		4290 Feb 03 13:00	0°♋	
minimum elong	4289 Mar 18 05:00	28°♋05'13	3°35'43	evening max el	4290 Feb 14 05:00	14°♋23'56	19°04'11
min. Earth dist.	4289 Mar 20 09:39	25°♋31'08	0.64458 AU	asc. node	4290 Feb 16 01:30	16°♋06'32	
morning rise	4289 Mar 23 23:54	21°♋53'50		retrograde	4290 Feb 21 02:39	18°♋18'17	
direct	4289 Mar 30 18:44	19°♋05'16		evening set	4290 Feb 24 11:20	17°♋12'39	
desc. node	4289 Apr 07 01:02	21°♋39'59		inferior conj	4290 Mar 02 00:57	11°♋25'49	3°26'41
morning max el	4289 Apr 13 08:57	27°♋00'31	27°24'32	minimum elong	4290 Mar 01 23:27	11°♋30'35	3°26'31
	4289 Apr 16 04:23	0°♌		min. Earth dist.	4290 Mar 03 13:55	9°♋28'36	0.65971 AU
	4289 May 07 06:01	0°♋		morning rise	4290 Mar 07 11:12	5°♋12'13	
morning set	4289 May 18 15:06	20°♋42'25		direct	4290 Mar 13 21:46	2°♋22'37	
	4289 May 23 05:52	0°♌		desc. node	4290 Mar 24 22:04	8°♋12'32	
max. Earth dist.	4289 May 23 09:56	0°♌21'00	1.33413 AU	morning max el	4290 Mar 26 18:51	10°♋00'52	26°28'07
					4290 Apr 11 13:38	0°♌	
superior conj	4289 May 26 17:23	7°♌17'34	-0°14'55		4290 Apr 29 18:23	0°♋	
minimum elong	4289 May 26 18:08	7°♌21'37	0°14'45	morning set	4290 May 01 19:48	3°♋49'49	
behind sun begin	4289 May 26 16:01	7°♌10'23		max. Earth dist.	4290 May 05 22:17	11°♋44'09	1.34779 AU
behind sun end	4289 May 26 20:15	7°♌32'51					
asc. node	4289 May 28 03:48	10°♌20'58		superior conj	4290 May 10 15:45	21°♋16'01	-0°44'07
evening rise	4289 Jun 02 22:12	22°♌39'45		minimum elong	4290 May 10 18:07	21°♋28'12	0°43'40
	4289 Jun 06 11:36	0°♌			4290 May 14 20:34	0°♌	
evening max el	4289 Jun 24 06:38	27°♌16'16	22°18'45	asc. node	4290 May 15 00:49	0°♌22'18	
	4289 Jun 27 10:30	0°♌		evening rise	4290 May 18 07:02	7°♌10'08	
desc. node	4289 Jul 04 00:17	3°♌18'26			4290 May 30 17:46	0°♌	
retrograde	4289 Jul 07 05:43	3°♌42'31		evening max el	4290 Jun 06 06:00	8°♌01'55	20°50'40
evening set	4289 Jul 10 05:30	3°♌22'43		retrograde	4290 Jun 17 18:20	13°♌40'11	
	4289 Jul 18 03:46	30°♋♌		evening set	4290 Jun 19 21:03	13°♌29'33	
min. Earth dist.	4289 Jul 18 13:01	29°♌47'00	0.55080 AU	desc. node	4290 Jun 20 21:18	13°♌17'17	
inferior conj	4289 Jul 19 11:29	29°♌15'17	-4°07'12	inferior conj	4290 Jun 29 04:40	9°♌32'22	-2°25'22
minimum elong	4289 Jul 19 03:04	29°♌27'11	4°05'09	minimum elong	4290 Jun 28 21:59	9°♌41'52	2°23'05
morning rise	4289 Jul 28 02:32	25°♌24'57		min. Earth dist.	4290 Jun 30 00:31	9°♌04'09	0.54849 AU
direct	4289 Jul 31 05:00	25°♌03'17		morning rise	4290 Jul 07 22:38	5°♌29'41	
	4289 Aug 11 07:37	0°♌		direct	4290 Jul 11 14:15	5°♌00'58	
morning max el	4289 Aug 11 20:18	0°♌28'43	21°17'48	morning max el	4290 Jul 24 15:38	11°♌16'48	22°56'26
asc. node	4289 Aug 24 03:03	17°♌17'20			4290 Aug 07 11:34	0°♌	
	4289 Aug 30 17:19	0°♌		asc. node	4290 Aug 11 00:06	6°♌28'08	
morning set	4289 Aug 31 21:46	2°♌26'38		morning set	4290 Aug 16 08:42	17°♌18'22	
					4290 Aug 22 07:04	0°♌	
superior conj	4289 Sep 08 05:49	17°♌47'53	1°43'45				
minimum elong	4289 Sep 08 05:24	17°♌45'41	1°43'45	superior conj	4290 Aug 23 10:21	2°♌26'05	1°38'24
max. Earth dist.	4289 Sep 12 12:08	26°♌28'38	1.35278 AU	minimum elong	4290 Aug 23 08:49	2°♌17'53	1°38'17
	4289 Sep 14 06:59	0°♌		max. Earth dist.	4290 Aug 26 07:14	8°♌30'25	1.33835 AU
evening rise	4289 Sep 16 17:32	4°♌41'27		evening rise	4290 Aug 31 04:18	18°♌26'07	
desc. node	4289 Sep 29 23:36	27°♌40'00			4290 Sep 06 07:03	0°♌	
	4289 Oct 01 11:26	0°♌		desc. node	4290 Sep 16 20:37	17°♌35'17	
evening max el	4289 Oct 22 02:57	26°♌36'05	26°36'16		4290 Sep 25 16:38	0°♌	
	4289 Oct 26 00:51	0°♊		evening max el	4290 Oct 04 15:25	10°♌05'10	27°15'17
retrograde	4289 Nov 04 01:56	3°♊50'44		retrograde	4290 Oct 18 01:44	17°♌23'16	

evening set	4290 Oct 25 00:32	14°♄42'29		retrograde	4291 Sep 30 18:58	0°♄26'00	
min. Earth dist.	4290 Oct 28 20:24	11°♄06'25	0.64788 AU		4291 Oct 03 18:24	30°♄	
inferior conj	4290 Oct 31 02:02	8°♄39'43	-2°16'54	evening set	4291 Oct 07 23:20	27°♄52'38	
minimum elong	4290 Oct 31 05:55	8°♄29'04	2°15'23	min. Earth dist.	4291 Oct 11 14:50	24°♄48'10	0.63123 AU
morning rise	4290 Nov 06 12:25	3°♄09'36		inferior conj	4291 Oct 14 08:22	22°♄07'14	-3°18'12
asc. node	4290 Nov 06 23:17	2°♄58'21		minimum elong	4291 Oct 14 13:50	21°♄53'48	3°16'24
direct	4290 Nov 09 03:10	2°♄33'46		morning rise	4291 Oct 21 05:50	16°♄54'11	
morning max el	4290 Nov 15 14:46	6°♄00'31	18°00'06	direct	4291 Oct 23 15:56	16°♄26'35	
	4290 Dec 01 17:03	0°♄		asc. node	4291 Oct 24 20:20	16°♄33'20	
morning set	4290 Dec 03 05:44	2°♄33'20		morning max el	4291 Oct 30 07:22	19°♄52'22	17°50'01
desc. node	4290 Dec 13 19:53	20°♄00'00			4291 Nov 06 19:30	0°♄	
				morning set	4291 Nov 15 13:57	15°♄01'32	
superior conj	4290 Dec 17 02:00	25°♄13'57	-0°22'19		4291 Nov 24 05:35	0°♄	
minimum elong	4290 Dec 16 23:16	25°♄03'02	0°21'56				
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max. Earth dist.	4290 Dec 21 05:29	1°♄48'54	1.44952 AU	minimum elong	4291 Nov 27 12:43	5°♄32'20	0°22'22
evening rise	4291 Jan 02 08:35	20°♄42'12		desc. node	4291 Nov 30 16:54	10°♄46'25	
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greatest brilliancy	4291 Jan 16 12:27	12°♄13'25	-0.6m	evening rise	4291 Dec 12 18:16	29°♄53'49	
evening max el	4291 Jan 28 10:21	27°♄56'20	19°56'35		4291 Dec 12 19:53	0°♄	
	4291 Jan 30 15:56	0°♄			4292 Jan 02 03:17	0°♄	
asc. node	4291 Feb 02 22:32	1°♄57'55		evening max el	4292 Jan 11 10:15	11°♄29'31	21°02'23
retrograde	4291 Feb 05 00:23	2°♄21'08		retrograde	4292 Jan 19 22:21	16°♄31'35	
evening set	4291 Feb 08 17:02	1°♄01'30		asc. node	4292 Jan 20 19:35	16°♄27'20	
	4291 Feb 09 22:37	30°♄		evening set	4292 Jan 24 00:31	14°♄56'53	
inferior conj	4291 Feb 14 02:59	25°♄00'25	3°05'22	inferior conj	4292 Jan 29 08:52	8°♄44'10	2°34'15
minimum elong	4291 Feb 14 00:44	25°♄07'54	3°04'55	minimum elong	4292 Jan 29 06:24	8°♄52'41	2°33'34
min. Earth dist.	4291 Feb 15 01:33	23°♄44'52	0.67066 AU	min. Earth dist.	4292 Jan 29 18:29	8°♄11'01	0.67743 AU
morning rise	4291 Feb 19 08:14	18°♄46'22		morning rise	4292 Feb 03 12:07	2°♄31'17	
direct	4291 Feb 25 06:28	16°♄07'25		direct	4292 Feb 08 19:57	0°♄10'49	
morning max el	4291 Mar 09 03:43	23°♄13'27	25°11'02	morning max el	4292 Feb 19 12:20	6°♄32'29	23°43'25
desc. node	4291 Mar 11 19:04	26°♄02'34		desc. node	4292 Feb 26 16:05	14°♄47'31	
	4291 Mar 15 03:48	0°♄			4292 Mar 08 17:12	0°♄	
	4291 Apr 04 22:10	0°♄		morning set	4292 Mar 25 22:03	27°♄14'13	
morning set	4291 Apr 14 08:05	16°♄05'49			4292 Mar 27 12:40	0°♄	
max. Earth dist.	4291 Apr 17 23:42	22°♄46'42	1.36588 AU	max. Earth dist.	4292 Mar 29 19:24	3°♄59'09	1.38699 AU
	4291 Apr 21 18:54	0°♄					
superior conj	4291 Apr 24 04:49	4°♄43'11	-1°13'02	superior conj	4292 Apr 06 04:50	17°♄28'56	-1°39'15
minimum elong	4291 Apr 24 08:43	5°♄02'29	1°12'25	minimum elong	4292 Apr 06 09:38	17°♄51'33	1°38'41
asc. node	4291 May 01 21:51	20°♄14'26			4292 Apr 12 17:02	0°♄	
evening rise	4291 May 02 11:15	21°♄22'07		evening rise	4292 Apr 15 08:07	5°♄07'55	
	4291 May 06 20:11	0°♄		asc. node	4292 Apr 17 18:53	9°♄52'24	
evening max el	4291 May 19 17:38	19°♄27'06	19°39'35		4292 Apr 30 05:13	0°♄	
retrograde	4291 May 29 12:01	24°♄12'27		evening max el	4292 May 01 16:22	1°♄32'38	18°48'33
evening set	4291 May 31 10:53	24°♄01'53		retrograde	4292 May 09 22:09	5°♄34'58	
desc. node	4291 Jun 07 18:17	20°♄52'54		evening set	4292 May 12 01:42	5°♄19'33	
inferior conj	4291 Jun 09 05:22	19°♄58'40	-0°25'59	inferior conj	4292 May 20 00:34	0°♄59'34	1°18'26
minimum elong	4291 Jun 09 04:11	20°♄00'30	0°25'33	minimum elong	4292 May 20 03:22	0°♄54'28	1°17'30
min. Earth dist.	4291 Jun 11 13:46	18°♄30'35	0.55588 AU		4292 May 21 09:04	30°♄	
morning rise	4291 Jun 17 19:06	15°♄26'30		min. Earth dist.	4292 May 23 06:06	28°♄39'15	0.57127 AU
direct	4291 Jun 22 06:41	14°♄41'46		desc. node	4292 May 24 15:17	27°♄43'43	
morning max el	4291 Jul 06 05:35	21°♄40'23	24°39'48	morning rise	4292 May 28 01:47	25°♄51'32	
	4291 Jul 13 12:09	0°♄		direct	4292 Jun 02 12:30	24°♄39'33	
asc. node	4291 Jul 28 21:07	26°♄01'57			4292 Jun 14 11:50	0°♄	
	4291 Jul 30 19:22	0°♄		morning max el	4292 Jun 16 20:49	2°♄08'41	26°12'21
morning set	4291 Jul 31 20:27	2°♄11'53			4292 Jul 06 15:54	0°♄	
				asc. node	4292 Jul 14 18:10	15°♄52'23	
superior conj	4291 Aug 07 19:16	17°♄16'03	1°27'24	morning set	4292 Jul 15 07:28	17°♄02'25	
minimum elong	4291 Aug 07 17:06	17°♄04'13	1°27'08		4292 Jul 21 06:43	0°♄	
max. Earth dist.	4291 Aug 09 10:53	20°♄51'13	1.32807 AU	superior conj	4292 Jul 22 06:33	2°♄11'22	1°11'34
	4291 Aug 13 18:15	0°♄		minimum elong	4292 Jul 22 04:14	1°♄58'34	1°11'12
evening rise	4291 Aug 15 01:16	2°♄39'35		max. Earth dist.	4292 Jul 22 20:23	3°♄27'30	1.32193 AU
	4291 Aug 30 02:47	0°♄		evening rise	4292 Jul 29 05:22	17°♄12'58	
desc. node	4291 Sep 03 17:38	6°♄59'26			4292 Aug 04 15:21	0°♄	
evening max el	4291 Sep 17 02:04	23°♄10'17	27°26'38	desc. node	4292 Aug 20 14:38	25°♄39'49	
	4291 Sep 27 16:59	0°♄			4292 Aug 24 01:42	0°♄	


























































































































evening max el	4292 Aug 29 08:12	5° Ω 37'56	27°05'37	desc. node	4293 Aug 07 11:39	13° Π 17'42	
retrograde	4292 Sep 12 04:59	12° Ω 50'07		evening max el	4293 Aug 11 07:20	17° Π 17'40	26°11'33
evening set	4292 Sep 19 06:47	10° Ω 36'10		retrograde	4293 Aug 25 06:40	24° Π 26'44	
min. Earth dist.	4292 Sep 22 22:30	7° Ω 54'19	0.61186 AU	evening set	4293 Aug 31 18:01	22° Π 44'33	
inferior conj	4292 Sep 26 01:45	5° Ω 11'26	-4°14'12	min. Earth dist.	4293 Sep 04 20:15	20° Π 09'29	0.59113 AU
minimum elong	4292 Sep 26 07:47	4° Ω 58'20	4°12'45	inferior conj	4293 Sep 08 02:34	17° Π 41'50	-4°56'41
morning rise	4292 Oct 03 10:38	0° Ω 18'59		minimum elong	4293 Sep 08 06:57	17° Π 33'31	4°56'07
	4292 Oct 04 21:07	30° \mathbb{R} Π		morning rise	4293 Sep 15 22:07	13° Π 12'14	
direct	4292 Oct 05 18:58	29° Π 56'34		direct	4293 Sep 18 07:49	12° Π 52'31	
	4292 Oct 06 16:38	0° Ω		morning max el	4293 Sep 26 06:41	16° Π 42'41	18°26'50
asc. node	4292 Oct 10 17:22	1° Ω 39'54		asc. node	4293 Sep 27 14:25	18° Π 04'35	
morning max el	4292 Oct 12 21:49	3° Ω 29'44	17°58'30		4293 Oct 05 17:09	0° Ω	
morning set	4292 Oct 28 16:24	28° Ω 21'42		morning set	4293 Oct 12 07:38	12° Ω 17'36	
	4292 Oct 29 13:46	0° \mathbb{M}					
superior conj	4292 Nov 07 21:41	16° \mathbb{M} 50'35	0°58'36	superior conj	4293 Oct 21 07:46	29° Ω 24'31	1°23'32
minimum elong	4292 Nov 08 01:45	17° \mathbb{M} 08'26	0°58'04	minimum elong	4293 Oct 21 11:19	29° Ω 40'58	1°23'10
max. Earth dist.	4292 Nov 15 11:36	29° \mathbb{M} 45'23	1.42323 AU		4293 Oct 21 15:27	0° \mathbb{M}	
	4292 Nov 15 15:08	0° \mathbb{X}		max. Earth dist.	4293 Oct 28 18:41	12° \mathbb{M} 44'56	1.40346 AU
desc. node	4292 Nov 16 13:57	1° \mathbb{X} 33'58		evening rise	4293 Nov 02 03:36	20° \mathbb{M} 09'02	
evening rise	4292 Nov 21 12:50	9° \mathbb{X} 33'35		desc. node	4293 Nov 03 11:00	22° \mathbb{M} 18'31	
	4292 Dec 04 23:14	0° \mathbb{Z}			4293 Nov 08 05:56	0° \mathbb{X}	
evening max el	4292 Dec 24 04:47	25° \mathbb{Z} 04'11	22°17'44	evening max el	4293 Nov 29 05:05	0° \mathbb{Z}	
	4292 Dec 30 14:06	0° \approx			4293 Dec 06 19:22	8° \mathbb{Z} 41'53	23°37'38
retrograde	4293 Jan 02 18:52	0° \approx 46'22		retrograde	4293 Dec 17 12:28	15° \mathbb{Z} 01'34	
	4293 Jan 05 18:15	30° \mathbb{R} \mathbb{Z}		evening set	4293 Dec 22 14:18	12° \mathbb{Z} 55'15	
asc. node	4293 Jan 06 16:36	29° \mathbb{Z} 25'31		asc. node	4293 Dec 24 13:38	10° \mathbb{Z} 57'05	
evening set	4293 Jan 07 08:08	28° \mathbb{Z} 55'55		min. Earth dist.	4293 Dec 27 11:18	7° \mathbb{Z} 14'21	0.67940 AU
inferior conj	4293 Jan 12 16:35	22° \mathbb{Z} 34'52	1°55'01	inferior conj	4293 Dec 28 00:18	6° \mathbb{Z} 29'56	1°08'49
minimum elong	4293 Jan 12 14:22	22° \mathbb{Z} 42'35	1°54'14	minimum elong	4293 Dec 27 22:46	6° \mathbb{Z} 35'09	1°08'12
min. Earth dist.	4293 Jan 12 14:30	22° \mathbb{Z} 42'06	0.68028 AU	morning rise	4294 Jan 02 07:13	0° \mathbb{Z} 24'00	
morning rise	4293 Jan 17 20:29	16° \mathbb{Z} 24'35			4294 Jan 02 20:25	30° \mathbb{R} \mathbb{Z}	
direct	4293 Jan 22 13:30	14° \mathbb{Z} 26'23		direct	4294 Jan 06 10:08	28° \mathbb{Z} 48'33	
morning max el	4293 Jan 31 23:39	19° \mathbb{Z} 58'53	22°15'02		4294 Jan 10 06:47	0° \mathbb{Z}	
	4293 Feb 09 10:21	0° \approx		morning max el	4294 Jan 14 16:57	3° \mathbb{Z} 35'23	20°53'53
desc. node	4293 Feb 12 13:09	4° \approx 12'06		desc. node	4294 Jan 30 10:13	24° \mathbb{Z} 05'27	
	4293 Mar 01 22:31	0° \mathbb{X}			4294 Feb 03 10:14	0° \approx	
morning set	4293 Mar 06 08:15	7° \mathbb{X} 02'14		morning set	4294 Feb 13 15:30	15° \approx 36'57	
max. Earth dist.	4293 Mar 11 16:32	15° \mathbb{X} 52'12	1.40873 AU	max. Earth dist.	4294 Feb 21 20:03	28° \approx 39'37	1.42826 AU
					4294 Feb 22 15:47	0° \mathbb{X}	
superior conj	4293 Mar 19 11:13	29° \mathbb{X} 22'01	-1°59'11	superior conj	4294 Feb 28 19:03	10° \mathbb{X} 11'56	-2°07'57
minimum elong	4293 Mar 19 15:15	29° \mathbb{X} 40'00	1°58'55	minimum elong	4294 Feb 28 19:27	10° \mathbb{X} 13'37	2°07'57
	4293 Mar 19 19:43	0° \mathbb{Y}			4294 Mar 12 03:25	0° \mathbb{Y}	
evening rise	4293 Mar 29 18:20	18° \mathbb{Y} 18'59		evening rise	4294 Mar 12 13:51	0° \mathbb{Y} 46'32	
asc. node	4293 Apr 04 15:54	29° \mathbb{Y} 10'30		asc. node	4294 Mar 22 12:57	18° \mathbb{Y} 02'18	
	4293 Apr 05 03:05	0° \mathbb{Z}		evening max el	4294 Mar 29 10:35	27° \mathbb{Y} 14'28	18°06'50
evening max el	4293 Apr 14 23:09	14° \mathbb{Z} 11'20	18°17'50		4294 Apr 02 05:46	0° \mathbb{Z}	
retrograde	4293 Apr 22 03:20	17° \mathbb{Z} 46'04		retrograde	4294 Apr 05 00:36	0° \mathbb{Z} 37'24	
evening set	4293 Apr 24 13:30	17° \mathbb{Z} 22'28		evening set	4294 Apr 07 17:10	0° \mathbb{Z} 03'23	
inferior conj	4293 May 01 17:23	12° \mathbb{Z} 42'21	2°32'18		4294 Apr 07 20:22	30° \mathbb{R} \mathbb{Y}	
minimum elong	4293 May 01 20:58	12° \mathbb{Z} 34'41	2°31'24	inferior conj	4294 Apr 14 05:33	25° \mathbb{Y} 02'56	3°15'30
min. Earth dist.	4293 May 05 03:41	9° \mathbb{Z} 48'04	0.59166 AU	minimum elong	4294 Apr 14 07:58	24° \mathbb{Y} 57'00	3°15'08
morning rise	4293 May 09 01:35	7° \mathbb{Z} 04'37		min. Earth dist.	4294 Apr 17 08:37	21° \mathbb{Y} 59'33	0.61362 AU
desc. node	4293 May 11 12:19	5° \mathbb{Z} 57'39		morning rise	4294 Apr 20 20:52	19° \mathbb{Y} 06'19	
direct	4293 May 15 08:13	5° \mathbb{Z} 17'42		direct	4294 Apr 27 15:22	16° \mathbb{Y} 46'33	
morning max el	4293 May 29 17:31	13° \mathbb{Z} 06'03	27°18'56	desc. node	4294 Apr 28 09:22	16° \mathbb{Y} 48'11	
	4293 Jun 12 02:50	0° \mathbb{I}		morning max el	4294 May 11 20:26	24° \mathbb{Y} 44'23	27°50'06
	4293 Jun 28 20:05	0° \mathbb{E}			4294 May 16 15:29	0° \mathbb{Z}	
morning set	4293 Jun 29 16:00	1° \mathbb{E} 43'33			4294 Jun 05 11:36	0° \mathbb{I}	
asc. node	4293 Jul 01 15:11	5° \mathbb{E} 53'14		morning set	4294 Jun 13 20:14	16° \mathbb{I} 09'27	
				asc. node	4294 Jun 18 12:14	26° \mathbb{I} 00'02	
superior conj	4293 Jul 06 18:20	17° \mathbb{E} 05'09	0°51'32	max. Earth dist.	4294 Jun 19 17:51	28° \mathbb{I} 40'27	1.32204 AU
minimum elong	4293 Jul 06 16:20	16° \mathbb{E} 54'05	0°51'09		4294 Jun 20 08:27	0° \mathbb{E}	
max. Earth dist.	4293 Jul 06 07:56	16° \mathbb{E} 07'49	1.31990 AU				
	4293 Jul 12 16:00	0° \mathbb{Q}		superior conj	4294 Jun 21 04:55	1° \mathbb{E} 51'54	0°27'56
evening rise	4293 Jul 13 14:03	1° \mathbb{Q} 57'28		minimum elong	4294 Jun 21 03:41	1° \mathbb{E} 45'06	0°27'40
	4293 Jul 28 16:27	0° \mathbb{P}		evening rise	4294 Jun 28 01:16	16° \mathbb{E} 46'44	

	4294 Jul 04 13:48	0°♎		minimum elong	4295 Jun 05 12:23	16°♐24'33	0°01'22
evening max el	4294 Jul 23 23:25	28°♎11'39	24°50'06	behind sun begin	4295 Jun 05 07:06	15°♐56'08	
desc. node	4294 Jul 25 08:39	29°♎27'58		behind sun end	4295 Jun 05 17:40	16°♐53'01	
	4294 Jul 25 23:33	0°♐			4295 Jun 11 19:28	0°♑	
retrograde	4294 Aug 06 21:44	5°♐14'04		evening rise	4295 Jun 12 13:05	1°♑33'39	
evening set	4294 Aug 12 05:08	4°♐10'17			4295 Jun 28 06:41	0°♎	
min. Earth dist.	4294 Aug 17 10:52	1°♐23'20	0.57156 AU	evening max el	4295 Jul 05 12:22	8°♎37'35	23°14'09
	4294 Aug 19 13:49	30°♎♎		desc. node	4295 Jul 12 05:39	13°♎37'53	
inferior conj	4294 Aug 20 07:51	29°♎30'08	-5°12'34	retrograde	4295 Jul 18 23:56	15°♎21'51	
minimum elong	4294 Aug 20 07:29	29°♎30'44	5°12'33	evening set	4295 Jul 22 19:10	14°♎50'16	
morning rise	4294 Aug 28 12:18	25°♎22'18		min. Earth dist.	4295 Jul 29 21:45	11°♎36'17	0.55635 AU
direct	4294 Aug 31 02:37	25°♎03'12		inferior conj	4295 Jul 31 17:21	10°♎32'30	-4°45'53
morning max el	4294 Sep 09 06:39	29°♎21'30	19°16'25	minimum elong	4295 Jul 31 10:54	10°♎41'58	4°44'50
	4294 Sep 09 22:28	0°♐		morning rise	4295 Aug 09 05:00	6°♎39'53	
asc. node	4294 Sep 14 11:29	5°♐32'29		direct	4295 Aug 12 02:36	6°♎19'37	
morning set	4294 Sep 26 07:43	26°♐38'38		morning max el	4295 Aug 22 19:09	11°♎17'33	20°27'46
	4294 Sep 28 00:03	0°♑		asc. node	4295 Sep 01 08:32	23°♎49'35	
					4295 Sep 04 20:22	0°♐	
superior conj	4294 Oct 04 11:16	12°♑49'21	1°38'09	morning set	4295 Sep 10 13:45	11°♐17'04	
minimum elong	4294 Oct 04 13:18	12°♑59'17	1°38'01				
max. Earth dist.	4294 Oct 10 23:01	25°♑03'42	1.38252 AU	superior conj	4295 Sep 18 03:23	26°♐51'39	1°43'53
	4294 Oct 13 17:00	0°♒		minimum elong	4295 Sep 18 03:47	26°♐53'43	1°43'53
evening rise	4294 Oct 14 17:38	1°♒48'19			4295 Sep 19 16:43	0°♑	
desc. node	4294 Oct 21 08:01	12°♒56'14		max. Earth dist.	4295 Sep 23 06:01	6°♑59'54	1.36281 AU
	4294 Nov 01 11:02	0°♓		evening rise	4295 Sep 27 04:26	14°♑25'19	
evening max el	4294 Nov 19 08:09	22°♓23'37	24°55'32		4295 Oct 06 03:03	0°♒	
retrograde	4294 Dec 01 01:56	29°♓12'31		desc. node	4295 Oct 08 05:00	3°♒22'39	
evening set	4294 Dec 06 17:21	26°♓51'20			4295 Oct 27 04:46	0°♓	
asc. node	4294 Dec 11 10:42	21°♓30'27		evening max el	4295 Nov 01 20:43	6°♓06'52	26°04'06
min. Earth dist.	4294 Dec 11 06:25	21°♓44'27	0.67506 AU	retrograde	4295 Nov 14 10:24	13°♓14'29	
inferior conj	4294 Dec 12 06:10	20°♓26'13	0°16'36	evening set	4295 Nov 20 15:34	10°♓41'00	
minimum elong	4294 Dec 12 05:46	20°♓27'34	0°16'25	min. Earth dist.	4295 Nov 24 21:29	6°♓09'25	0.66727 AU
morning rise	4294 Dec 17 18:20	14°♓26'51		inferior conj	4295 Nov 26 08:23	4°♓20'53	-0°40'32
direct	4294 Dec 21 08:37	13°♓12'24		minimum elong	4295 Nov 26 09:27	4°♓17'31	0°40'03
morning max el	4294 Dec 28 18:01	17°♓22'47	19°45'05	asc. node	4295 Nov 28 07:44	1°♓57'58	
	4295 Jan 07 16:22	0°♑			4295 Nov 30 05:03	30°♒♒	
greatest brilliancy	4295 Jan 10 22:10	4°♑43'40	-0.7m	morning rise	4295 Dec 02 03:48	28°♒30'41	
desc. node	4295 Jan 17 07:16	14°♑19'07		direct	4295 Dec 05 07:16	27°♒34'10	
morning set	4295 Jan 23 11:35	23°♑47'32			4295 Dec 10 16:08	0°♓	
	4295 Jan 27 11:43	0°♒		morning max el	4295 Dec 12 02:32	1°♓19'23	18°51'25
max. Earth dist.	4295 Feb 04 07:19	12°♒17'02	1.44309 AU		4296 Jan 01 02:58	0°♑	
				morning set	4296 Jan 02 21:56	2°♑48'28	
superior conj	4295 Feb 09 01:06	19°♒52'45	-2°00'09	desc. node	4296 Jan 04 04:18	4°♑47'34	
minimum elong	4295 Feb 08 19:27	19°♒29'56	1°59'52	max. Earth dist.	4296 Jan 18 00:26	26°♑29'05	1.45140 AU
	4295 Feb 15 05:35	0°♒					
evening rise	4295 Feb 22 14:11	12°♒21'14		superior conj	4296 Jan 19 09:36	28°♑39'24	-1°32'44
	4295 Mar 05 03:35	0°♓		minimum elong	4296 Jan 19 00:18	28°♑02'49	1°31'49
asc. node	4295 Mar 09 09:59	6°♓18'46			4296 Jan 20 06:04	0°♒	
evening max el	4295 Mar 12 23:27	10°♓32'45	18°14'51	evening rise	4296 Feb 03 15:53	22°♒59'05	
retrograde	4295 Mar 19 09:32	13°♓58'06			4296 Feb 07 23:51	0°♒	
evening set	4295 Mar 22 08:07	13°♓12'22		asc. node	4296 Feb 24 07:00	23°♒49'31	
inferior conj	4295 Mar 28 08:57	7°♓52'30	3°33'55	evening max el	4296 Feb 24 10:59	23°♒59'42	18°41'07
minimum elong	4295 Mar 28 09:38	7°♓50'35	3°33'53	retrograde	4296 Mar 02 02:05	27°♒40'15	
min. Earth dist.	4295 Mar 30 22:18	5°♓03'17	0.63423 AU	evening set	4296 Mar 05 06:53	26°♒41'58	
morning rise	4295 Apr 03 10:10	1°♓45'31		inferior conj	4296 Mar 10 23:43	21°♒04'11	3°33'33
	4295 Apr 06 05:11	30°♒♒		minimum elong	4296 Mar 10 22:53	21°♒06'43	3°33'30
direct	4295 Apr 10 07:18	29°♒03'35		min. Earth dist.	4296 Mar 12 21:24	18°♒45'28	0.65160 AU
	4295 Apr 14 15:45	0°♓		morning rise	4296 Mar 16 14:24	14°♒52'05	
desc. node	4295 Apr 15 06:25	0°♓16'08		direct	4296 Mar 23 06:22	12°♒01'45	
morning max el	4295 Apr 24 04:01	7°♓01'54	27°43'46	desc. node	4296 Apr 01 03:29	15°♒51'26	
	4295 May 11 17:42	0°♑		morning max el	4296 Apr 05 13:53	19°♒50'30	27°03'40
morning set	4295 May 28 17:48	0°♐12'04			4296 Apr 14 06:23	0°♓	
	4295 May 28 15:23	0°♐			4296 May 03 18:56	0°♑	
max. Earth dist.	4295 Jun 02 22:11	10°♐52'30	1.32849 AU	morning set	4296 May 11 05:46	13°♑42'57	
asc. node	4295 Jun 05 09:16	16°♐07'47		max. Earth dist.	4296 May 15 17:23	22°♑35'29	1.33947 AU
					4296 May 19 07:35	0°♐	
superior conj	4295 Jun 05 12:27	16°♐24'56	0°01'24				

superior conj	4296 May 19 14:52	0° Π 38'10	-0°27'12	superior conj	4297 May 03 09:42	14° \mathcal{B} 24'48	-0°56'31
minimum elong	4296 May 19 16:18	0° Π 45'39	0°26'55	minimum elong	4297 May 03 12:46	14° \mathcal{B} 40'16	0°55'59
asc. node	4296 May 22 06:18	6° Π 12'57		asc. node	4297 May 09 03:20	26° \mathcal{B} 11'23	
evening rise	4296 May 26 23:36	16° Π 12'21			4297 May 10 23:42	0° Π	
	4296 Jun 02 22:04	0° \mathcal{E}		evening rise	4297 May 11 06:50	0° Π 36'36	
evening max el	4296 Jun 16 05:47	19° \mathcal{E} 07'05	21°39'25		4297 May 29 06:36	0° \mathcal{E}	
desc. node	4296 Jun 28 02:40	25° \mathcal{E} 13'53		evening max el	4297 May 29 10:12	0° \mathcal{E} 08'52	20°18'01
retrograde	4296 Jun 28 15:22	25° \mathcal{E} 14'32		retrograde	4297 Jun 09 05:02	5° \mathcal{E} 24'56	
evening set	4296 Jul 01 04:11	25° \mathcal{E} 00'00		evening set	4297 Jun 11 04:17	5° \mathcal{E} 15'08	
inferior conj	4296 Jul 10 12:54	20° \mathcal{E} 58'41	-3°28'19	desc. node	4297 Jun 14 23:41	4° \mathcal{E} 06'14	
minimum elong	4296 Jul 10 04:25	21° \mathcal{E} 10'32	3°25'50	inferior conj	4297 Jun 20 07:40	1° \mathcal{E} 16'51	-1°34'48
min. Earth dist.	4296 Jul 10 08:08	21° \mathcal{E} 05'21	0.54867 AU	minimum elong	4297 Jun 20 03:12	1° \mathcal{E} 23'24	1°33'09
morning rise	4296 Jul 19 05:52	17° \mathcal{E} 06'02		min. Earth dist.	4297 Jun 21 20:18	0° \mathcal{E} 23'02	0.55046 AU
direct	4296 Jul 22 13:20	16° \mathcal{E} 42'09			4297 Jun 22 12:15	30° \mathcal{R} Π	
morning max el	4296 Aug 03 19:59	22° \mathcal{E} 28'28	21°58'27	morning rise	4297 Jun 29 00:53	27° Π 03'14	
	4296 Aug 10 08:31	0° \mathcal{Q}		direct	4297 Jul 02 23:54	26° Π 29'20	
asc. node	4296 Aug 18 05:34	12° \mathcal{Q} 43'47			4297 Jul 12 18:42	0° \mathcal{E}	
morning set	4296 Aug 24 23:26	26° \mathcal{Q} 05'56		morning max el	4297 Jul 16 12:32	3° \mathcal{E} 04'44	23°40'44
	4296 Aug 26 19:57	0° \mathcal{M}			4297 Aug 04 00:47	0° \mathcal{Q}	
				asc. node	4297 Aug 05 02:36	2° \mathcal{Q} 05'45	
superior conj	4296 Sep 01 04:15	11° \mathcal{M} 19'42	1°42'14	morning set	4297 Aug 09 10:57	10° \mathcal{Q} 59'49	
minimum elong	4296 Sep 01 03:18	11° \mathcal{M} 14'43	1°42'11				
max. Earth dist.	4296 Sep 04 20:08	18° \mathcal{M} 55'01	1.34612 AU	superior conj	4297 Aug 16 10:59	26° \mathcal{Q} 04'39	1°34'22
evening rise	4296 Sep 09 07:38	27° \mathcal{M} 48'28		minimum elong	4297 Aug 16 09:07	25° \mathcal{Q} 54'37	1°34'12
	4296 Sep 10 11:06	0° \mathcal{L}			4297 Aug 18 06:51	0° \mathcal{M}	
desc. node	4296 Sep 24 01:59	23° \mathcal{L} 31'32		max. Earth dist.	4297 Aug 18 19:03	1° \mathcal{M} 04'58	1.33343 AU
	4296 Sep 28 09:06	0° \mathcal{M}		evening rise	4297 Aug 23 23:11	11° \mathcal{M} 47'02	
evening max el	4296 Oct 14 09:18	19° \mathcal{M} 43'30	26°55'51		4297 Sep 02 17:24	0° \mathcal{L}	
retrograde	4296 Oct 27 13:25	27° \mathcal{M} 00'09		desc. node	4297 Sep 10 23:00	13° \mathcal{L} 15'13	
evening set	4296 Nov 03 06:51	24° \mathcal{M} 19'31			4297 Sep 23 20:50	0° \mathcal{M}	
min. Earth dist.	4296 Nov 07 06:03	20° \mathcal{M} 23'48	0.65598 AU	evening max el	4297 Sep 26 21:02	3° \mathcal{M} 03'20	27°23'42
inferior conj	4296 Nov 09 04:49	18° \mathcal{M} 09'08	-1°41'11	retrograde	4297 Oct 10 10:37	10° \mathcal{M} 21'29	
minimum elong	4296 Nov 09 07:39	18° \mathcal{M} 00'56	1°40'00	evening set	4297 Oct 17 12:38	7° \mathcal{M} 42'06	
asc. node	4296 Nov 14 04:47	13° \mathcal{M} 13'57		min. Earth dist.	4297 Oct 21 06:09	4° \mathcal{M} 20'27	0.64120 AU
morning rise	4296 Nov 15 09:20	12° \mathcal{M} 31'04		inferior conj	4297 Oct 23 17:06	1° \mathcal{M} 46'09	-2°43'11
direct	4296 Nov 18 04:04	11° \mathcal{M} 48'48		minimum elong	4297 Oct 23 21:44	1° \mathcal{M} 34'02	2°41'29
morning max el	4296 Nov 24 16:26	15° \mathcal{M} 19'26	18°14'00		4297 Oct 25 10:37	30° \mathcal{R} \mathcal{L}	
	4296 Dec 05 08:06	0° \mathcal{X}		morning rise	4297 Oct 30 08:09	26° \mathcal{L} 23'10	
morning set	4296 Dec 13 12:38	13° \mathcal{X} 15'37		asc. node	4297 Nov 01 01:50	25° \mathcal{L} 54'27	
desc. node	4296 Dec 21 01:18	25° \mathcal{X} 25'41		direct	4297 Nov 01 20:30	25° \mathcal{L} 51'22	
	4296 Dec 23 22:02	0° \mathcal{Z}		morning max el	4297 Nov 08 08:58	29° \mathcal{L} 16'41	17°53'38
					4297 Nov 09 01:42	0° \mathcal{M}	
superior conj	4296 Dec 28 12:37	7° \mathcal{Z} 17'40	-0°49'49	morning set	4297 Nov 25 07:22	25° \mathcal{M} 04'35	
minimum elong	4296 Dec 28 06:23	6° \mathcal{Z} 53'08	0°48'59		4297 Nov 28 04:49	0° \mathcal{X}	
max. Earth dist.	4296 Dec 30 19:50	10° \mathcal{Z} 54'48	1.45231 AU	desc. node	4297 Dec 07 22:18	16° \mathcal{X} 09'58	
	4297 Jan 12 00:57	0° \approx					
evening rise	4297 Jan 13 18:58	2° \approx 43'49		superior conj	4297 Dec 08 06:43	16° \mathcal{X} 44'09	-0°02'27
greatest brilliancy	4297 Jan 25 14:28	21° \approx 01'38	-0.7m	minimum elong	4297 Dec 08 06:26	16° \mathcal{X} 43'00	0°02'24
	4297 Jan 31 17:16	0° \mathcal{H}		behind sun begin	4297 Dec 07 20:28	16° \mathcal{X} 02'32	
evening max el	4297 Feb 06 18:58	7° \mathcal{H} 30'23	19°24'35	behind sun end	4297 Dec 08 16:24	17° \mathcal{X} 23'25	
asc. node	4297 Feb 10 04:02	10° \mathcal{H} 21'20		max. Earth dist.	4297 Dec 13 14:11	25° \mathcal{X} 15'29	1.44590 AU
retrograde	4297 Feb 13 22:48	11° \mathcal{H} 36'53			4297 Dec 16 14:17	0° \mathcal{Z}	
evening set	4297 Feb 17 10:43	10° \mathcal{H} 25'19		evening rise	4297 Dec 24 06:47	11° \mathcal{Z} 56'19	
inferior conj	4297 Feb 22 22:27	4° \mathcal{H} 31'50	3°18'59		4298 Jan 05 04:58	0° \approx	
minimum elong	4297 Feb 22 20:35	4° \mathcal{H} 37'56	3°18'42	evening max el	4298 Jan 20 21:55	21° \approx 02'25	20°23'10
min. Earth dist.	4297 Feb 24 05:02	2° \mathcal{H} 52'13	0.66485 AU	asc. node	4298 Jan 28 01:05	25° \approx 39'18	
	4297 Feb 26 13:42	30° \mathcal{R} \approx		retrograde	4298 Jan 28 20:58	25° \approx 43'02	
morning rise	4297 Feb 28 06:11	28° \approx 17'43		evening set	4298 Feb 01 17:22	24° \approx 17'13	
direct	4297 Mar 06 11:43	25° \approx 31'46		inferior conj	4298 Feb 07 02:24	18° \approx 10'40	2°53'18
	4297 Mar 15 19:16	0° \mathcal{H}		minimum elong	4298 Feb 06 24:00	18° \approx 18'49	2°52'43
morning max el	4297 Mar 18 23:40	2° \mathcal{H} 58'11	25°57'23	min. Earth dist.	4298 Feb 07 19:18	17° \approx 13'10	0.67395 AU
desc. node	4297 Mar 19 00:31	3° \mathcal{H} 00'19		morning rise	4298 Feb 12 06:25	11° \approx 56'40	
	4297 Apr 08 11:54	0° \mathcal{Y}		direct	4298 Feb 17 22:35	9° \approx 24'49	
morning set	4297 Apr 24 04:13	26° \mathcal{Y} 31'02		morning max el	4298 Mar 01 08:18	16° \approx 14'05	24°34'29
	4297 Apr 26 01:01	0° \mathcal{B}		desc. node	4298 Mar 05 21:32	21° \approx 15'53	
max. Earth dist.	4297 Apr 28 01:15	3° \mathcal{B} 49'45	1.35500 AU		4298 Mar 12 17:34	0° \mathcal{H}	
					4298 Apr 01 11:05	0° \mathcal{Y}	

morning set	4298 Apr 06 07:48	8°♂20'37		max. Earth dist.	4299 Mar 22 18:03	26°♂15'36	1.39629 AU
max. Earth dist.	4298 Apr 09 23:07	14°♂51'03	1.37452 AU		4299 Mar 24 21:31	0°♂	
superior conj	4298 Apr 16 17:43	27°♂35'27	-1°24'40	superior conj	4299 Mar 30 10:52	10°♂00'31	-1°48'44
minimum elong	4298 Apr 16 22:07	27°♂56'51	1°24'02	minimum elong	4299 Mar 30 15:37	10°♂22'24	1°48'17
	4298 Apr 17 23:25	0°♂		evening rise	4299 Apr 09 01:04	28°♂10'14	
evening rise	4298 Apr 25 08:18	14°♂38'20			4299 Apr 09 24:00	0°♂	
asc. node	4298 Apr 26 00:22	15°♂58'07		asc. node	4299 Apr 12 21:25	5°♂28'25	
	4298 May 03 11:33	0°♂		evening max el	4299 Apr 25 05:36	24°♂13'24	18°33'06
evening max el	4298 May 12 02:55	11°♂52'11	19°15'27	retrograde	4299 May 02 22:52	28°♂01'31	
retrograde	4298 May 21 04:50	16°♂17'33		evening set	4299 May 05 05:19	27°♂42'54	
evening set	4298 May 23 04:57	16°♂05'33		inferior conj	4299 May 12 19:49	23°♂14'44	1°53'42
inferior conj	4298 May 31 15:26	11°♂56'24	0°21'27	minimum elong	4299 May 12 23:18	23°♂07'57	1°52'39
minimum elong	4298 May 31 16:20	11°♂54'54	0°21'06	min. Earth dist.	4299 May 16 05:22	20°♂37'08	0.57959 AU
desc. node	4298 Jun 01 20:44	11°♂07'22		desc. node	4299 May 19 17:45	18°♂19'24	
min. Earth dist.	4298 Jun 03 11:03	10°♂04'16	0.56156 AU	morning rise	4299 May 20 14:05	17°♂53'08	
morning rise	4298 Jun 09 00:38	7°♂08'30		direct	4299 May 26 10:20	16°♂26'24	
direct	4298 Jun 13 22:00	6°♂13'22		morning max el	4299 Jun 09 19:24	24°♂04'44	26°44'25
morning max el	4298 Jun 28 02:26	13°♂27'26	25°21'20		4299 Jun 15 04:28	0°♂	
	4298 Jul 11 01:35	0°♂			4299 Jul 04 02:27	0°♂	
asc. node	4298 Jul 22 23:38	21°♂47'15		morning set	4299 Jul 09 08:45	10°♂39'30	
morning set	4298 Jul 24 22:35	25°♂52'39		asc. node	4299 Jul 09 20:41	11°♂42'29	
	4298 Jul 26 20:49	0°♂					
superior conj	4298 Jul 31 21:10	10°♂57'55	1°21'14	superior conj	4299 Jul 16 08:54	25°♂53'12	1°03'33
minimum elong	4298 Jul 31 18:53	10°♂45'20	1°20'55	minimum elong	4299 Jul 16 06:39	25°♂40'48	1°03'10
max. Earth dist.	4298 Aug 02 01:21	13°♂32'06	1.32495 AU	max. Earth dist.	4299 Jul 16 12:08	26°♂11'07	1.32063 AU
evening rise	4298 Aug 07 23:32	26°♂10'05			4299 Jul 18 05:40	0°♂	
	4298 Aug 09 20:40	0°♂		evening rise	4299 Jul 23 05:54	10°♂49'11	
	4298 Aug 27 03:59	0°♂			4299 Aug 02 02:26	0°♂	
desc. node	4298 Aug 28 20:01	2°♂22'38		desc. node	4299 Aug 15 17:03	20°♂38'55	
evening max el	4298 Sep 09 06:00	15°♂53'45	27°21'47	evening max el	4299 Aug 22 09:39	28°♂02'28	26°46'31
retrograde	4298 Sep 23 01:13	23°♂08'41			4299 Aug 24 14:34	0°♂	
evening set	4298 Sep 30 05:29	20°♂42'04		retrograde	4299 Sep 05 07:49	5°♂12'43	
min. Earth dist.	4298 Oct 03 20:14	17°♂48'30	0.62324 AU	evening set	4299 Sep 12 04:54	3°♂11'22	
inferior conj	4298 Oct 06 18:21	15°♂04'47	-3°43'01	min. Earth dist.	4299 Sep 15 23:40	0°♂34'18	0.60309 AU
minimum elong	4298 Oct 07 00:14	14°♂51'00	3°41'17		4299 Sep 16 16:53	30°♂	
morning rise	4298 Oct 13 20:42	10°♂00'08		inferior conj	4299 Sep 19 05:08	27°♂55'55	-4°34'35
direct	4298 Oct 16 05:31	9°♂35'13		minimum elong	4299 Sep 19 10:49	27°♂44'15	4°33'28
asc. node	4298 Oct 18 22:52	10°♂09'12		morning rise	4299 Sep 26 18:40	23°♂12'37	
morning max el	4298 Oct 23 01:03	13°♂03'26	17°51'14	direct	4299 Sep 29 03:10	22°♂51'36	
	4298 Nov 03 12:55	0°♂		asc. node	4299 Oct 05 19:55	25°♂50'26	
morning set	4298 Nov 08 00:07	7°♂56'59		morning max el	4299 Oct 06 13:28	26°♂31'03	18°07'58
					4299 Oct 09 14:43	0°♂	
superior conj	4298 Nov 19 02:42	27°♂27'04	0°39'13	morning set	4299 Oct 22 08:36	21°♂34'04	
minimum elong	4298 Nov 19 06:07	27°♂41'32	0°38'45		4299 Oct 26 20:46	0°♂	
	4298 Nov 20 14:51	0°♂		superior conj	4299 Nov 01 00:15	9°♂24'16	1°10'31
desc. node	4298 Nov 24 19:20	6°♂57'20		minimum elong	4299 Nov 01 04:18	9°♂42'27	1°10'02
max. Earth dist.	4298 Nov 26 05:16	9°♂15'44	1.43301 AU	max. Earth dist.	4299 Nov 08 15:47	22°♂42'07	1.41517 AU
evening rise	4298 Dec 03 18:21	21°♂15'18		desc. node	4299 Nov 11 16:22	27°♂43'51	
	4298 Dec 09 11:00	0°♂			4299 Nov 13 01:42	0°♂	
	4298 Dec 30 17:22	0°♂		evening rise	4299 Nov 13 20:40	1°♂16'49	
evening max el	4299 Jan 03 19:29	4°♂36'21	21°33'39		4299 Dec 02 22:11	0°♂	
retrograde	4299 Jan 12 18:30	9°♂55'34		evening max el	4299 Dec 17 12:16	18°♂12'35	22°51'37
asc. node	4299 Jan 14 22:07	9°♂30'33		retrograde	4299 Dec 27 13:45	24°♂10'44	
evening set	4299 Jan 17 01:05	8°♂14'28		evening set	4300 Jan 01 08:15	22°♂13'34	
inferior conj	4299 Jan 22 09:19	1°♂57'55	2°18'34	asc. node	4300 Jan 01 19:10	21°♂49'47	
minimum elong	4299 Jan 22 06:53	2°♂06'19	2°17'48	inferior conj	4300 Jan 06 17:14	15°♂50'29	1°36'12
min. Earth dist.	4299 Jan 22 13:55	1°♂41'57	0.67906 AU	minimum elong	4300 Jan 06 15:15	15°♂57'20	1°35'28
	4299 Jan 23 19:39	30°♂		min. Earth dist.	4300 Jan 06 10:29	16°♂13'47	0.68038 AU
morning rise	4299 Jan 27 12:30	25°♂45'47		morning rise	4300 Jan 11 22:08	9°♂41'55	
direct	4299 Feb 01 14:05	23°♂34'15		direct	4300 Jan 16 09:08	7°♂53'18	
morning max el	4299 Feb 11 17:27	29°♂35'21	23°05'22	morning max el	4300 Jan 25 06:48	13°♂04'56	21°39'15
	4299 Feb 12 03:08	0°♂		desc. node	4300 Feb 07 15:37	29°♂57'03	
desc. node	4299 Feb 20 18:34	10°♂19'23			4300 Feb 07 16:27	0°♂	
	4299 Mar 06 13:08	0°♂		morning set	4300 Feb 26 08:14	28°♂08'42	
morning set	4299 Mar 18 10:28	18°♂55'52			4300 Feb 27 12:06	0°♂	

max. Earth dist.	4300 Mar 04 17:49	8° K 32'13	1.41753 AU	morning set	4301 Feb 05 07:49	6° \approx 24'20	
				max. Earth dist.	4301 Feb 15 01:11	21° \approx 43'57	1.43533 AU
superior conj	4300 Mar 12 08:13	21° K 27'40	-2°04'35		4301 Feb 20 03:06	0° K	
minimum elong	4300 Mar 12 11:06	21° K 40'15	2°04'29				
	4300 Mar 17 03:50	0° Y		superior conj	4301 Feb 21 05:05	1° K 47'18	-2°06'56
evening rise	4300 Mar 23 05:29	11° Y 03'16		minimum elong	4301 Feb 21 03:02	1° K 38'49	2°06'54
asc. node	4300 Mar 30 18:27	24° Y 35'52		evening rise	4301 Mar 05 17:21	23° K 09'06	
	4300 Apr 03 02:18	0° Z			4301 Mar 09 15:30	0° Y	
evening max el	4300 Apr 08 14:45	7° Z 03'04	18°10'47	asc. node	4301 Mar 17 15:29	13° Y 13'24	
retrograde	4300 Apr 15 11:22	10° Z 30'45		evening max el	4301 Mar 23 03:02	20° Y 12'38	18°07'54
evening set	4300 Apr 18 00:28	10° Z 02'46		retrograde	4301 Mar 29 14:17	23° Y 35'15	
inferior conj	4300 Apr 24 21:13	5° Z 13'40	2°54'04	evening set	4301 Apr 01 09:23	22° Y 56'23	
minimum elong	4300 Apr 25 00:27	5° Z 06'18	2°53'23	inferior conj	4301 Apr 07 16:20	17° Y 47'12	3°25'58
min. Earth dist.	4300 Apr 28 05:28	2° Z 12'43	0.60103 AU	minimum elong	4301 Apr 07 18:02	17° Y 42'48	3°25'48
	4300 May 01 01:36	30° R Y		min. Earth dist.	4301 Apr 10 13:55	14° Y 47'27	0.62265 AU
morning rise	4300 May 01 22:04	29° Y 26'53		morning rise	4301 Apr 14 01:13	11° Y 45'06	
desc. node	4300 May 06 14:48	27° Y 34'58		direct	4301 Apr 20 21:42	9° Y 14'35	
direct	4300 May 08 10:55	27° Y 25'27		desc. node	4301 Apr 23 11:51	9° Y 34'15	
	4300 May 16 06:39	0° Z		morning max el	4301 May 05 00:03	17° Y 13'48	27°52'04
morning max el	4300 May 22 18:41	5° Z 17'57	27°36'55		4301 May 15 14:31	0° Z	
	4300 Jun 10 03:36	0° II			4301 Jun 02 21:03	0° II	
morning set	4300 Jun 23 15:44	25° II 14'55		morning set	4301 Jun 07 17:25	9° II 31'36	
	4300 Jun 25 21:53	0° S		max. Earth dist.	4301 Jun 13 07:49	21° II 16'22	1.32419 AU
asc. node	4300 Jun 26 17:44	1° S 46'22		asc. node	4301 Jun 13 14:45	21° II 53'46	
max. Earth dist.	4300 Jun 29 23:41	8° S 50'43	1.32032 AU				
				superior conj	4301 Jun 15 05:51	25° II 25'40	0°17'00
superior conj	4300 Jun 30 20:23	10° S 44'37	0°41'56	minimum elong	4301 Jun 15 05:03	25° II 21'21	0°16'48
minimum elong	4300 Jun 30 18:39	10° S 35'03	0°41'35		4301 Jun 17 08:07	0° S	
evening rise	4300 Jul 07 15:56	25° S 36'48		evening rise	4301 Jun 22 03:35	10° S 25'23	
	4300 Jul 09 18:07	0° Q			4301 Jul 02 03:52	0° Q	
	4300 Jul 27 03:37	0° P		evening max el	4301 Jul 16 19:29	20° Q 00'17	24°10'08
desc. node	4300 Aug 02 14:04	7° P 43'29		desc. node	4301 Jul 20 11:05	23° Q 06'55	
evening max el	4300 Aug 04 05:47	9° P 22'36	25°39'39	retrograde	4301 Jul 30 14:45	26° Q 57'41	
retrograde	4300 Aug 18 04:53	16° P 28'48		evening set	4301 Aug 04 07:19	26° Q 08'50	
evening set	4300 Aug 24 06:11	15° P 02'42		min. Earth dist.	4301 Aug 10 06:06	23° Q 12'07	0.56432 AU
min. Earth dist.	4300 Aug 28 17:48	12° P 25'04	0.58254 AU	inferior conj	4301 Aug 12 18:35	21° Q 38'11	-5°07'18
inferior conj	4300 Aug 31 22:00	10° P 10'00	-5°07'37	minimum elong	4301 Aug 12 15:32	21° Q 42'57	5°07'05
minimum elong	4300 Sep 01 00:45	10° P 05'06	5°07'25	morning rise	4301 Aug 21 02:21	17° Q 38'37	
morning rise	4300 Sep 08 21:34	5° P 49'58		direct	4301 Aug 23 19:28	17° Q 19'17	
direct	4300 Sep 11 09:04	5° P 30'35		morning max el	4301 Sep 02 14:19	21° Q 52'37	19°44'12
morning max el	4300 Sep 19 18:56	9° P 30'53	18°45'14		4301 Sep 09 04:58	0° P	
asc. node	4300 Sep 22 16:58	12° P 44'07		asc. node	4301 Sep 09 14:01	0° P 34'19	
	4300 Oct 03 05:11	0° A		morning set	4301 Sep 20 06:59	20° P 11'48	
morning set	4300 Oct 06 04:04	5° A 42'32			4301 Sep 25 03:02	0° A	
superior conj	4300 Oct 14 18:28	22° A 22'18	1°30'55	superior conj	4301 Sep 28 03:53	6° A 04'55	1°41'34
minimum elong	4300 Oct 14 21:26	22° A 36'20	1°30'39	minimum elong	4301 Sep 28 05:13	6° A 11'31	1°41'30
	4300 Oct 18 21:06	0° M		max. Earth dist.	4301 Oct 04 02:26	17° A 31'44	1.37385 AU
max. Earth dist.	4300 Oct 21 21:49	5° M 25'58	1.39460 AU	evening rise	4301 Oct 07 20:46	24° A 24'35	
evening rise	4300 Oct 25 21:27	12° M 19'51			4301 Oct 11 01:11	0° M	
desc. node	4300 Oct 29 13:24	18° M 26'11		desc. node	4301 Oct 16 10:24	8° M 59'33	
	4300 Nov 05 20:59	0° X			4301 Oct 30 12:57	0° X	
	4300 Nov 28 06:26	0° S		evening max el	4301 Nov 12 14:11	15° X 34'08	25°26'09
evening max el	4300 Nov 30 01:51	1° S 52'09	24°11'20	retrograde	4301 Nov 24 17:09	22° X 32'54	
retrograde	4300 Dec 11 05:36	8° S 24'59		evening set	4301 Nov 30 14:32	20° X 05'44	
evening set	4300 Dec 16 13:17	6° S 11'54		min. Earth dist.	4301 Dec 05 00:22	15° X 13'53	0.67220 AU
asc. node	4300 Dec 19 16:12	2° S 51'32		inferior conj	4301 Dec 06 04:54	13° X 41'57	-0°07'08
min. Earth dist.	4300 Dec 21 06:44	0° S 45'37	0.67807 AU	minimum elong	4301 Dec 06 05:04	13° X 41'22	0°07'03
	4300 Dec 21 20:16	30° R X		transit middle	4301 Dec 06 05:04	13° X 41'22	0°07'03
inferior conj	4300 Dec 22 00:21	29° X 46'13	0°47'18	transit begin	4301 Dec 06 02:33	13° X 49'29	
minimum elong	4300 Dec 21 23:15	29° X 49'57	0°46'52	transit end	4301 Dec 06 07:35	13° X 33'15	
morning rise	4300 Dec 27 09:16	23° X 43'04		asc. node	4301 Dec 06 13:14	13° X 15'07	
direct	4300 Dec 31 06:38	22° X 16'56		morning rise	4301 Dec 11 19:56	7° X 46'20	
morning max el	4301 Jan 08 03:25	26° X 46'29	20°22'53	direct	4301 Dec 15 05:16	6° X 40'09	
	4301 Jan 11 01:55	0° S		morning max el	4301 Dec 22 07:55	10° X 38'37	19°20'16
desc. node	4301 Jan 25 12:40	19° S 59'38		greatest brilliancy	4302 Jan 04 16:47	28° X 33'05	-0.7m
	4301 Feb 01 03:50	0° \approx			4302 Jan 05 15:49	0° S	

desc. node	4302 Jan 12 09:41	10°  20'00		asc. node	4302 Nov 23 10:17	23°  56'58	
morning set	4302 Jan 15 07:07	14°  48'26		morning rise	4302 Nov 26 04:00	21°  48'47	
	4302 Jan 25 01:14	0° 		direct	4302 Nov 29 03:23	20°  58'55	
max. Earth dist.	4302 Jan 28 15:00	5°  37'18	1.44745 AU	morning max el	4302 Dec 05 19:00	24°  37'07	18°33'20
					4302 Dec 10 07:14	0° 	
superior conj	4302 Feb 01 00:45	11°  01'17	-1°50'52	morning set	4302 Dec 26 04:46	24°  23'51	
minimum elong	4302 Jan 31 16:52	10°  29'54	1°50'18		4302 Dec 29 17:24	0° 	
	4302 Feb 12 17:36	0° 		desc. node	4302 Dec 30 06:41	0°  52'38	
evening rise	4302 Feb 15 08:23	4°  20'01					
	4302 Mar 03 13:44	0° 		superior conj	4303 Jan 11 04:23	19°  37'20	-1°15'50
asc. node	4302 Mar 04 12:30	1°  12'00		minimum elong	4303 Jan 10 19:37	19°  02'58	1°14'50
evening max el	4302 Mar 06 15:35	3°  35'12	18°23'50	max. Earth dist.	4303 Jan 11 08:56	19°  55'12	1.45268 AU
retrograde	4302 Mar 13 02:59	7°  05'57			4303 Jan 17 19:03	0° 	
evening set	4302 Mar 16 04:02	6°  15'08		evening rise	4303 Jan 27 00:01	14°  33'10	
inferior conj	4302 Mar 22 01:04	0°  47'30	3°35'44	greatest brilliancy	4303 Feb 04 22:24	28°  43'51	-0.8m
minimum elong	4302 Mar 22 01:04	0°  47'31	3°35'45		4303 Feb 05 17:50	0° 	
	4302 Mar 22 17:25	30°  18'18		evening max el	4303 Feb 18 01:52	17°  04'10	18°57'42
min. Earth dist.	4302 Mar 24 07:53	28°  09'25	0.64202 AU	asc. node	4303 Feb 19 09:33	18°  19'19	
morning rise	4302 Mar 27 21:19	24°  37'32		retrograde	4303 Feb 24 21:35	20°  54'29	
direct	4302 Apr 03 16:57	21°  50'08		evening set	4303 Feb 28 05:14	19°  50'48	
desc. node	4302 Apr 10 08:53	24°  00'42		inferior conj	4303 Mar 05 19:36	14°  06'20	3°28'53
morning max el	4302 Apr 17 09:05	29°  46'49	27°30'29	minimum elong	4303 Mar 05 18:16	14°  10'32	3°28'44
	4302 Apr 17 14:19	0° 		min. Earth dist.	4303 Mar 07 10:49	12°  03'18	0.65777 AU
	4302 May 09 13:16	0° 		morning rise	4303 Mar 11 06:54	7°  53'06	
morning set	4302 May 22 11:19	23°  22'10		direct	4303 Mar 17 19:05	5°  02'52	
	4302 May 25 18:31	0° 		desc. node	4303 Mar 28 05:54	10°  19'09	
max. Earth dist.	4302 May 27 08:35	3°  16'27	1.33252 AU	morning max el	4303 Mar 30 18:57	12°  44'11	26°38'00
					4303 Apr 13 16:18	0° 	
superior conj	4302 May 30 11:28	9°  15'00	-0°10'34		4303 May 02 04:39	0° 	
minimum elong	4302 May 30 12:00	9°  53'52	0°10'28	morning set	4303 May 05 18:01	6°  35'57	
behind sun begin	4302 May 30 07:52	9°  13'53		max. Earth dist.	4303 May 09 22:39	14°  44'11	1.34553 AU
behind sun end	4302 May 30 16:07	10°  15'52					
asc. node	4302 May 31 11:47	12°  00'56		superior conj	4303 May 14 10:58	23°  53'35	-0°39'40
evening rise	4302 Jun 06 15:04	25°  09'17		minimum elong	4303 May 14 13:06	24°  04'32	0°39'15
	4302 Jun 08 22:53	0° 			4303 May 17 09:18	0° 	
	4302 Jun 27 23:52	0° 		asc. node	4303 May 18 08:49	2°  03'26	
evening max el	4302 Jun 28 09:14	0°  23'07	22°32'54	evening rise	4303 May 22 00:25	9°  14'59	
desc. node	4302 Jul 07 08:05	6°  14'38			4303 Jun 01 18:46	0° 	
retrograde	4302 Jul 11 12:14	6°  54'43		evening max el	4303 Jun 10 06:57	11°  03'53	21°02'44
evening set	4302 Jul 14 16:34	6°  32'27		retrograde	4303 Jun 22 01:00	16°  04'45	
min. Earth dist.	4302 Jul 22 16:43	3°  02'44	0.55194 AU	evening set	4303 Jun 24 05:47	16°  03'24	
inferior conj	4302 Jul 23 20:56	2°  22'36	-4°19'00	desc. node	4303 Jun 24 05:06	16°  03'41	
minimum elong	4302 Jul 23 12:50	2°  34'08	4°17'12	inferior conj	4303 Jul 03 14:13	12°  04'48	-2°42'46
	4302 Jul 28 08:03	30°  18'18		minimum elong	4303 Jul 03 06:54	12°  51'08	2°40'18
morning rise	4302 Aug 01 11:09	28°  32'08		min. Earth dist.	4303 Jul 04 03:52	12°  21'34	0.54824 AU
direct	4302 Aug 04 12:12	28°  10'56		morning rise	4303 Jul 12 08:06	8°  41'20	
	4302 Aug 11 04:28	0° 		direct	4303 Jul 15 21:31	8°  14'02	
morning max el	4302 Aug 15 21:46	3°  29'17	21°04'19	morning max el	4303 Jul 28 18:18	14°  22'21	22°41'14
asc. node	4302 Aug 27 11:03	19°  08'04			4303 Aug 09 17:16	0° 	
	4302 Sep 02 05:01	0° 		asc. node	4303 Aug 14 08:05	8°  14'40	
morning set	4302 Sep 04 14:48	4°  15'47		morning set	4303 Aug 20 01:27	19°  04'52	
					4303 Aug 24 20:39	0° 	
superior conj	4302 Sep 12 00:08	20°  19'10	1°44'00	superior conj	4303 Aug 27 03:48	4°  54'53	1°39'35
minimum elong	4302 Sep 11 23:55	20°  18'03	1°44'00	minimum elong	4303 Aug 27 02:25	4°  47'28	1°39'30
max. Earth dist.	4302 Sep 16 11:36	29°  16'41	1.35525 AU	max. Earth dist.	4303 Aug 30 05:27	11°  11'22'31	1.34020 AU
	4302 Sep 16 19:10	0° 		evening rise	4303 Sep 04 00:01	21°  01'57	
evening rise	4302 Sep 20 15:04	7°  22'29			4303 Sep 08 17:16	0° 	
desc. node	4302 Oct 03 07:24	29°  19'00		desc. node	4303 Sep 20 04:24	19°  18'08	
	4302 Oct 03 17:46	0° 			4303 Sep 27 15:00	0° 	
evening max el	4302 Oct 26 02:43	29°  15'16	26°28'36	evening max el	4303 Oct 08 15:22	12°  47'12	27°11'09
	4302 Oct 26 21:36	0° 		retrograde	4303 Oct 22 00:11	20°  04'53	
retrograde	4302 Nov 07 23:35	6°  28'31		evening set	4303 Oct 28 21:44	17°  23'59	
evening set	4302 Nov 14 10:06	3°  51'14		min. Earth dist.	4303 Nov 01 18:27	13°  42'52	0.65006 AU
	4302 Nov 18 04:31	30° 18'18		inferior conj	4303 Nov 03 22:16	11° 19'09	-2°07'27
min. Earth dist.	4302 Nov 18 13:04	29° 34'43	0.66287 AU	minimum elong	4303 Nov 04 01:53	11° 09'06	2°06'02
inferior conj	4302 Nov 20 04:55	27° 34'20	-1°05'57	morning rise	4303 Nov 10 07:05	5° 46'46	
minimum elong	4302 Nov 20 06:44	27° 28'53	1°05'10				

asc. node	4303 Nov 10 07:19	5°♑46'30		minimum elong	4304 Oct 17 11:31	24°♊35'58	3°07'20
direct	4303 Nov 12 22:49	5°♑09'20		morning rise	4304 Oct 24 02:02	19°♊33'28	
morning max el	4303 Nov 19 10:21	8°♑36'46	18°03'11	direct	4304 Oct 26 12:40	19°♊04'50	
	4303 Dec 04 00:56	0°♊		asc. node	4304 Oct 27 04:22	19°♊06'56	
morning set	4303 Dec 07 08:10	5°♊28'49		morning max el	4304 Nov 02 03:04	22°♊30'08	17°50'27
desc. node	4303 Dec 17 03:42	21°♊33'56			4304 Nov 07 23:03	0°♑	
				morning set	4304 Nov 18 13:08	17°♑47'27	
					4304 Nov 25 15:02	0°♊	
superior conj	4303 Dec 21 11:46	28°♊30'47	-0°29'33				
minimum elong	4303 Dec 21 08:06	28°♊16'11	0°29'03				
	4303 Dec 22 10:13	0°♋		superior conj	4304 Nov 30 16:20	8°♊28'17	0°16'19
max. Earth dist.	4303 Dec 25 04:29	4°♋21'58	1.45051 AU	minimum elong	4304 Nov 30 18:02	8°♊35'17	0°16'06
evening rise	4304 Jan 06 19:18	24°♋01'09		behind sun begin	4304 Nov 30 17:45	8°♊34'06	
	4304 Jan 10 16:25	0°♌		behind sun end	4304 Nov 30 18:19	8°♊36'28	
greatest brilliancy	4304 Jan 20 10:18	14°♌48'47	-0.7m	desc. node	4304 Dec 03 00:43	12°♊19'48	
	4304 Jan 31 18:11	0°♍		max. Earth dist.	4304 Dec 06 22:24	18°♊38'20	1.44118 AU
evening max el	4304 Feb 01 07:59	0°♍36'14	19°47'49		4304 Dec 14 03:28	0°♋	
asc. node	4304 Feb 06 06:35	4°♍21'47		evening rise	4304 Dec 16 05:04	3°♋11'48	
retrograde	4304 Feb 08 19:06	4°♍55'53			4305 Jan 03 05:07	0°♌	
evening set	4304 Feb 12 10:32	3°♍38'17		evening max el	4305 Jan 14 08:42	14°♌09'05	20°51'50
	4304 Feb 16 01:24	30°♍		retrograde	4305 Jan 22 17:16	19°♌05'29	
inferior conj	4304 Feb 17 20:52	27°♌39'04	3°09'17	asc. node	4305 Jan 23 03:38	19°♌04'28	
minimum elong	4304 Feb 17 18:43	27°♌46'15	3°08'51	evening set	4305 Jan 26 17:54	17°♌33'03	
min. Earth dist.	4304 Feb 18 21:27	26°♌17'20	0.66934 AU	inferior conj	4305 Feb 01 02:21	11°♌21'42	2°39'33
morning rise	4304 Feb 23 02:41	21°♌25'02		minimum elong	4305 Jan 31 23:53	11°♌30'11	2°38'53
direct	4304 Feb 29 02:54	18°♌44'04		min. Earth dist.	4305 Feb 01 13:47	10°♌42'25	0.67667 AU
morning max el	4304 Mar 12 04:03	25°♌55'27	25°23'24	morning rise	4305 Feb 06 05:43	5°♌08'29	
desc. node	4304 Mar 14 02:57	27°♌58'58		direct	4305 Feb 11 15:43	2°♌45'02	
	4304 Mar 15 21:56	0°♎		morning max el	4305 Feb 22 12:44	9°♌14'06	23°56'45
	4304 Apr 06 05:35	0°♏		desc. node	4305 Feb 28 23:59	16°♌36'43	
morning set	4304 Apr 17 09:07	19°♏00'25			4305 Mar 10 21:22	0°♍	
max. Earth dist.	4304 Apr 21 01:45	25°♏49'15	1.36299 AU		4305 Mar 29 22:09	0°♏	
	4304 Apr 23 06:29	0°♐		morning set	4305 Mar 30 02:53	0°♏20'17	
				max. Earth dist.	4305 Apr 02 21:57	6°♏58'27	1.38371 AU
superior conj	4304 Apr 27 01:38	7°♐25'53	-1°08'46				
minimum elong	4304 Apr 27 05:20	7°♐44'17	1°08'09	superior conj	4305 Apr 10 03:55	20°♏18'35	-1°35'36
asc. node	4304 May 04 05:51	21°♐57'17		minimum elong	4305 Apr 10 08:40	20°♏41'07	1°35'00
evening rise	4304 May 05 05:30	23°♐57'16			4305 Apr 15 04:23	0°♑	
	4304 May 08 06:06	0°♒		evening rise	4305 Apr 19 03:43	7°♐47'48	
evening max el	4304 May 22 16:44	22°♒22'42	19°48'51	asc. node	4305 Apr 21 02:55	11°♐37'56	
retrograde	4304 Jun 01 17:16	27°♒15'49			4305 May 01 20:06	0°♒	
evening set	4304 Jun 03 15:57	27°♒05'35		evening max el	4305 May 05 14:02	4°♒22'57	18°54'53
desc. node	4304 Jun 10 02:09	24°♒31'53		retrograde	4305 May 14 00:49	8°♒30'57	
inferior conj	4304 Jun 12 13:00	23°♒03'57	-0°43'43	evening set	4305 May 16 03:18	8°♒16'35	
minimum elong	4304 Jun 12 10:59	23°♒07'02	0°42'58	inferior conj	4305 May 24 05:12	3°♒59'29	1°04'24
min. Earth dist.	4304 Jun 14 16:41	21°♒44'39	0.55421 AU	minimum elong	4305 May 24 07:36	3°♒55'12	1°03'33
morning rise	4304 Jun 21 03:55	18°♒37'00		min. Earth dist.	4305 May 27 08:39	1°♒46'01	0.56855 AU
direct	4304 Jun 25 12:07	17°♒55'30		desc. node	4305 May 27 23:11	1°♒21'36	
morning max el	4304 Jul 09 08:44	24°♒48'14	24°24'47		4305 May 30 04:32	30°♒♊	
	4304 Jul 14 04:08	0°♓		morning rise	4305 Jun 01 08:40	28°♒56'28	
asc. node	4304 Jul 31 05:06	27°♓45'29		direct	4305 Jun 06 15:53	27°♒49'13	
	4304 Aug 01 07:35	0°♈			4305 Jun 14 04:14	0°♒	
morning set	4304 Aug 03 13:12	4°♈39'33		morning max el	4305 Jun 20 23:36	5°♒14'56	25°59'51
					4305 Jul 08 23:36	0°♓	
superior conj	4304 Aug 10 12:13	19°♈43'32	1°29'23	asc. node	4305 Jul 18 02:09	17°♓33'51	
minimum elong	4304 Aug 10 10:07	19°♈32'05	1°29'09	morning set	4305 Jul 19 00:27	19°♓31'01	
max. Earth dist.	4304 Aug 12 08:03	23°♈40'48	1.32930 AU		4305 Jul 23 20:41	0°♈	
	4304 Aug 15 07:20	0°♉					
evening rise	4304 Aug 17 19:40	5°♉11'36		superior conj	4305 Jul 25 23:19	4°♈38'38	1°14'15
	4304 Aug 31 08:37	0°♊		minimum elong	4305 Jul 25 20:59	4°♈25'48	1°13'54
desc. node	4304 Sep 06 01:26	8°♊47'43		max. Earth dist.	4305 Jul 26 16:50	6°♈15'03	1.32259 AU
evening max el	4304 Sep 20 02:23	25°♊56'19	27°26'55	evening rise	4305 Aug 01 22:54	19°♈42'31	
	4304 Sep 25 01:01	0°♋			4305 Aug 07 01:56	0°♉	
retrograde	4304 Oct 03 18:24	3°♋12'37		desc. node	4305 Aug 23 22:28	27°♉35'37	
evening set	4304 Oct 10 22:27	0°♌37'16			4305 Aug 25 18:38	0°♊	
	4304 Oct 11 18:14	30°♌♊		evening max el	4305 Sep 02 09:14	8°♊29'29	27°10'49
min. Earth dist.	4304 Oct 14 14:21	27°♊28'41	0.63389 AU	retrograde	4305 Sep 16 05:39	15°♊42'35	
inferior conj	4304 Oct 17 06:15	24°♊49'08	-3°09'07	evening set	4305 Sep 23 08:28	13°♊24'49	

min. Earth dist.	4305 Sep 26 23:37	10°♌40'25	0.61487 AU	inferior conj	4306 Sep 12 05:14	20°♏32'37	-4°51'42
inferior conj	4305 Sep 30 01:44	7°♌56'43	-4°06'25	minimum elong	4306 Sep 12 10:04	20°♏23'16	4°50'59
minimum elong	4305 Sep 30 07:48	7°♌43'18	4°04'51	morning rise	4306 Sep 19 23:17	15°♏59'26	
morning rise	4305 Oct 07 08:58	3°♌01'08		direct	4306 Sep 22 08:31	15°♏39'29	
direct	4305 Oct 09 17:18	2°♌38'12		morning max el	4306 Sep 30 03:55	19°♏26'42	18°21'16
asc. node	4305 Oct 14 01:24	3°♌59'42		asc. node	4306 Sep 30 22:25	20°♏13'13	
morning max el	4305 Oct 16 18:01	6°♌09'46	17°56'01		4306 Oct 07 23:32	0°♌	
	4305 Nov 01 00:00	0°♌		morning set	4306 Oct 16 02:45	14°♌51'14	
morning set	4305 Nov 01 13:10	1°♌00'06			4306 Oct 24 02:44	0°♌	
superior conj	4305 Nov 11 23:39	19°♌43'59	0°53'51	superior conj	4306 Oct 25 06:37	2°♌08'37	1°20'27
minimum elong	4305 Nov 12 03:38	20°♌01'18	0°53'19	minimum elong	4306 Oct 25 10:21	2°♌25'42	1°20'03
	4305 Nov 18 00:30	0°♌		max. Earth dist.	4306 Nov 01 19:18	15°♌30'50	1.40653 AU
max. Earth dist.	4305 Nov 19 11:34	2°♌25'05	1.42587 AU	evening rise	4306 Nov 06 08:40	23°♌10'26	
desc. node	4305 Nov 19 21:45	3°♌06'57		desc. node	4306 Nov 06 18:47	23°♌52'02	
evening rise	4305 Nov 25 21:17	12°♌44'16			4306 Nov 10 13:56	0°♌	
	4305 Dec 07 04:40	0°♌			4306 Dec 01 04:00	0°♌	
evening max el	4305 Dec 28 03:55	27°♌42'57	22°06'09	evening max el	4306 Dec 10 19:01	11°♌20'14	23°25'47
	4305 Dec 30 14:31	0°♌		retrograde	4306 Dec 21 08:12	17°♌34'38	
retrograde	4306 Jan 06 14:07	3°♌19'31		evening set	4306 Dec 26 08:02	15°♌30'47	
asc. node	4306 Jan 10 00:41	2°♌16'22		asc. node	4306 Dec 27 21:42	13°♌59'40	
evening set	4306 Jan 11 01:36	1°♌31'30		inferior conj	4306 Dec 31 17:44	9°♌05'54	1°16'13
	4306 Jan 12 16:00	30°♌		minimum elong	4306 Dec 31 16:04	9°♌11'36	1°15'35
inferior conj	4306 Jan 16 09:56	25°♌11'25	2°01'27	min. Earth dist.	4306 Dec 31 06:22	9°♌44'52	0.67973 AU
minimum elong	4306 Jan 16 07:38	25°♌19'22	2°00'41	morning rise	4307 Jan 06 00:02	2°♌59'09	
min. Earth dist.	4306 Jan 16 09:33	25°♌12'44	0.68004 AU	direct	4307 Jan 10 05:02	1°♌20'14	
morning rise	4306 Jan 21 13:33	19°♌00'31		morning max el	4307 Jan 18 15:31	6°♌13'20	21°05'18
direct	4306 Jan 26 08:43	16°♌58'49		desc. node	4307 Feb 02 18:03	25°♌45'19	
morning max el	4306 Feb 04 23:23	22°♌38'56	22°27'55		4307 Feb 05 15:42	0°♌	
	4306 Feb 11 08:48	0°♌		morning set	4307 Feb 18 04:07	19°♌04'05	
desc. node	4306 Feb 15 21:01	5°♌55'57			4307 Feb 25 00:28	0°♌	
	4306 Mar 04 05:54	0°♌		max. Earth dist.	4307 Feb 25 20:35	1°♌21'57	1.42561 AU
morning set	4306 Mar 10 17:27	10°♌20'44		superior conj	4307 Mar 05 00:46	13°♌20'11	-2°07'34
max. Earth dist.	4306 Mar 15 18:10	18°♌42'45	1.40553 AU	minimum elong	4307 Mar 05 01:55	13°♌25'06	2°07'34
	4306 Mar 22 05:58	0°♌			4307 Mar 14 12:59	0°♌	
superior conj	4306 Mar 23 13:16	2°♌20'12	-1°56'45	evening rise	4307 Mar 16 13:44	3°♌38'47	
minimum elong	4306 Mar 23 17:35	2°♌39'35	1°56'27	asc. node	4307 Mar 25 21:00	19°♌55'28	
evening rise	4306 Apr 02 15:46	21°♌04'27			4307 Apr 02 07:59	0°♌	
	4306 Apr 07 10:51	0°♌		evening max el	4307 Apr 02 06:50	29°♌57'12	18°07'13
asc. node	4306 Apr 07 23:58	0°♌59'23		retrograde	4307 Apr 08 22:08	3°♌20'42	
evening max el	4306 Apr 18 19:52	16°♌57'17	18°21'10	evening set	4307 Apr 11 13:52	2°♌48'15	
retrograde	4306 Apr 26 03:07	20°♌34'59			4307 Apr 15 20:21	30°♌	
evening set	4306 Apr 28 12:17	20°♌12'48		inferior conj	4307 Apr 18 04:18	27°♌50'47	3°10'38
inferior conj	4306 May 05 18:50	15°♌35'56	2°23'07	minimum elong	4307 Apr 18 06:57	27°♌44'23	3°10'12
minimum elong	4306 May 05 22:28	15°♌28'21	2°22'09	min. Earth dist.	4307 Apr 21 08:59	24°♌47'14	0.61042 AU
min. Earth dist.	4306 May 09 05:25	12°♌45'05	0.58845 AU	morning rise	4307 Apr 24 22:02	21°♌56'29	
morning rise	4306 May 13 05:40	10°♌01'57		direct	4307 May 01 15:27	19°♌41'06	
desc. node	4306 May 14 20:14	9°♌16'09		desc. node	4307 May 01 17:16	19°♌41'07	
direct	4306 May 19 09:50	8°♌20'12		morning max el	4307 May 15 21:12	27°♌37'40	27°47'50
morning max el	4306 Jun 02 19:17	16°♌06'32	27°11'02		4307 May 18 03:45	0°♌	
	4306 Jun 14 03:34	0°♌			4307 Jun 07 20:23	0°♌	
	4306 Jul 01 08:22	0°♌		morning set	4307 Jun 17 14:27	18°♌41'49	
morning set	4306 Jul 03 09:29	4°♌13'43		asc. node	4307 Jun 21 20:15	27°♌39'10	
asc. node	4306 Jul 04 23:12	7°♌33'18			4307 Jun 22 22:16	0°♌	
				max. Earth dist.	4307 Jun 23 14:38	1°♌29'06	1.32147 AU
superior conj	4306 Jul 10 11:09	19°♌32'58	0°54'51	superior conj	4307 Jun 24 22:00	4°♌20'45	0°31'44
minimum elong	4306 Jul 10 09:03	19°♌21'28	0°54'26	minimum elong	4307 Jun 24 20:37	4°♌13'09	0°31'26
max. Earth dist.	4306 Jul 10 04:15	18°♌54'55	1.31997 AU	evening rise	4307 Jul 01 18:00	19°♌14'25	
	4306 Jul 15 05:26	0°♌			4307 Jul 06 23:59	0°♌	
evening rise	4306 Jul 17 07:03	4°♌25'43			4307 Jul 26 19:38	0°♌	
	4306 Jul 30 20:30	0°♌		evening max el	4307 Jul 28 02:39	1°♌17'00	25°03'32
desc. node	4306 Aug 10 19:30	15°♌24'13		desc. node	4307 Jul 28 16:31	1°♌49'36	
evening max el	4306 Aug 15 09:33	20°♌16'38	26°21'31	retrograde	4307 Aug 11 01:24	8°♌20'24	
retrograde	4306 Aug 29 08:47	27°♌26'09		evening set	4307 Aug 16 13:46	7°♌11'01	
evening set	4306 Sep 04 23:01	25°♌38'46		min. Earth dist.	4307 Aug 21 14:16	4°♌26'58	0.57430 AU
min. Earth dist.	4306 Sep 08 22:50	23°♌03'42	0.59422 AU				

inferior conj	4307 Aug 24 13:34	2° \mathbb{M} 27'42	-5°12'34	retrograde	4308 Jul 22 05:29	18° \mathbb{Q} 33'35	
minimum elong	4307 Aug 24 14:06	2° \mathbb{M} 26'49	5°12'34	evening set	4308 Jul 26 06:20	17° \mathbb{Q} 57'56	
	4307 Aug 28 11:51	30° \mathbb{R} \mathbb{Q}		min. Earth dist.	4308 Aug 02 01:21	14° \mathbb{Q} 48'56	0.55821 AU
morning rise	4307 Sep 01 16:48	28° \mathbb{Q} 16'44		inferior conj	4308 Aug 04 01:52	13° \mathbb{Q} 37'02	-4°53'13
direct	4307 Sep 04 06:18	27° \mathbb{Q} 57'36		minimum elong	4308 Aug 03 20:14	13° \mathbb{Q} 45'26	4°52'27
	4307 Sep 10 12:05	0° \mathbb{M}		morning rise	4308 Aug 12 12:34	9° \mathbb{Q} 43'06	
morning max el	4307 Sep 13 05:21	2° \mathbb{M} 10'57	19°07'37	direct	4308 Aug 15 09:01	9° \mathbb{Q} 23'07	
asc. node	4307 Sep 17 19:28	7° \mathbb{M} 32'23		morning max el	4308 Aug 25 19:41	14° \mathbb{Q} 14'08	20°15'48
morning set	4307 Sep 30 01:44	29° \mathbb{M} 09'10		asc. node	4308 Sep 03 16:30	25° \mathbb{Q} 43'01	
	4307 Sep 30 11:59	0° \mathbb{Q}			4308 Sep 06 04:36	0° \mathbb{M}	
				morning set	4308 Sep 13 07:05	13° \mathbb{M} 45'56	
superior conj	4307 Oct 08 07:50	15° \mathbb{Q} 26'39	1°36'32	superior conj	4308 Sep 20 22:24	29° \mathbb{M} 24'37	1°43'30
minimum elong	4307 Oct 08 10:08	15° \mathbb{Q} 37'43	1°36'22	minimum elong	4308 Sep 20 23:02	29° \mathbb{M} 27'51	1°43'30
max. Earth dist.	4307 Oct 15 00:01	27° \mathbb{Q} 55'58	1.38564 AU		4308 Sep 21 05:25	0° \mathbb{Q}	
	4307 Oct 16 03:37	0° \mathbb{M}		max. Earth dist.	4308 Sep 26 06:25	9° \mathbb{Q} 54'53	1.36562 AU
evening rise	4307 Oct 18 19:18	4° \mathbb{M} 40'18		evening rise	4308 Sep 30 03:19	17° \mathbb{Q} 09'37	
desc. node	4307 Oct 24 15:47	14° \mathbb{M} 30'56			4308 Oct 07 11:38	0° \mathbb{M}	
	4307 Nov 03 15:50	0° \mathbb{M}		desc. node	4308 Oct 10 12:48	4° \mathbb{M} 59'35	
evening max el	4307 Nov 23 07:58	25° \mathbb{M} 01'19	24°44'23		4308 Oct 28 00:32	0° \mathbb{M}	
	4307 Nov 29 11:06	0° \mathbb{Q}		evening max el	4308 Nov 04 20:27	8° \mathbb{M} 44'24	25°54'40
retrograde	4307 Dec 04 22:11	1° \mathbb{Q} 46'10		retrograde	4308 Nov 17 07:26	15° \mathbb{M} 49'51	
	4307 Dec 09 19:06	30° \mathbb{R} \mathbb{M}		evening set	4308 Nov 23 10:40	13° \mathbb{M} 17'48	
evening set	4307 Dec 10 11:37	29° \mathbb{M} 27'04		min. Earth dist.	4308 Nov 27 17:34	8° \mathbb{M} 41'01	0.66871 AU
asc. node	4307 Dec 14 18:43	24° \mathbb{M} 38'28		inferior conj	4308 Nov 29 02:49	6° \mathbb{M} 56'37	-0°31'36
min. Earth dist.	4307 Dec 15 01:49	24° \mathbb{M} 15'08	0.67595 AU	minimum elong	4308 Nov 29 03:39	6° \mathbb{M} 53'59	0°31'14
inferior conj	4307 Dec 15 23:57	23° \mathbb{M} 01'46	0°24'50	asc. node	4308 Nov 30 15:44	5° \mathbb{M} 02'57	
minimum elong	4307 Dec 15 23:21	23° \mathbb{M} 03'47	0°24'36	morning rise	4308 Dec 04 21:03	1° \mathbb{M} 05'02	
morning rise	4307 Dec 21 11:12	17° \mathbb{M} 01'20		direct	4308 Dec 08 02:00	0° \mathbb{M} 06'07	
direct	4307 Dec 25 03:18	15° \mathbb{M} 43'52		morning max el	4308 Dec 14 22:53	3° \mathbb{M} 54'14	18°58'20
morning max el	4308 Jan 01 15:21	19° \mathbb{M} 58'44	19°54'25		4309 Jan 02 10:08	0° \mathbb{Q}	
	4308 Jan 09 18:24	0° \mathbb{Q}		morning set	4309 Jan 06 06:59	6° \mathbb{Q} 02'15	
desc. node	4308 Jan 20 15:03	15° \mathbb{Q} 55'54		desc. node	4309 Jan 06 12:03	6° \mathbb{Q} 22'05	
morning set	4308 Jan 28 00:10	27° \mathbb{Q} 12'58		max. Earth dist.	4309 Jan 20 23:22	29° \mathbb{Q} 00'56	1.45062 AU
	4308 Jan 29 19:23	0° \approx			4309 Jan 21 14:23	0° \approx	
max. Earth dist.	4308 Feb 08 06:56	14° \approx 53'13	1.44128 AU				
superior conj	4308 Feb 13 10:33	23° \approx 10'28	-2°02'36	superior conj	4309 Jan 22 21:24	2° \approx 02'09	-1°38'03
minimum elong	4308 Feb 13 05:49	22° \approx 51'16	2°02'22	minimum elong	4309 Jan 22 12:14	1° \approx 26'03	1°37'13
	4308 Feb 17 14:26	0° \mathbb{H}		evening rise	4309 Feb 06 22:14	26° \approx 07'16	
evening rise	4308 Feb 26 17:07	15° \mathbb{H} 21'21			4309 Feb 09 07:22	0° \mathbb{H}	
	4308 Mar 06 08:29	0° \mathbb{Y}		asc. node	4309 Feb 26 15:03	25° \mathbb{H} 55'44	
asc. node	4308 Mar 11 18:02	8° \mathbb{Y} 17'35		evening max el	4309 Feb 27 07:27	26° \mathbb{H} 38'50	18°36'07
evening max el	4308 Mar 15 19:37	13° \mathbb{Y} 13'17	18°12'27		4309 Mar 04 03:48	0° \mathbb{Y}	
retrograde	4308 Mar 22 05:39	16° \mathbb{Y} 37'27		retrograde	4309 Mar 05 21:22	0° \mathbb{Y} 16'36	
evening set	4308 Mar 25 03:23	15° \mathbb{Y} 53'27			4309 Mar 07 14:25	30° \mathbb{R} \mathbb{H}	
inferior conj	4308 Mar 31 05:40	10° \mathbb{Y} 36'12	3°32'26	evening set	4309 Mar 09 01:11	29° \mathbb{H} 20'16	
minimum elong	4308 Mar 31 06:37	10° \mathbb{Y} 33'37	3°32'22	inferior conj	4309 Mar 14 18:59	23° \mathbb{H} 44'56	3°34'37
min. Earth dist.	4308 Apr 02 21:12	7° \mathbb{Y} 43'49	0.63133 AU	minimum elong	4309 Mar 14 18:21	23° \mathbb{H} 46'50	3°34'35
morning rise	4308 Apr 06 08:46	4° \mathbb{Y} 30'22		min. Earth dist.	4309 Mar 16 18:59	21° \mathbb{H} 20'55	0.64919 AU
direct	4308 Apr 13 06:00	1° \mathbb{Y} 51'03		morning rise	4309 Mar 20 10:58	17° \mathbb{H} 33'14	
desc. node	4308 Apr 17 14:17	2° \mathbb{Y} 46'37		direct	4309 Mar 27 04:01	14° \mathbb{H} 43'20	
morning max el	4308 Apr 27 04:15	9° \mathbb{Y} 49'35	27°47'05	desc. node	4309 Apr 04 11:18	18° \mathbb{H} 04'44	
	4308 May 12 21:48	0° \mathbb{B}		morning max el	4309 Apr 09 14:03	22° \mathbb{H} 34'39	27°11'36
	4308 May 30 03:19	0° \mathbb{I}			4309 Apr 16 03:09	0° \mathbb{Y}	
morning set	4308 May 31 13:11	2° \mathbb{I} 48'24			4309 May 06 03:51	0° \mathbb{B}	
max. Earth dist.	4308 Jun 05 20:08	13° \mathbb{I} 45'27	1.32722 AU	morning set	4309 May 15 02:48	16° \mathbb{B} 24'47	
asc. node	4308 Jun 07 17:18	17° \mathbb{I} 47'10		max. Earth dist.	4309 May 19 17:00	25° \mathbb{B} 33'37	1.33750 AU
					4309 May 21 20:38	0° \mathbb{I}	
superior conj	4308 Jun 08 06:06	18° \mathbb{I} 56'12	0°05'36	superior conj	4309 May 23 09:25	3° \mathbb{I} 12'43	-0°22'47
minimum elong	4308 Jun 08 05:50	18° \mathbb{I} 54'44	0°05'32	minimum elong	4309 May 23 10:36	3° \mathbb{I} 18'58	0°22'32
behind sun begin	4308 Jun 08 00:52	18° \mathbb{I} 27'56		asc. node	4309 May 25 14:20	7° \mathbb{I} 52'57	
behind sun end	4308 Jun 08 10:48	19° \mathbb{I} 21'34		evening rise	4309 May 30 16:42	18° \mathbb{I} 42'34	
	4308 Jun 13 08:35	0° \mathbb{B}			4309 Jun 05 06:53	0° \mathbb{B}	
evening rise	4308 Jun 15 05:51	4° \mathbb{B} 02'14		evening max el	4309 Jun 20 07:47	22° \mathbb{B} 11'59	21°52'57
	4308 Jun 29 05:36	0° \mathbb{Q}		desc. node	4309 Jul 01 10:33	28° \mathbb{B} 21'20	
evening max el	4308 Jul 08 15:37	11° \mathbb{Q} 45'26	23°28'46	retrograde	4309 Jul 02 22:25	28° \mathbb{B} 26'33	
desc. node	4308 Jul 14 13:31	16° \mathbb{Q} 20'23					

evening set	4309 Jul 05 14:45	28°☿10'26	evening set	4310 Jun 15 11:35	8°☿21'47
inferior conj	4309 Jul 14 22:49	24°☿07'09 -3°43'08	desc. node	4310 Jun 18 07:34	7°☿36'36
minimum elong	4309 Jul 14 14:13	24°☿19'12 3°40'44	inferior conj	4310 Jun 24 16:44	4°☿24'10 -1°53'02
min. Earth dist.	4309 Jul 14 11:41	24°☿22'45 0.54921 AU	minimum elong	4310 Jun 24 11:26	4°☿31'52 1°51'07
morning rise	4309 Jul 23 15:12	20°☿15'51	min. Earth dist.	4310 Jun 25 23:41	3°☿39'17 0.54958 AU
direct	4309 Jul 26 20:49	19°☿52'51	morning rise	4310 Jul 03 10:20	0°☿14'37
morning max el	4309 Aug 07 22:14	25°☿31'44 21°43'58		4310 Jul 04 11:03	30°☿II
	4309 Aug 12 01:56	0°♊	direct	4310 Jul 07 06:36	29°II42'43
asc. node	4309 Aug 21 13:33	14°♊32'05		4310 Jul 10 01:18	0°☿
morning set	4309 Aug 28 16:22	28°♊33'35	morning max el	4310 Jul 20 15:39	6°☿11'34 23°25'13
	4309 Aug 29 08:55	0°♊		4310 Aug 06 10:26	0°♊
			asc. node	4310 Aug 08 10:37	3°♊50'04
superior conj	4309 Sep 04 22:13	13°♊49'39 1°42'53	morning set	4310 Aug 13 03:43	13°♊26'32
minimum elong	4309 Sep 04 21:27	13°♊45'38 1°42'52			
max. Earth dist.	4309 Sep 08 19:10	21°♊48'17 1.34837 AU	superior conj	4310 Aug 20 04:14	28°♊32'12 1°35'55
	4309 Sep 12 22:50	0°♋	minimum elong	4310 Aug 20 02:29	28°♊22'46 1°35'46
evening rise	4309 Sep 13 04:23	0°♋26'40		4310 Aug 20 20:36	0°♊
desc. node	4309 Sep 27 09:50	25°♋11'35	max. Earth dist.	4310 Aug 22 16:40	3°♊54'27 1.33505 AU
	4309 Sep 30 13:15	0°♋	evening rise	4310 Aug 27 18:20	14°♊20'20
evening max el	4309 Oct 18 09:00	22°♋22'21 26°49'23		4310 Sep 05 02:28	0°♋
retrograde	4309 Oct 31 11:24	29°♋38'34	desc. node	4310 Sep 14 06:52	14°♋59'27
evening set	4309 Nov 07 03:10	26°♋58'27		4310 Sep 25 11:03	0°♋
min. Earth dist.	4309 Nov 11 03:17	22°♋57'26 0.65791 AU	evening max el	4310 Sep 30 21:00	5°♋45'32 27°21'22
inferior conj	4309 Nov 13 00:17	20°♋46'11 -1°31'49	retrograde	4310 Oct 14 09:38	13°♋04'00
minimum elong	4309 Nov 13 02:51	20°♋38'40 1°30'45	evening set	4310 Oct 21 10:36	10°♋23'55
asc. node	4309 Nov 17 12:46	16°♋08'44	min. Earth dist.	4310 Oct 25 04:53	6°♋57'17 0.64358 AU
morning rise	4309 Nov 19 03:21	15°♋06'09	inferior conj	4310 Oct 27 13:59	4°♋25'24 -2°33'50
direct	4309 Nov 28 23:11	14°♋22'06	minimum elong	4310 Oct 27 18:21	4°♋13'45 2°32'12
morning max el	4309 Nov 28 12:13	17°♋54'24 18°18'27		4310 Nov 01 08:39	30°☿♋
	4309 Dec 07 13:22	0°♌	morning rise	4310 Nov 03 03:23	28°♋59'53
morning set	4309 Dec 17 17:16	16°♌16'07	asc. node	4310 Nov 04 09:50	28°♋35'12
desc. node	4309 Dec 24 09:06	26°♌59'01	direct	4310 Nov 05 16:30	28°♋26'46
	4309 Dec 26 06:29	0°♌		4310 Nov 09 23:50	0°♋
superior conj	4310 Jan 01 23:57	10°♌38'15 -0°56'52	morning max el	4310 Nov 12 04:33	1°♋52'31 17°55'32
minimum elong	4310 Jan 01 16:55	10°♌10'34 0°55'59	morning set	4310 Nov 29 08:16	27°♋54'25
max. Earth dist.	4310 Jan 03 18:27	13°♌25'08 1.45263 AU		4310 Nov 30 13:57	0°♌
	4310 Jan 14 08:44	0°♍	desc. node	4310 Dec 11 06:08	17°♌42'41
evening rise	4310 Jan 18 04:28	5°♍59'01	superior conj	4310 Dec 12 14:54	19°♌55'15 -0°09'27
greatest brilliancy	4310 Jan 29 07:22	23°♍18'46 -0.8m	minimum elong	4310 Dec 12 13:47	19°♌50'46 0°09'16
	4310 Feb 02 18:26	0°♎	behind sun begin	4310 Dec 12 05:19	19°♌16'37
evening max el	4310 Feb 10 16:05	10°♎09'07 19°17'08	behind sun end	4310 Dec 12 22:14	20°♌24'52
asc. node	4310 Feb 13 12:05	12°♎37'20	max. Earth dist.	4310 Dec 17 13:03	27°♌47'18 1.44731 AU
retrograde	4310 Feb 17 17:40	14°♎11'18		4310 Dec 18 22:39	0°♌
evening set	4310 Feb 21 04:24	13°♎01'52	evening rise	4310 Dec 28 17:48	15°♌14'26
inferior conj	4310 Feb 26 16:44	7°♎10'39 3°21'58		4311 Jan 07 10:27	0°♍
minimum elong	4310 Feb 26 14:59	7°♎16'18 3°21'43	greatest brilliancy	4311 Jan 12 08:24	7°♍18'23 -0.6m
min. Earth dist.	4310 Feb 28 01:32	5°♎24'45 0.66311 AU	evening max el	4311 Jan 24 19:54	23°♍41'12 20°13'36
morning rise	4310 Mar 04 01:16	0°♎56'35	asc. node	4311 Jan 31 09:07	28°♍07'23
	4310 Mar 05 04:58	30°☿♍	retrograde	4311 Feb 01 15:44	28°♍16'11
direct	4310 Mar 10 08:36	28°♍09'09	evening set	4311 Feb 05 10:46	26°♍52'37
	4310 Mar 16 02:46	0°♎	inferior conj	4311 Feb 10 20:04	20°♍47'57 2°57'47
desc. node	4310 Mar 22 08:19	5°♎01'17	minimum elong	4311 Feb 10 17:43	20°♍55'55 2°57'16
morning max el	4310 Mar 22 23:59	5°♎40'17 26°08'33	min. Earth dist.	4311 Feb 11 14:58	19°♍44'02 0.67290 AU
	4310 Apr 10 17:21	0°♏	morning rise	4311 Feb 16 00:28	14°♍33'53
morning set	4310 Apr 28 03:34	29°♏20'03	direct	4311 Feb 21 18:48	11°♍59'19
	4310 Apr 28 12:09	0°♏	morning max el	4311 Mar 05 08:39	18°♍54'48 24°47'24
max. Earth dist.	4310 May 02 02:25	6°♏50'41 1.35239 AU	desc. node	4311 Mar 09 05:21	23°♍07'55
				4311 Mar 14 17:52	0°♎
superior conj	4310 May 07 05:34	17°♏03'41 -0°52'07		4311 Apr 03 19:47	0°♏
minimum elong	4310 May 07 08:23	17°♏18'01 0°51'35	morning set	4311 Apr 10 10:19	11°♏18'58
asc. node	4310 May 12 11:23	27°♏52'37	max. Earth dist.	4311 Apr 14 01:16	17°♏50'51 1.37143 AU
	4310 May 13 11:57	0°♐		4311 Apr 20 11:18	0°♏
evening rise	4310 May 15 00:34	3°♐09'06	superior conj	4311 Apr 20 15:25	0°♏20'04 -1°20'36
	4310 May 30 13:57	0°☿	minimum elong	4311 Apr 20 19:40	0°♏40'49 1°19'57
evening max el	4310 Jun 02 10:24	3°☿07'48 20°29'03	evening rise	4311 Apr 29 03:02	17°♏14'16
retrograde	4310 Jun 13 11:32	8°☿31'42			

asc. node	4311 Apr 29 08:26	17°♄41'16		minimum elong	4312 Apr 02 15:52	13°♑14'45	1°45'02
	4311 May 05 18:10	0°♊			4312 Apr 11 10:44	0°♄	
evening max el	4311 May 16 01:24	14°♊44'48	19°23'31	evening rise	4312 Apr 11 21:17	0°♄50'54	
retrograde	4311 May 25 08:54	19°♊16'51		asc. node	4312 Apr 15 05:28	7°♄14'08	
evening set	4311 May 27 08:27	19°♊05'26		evening max el	4312 Apr 28 02:45	27°♄00'23	18°38'06
inferior conj	4311 Jun 04 21:51	14°♊58'38	0°04'58		4312 May 02 05:32	0°♊	
minimum elong	4311 Jun 04 22:04	14°♊58'17	0°04'52	retrograde	4312 May 06 00:06	0°♊53'05	
transit middle	4311 Jun 04 22:04	14°♊58'17	0°04'52	evening set	4312 May 08 05:33	0°♊35'37	
transit begin	4311 Jun 04 18:23	15°♊04'18			4312 May 09 22:47	30°♄♄	
transit end	4311 Jun 05 01:45	14°♊52'16		inferior conj	4312 May 15 22:57	26°♄10'21	1°41'46
desc. node	4311 Jun 05 04:36	14°♊47'38		minimum elong	4312 May 16 02:14	26°♄04'04	1°40'44
min. Earth dist.	4311 Jun 07 13:57	13°♊14'41	0.55941 AU	min. Earth dist.	4312 May 19 07:24	23°♄38'25	0.57658 AU
morning rise	4311 Jun 13 08:47	10°♊16'18		desc. node	4312 May 22 01:37	21°♄49'00	
direct	4311 Jun 18 02:45	9°♊24'58		morning rise	4312 May 23 19:43	20°♄53'25	
morning max el	4311 Jul 02 05:26	16°♊33'59	25°07'07	direct	4312 May 29 12:47	19°♄32'00	
	4311 Jul 13 03:21	0°♄		morning max el	4312 Jun 12 21:39	27°♄07'11	26°33'52
asc. node	4311 Jul 26 07:41	23°♄29'08			4312 Jun 15 16:08	0°♊	
morning set	4311 Jul 28 15:26	28°♄19'47			4312 Jul 05 12:46	0°♄	
	4311 Jul 29 10:17	0°♊		morning set	4312 Jul 12 01:54	13°♄07'53	
				asc. node	4312 Jul 12 04:43	13°♄22'44	
superior conj	4311 Aug 04 14:03	13°♊24'35	1°23'33	superior conj	4312 Jul 19 01:37	28°♄19'50	1°06'31
minimum elong	4311 Aug 04 11:47	13°♊12'14	1°23'15	minimum elong	4312 Jul 18 23:20	28°♄07'13	1°06'08
max. Earth dist.	4311 Aug 05 22:07	16°♊19'39	1.32594 AU	max. Earth dist.	4312 Jul 19 08:33	28°♄58'07	1.32098 AU
evening rise	4311 Aug 11 17:35	28°♊40'26			4312 Jul 19 19:47	0°♊	
	4311 Aug 12 09:07	0°♊		evening rise	4312 Jul 25 23:10	13°♊17'35	
	4311 Aug 29 06:34	0°♊			4312 Aug 03 11:06	0°♊	
desc. node	4311 Sep 01 03:54	4°♊13'17		desc. node	4312 Aug 18 00:56	22°♊38'35	
evening max el	4311 Sep 13 06:45	18°♊41'56	27°24'14		4312 Aug 24 11:38	0°♊	
retrograde	4311 Sep 27 01:14	25°♊57'06		evening max el	4312 Aug 25 11:19	0°♊57'30	26°53'56
evening set	4311 Oct 04 05:40	23°♊27'58		retrograde	4312 Sep 08 08:57	8°♊08'12	
min. Earth dist.	4311 Oct 07 20:36	20°♊30'44	0.62606 AU	evening set	4312 Sep 15 08:00	6°♊02'14	
inferior conj	4311 Oct 10 17:08	17°♊47'45	-3°34'21	min. Earth dist.	4312 Sep 19 01:29	3°♊23'50	0.60619 AU
minimum elong	4311 Oct 10 22:54	17°♊34'01	3°32'34	inferior conj	4312 Sep 22 06:18	0°♊43'35	-4°27'43
morning rise	4311 Oct 17 17:46	12°♊40'00		minimum elong	4312 Sep 22 12:09	0°♊31'18	4°26'27
direct	4311 Oct 20 02:57	12°♊14'12			4312 Sep 23 03:15	30°♄♊	
asc. node	4311 Oct 22 06:53	12°♊36'05		morning rise	4312 Sep 29 18:14	25°♊56'59	
morning max el	4311 Oct 26 20:55	15°♊41'30	17°50'25	direct	4312 Oct 02 02:38	25°♊35'30	
	4311 Nov 05 20:47	0°♊		asc. node	4312 Oct 08 03:56	28°♊05'01	
morning set	4311 Nov 11 22:13	10°♊39'12		morning max el	4312 Oct 09 10:04	29°♊12'29	18°04'13
					4312 Oct 10 04:44	0°♊	
superior conj	4311 Nov 23 06:53	0°♊26'39	0°33'31	morning set	4312 Oct 25 04:38	24°♊10'28	
minimum elong	4311 Nov 23 09:57	0°♊39'34	0°33'05		4312 Oct 28 07:45	0°♊	
	4311 Nov 23 00:34	0°♊		superior conj	4312 Nov 04 00:51	12°♊13'29	1°06'29
desc. node	4311 Nov 28 03:10	8°♊30'00		minimum elong	4312 Nov 04 04:57	12°♊31'44	1°05'58
max. Earth dist.	4311 Nov 30 05:04	11°♊53'05	1.43533 AU	max. Earth dist.	4312 Nov 11 16:28	25°♊25'50	1.41808 AU
evening rise	4311 Dec 08 04:28	24°♊30'38		desc. node	4312 Nov 14 00:12	29°♊16'51	
	4311 Dec 11 18:04	0°♊			4312 Nov 14 10:43	0°♊	
	4312 Jan 01 14:00	0°♊		evening rise	4312 Nov 17 03:50	4°♊23'52	
evening max el	4312 Jan 07 18:21	7°♊15'19	21°22'29		4312 Dec 04 01:53	0°♊	
retrograde	4312 Jan 16 13:25	12°♊28'18		evening max el	4312 Dec 20 11:42	20°♊51'00	22°39'39
asc. node	4312 Jan 18 06:09	12°♊12'42		retrograde	4312 Dec 30 09:07	26°♊43'32	
evening set	4312 Jan 20 18:27	10°♊49'28		evening set	4313 Jan 04 01:48	24°♊48'38	
inferior conj	4312 Jan 26 02:41	4°♊34'15	2°24'20	asc. node	4313 Jan 04 03:10	24°♊45'47	
minimum elong	4312 Jan 26 00:15	4°♊42'43	2°23'35	inferior conj	4313 Jan 09 10:34	18°♊26'12	1°43'04
min. Earth dist.	4312 Jan 26 09:02	4°♊12'18	0.67864 AU	minimum elong	4313 Jan 09 08:29	18°♊33'23	1°42'19
	4312 Jan 29 15:05	30°♄♊		min. Earth dist.	4313 Jan 09 05:25	18°♊44'01	0.68046 AU
morning rise	4312 Jan 31 05:51	28°♊21'50		morning rise	4313 Jan 14 15:04	12°♊17'05	
direct	4312 Feb 05 09:40	26°♊07'04		direct	4313 Jan 19 04:10	10°♊25'06	
	4312 Feb 13 07:55	0°♊		morning max el	4313 Jan 28 06:05	15°♊43'48	21°51'35
morning max el	4312 Feb 15 17:31	2°♊15'14	23°18'34		4313 Feb 08 19:10	0°♊	
desc. node	4312 Feb 24 02:24	12°♊05'09		desc. node	4313 Feb 09 23:26	1°♊38'25	
	4312 Mar 07 19:13	0°♊			4313 Feb 28 20:19	0°♊	
morning set	4312 Mar 21 17:00	22°♊05'43		morning set	4313 Mar 01 19:07	1°♊31'03	
max. Earth dist.	4312 Mar 25 20:17	29°♊10'18	1.39308 AU	max. Earth dist.	4313 Mar 07 19:12	11°♊19'26	1.41453 AU
	4312 Mar 26 07:40	0°♊					
superior conj	4312 Apr 02 11:03	12°♊52'24	-1°45'30				

superior conj	4313 Mar 15 11:42	24° K 29'16	-2°02'55	superior conj	4314 Feb 24 12:25	4° K 59'26	-2°07'42
minimum elong	4313 Mar 15 15:04	24° K 44'02	2°02'46	minimum elong	4314 Feb 24 11:17	4° K 54'42	2°07'41
	4313 Mar 18 14:07	0° Y		evening rise	4314 Mar 08 18:29	26° K 04'34	
evening rise	4313 Mar 26 03:51	13° Y 50'56			4314 Mar 10 23:58	0° Y	
asc. node	4313 Apr 02 02:29	26° Y 25'44		asc. node	4314 Mar 19 23:30	15° Y 08'36	
	4313 Apr 04 05:16	0° B		evening max el	4314 Mar 25 23:09	22° Y 54'00	18°07'05
evening max el	4313 Apr 11 11:08	9° B 46'34	18°12'48	retrograde	4314 Apr 01 11:12	26° Y 16'31	
retrograde	4313 Apr 18 10:11	13° B 16'29		evening set	4314 Apr 04 05:23	25° Y 39'24	
evening set	4313 Apr 20 22:14	12° B 50'06		inferior conj	4314 Apr 10 14:09	20° Y 33'17	3°22'41
inferior conj	4313 Apr 27 21:24	8° B 04'02	2°46'52	minimum elong	4314 Apr 10 16:07	20° Y 28'18	3°22'26
minimum elong	4313 Apr 28 00:47	7° B 56'29	2°46'06	min. Earth dist.	4314 Apr 13 13:46	17° Y 31'43	0.61952 AU
min. Earth dist.	4313 May 01 06:32	5° B 04'57	0.59772 AU	morning rise	4314 Apr 17 01:13	14° Y 32'49	
morning rise	4313 May 05 00:47	2° B 20'12		direct	4314 Apr 23 21:09	12° Y 05'49	
desc. node	4313 May 08 22:38	0° B 41'48		desc. node	4314 Apr 25 19:40	12° Y 16'49	
direct	4313 May 11 11:35	0° B 23'49		morning max el	4314 May 08 00:38	20° Y 04'58	27°52'10
morning max el	4313 May 25 20:03	8° B 14'59	27°31'28		4314 May 16 12:28	0° B	
	4313 Jun 11 08:51	0° II			4314 Jun 04 07:27	0° II	
morning set	4313 Jun 26 09:28	27° II 45'34		morning set	4314 Jun 10 12:04	12° II 05'29	
	4313 Jun 27 11:06	0° E		asc. node	4314 Jun 15 22:47	23° II 32'56	
asc. node	4313 Jun 29 01:45	3° E 25'45		max. Earth dist.	4314 Jun 16 04:59	24° II 06'28	1.32333 AU
max. Earth dist.	4313 Jul 02 20:12	11° E 38'25	1.32008 AU				
				superior conj	4314 Jun 17 23:06	27° II 55'12	0°20'58
superior conj	4313 Jul 03 13:14	13° E 12'14	0°45'28	minimum elong	4314 Jun 17 22:08	27° II 49'58	0°20'45
minimum elong	4313 Jul 03 11:23	13° E 02'05	0°45'05		4314 Jun 18 21:57	0° E	
evening rise	4313 Jul 10 08:45	28° E 04'18		evening rise	4314 Jun 24 20:16	12° E 52'58	
	4313 Jul 11 06:39	0° O			4314 Jul 03 11:08	0° O	
	4313 Jul 28 01:31	0° P		evening max el	4314 Jul 19 22:45	23° O 06'38	24°24'19
desc. node	4313 Aug 04 21:56	9° P 55'32		desc. node	4314 Jul 22 18:56	25° O 36'07	
evening max el	4313 Aug 07 08:25	12° P 24'10	25°51'20		4314 Aug 01 03:54	0° P	
retrograde	4313 Aug 21 07:36	19° P 31'27		retrograde	4314 Aug 02 19:24	0° P 06'15	
evening set	4313 Aug 27 12:47	17° P 59'32			4314 Aug 04 11:02	30° R 0	
min. Earth dist.	4313 Aug 31 20:40	15° P 23'17	0.58554 AU	evening set	4314 Aug 07 17:15	29° O 12'21	
inferior conj	4313 Sep 04 01:57	13° P 03'22	-5°04'25	min. Earth dist.	4314 Aug 13 09:41	26° O 19'19	0.56673 AU
minimum elong	4313 Sep 04 05:21	12° P 57'10	5°04'06	inferior conj	4314 Aug 16 01:30	24° O 38'20	-5°10'13
morning rise	4313 Sep 12 00:10	8° P 40'05		minimum elong	4314 Aug 15 23:25	24° O 41'39	5°10'07
direct	4313 Sep 14 11:00	8° P 20'37		morning rise	4314 Aug 24 08:09	20° O 36'06	
morning max el	4313 Sep 22 16:46	12° P 17'01	18°38'20	direct	4314 Aug 27 00:11	20° O 16'56	
asc. node	4313 Sep 25 00:58	14° P 48'34		morning max el	4314 Sep 05 13:48	24° O 44'51	19°34'04
	4313 Oct 04 15:04	0° A			4314 Sep 10 03:36	0° P	
morning set	4313 Oct 08 22:39	8° A 14'31		asc. node	4314 Sep 11 22:00	2° P 31'01	
				morning set	4314 Sep 23 00:39	22° P 41'04	
superior conj	4313 Oct 17 16:17	25° A 03'14	1°28'28		4314 Sep 26 15:38	0° A	
minimum elong	4313 Oct 17 19:29	25° A 18'12	1°28'10				
	4313 Oct 20 08:18	0° M		superior conj	4314 Sep 30 23:45	8° A 40'03	1°40'29
max. Earth dist.	4313 Oct 24 22:43	8° M 14'44	1.39773 AU	minimum elong	4314 Oct 01 01:20	8° A 47'51	1°40'26
evening rise	4313 Oct 29 01:01	15° M 16'46		max. Earth dist.	4314 Oct 07 03:02	20° A 24'26	1.37683 AU
desc. node	4313 Oct 31 21:13	19° M 59'51		evening rise	4314 Oct 10 11:10	27° A 12'57	
	4313 Nov 07 04:03	0° J			4314 Oct 12 11:09	0° M	
	4313 Nov 28 21:54	0° B		desc. node	4314 Oct 18 18:14	10° M 35'05	
evening max el	4313 Dec 03 01:30	4° B 29'25	23°59'37		4314 Oct 31 15:14	0° J	
retrograde	4313 Dec 14 01:36	10° B 57'57		evening max el	4314 Nov 15 13:56	18° J 11'35	25°15'41
evening set	4313 Dec 19 07:14	8° B 47'10		retrograde	4314 Nov 27 13:53	25° J 07'20	
asc. node	4313 Dec 22 00:12	5° B 57'06		evening set	4314 Dec 03 09:09	22° J 42'11	
min. Earth dist.	4313 Dec 24 01:52	3° B 15'46	0.67860 AU	min. Earth dist.	4314 Dec 07 20:06	17° J 45'01	0.67326 AU
inferior conj	4313 Dec 24 17:54	2° B 21'26	0°55'07	inferior conj	4314 Dec 08 22:57	16° J 17'46	0°01'28
minimum elong	4313 Dec 24 16:38	2° B 25'43	0°54'36	minimum elong	4314 Dec 08 22:55	16° J 17'53	0°01'27
	4313 Dec 26 12:35	30° R 0		transit middle	4314 Dec 08 22:55	16° J 17'53	0°01'27
morning rise	4313 Dec 30 02:04	26° J 17'19		transit begin	4314 Dec 08 20:08	16° J 26'55	
direct	4314 Jan 03 01:19	24° J 48'02		transit end	4314 Dec 09 01:41	16° J 08'53	
morning max el	4314 Jan 11 01:30	29° J 23'26	20°33'27	asc. node	4314 Dec 08 21:14	16° J 23'21	
	4314 Jan 11 15:48	0° B		morning rise	4314 Dec 14 12:56	10° J 20'44	
desc. node	4314 Jan 27 20:27	21° B 37'36		direct	4314 Dec 17 23:56	9° J 11'45	
	4314 Feb 02 10:34	0° A		morning max el	4314 Dec 25 04:50	13° J 14'17	19°28'36
morning set	4314 Feb 08 20:57	9° A 52'03			4315 Jan 06 20:52	0° B	
max. Earth dist.	4314 Feb 18 01:14	24° A 22'55	1.43294 AU	greatest brilliancy	4315 Jan 07 08:49	0° B 44'36	-0.7m
	4314 Feb 21 12:04	0° K		desc. node	4315 Jan 14 17:28	11° B 55'44	
				morning set	4315 Jan 18 18:33	18° B 09'54	

	4315 Jan 26 09:15	0°♊				4315 Dec 11 03:15	0°♊
max. Earth dist.	4315 Jan 31 14:03	8°♊10'36	1.44606 AU	morning set		4315 Dec 29 12:03	27°♊32'51
						4315 Dec 31 01:16	0°♊
superior conj	4315 Feb 04 11:34	14°♊22'29	-1°54'36	desc. node		4316 Jan 01 14:29	2°♊27'03
minimum elong	4315 Feb 04 04:23	13°♊53'47	1°54'08				
	4315 Feb 14 02:09	0°♋		superior conj	4316 Jan 14 16:30	23°♊01'11	-1°22'08
evening rise	4315 Feb 18 12:48	7°♋23'52		minimum elong	4316 Jan 14 07:24	22°♊25'26	1°21'08
	4315 Mar 04 11:26	0°♌		max. Earth dist.	4316 Jan 14 07:44	22°♊26'46	1.45242 AU
asc. node	4315 Mar 06 20:33	3°♌13'59			4316 Jan 19 03:08	0°♌	
evening max el	4315 Mar 09 11:54	6°♌15'23	18°20'20	evening rise	4316 Jan 30 07:54	17°♌45'22	
retrograde	4315 Mar 15 22:40	9°♌43'58			4316 Feb 06 23:44	0°♋	
evening set	4315 Mar 18 22:50	8°♌54'59		greatest brilliancy	4316 Feb 07 08:40	0°♋35'27	-0.8m
inferior conj	4315 Mar 24 21:08	3°♌30'05	3°35'25	evening max el	4316 Feb 20 22:41	19°♋43'52	18°51'35
minimum elong	4315 Mar 24 21:22	3°♌29'25	3°35'24	asc. node	4316 Feb 21 17:35	20°♋30'00	
min. Earth dist.	4315 Mar 27 06:17	0°♌47'45	0.63938 AU	retrograde	4316 Feb 27 16:35	23°♋30'26	
	4315 Mar 27 23:54	30°♋♋		evening set	4316 Mar 01 23:16	22°♋28'37	
morning rise	4315 Mar 30 19:03	27°♋21'04		inferior conj	4316 Mar 07 14:26	16°♋46'30	3°30'46
direct	4315 Apr 06 15:23	24°♋35'12		minimum elong	4316 Mar 07 13:16	16°♋50'07	3°30'40
desc. node	4315 Apr 12 16:41	26°♋23'11		min. Earth dist.	4316 Mar 09 07:54	14°♋37'50	0.65572 AU
	4315 Apr 17 16:16	0°♍		morning rise	4316 Mar 13 02:51	10°♋33'40	
morning max el	4315 Apr 20 09:13	2°♍32'48	27°35'45	direct	4316 Mar 19 16:29	7°♋43'08	
	4315 May 10 19:56	0°♎		desc. node	4316 Mar 29 13:42	12°♋26'49	
morning set	4315 May 25 07:18	26°♎00'27		morning max el	4316 Apr 01 19:04	15°♋27'09	26°47'27
	4315 May 27 07:06	0°♏			4316 Apr 13 17:53	0°♍	
max. Earth dist.	4315 May 30 06:59	6°♏10'27	1.33102 AU		4316 May 02 14:42	0°♎	
				morning set	4316 May 07 15:58	9°♎20'41	
superior conj	4315 Jun 02 05:26	12°♏23'25	-0°06'16	max. Earth dist.	4316 May 11 22:56	17°♎43'49	1.34330 AU
minimum elong	4315 Jun 02 05:45	12°♏25'06	0°06'12				
behind sun begin	4315 Jun 02 00:46	11°♏58'26		superior conj	4316 May 16 06:03	26°♎30'15	-0°35'12
behind sun end	4315 Jun 02 10:44	12°♏51'46		minimum elong	4316 May 16 07:56	26°♎39'58	0°34'49
asc. node	4315 Jun 02 19:50	13°♏40'29			4316 May 17 22:14	0°♏	
evening rise	4315 Jun 09 07:55	27°♏38'01		asc. node	4316 May 19 16:53	3°♏44'23	
	4315 Jun 10 10:56	0°♐		evening rise	4316 May 23 17:45	12°♏13'22	
	4315 Jun 28 06:10	0°♑			4316 Jun 01 22:50	0°♐	
evening max el	4315 Jul 01 12:04	3°♑29'54	22°47'13	evening max el	4316 Jun 12 08:17	14°♐06'57	21°15'17
desc. node	4315 Jul 09 15:58	9°♑06'37		retrograde	4316 Jun 24 07:54	20°♐00'31	
retrograde	4315 Jul 14 18:28	10°♑06'17		desc. node	4316 Jun 25 12:58	19°♐57'04	
evening set	4315 Jul 18 03:45	9°♑41'09		evening set	4316 Jun 26 15:11	19°♐48'15	
min. Earth dist.	4315 Jul 25 20:25	6°♑17'10	0.55330 AU	inferior conj	4316 Jul 06 00:04	15°♐49'44	-2°59'39
inferior conj	4315 Jul 27 06:11	5°♑28'45	-4°29'42	minimum elong	4316 Jul 05 16:12	16°♐00'46	2°57'08
minimum elong	4315 Jul 26 22:33	5°♑39'43	4°28'10	min. Earth dist.	4316 Jul 06 07:17	15°♐39'37	0.54819 AU
morning rise	4315 Aug 04 19:31	1°♑37'49		morning rise	4316 Jul 14 17:43	11°♐53'08	
direct	4315 Aug 07 19:17	1°♑16'59		direct	4316 Jul 18 05:01	11°♐27'08	
morning max el	4315 Aug 18 23:00	6°♑28'12	20°51'11	morning max el	4316 Jul 30 20:58	17°♐27'43	22°26'05
asc. node	4315 Aug 29 19:03	20°♑59'04			4316 Aug 09 20:47	0°♒	
	4315 Sep 03 16:07	0°♓		asc. node	4316 Aug 15 16:07	10°♒01'54	
morning set	4315 Sep 07 07:53	7°♓22'36		morning set	4316 Aug 21 18:18	22°♒13'33	
					4316 Aug 25 10:10	0°♓	
superior conj	4315 Sep 14 18:37	22°♓50'19	1°44'05				
minimum elong	4315 Sep 14 18:37	22°♓50'18	1°44'06	superior conj	4316 Aug 28 21:25	7°♓23'59	1°40'39
	4315 Sep 18 07:39	0°♈		minimum elong	4316 Aug 28 20:10	7°♓17'24	1°40'35
max. Earth dist.	4315 Sep 19 11:20	2°♈16'36	1.35781 AU	max. Earth dist.	4316 Sep 01 04:01	14°♓15'27	1.34220 AU
evening rise	4315 Sep 23 12:56	10°♈03'55		evening rise	4316 Sep 05 20:02	23°♓38'25	
	4315 Oct 05 00:55	0°♉			4316 Sep 09 04:01	0°♈	
desc. node	4315 Oct 05 15:16	0°♉57'21		desc. node	4316 Sep 21 12:19	21°♈00'31	
	4315 Oct 27 05:15	0°♊			4316 Sep 27 15:29	0°♉	
evening max el	4315 Oct 29 02:31	1°♊53'52	26°20'27	evening max el	4316 Oct 10 15:17	15°♉28'12	27°06'18
retrograde	4315 Nov 10 21:03	9°♊05'21		retrograde	4316 Oct 23 22:29	22°♉45'25	
evening set	4315 Nov 17 05:42	6°♊29'24		evening set	4316 Oct 30 18:40	20°♉04'28	
min. Earth dist.	4315 Nov 21 09:42	2°♊07'33	0.66447 AU	min. Earth dist.	4316 Nov 03 16:16	16°♉18'18	0.65224 AU
inferior conj	4315 Nov 22 23:48	0°♊11'16	-0°56'47	inferior conj	4316 Nov 05 18:18	13°♉57'40	-1°58'02
minimum elong	4315 Nov 23 01:21	0°♊06'33	0°56'07	minimum elong	4316 Nov 05 21:39	13°♉48'16	1°56'41
	4315 Nov 23 03:29	30°♋♌		asc. node	4316 Nov 11 15:19	8°♌36'23	
asc. node	4315 Nov 25 18:17	26°♌59'09		morning rise	4316 Nov 12 01:35	8°♌23'12	
morning rise	4315 Nov 28 21:34	24°♌23'57		direct	4316 Nov 14 18:21	7°♌44'06	
direct	4315 Dec 01 22:20	23°♌31'50		morning max el	4316 Nov 21 05:59	11°♌12'24	18°06'36
morning max el	4315 Dec 08 15:04	27°♌12'15	18°39'17		4316 Dec 04 08:24	0°♊	

morning set	4316 Dec 09 11:08	8°♂25'11	direct	4317 Oct 29 09:09	21°♂42'19	
desc. node	4316 Dec 18 11:33	23°♂07'38	asc. node	4317 Oct 29 12:21	21°♂42'24	
	4316 Dec 22 18:41	0°♂	morning max el	4317 Nov 04 22:42	25°♂07'21	17°51'12
				4317 Nov 08 23:37	0°♂	
superior conj	4316 Dec 23 22:00	1°♂48'24 -0°36'48	morning set	4317 Nov 21 12:39	20°♂33'59	
minimum elong	4316 Dec 23 17:24	1°♂30'10 0°36'10		4317 Nov 27 00:28	0°♂	
max. Earth dist.	4316 Dec 27 03:30	6°♂54'23 1.45134 AU				
evening rise	4317 Jan 09 05:47	27°♂19'00	superior conj	4317 Dec 03 22:47	11°♂34'58	0°09'49
	4317 Jan 10 23:22	0°♂	minimum elong	4317 Dec 03 23:50	11°♂39'18	0°09'39
greatest brilliancy	4317 Jan 22 06:21	17°♂17'16 -0.7m	behind sun begin	4317 Dec 03 15:59	11°♂07'01	
	4317 Jan 31 08:37	0°♂	behind sun end	4317 Dec 04 07:42	12°♂11'31	
evening max el	4317 Feb 03 05:30	3°♂15'34 19°39'22	desc. node	4317 Dec 05 08:37	13°♂53'20	
asc. node	4317 Feb 07 14:37	6°♂43'19	max. Earth dist.	4317 Dec 09 21:40	21°♂12'54	1.44296 AU
retrograde	4317 Feb 10 13:54	7°♂30'23		4317 Dec 15 11:20	0°♂	
evening set	4317 Feb 14 04:06	6°♂14'51	evening rise	4317 Dec 19 15:58	6°♂29'51	
inferior conj	4317 Feb 19 14:52	0°♂17'32 3°12'54		4318 Jan 04 08:12	0°♂	
minimum elong	4317 Feb 19 12:48	0°♂24'21 3°12'33	evening max el	4318 Jan 17 06:59	16°♂48'26	20°41'31
	4317 Feb 19 20:10	30°♂	asc. node	4318 Jan 25 11:37	21°♂39'20	
min. Earth dist.	4317 Feb 20 17:30	28°♂49'35 0.66788 AU	retrograde	4318 Jan 25 12:09	21°♂39'20	
morning rise	4317 Feb 24 21:18	24°♂03'28	evening set	4318 Jan 29 11:15	20°♂09'13	
direct	4317 Mar 02 23:25	21°♂20'39	inferior conj	4318 Feb 03 19:52	13°♂59'25	2°44'38
morning max el	4317 Mar 15 04:27	28°♂37'27 25°35'33	minimum elong	4318 Feb 03 17:25	14°♂07'49	2°44'00
desc. node	4317 Mar 16 10:44	29°♂56'06	min. Earth dist.	4318 Feb 04 09:10	13°♂13'49	0.67580 AU
	4317 Mar 16 12:12	0°♂	morning rise	4318 Feb 08 23:24	7°♂45'52	
	4317 Apr 07 12:33	0°♂	direct	4318 Feb 14 11:33	5°♂19'26	
morning set	4317 Apr 20 09:44	21°♂53'38	morning max el	4318 Feb 25 13:09	11°♂55'50	24°10'02
max. Earth dist.	4317 Apr 24 03:43	28°♂51'56 1.36011 AU	desc. node	4318 Mar 03 07:48	18°♂26'45	
	4317 Apr 24 18:02	0°♂		4318 Mar 12 00:41	0°♂	
				4318 Mar 31 07:23	0°♂	
superior conj	4317 Apr 29 22:15	10°♂07'42 -1°04'26	morning set	4318 Apr 02 07:06	3°♂24'40	
minimum elong	4317 Apr 30 01:44	10°♂25'07 1°03'50	max. Earth dist.	4318 Apr 06 00:23	9°♂58'05	1.38047 AU
asc. node	4317 May 06 13:56	23°♂40'01				
evening rise	4317 May 07 23:39	26°♂31'58	superior conj	4318 Apr 13 02:37	23°♂07'05	-1°31'48
	4317 May 09 16:50	0°♂	minimum elong	4318 Apr 13 07:17	23°♂29'21	1°31'11
evening max el	4317 May 25 16:09	25°♂19'31 19°58'40		4318 Apr 16 15:56	0°♂	
	4317 Jun 02 05:33	0°♂	evening rise	4318 Apr 21 23:04	10°♂26'51	
retrograde	4317 Jun 04 23:03	0°♂20'40	asc. node	4318 Apr 23 10:58	13°♂23'03	
evening set	4317 Jun 06 21:42	0°♂10'42		4318 May 02 18:06	0°♂	
	4317 Jun 07 18:40	30°♂	evening max el	4318 May 08 11:52	7°♂13'52	19°01'38
desc. node	4317 Jun 12 09:59	28°♂09'58	retrograde	4318 May 17 03:49	11°♂27'45	
inferior conj	4317 Jun 15 21:08	26°♂10'25 -1°01'47	evening set	4318 May 19 05:19	11°♂14'20	
minimum elong	4317 Jun 15 18:16	26°♂14'45 1°00'43	inferior conj	4318 May 27 10:16	7°♂00'06	0°49'37
min. Earth dist.	4317 Jun 17 19:46	25°♂00'03 0.55269 AU	minimum elong	4318 May 27 12:12	6°♂56'44	0°48'57
morning rise	4317 Jun 24 13:02	21°♂48'28	desc. node	4318 May 30 07:00	5°♂01'01	
direct	4317 Jun 28 17:54	21°♂09'53	min. Earth dist.	4318 May 30 11:20	4°♂53'45	0.56596 AU
morning max el	4317 Jul 12 12:01	27°♂56'41 24°09'32	morning rise	4318 Jun 04 15:50	2°♂02'13	
	4317 Jul 14 13:11	0°♂	direct	4318 Jun 09 19:35	0°♂59'25	
asc. node	4317 Aug 02 13:10	29°♂29'50	morning max el	4318 Jun 24 02:27	8°♂21'28	25°46'51
	4317 Aug 02 19:12	0°♂		4318 Jul 10 06:04	0°♂	
morning set	4317 Aug 06 06:00	7°♂07'29	asc. node	4318 Jul 20 10:14	19°♂15'57	
			morning set	4318 Jul 21 17:23	21°♂59'22	
				4318 Jul 25 10:32	0°♂	
superior conj	4317 Aug 13 05:18	22°♂11'28 1°31'17				
minimum elong	4317 Aug 13 03:16	22°♂00'28 1°31'04	superior conj	4318 Jul 28 16:04	7°♂05'55	1°16'51
max. Earth dist.	4317 Aug 15 05:23	26°♂30'57 1.33065 AU	minimum elong	4318 Jul 28 13:45	6°♂53'08	1°16'30
	4317 Aug 16 20:39	0°♂	max. Earth dist.	4318 Jul 29 13:17	9°♂02'23	1.32331 AU
evening rise	4317 Aug 20 14:19	7°♂44'17	evening rise	4318 Aug 04 16:32	22°♂12'19	
	4317 Sep 01 15:28	0°♂		4318 Aug 08 13:05	0°♂	
desc. node	4317 Sep 08 09:20	10°♂35'22	desc. node	4318 Aug 26 06:20	29°♂30'23	
evening max el	4317 Sep 23 02:33	28°♂41'10 27°26'24		4318 Aug 26 15:04	0°♂	
	4317 Sep 24 13:02	0°♂	evening max el	4318 Sep 05 10:07	11°♂20'16	27°15'21
retrograde	4317 Oct 06 17:42	5°♂58'09	retrograde	4318 Sep 19 06:13	18°♂34'14	
evening set	4317 Oct 13 21:14	3°♂21'07	evening set	4318 Sep 26 09:44	16°♂13'01	
min. Earth dist.	4317 Oct 17 13:38	0°♂08'09 0.63653 AU	min. Earth dist.	4318 Sep 30 00:32	13°♂25'44	0.61781 AU
	4317 Oct 17 16:55	30°♂	inferior conj	4318 Oct 03 01:24	10°♂41'37	-3°58'21
inferior conj	4317 Oct 20 03:51	27°♂30'12 -2°59'57	minimum elong	4318 Oct 03 07:26	10°♂27'59	3°56'43
minimum elong	4317 Oct 20 08:54	27°♂17'20 2°58'10	morning rise	4318 Oct 10 06:57	5°♂42'52	
morning rise	4317 Oct 26 21:58	22°♂11'59				

direct	4318 Oct 12 15:20	5°♌19'20		morning rise	4319 Sep 23 00:02	18°♏46'38	
asc. node	4318 Oct 16 09:24	6°♌21'37		direct	4319 Sep 25 08:53	18°♏26'24	
morning max el	4318 Oct 19 14:07	8°♌49'37	17°53'57	morning max el	4319 Oct 03 00:58	22°♏10'48	18°16'09
	4318 Nov 02 09:43	0°♍		asc. node	4319 Oct 03 06:28	22°♏24'14	
morning set	4318 Nov 04 10:12	3°♍39'39			4319 Oct 09 03:24	0°♌	
				morning set	4319 Oct 18 22:06	17°♌26'25	
superior conj	4318 Nov 15 02:07	22°♍39'11	0°48'52		4319 Oct 25 13:50	0°♍	
minimum elong	4318 Nov 15 05:57	22°♍55'44	0°48'20				
	4318 Nov 19 09:53	0°♎		superior conj	4319 Oct 28 05:54	4°♍54'44	1°17'06
desc. node	4318 Nov 22 05:38	4°♎40'37		minimum elong	4319 Oct 28 09:47	5°♍12'21	1°16'41
max. Earth dist.	4318 Nov 22 11:22	5°♎04'08	1.42843 AU	max. Earth dist.	4319 Nov 04 20:01	18°♍17'19	1.40960 AU
evening rise	4318 Nov 29 06:11	15°♎56'37		desc. node	4319 Nov 09 02:38	25°♍26'27	
	4318 Dec 08 10:33	0°♏		evening rise	4319 Nov 09 14:18	26°♍14'13	
	4318 Dec 30 18:18	0°♐			4319 Nov 11 22:04	0°♎	
evening max el	4318 Dec 31 02:58	0°♐22'14	21°54'39		4319 Dec 02 04:28	0°♏	
retrograde	4319 Jan 09 09:16	5°♐52'53		evening max el	4319 Dec 13 18:38	13°♏59'20	23°13'49
asc. node	4319 Jan 12 08:38	5°♐05'27		retrograde	4319 Dec 24 03:46	20°♏08'07	
evening set	4319 Jan 13 18:58	4°♐07'21		evening set	4319 Dec 29 01:41	18°♏06'40	
	4319 Jan 17 12:46	30°♑♏		asc. node	4319 Dec 30 05:40	17°♏01'16	
inferior conj	4319 Jan 19 03:14	27°♏48'25	2°07'45	inferior conj	4320 Jan 03 11:06	11°♏42'22	1°23'32
minimum elong	4319 Jan 19 00:53	27°♏56'34	2°06'58	minimum elong	4320 Jan 03 09:19	11°♏48'30	1°22'51
min. Earth dist.	4319 Jan 19 04:35	27°♏43'43	0.67977 AU	min. Earth dist.	4320 Jan 03 01:22	12°♏15'50	0.68005 AU
morning rise	4319 Jan 24 06:38	21°♏36'58		morning rise	4320 Jan 08 16:52	5°♏34'54	
direct	4319 Jan 29 04:02	19°♏31'47		direct	4320 Jan 12 23:58	3°♏52'31	
morning max el	4319 Feb 07 23:10	25°♏19'24	22°40'54	morning max el	4320 Jan 21 14:12	8°♏51'55	21°16'55
	4319 Feb 12 04:31	0°♐		desc. node	4320 Feb 05 01:52	27°♏26'11	
desc. node	4319 Feb 18 04:50	7°♐40'44			4320 Feb 06 20:24	0°♐	
	4319 Mar 05 12:51	0°♑		morning set	4320 Feb 21 16:16	22°♐30'26	
morning set	4319 Mar 14 01:57	13°♑37'33			4320 Feb 26 08:55	0°♑	
max. Earth dist.	4319 Mar 18 19:54	21°♑34'44	1.40234 AU	max. Earth dist.	4320 Feb 28 21:16	4°♑05'51	1.42290 AU
	4319 Mar 23 16:05	0°♒					
superior conj	4319 Mar 26 14:47	5°♒17'11	-1°54'06	superior conj	4320 Mar 07 05:48	16°♑26'58	-2°06'50
minimum elong	4319 Mar 26 19:18	5°♒37'41	1°53'44	minimum elong	4320 Mar 07 07:38	16°♑34'52	2°06'47
evening rise	4319 Apr 05 12:50	23°♒48'59			4320 Mar 14 22:41	0°♒	
	4319 Apr 08 19:38	0°♓		evening rise	4320 Mar 18 13:07	6°♒30'02	
asc. node	4319 Apr 10 07:59	2°♓47'40		asc. node	4320 Mar 27 04:59	21°♒47'53	
evening max el	4319 Apr 21 16:39	19°♓43'50	18°24'54		4320 Apr 01 17:55	0°♓	
retrograde	4319 Apr 29 03:09	23°♓24'47		evening max el	4320 Apr 04 03:04	2°♓40'31	18°08'02
evening set	4319 May 01 11:22	23°♓03'54		retrograde	4320 Apr 10 19:57	6°♓05'03	
inferior conj	4319 May 08 20:40	18°♓30'11	2°13'14	evening set	4320 Apr 13 10:47	5°♓34'10	
minimum elong	4319 May 09 00:17	18°♓22'48	2°12'14	inferior conj	4320 Apr 20 03:21	0°♓39'36	3°05'15
min. Earth dist.	4319 May 12 07:13	15°♓43'24	0.58531 AU	minimum elong	4320 Apr 20 06:14	0°♓32'47	3°04'43
morning rise	4319 May 16 10:07	13°♓00'17			4320 Apr 20 20:02	30°♑♒	
desc. node	4319 May 17 04:01	12°♓38'15		min. Earth dist.	4320 Apr 23 09:28	27°♒36'29	0.60719 AU
direct	4319 May 22 11:42	11°♓23'44		morning rise	4320 Apr 26 23:33	24°♒47'48	
morning max el	4319 Jun 05 21:08	19°♓07'38	27°02'25	desc. node	4320 May 03 01:03	22°♒38'11	
	4319 Jun 15 01:49	0°♔		direct	4320 May 03 15:38	22°♒37'07	
	4319 Jul 02 20:09	0°♕			4320 May 17 08:53	0°♓	
morning set	4319 Jul 06 02:49	6°♕43'35		morning max el	4320 May 17 22:03	0°♓32'13	27°44'47
asc. node	4319 Jul 07 07:16	9°♕14'03			4320 Jun 08 04:13	0°♔	
				morning set	4320 Jun 19 08:31	21°♔14'15	
superior conj	4319 Jul 13 03:53	22°♕00'45	0°58'02	asc. node	4320 Jun 23 04:17	29°♔19'09	
minimum elong	4319 Jul 13 01:44	21°♕48'52	0°57'39		4320 Jun 23 11:52	0°♕	
max. Earth dist.	4319 Jul 13 00:29	21°♕41'58	1.32007 AU	max. Earth dist.	4320 Jun 25 11:19	4°♕18'09	1.32098 AU
	4319 Jul 16 19:01	0°♌					
evening rise	4319 Jul 20 00:05	6°♌54'17		superior conj	4320 Jun 26 15:00	6°♕49'55	0°35'27
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desc. node	4319 Aug 13 03:20	17°♍29'27		evening rise	4320 Jul 03 10:45	21°♕42'46	
evening max el	4319 Aug 18 11:40	23°♍15'29	26°31'00		4320 Jul 07 10:49	0°♌	
	4319 Aug 29 05:39	0°♎			4320 Jul 26 03:20	0°♍	
retrograde	4319 Sep 01 10:41	0°♎25'20		evening max el	4320 Jul 30 05:49	4°♍22'32	25°16'38
	4319 Sep 04 14:35	30°♑♒		desc. node	4320 Jul 30 00:20	4°♍09'21	
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min. Earth dist.	4319 Sep 12 01:17	25°♍57'28	0.59729 AU	evening set	4320 Aug 18 21:57	10°♍11'43	
inferior conj	4319 Sep 15 07:32	23°♍23'26	-4°46'07	min. Earth dist.	4320 Aug 23 17:35	7°♍30'17	0.57710 AU
minimum elong	4319 Sep 15 12:44	23°♍13'09	4°45'15	inferior conj	4320 Aug 26 18:52	5°♍25'14	-5°11'41
				minimum elong	4320 Aug 26 20:15	5°♍22'52	5°11'38





































































































































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direct	4320 Sep 06 09:38	0° \mathbb{M} 51'54		morning rise	4321 Aug 15 19:42	12° Ω 45'26	
morning max el	4320 Sep 15 03:50	5° \mathbb{M} 00'28	18°59'20	direct	4321 Aug 18 15:00	12° Ω 25'42	
asc. node	4320 Sep 19 03:31	9° \mathbb{M} 34'32		morning max el	4321 Aug 28 19:59	17° Ω 10'09	20°04'20
	4320 Sep 30 23:21	0° $\underline{\Omega}$		asc. node	4321 Sep 06 00:35	27° Ω 38'04	
morning set	4320 Oct 01 19:57	1° $\underline{\Omega}$ 41'16			4321 Sep 07 11:04	0° \mathbb{M}	
				morning set	4321 Sep 16 00:31	16° \mathbb{M} 15'30	
superior conj	4320 Oct 10 04:47	18° $\underline{\Omega}$ 05'59	1°34'41		4321 Sep 22 18:04	0° $\underline{\Omega}$	
minimum elong	4320 Oct 10 07:20	18° $\underline{\Omega}$ 18'10	1°34'31				
	4320 Oct 16 14:16	0° \mathbb{M}		superior conj	4321 Sep 23 17:40	1° $\underline{\Omega}$ 58'47	1°42'58
max. Earth dist.	4320 Oct 17 01:10	0° \mathbb{M} 48'59	1.38878 AU	minimum elong	4321 Sep 23 18:33	2° $\underline{\Omega}$ 03'13	1°42'56
evening rise	4320 Oct 20 21:32	7° \mathbb{M} 34'43		max. Earth dist.	4321 Sep 29 06:55	12° $\underline{\Omega}$ 49'54	1.36846 AU
desc. node	4320 Oct 25 23:39	16° \mathbb{M} 06'34		evening rise	4321 Oct 03 02:36	19° $\underline{\Omega}$ 55'27	
	4320 Nov 03 21:09	0° \mathbb{M}			4321 Oct 08 20:34	0° \mathbb{M}	
evening max el	4320 Nov 25 07:48	27° \mathbb{M} 39'53	24°32'57	desc. node	4321 Oct 12 20:41	6° \mathbb{M} 36'49	
	4320 Nov 27 20:27	0° \mathbb{Z}			4321 Oct 28 22:30	0° \mathbb{M}	
retrograde	4320 Dec 06 18:22	4° \mathbb{Z} 20'33		evening max el	4321 Nov 07 20:12	11° \mathbb{M} 22'25	25°44'58
evening set	4320 Dec 12 05:48	2° \mathbb{Z} 03'31		retrograde	4321 Nov 20 04:26	18° \mathbb{M} 25'41	
	4320 Dec 14 07:16	30° \mathbb{R} \mathbb{M}		evening set	4321 Nov 26 05:40	15° \mathbb{M} 55'11	
asc. node	4320 Dec 16 02:43	27° \mathbb{M} 47'04		min. Earth dist.	4321 Nov 30 13:33	11° \mathbb{M} 13'12	0.67001 AU
min. Earth dist.	4320 Dec 16 21:08	26° \mathbb{M} 46'35	0.67678 AU	inferior conj	4321 Dec 01 21:11	9° \mathbb{M} 32'59	-0°22'47
inferior conj	4320 Dec 17 17:41	25° \mathbb{M} 38'03	0°33'01	minimum elong	4321 Dec 01 21:46	9° \mathbb{M} 31'06	0°22'31
minimum elong	4320 Dec 17 16:53	25° \mathbb{M} 40'42	0°32'41	asc. node	4321 Dec 02 23:47	8° \mathbb{M} 09'37	
morning rise	4320 Dec 23 04:04	19° \mathbb{M} 36'39		morning rise	4321 Dec 07 14:16	3° \mathbb{M} 40'02	
direct	4320 Dec 26 22:00	18° \mathbb{M} 16'10		direct	4321 Dec 10 20:43	2° \mathbb{M} 38'40	
morning max el	4321 Jan 03 12:54	22° \mathbb{M} 35'47	20°04'04	morning max el	4321 Dec 17 19:27	6° \mathbb{M} 30'06	19°05'40
	4321 Jan 09 18:23	0° \mathbb{Z}			4322 Jan 03 16:44	0° \mathbb{Z}	
desc. node	4321 Jan 21 22:53	17° \mathbb{Z} 33'58		desc. node	4322 Jan 08 19:55	7° \mathbb{Z} 57'56	
	4321 Jan 30 02:39	0° \approx		morning set	4322 Jan 09 16:46	9° \mathbb{Z} 19'02	
morning set	4321 Jan 30 13:03	0° \approx 40'04			4322 Jan 22 22:28	0° \approx	
max. Earth dist.	4321 Feb 10 06:44	17° \approx 30'58	1.43931 AU	max. Earth dist.	4322 Jan 23 22:23	1° \approx 34'02	1.44963 AU
superior conj	4321 Feb 15 19:29	26° \approx 27'29	-2°04'33	superior conj	4322 Jan 26 09:06	5° \approx 25'39	-1°43'00
minimum elong	4321 Feb 15 15:42	26° \approx 12'03	2°04'26	minimum elong	4322 Jan 26 00:14	4° \approx 50'40	1°42'14
	4321 Feb 17 23:11	0° \mathbb{H}		evening rise	4322 Feb 10 04:10	29° \approx 15'19	
evening rise	4321 Feb 28 19:34	18° \mathbb{H} 21'03			4322 Feb 10 15:04	0° \mathbb{H}	
	4321 Mar 07 14:35	0° \mathbb{Y}		asc. node	4322 Feb 28 23:03	28° \mathbb{H} 01'27	
asc. node	4321 Mar 14 02:00	10° \mathbb{Y} 15'56		evening max el	4322 Mar 02 03:54	29° \mathbb{H} 19'05	18°31'30
evening max el	4321 Mar 18 15:47	15° \mathbb{Y} 54'52	18°10'29		4322 Mar 02 20:44	0° \mathbb{Y}	
retrograde	4321 Mar 25 02:01	19° \mathbb{Y} 18'15		retrograde	4322 Mar 08 16:48	2° \mathbb{Y} 54'16	
evening set	4321 Mar 27 22:51	18° \mathbb{Y} 36'01		evening set	4322 Mar 11 19:37	1° \mathbb{Y} 59'54	
inferior conj	4321 Apr 03 02:41	13° \mathbb{Y} 21'31	3°30'31		4322 Mar 14 09:14	30° \mathbb{R} \mathbb{H}	
minimum elong	4321 Apr 03 03:53	13° \mathbb{Y} 18'15	3°30'25	inferior conj	4322 Mar 17 14:28	26° \mathbb{H} 27'11	3°35'18
min. Earth dist.	4321 Apr 05 20:21	10° \mathbb{Y} 26'14	0.62833 AU	minimum elong	4322 Mar 17 14:04	26° \mathbb{H} 28'25	3°35'17
morning rise	4321 Apr 09 07:44	7° \mathbb{Y} 16'52		min. Earth dist.	4322 Mar 19 16:51	23° \mathbb{H} 58'01	0.64671 AU
direct	4321 Apr 16 04:50	4° \mathbb{Y} 40'29		morning rise	4322 Mar 23 07:53	20° \mathbb{H} 15'56	
desc. node	4321 Apr 19 22:05	5° \mathbb{Y} 21'09		direct	4322 Mar 30 01:54	17° \mathbb{H} 26'43	
morning max el	4321 Apr 30 04:37	12° \mathbb{Y} 39'16	27°49'36	desc. node	4322 Apr 06 19:07	20° \mathbb{H} 21'12	
	4321 May 14 00:21	0° \mathbb{B}		morning max el	4322 Apr 12 14:18	25° \mathbb{H} 20'22	27°18'52
	4321 May 31 14:42	0° \mathbb{I}			4322 Apr 16 20:38	0° \mathbb{Y}	
morning set	4321 Jun 03 08:23	5° \mathbb{I} 25'04			4322 May 07 12:04	0° \mathbb{B}	
max. Earth dist.	4321 Jun 08 17:59	16° \mathbb{I} 39'03	1.32611 AU	morning set	4322 May 17 23:35	19° \mathbb{B} 06'34	
asc. node	4321 Jun 10 01:19	19° \mathbb{I} 27'12		max. Earth dist.	4322 May 22 16:20	28° \mathbb{B} 31'36	1.33567 AU
					4322 May 23 09:28	0° \mathbb{I}	
superior conj	4321 Jun 10 23:40	21° \mathbb{I} 27'54	0°09'44				
minimum elong	4321 Jun 10 23:12	21° \mathbb{I} 25'23	0°09'38	superior conj	4322 May 26 03:50	5° \mathbb{I} 47'31	-0°18'22
behind sun begin	4321 Jun 10 19:00	21° \mathbb{I} 02'39		minimum elong	4322 May 26 04:47	5° \mathbb{I} 52'32	0°18'11
behind sun end	4321 Jun 11 03:24	21° \mathbb{I} 48'07		asc. node	4322 May 27 22:21	9° \mathbb{I} 33'24	
	4321 Jun 14 21:52	0° \mathbb{D}		evening rise	4322 Jun 02 09:45	21° \mathbb{I} 13'08	
evening rise	4321 Jun 17 22:38	6° \mathbb{D} 31'33			4322 Jun 06 16:43	0° \mathbb{D}	
	4321 Jun 30 07:28	0° Ω		evening max el	4322 Jun 23 10:01	25° \mathbb{D} 18'05	22°06'40
evening max el	4321 Jul 11 18:53	14° Ω 53'38	23°43'14		4322 Jun 29 17:17	0° Ω	
desc. node	4321 Jul 16 21:21	18° Ω 59'45		desc. node	4322 Jul 03 18:23	1° Ω 25'05	
retrograde	4321 Jul 25 10:49	21° Ω 45'19		retrograde	4322 Jul 06 05:22	1° Ω 39'06	
evening set	4321 Jul 29 17:16	21° Ω 05'16		evening set	4322 Jul 09 01:33	1° Ω 21'08	
min. Earth dist.	4321 Aug 05 04:55	18° Ω 00'51	0.56025 AU		4322 Jul 13 03:02	30° \mathbb{R} \mathbb{D}	
inferior conj	4321 Aug 07 10:00	16° Ω 41'01	-4°59'22	min. Earth dist.	4322 Jul 17 15:20	27° \mathbb{D} 39'59	0.55001 AU


































































































































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minimum elong	4322 Jul 18 00:03	27°☿27'43	3°54'39	minimum elong	4323 Jun 27 19:57	7°☿41'15	2°08'55
morning rise	4322 Jul 27 00:19	23°☿25'04		min. Earth dist.	4323 Jun 29 03:07	6°☿56'34	0.54891 AU
direct	4322 Jul 30 04:11	23°☿02'49		morning rise	4323 Jul 06 19:52	3°☿26'46	
morning max el	4322 Aug 11 00:15	28°☿34'25	21°29'47	direct	4323 Jul 10 13:35	2°☿56'39	
	4322 Aug 12 11:09	0°♊		morning max el	4323 Jul 23 18:39	9°☿18'36	23°09'42
asc. node	4322 Aug 23 21:38	16°♊21'43			4323 Aug 07 18:43	0°♊	
	4322 Aug 30 21:28	0°♊		asc. node	4323 Aug 10 18:40	5°♊35'44	
morning set	4322 Aug 31 09:20	1°♊01'32		morning set	4323 Aug 15 20:27	15°♊53'52	
					4323 Aug 22 10:16	0°♊	
superior conj	4322 Sep 07 16:19	16°♊20'14	1°43'26	superior conj	4323 Aug 22 21:33	1°♊00'33	1°37'21
minimum elong	4322 Sep 07 15:44	16°♊17'13	1°43'24	minimum elong	4323 Aug 22 19:55	0°♊51'48	1°37'13
max. Earth dist.	4322 Sep 11 18:17	24°♊41'33	1.35069 AU	max. Earth dist.	4323 Aug 25 14:27	6°♊45'10	1.33678 AU
	4322 Sep 14 10:45	0°♊		evening rise	4323 Aug 30 13:41	16°♊54'56	
evening rise	4322 Sep 16 01:24	3°♊05'58			4323 Sep 06 11:58	0°♊	
desc. node	4322 Sep 29 17:43	26°♊51'36		desc. node	4323 Sep 16 14:44	16°♊43'36	
	4322 Oct 01 18:17	0°♊			4323 Sep 26 05:03	0°♊	
evening max el	4322 Oct 21 08:42	25°♊01'35	26°42'35	evening max el	4323 Oct 03 21:00	8°♊28'06	27°18'23
	4322 Oct 27 13:16	0°♊		retrograde	4323 Oct 17 08:29	15°♊46'29	
retrograde	4322 Nov 03 09:21	2°♊17'13		evening set	4323 Oct 24 08:17	13°♊06'00	
evening set	4322 Nov 09 23:19	29°♊37'54		min. Earth dist.	4323 Oct 28 03:24	9°♊34'18	0.64590 AU
	4322 Nov 09 12:06	30°♊		inferior conj	4323 Oct 30 10:39	7°♊05'06	-2°24'28
min. Earth dist.	4322 Nov 14 00:24	25°♊31'30	0.65969 AU	minimum elong	4323 Oct 30 14:45	6°♊53'58	2°22'53
inferior conj	4322 Nov 15 19:37	23°♊23'50	-1°22'33	morning rise	4323 Nov 05 22:25	1°♊37'04	
minimum elong	4322 Nov 15 21:54	23°♊17'03	1°21'34	asc. node	4323 Nov 06 17:53	1°♊18'52	
asc. node	4322 Nov 19 20:50	19°♊06'07		direct	4323 Nov 08 12:22	1°♊02'32	
morning rise	4322 Nov 21 21:16	17°♊41'51		morning max el	4323 Nov 15 00:08	4°♊28'48	17°57'50
direct	4322 Nov 24 18:15	16°♊55'54			4323 Dec 01 22:37	0°♊	
morning max el	4322 Dec 01 08:06	20°♊30'08	18°23'19	morning set	4323 Dec 02 09:40	0°♊46'31	
	4322 Dec 08 16:57	0°♊		desc. node	4323 Dec 13 14:01	19°♊16'26	
morning set	4322 Dec 20 22:37	19°♊19'33					
desc. node	4322 Dec 26 16:58	28°♊33'33		superior conj	4323 Dec 15 23:38	23°♊08'46	-0°16'33
	4322 Dec 27 14:41	0°♊		minimum elong	4323 Dec 15 21:39	23°♊00'46	0°16'15
superior conj	4323 Jan 05 11:38	14°♊00'48	-1°03'49		4323 Dec 20 06:54	0°♊	
minimum elong	4323 Jan 05 03:53	13°♊30'20	1°02'51	max. Earth dist.	4323 Dec 20 11:58	0°♊19'59	1.44859 AU
max. Earth dist.	4323 Jan 06 17:01	15°♊56'04	1.45279 AU	evening rise	4324 Jan 01 04:47	18°♊33'24	
	4323 Jan 15 16:29	0°♊			4324 Jan 08 16:19	0°♊	
evening rise	4323 Jan 21 13:37	9°♊14'16		greatest brilliancy	4324 Jan 15 17:02	10°♊32'06	-0.6m
greatest brilliancy	4323 Jan 31 23:10	25°♊32'26	-0.8m	evening max el	4324 Jan 27 17:47	26°♊20'52	20°04'18
	4323 Feb 03 21:15	0°♊			4324 Feb 01 07:56	0°♊	
evening max el	4323 Feb 13 13:08	12°♊48'45	19°10'02	asc. node	4324 Feb 02 17:08	0°♊34'15	
asc. node	4323 Feb 15 20:06	14°♊52'25		retrograde	4324 Feb 04 10:26	0°♊50'13	
retrograde	4323 Feb 20 12:34	16°♊46'40			4324 Feb 07 09:00	30°♊	
evening set	4323 Feb 23 22:11	15°♊39'17		evening set	4324 Feb 08 04:11	29°♊28'47	
inferior conj	4323 Mar 01 11:10	9°♊50'25	3°24'37	inferior conj	4324 Feb 13 13:49	23°♊26'03	3°02'03
minimum elong	4323 Mar 01 09:33	9°♊55'35	3°24'26	minimum elong	4324 Feb 13 11:31	23°♊33'45	3°01'34
min. Earth dist.	4323 Mar 02 22:13	7°♊58'20	0.66132 AU	min. Earth dist.	4324 Feb 14 10:41	22°♊15'48	0.67177 AU
morning rise	4323 Mar 06 20:36	3°♊36'32		morning rise	4324 Feb 18 18:38	17°♊11'56	
direct	4323 Mar 13 05:42	0°♊47'48		direct	4324 Feb 24 15:07	14°♊34'54	
desc. node	4323 Mar 24 16:09	7°♊04'25		morning max el	4324 Mar 07 08:57	21°♊36'09	25°00'08
morning max el	4323 Mar 26 00:14	8°♊23'02	26°19'15	desc. node	4324 Mar 10 13:12	25°♊01'45	
	4323 Apr 11 21:49	0°♊			4324 Mar 14 16:13	0°♊	
	4323 Apr 29 22:55	0°♊			4324 Apr 04 03:59	0°♊	
morning set	4323 May 01 02:31	2°♊08'17		morning set	4324 Apr 12 12:17	14°♊16'10	
max. Earth dist.	4323 May 05 03:16	9°♊51'20	1.34986 AU	max. Earth dist.	4324 Apr 16 03:20	20°♊51'46	1.36838 AU
					4324 Apr 20 23:01	0°♊	
superior conj	4323 May 10 01:12	19°♊42'20	-0°47'40	superior conj	4324 Apr 22 12:48	3°♊04'18	-1°16'27
minimum elong	4323 May 10 03:46	19°♊55'29	0°47'11	minimum elong	4324 Apr 22 16:52	3°♊24'18	1°15'48
asc. node	4323 May 14 19:24	29°♊33'55		evening rise	4324 Apr 30 21:34	19°♊50'08	
	4323 May 15 00:24	0°♊		asc. node	4324 Apr 30 16:26	19°♊24'22	
evening rise	4323 May 17 18:09	5°♊41'34			4324 May 06 02:16	0°♊	
	4323 May 31 06:46	0°☿		evening max el	4324 May 18 00:05	17°♊38'54	19°32'02
evening max el	4323 Jun 05 10:52	6°☿08'15	20°40'31	retrograde	4324 May 27 13:24	22°♊18'02	
retrograde	4323 Jun 16 18:07	11°☿39'57		evening set	4324 May 29 12:30	22°♊07'08	
evening set	4323 Jun 18 19:26	11°☿29'43		desc. node	4324 Jun 06 12:22	18°♊28'21	
desc. node	4323 Jun 20 15:23	11°☿04'24					



























































































































inferior conj	4324 Jun 07 04:42	18° Π 02'26	-0°12'04	retrograde	4325 May 09 01:49	3° Π 46'28	
minimum elong	4324 Jun 07 04:10	18° Π 03'17	0°11'52	evening set	4325 May 11 06:13	3° Π 30'08	
transit middle	4324 Jun 07 04:10	18° Π 03'17	0°11'52		4325 May 17 22:04	30° \mathbb{R} 8	
transit begin	4324 Jun 07 01:33	18° Π 07'28		inferior conj	4325 May 19 02:33	29° \mathbb{B} 07'42	1°29'07
transit end	4324 Jun 07 06:47	17° Π 59'07		minimum elong	4325 May 19 05:35	29° \mathbb{B} 02'02	1°28'07
min. Earth dist.	4324 Jun 09 16:48	16° Π 26'59	0.55737 AU	min. Earth dist.	4325 May 22 09:34	26° \mathbb{B} 41'53	0.57363 AU
morning rise	4324 Jun 15 17:11	13° Π 25'42		desc. node	4325 May 24 09:24	25° \mathbb{B} 22'06	
direct	4324 Jun 20 07:44	12° Π 38'01		morning rise	4325 May 27 01:44	23° \mathbb{B} 55'34	
morning max el	4324 Jul 04 08:28	19° Π 41'36	24°52'35	direct	4325 Jun 01 15:26	22° \mathbb{B} 39'19	
	4324 Jul 13 02:02	0° \mathbb{E}			4325 Jun 15 19:22	0° Π	
asc. node	4324 Jul 27 15:42	25° \mathbb{E} 12'13		morning max el	4325 Jun 16 00:03	0° Π 11'17	26°22'41
	4324 Jul 29 23:12	0° \mathbb{N}			4325 Jul 06 22:06	0° \mathbb{E}	
morning set	4324 Jul 30 08:14	0° \mathbb{N} 47'42		morning set	4325 Jul 14 18:59	15° \mathbb{E} 36'45	
				asc. node	4325 Jul 14 12:44	15° \mathbb{E} 03'45	
					4325 Jul 21 09:48	0° \mathbb{N}	
superior conj	4324 Aug 06 06:55	15° \mathbb{N} 52'06	1°25'45	superior conj	4325 Jul 21 18:19	0° \mathbb{N} 47'00	1°09'23
minimum elong	4324 Aug 06 04:42	15° \mathbb{N} 40'01	1°25'28	minimum elong	4325 Jul 21 16:01	0° \mathbb{N} 34'15	1°09'00
max. Earth dist.	4324 Aug 07 19:03	19° \mathbb{N} 08'53	1.32704 AU	max. Earth dist.	4325 Jul 22 04:59	1° \mathbb{N} 45'47	1.32143 AU
	4324 Aug 12 21:44	0° \mathbb{N}		evening rise	4325 Jul 28 16:30	15° \mathbb{N} 46'43	
evening rise	4324 Aug 13 11:44	1° \mathbb{N} 12'00			4325 Aug 04 20:30	0° \mathbb{N}	
	4324 Aug 29 10:28	0° \mathbb{E}		desc. node	4325 Aug 20 08:43	24° \mathbb{N} 36'57	
desc. node	4324 Sep 02 11:44	6° \mathbb{E} 03'27			4325 Aug 24 19:14	0° \mathbb{E}	
evening max el	4324 Sep 15 07:19	21° \mathbb{E} 29'42	27°25'49	evening max el	4325 Aug 28 12:42	3° \mathbb{E} 51'30	27°00'33
retrograde	4324 Sep 29 00:56	28° \mathbb{E} 45'01		retrograde	4325 Sep 11 09:50	11° \mathbb{E} 02'53	
evening set	4324 Oct 06 05:24	26° \mathbb{E} 13'32		evening set	4325 Sep 18 10:31	8° \mathbb{E} 52'30	
min. Earth dist.	4324 Oct 09 20:38	23° \mathbb{E} 12'25	0.62891 AU	min. Earth dist.	4325 Sep 22 02:57	6° \mathbb{E} 12'24	0.60930 AU
inferior conj	4324 Oct 12 15:33	20° \mathbb{E} 30'29	-3°25'27	inferior conj	4325 Sep 25 07:00	3° \mathbb{E} 30'34	-4°20'25
minimum elong	4324 Oct 12 21:10	20° \mathbb{E} 16'53	3°23'40	minimum elong	4325 Sep 25 12:59	3° \mathbb{E} 17'47	4°19'03
morning rise	4324 Oct 19 14:29	15° \mathbb{E} 19'46			4325 Sep 29 21:21	30° \mathbb{R} 17	
direct	4324 Oct 22 00:07	14° \mathbb{E} 53'02		morning rise	4325 Oct 02 17:19	28° \mathbb{N} 40'47	
asc. node	4324 Oct 23 14:55	15° \mathbb{E} 05'28		direct	4325 Oct 05 01:40	28° \mathbb{N} 18'49	
morning max el	4324 Oct 28 16:39	18° \mathbb{E} 19'25	17°49'59		4325 Oct 09 23:49	0° \mathbb{E}	
	4324 Nov 06 03:20	0° \mathbb{N}		asc. node	4325 Oct 10 11:57	0° \mathbb{E} 21'43	
morning set	4324 Nov 13 20:35	13° \mathbb{N} 22'30		morning max el	4325 Oct 12 06:30	1° \mathbb{E} 53'35	18°00'53
	4324 Nov 23 10:13	0° \mathbb{E}		morning set	4325 Oct 28 00:52	26° \mathbb{E} 47'33	
superior conj	4324 Nov 25 11:33	3° \mathbb{E} 27'57	0°27'35		4325 Oct 29 18:28	0° \mathbb{N}	
minimum elong	4324 Nov 25 14:12	3° \mathbb{E} 39'01	0°27'12	superior conj	4325 Nov 07 01:52	15° \mathbb{N} 04'08	1°02'11
desc. node	4324 Nov 29 11:03	10° \mathbb{E} 03'13		minimum elong	4325 Nov 07 05:59	15° \mathbb{N} 22'14	1°01'40
max. Earth dist.	4324 Dec 02 04:44	14° \mathbb{E} 29'49	1.43754 AU	max. Earth dist.	4325 Nov 14 16:49	28° \mathbb{N} 07'57	1.42092 AU
evening rise	4324 Dec 10 14:47	27° \mathbb{E} 46'45			4325 Nov 15 19:53	0° \mathbb{E}	
	4324 Dec 12 01:21	0° \mathbb{E}		desc. node	4325 Nov 16 08:04	0° \mathbb{E} 50'08	
	4325 Jan 01 13:10	0° \mathbb{E}		evening rise	4325 Nov 20 11:25	7° \mathbb{E} 32'05	
evening max el	4325 Jan 09 17:00	9° \mathbb{E} 54'24	21°11'32		4325 Dec 05 06:19	0° \mathbb{E}	
retrograde	4325 Jan 18 08:16	15° \mathbb{E} 01'23		evening max el	4325 Dec 23 10:58	23° \mathbb{E} 29'24	22°27'50
asc. node	4325 Jan 19 14:09	14° \mathbb{E} 52'58		retrograde	4326 Jan 02 04:26	29° \mathbb{E} 16'26	
evening set	4325 Jan 22 11:46	13° \mathbb{E} 24'45		asc. node	4326 Jan 06 11:10	27° \mathbb{E} 39'59	
inferior conj	4325 Jan 27 20:03	7° \mathbb{E} 10'51	2°29'56	evening set	4326 Jan 06 19:16	27° \mathbb{E} 23'53	
minimum elong	4325 Jan 27 17:35	7° \mathbb{E} 19'22	2°29'12	inferior conj	4326 Jan 12 03:51	21° \mathbb{E} 02'09	1°49'49
min. Earth dist.	4325 Jan 28 04:08	6° \mathbb{E} 42'55	0.67807 AU	minimum elong	4326 Jan 12 01:42	21° \mathbb{E} 09'39	1°49'02
morning rise	4325 Feb 01 23:13	0° \mathbb{E} 58'12		min. Earth dist.	4326 Jan 12 00:20	21° \mathbb{E} 14'20	0.68039 AU
	4325 Feb 03 04:53	30° \mathbb{R} 3		morning rise	4326 Jan 17 08:00	14° \mathbb{E} 52'26	
direct	4325 Feb 07 05:14	28° \mathbb{E} 40'18		direct	4326 Jan 21 23:12	12° \mathbb{E} 57'07	
	4325 Feb 11 15:35	0° \mathbb{E}		morning max el	4326 Jan 31 05:31	18° \mathbb{E} 23'10	22°04'09
morning max el	4325 Feb 17 17:38	4° \mathbb{E} 55'41	23°31'53		4326 Feb 09 20:33	0° \mathbb{E}	
desc. node	4325 Feb 25 10:15	13° \mathbb{E} 52'14		desc. node	4326 Feb 12 07:18	3° \mathbb{E} 20'52	
	4325 Mar 09 00:35	0° \mathbb{E}			4326 Mar 02 04:10	0° \mathbb{E}	
morning set	4325 Mar 24 22:55	25° \mathbb{E} 14'28		morning set	4326 Mar 05 05:26	4° \mathbb{E} 52'21	
	4325 Mar 27 17:32	0° \mathbb{Y}		max. Earth dist.	4326 Mar 10 20:44	14° \mathbb{E} 08'14	1.41144 AU
max. Earth dist.	4325 Mar 28 22:39	2° \mathbb{Y} 07'02	1.38980 AU	superior conj	4326 Mar 18 14:39	27° \mathbb{E} 29'45	-2°00'59
superior conj	4325 Apr 05 10:50	15° \mathbb{Y} 43'46	-1°42'08	minimum elong	4326 Mar 18 18:25	27° \mathbb{E} 46'26	2°00'46
minimum elong	4325 Apr 05 15:39	16° \mathbb{Y} 06'21	1°41'36		4326 Mar 20 00:22	0° \mathbb{Y}	
	4325 Apr 12 21:41	0° \mathbb{B}		evening rise	4326 Mar 29 01:52	16° \mathbb{Y} 37'59	
evening rise	4325 Apr 14 17:16	3° \mathbb{B} 31'35		asc. node	4326 Apr 04 10:29	28° \mathbb{Y} 15'15	
asc. node	4325 Apr 17 13:27	8° \mathbb{B} 59'51			4326 Apr 05 10:33	0° \mathbb{B}	
evening max el	4325 May 01 00:03	29° \mathbb{B} 48'43	18°43'32				
	4325 May 01 04:44	0° Π					

evening max el	4326 Apr 14 07:36	12°♄30'59	18°15'17	retrograde	4327 Apr 04 08:21	28°♄58'27	
retrograde	4326 Apr 21 09:19	16°♄03'24		evening set	4327 Apr 07 01:39	28°♄23'03	
evening set	4326 Apr 23 20:20	15°♄38'33		inferior conj	4327 Apr 13 12:20	23°♄20'00	3°18'48
inferior conj	4326 Apr 30 22:01	10°♄55'38	2°38'59	minimum elong	4327 Apr 13 14:33	23°♄14'27	3°18'30
minimum elong	4326 May 01 01:31	10°♄47'59	2°38'08	min. Earth dist.	4327 Apr 16 13:52	20°♄17'11	0.61638 AU
min. Earth dist.	4326 May 04 07:53	7°♄58'52	0.59445 AU	morning rise	4327 Apr 20 01:40	17°♄21'26	
morning rise	4326 May 08 03:59	5°♄14'55		direct	4327 Apr 26 20:55	14°♄58'12	
desc. node	4326 May 11 06:27	3°♄52'51		desc. node	4327 Apr 28 03:29	15°♄02'56	
direct	4326 May 14 12:35	3°♄23'38		morning max el	4327 May 11 01:19	22°♄56'50	27°51'24
morning max el	4326 May 28 21:35	11°♄13'22	27°25'07		4327 May 17 07:36	0°♄	
	4326 Jun 12 12:40	0°♄			4327 Jun 05 17:21	0°♄	
morning set	4326 Jun 29 03:05	0°♄15'58		morning set	4327 Jun 13 06:35	14°♄38'47	
	4326 Jun 29 00:01	0°♄		asc. node	4327 Jun 18 06:49	25°♄11'58	
asc. node	4326 Jul 01 09:46	5°♄05'19		max. Earth dist.	4327 Jun 19 01:59	26°♄55'38	1.32257 AU
max. Earth dist.	4326 Jul 05 16:36	14°♄25'41	1.31992 AU		4327 Jun 20 11:50	0°♄	
superior conj	4326 Jul 06 06:02	15°♄39'46	0°48'53	superior conj	4327 Jun 20 16:19	0°♄24'30	0°24'53
minimum elong	4326 Jul 06 04:06	15°♄29'05	0°48'31	minimum elong	4327 Jun 20 15:12	0°♄18'22	0°24'38
	4326 Jul 12 19:37	0°♄		evening rise	4327 Jun 27 13:00	15°♄20'31	
evening rise	4326 Jul 13 01:37	0°♄31'51			4327 Jul 04 19:45	0°♄	
	4326 Jul 29 02:14	0°♄		evening max el	4327 Jul 23 02:06	26°♄13'00	24°38'23
desc. node	4326 Aug 07 05:43	12°♄05'17		desc. node	4327 Jul 25 02:44	28°♄02'29	
evening max el	4326 Aug 10 10:52	15°♄24'43	26°02'29		4327 Jul 27 16:37	0°♄	
retrograde	4326 Aug 24 10:10	22°♄33'01		retrograde	4327 Aug 05 23:47	3°♄14'21	
evening set	4326 Aug 30 18:49	20°♄55'26		evening set	4327 Aug 11 02:52	2°♄15'11	
min. Earth dist.	4326 Sep 03 23:26	18°♄20'05	0.58853 AU		4327 Aug 15 14:57	30°♄	
inferior conj	4326 Sep 07 05:26	15°♄55'47	-5°00'33	min. Earth dist.	4327 Aug 16 13:20	29°♄25'35	0.56923 AU
minimum elong	4326 Sep 07 09:25	15°♄48'22	5°00'05	inferior conj	4327 Aug 19 08:05	27°♄37'55	-5°12'08
morning rise	4326 Sep 15 02:15	11°♄29'08		minimum elong	4327 Aug 19 06:57	27°♄39'45	5°12'05
direct	4326 Sep 17 12:25	11°♄09'35		morning rise	4327 Aug 27 13:33	23°♄32'46	
morning max el	4326 Sep 25 14:24	15°♄02'31	18°31'55	direct	4327 Aug 30 04:36	23°♄13'40	
asc. node	4326 Sep 27 09:00	16°♄54'42		morning max el	4327 Sep 08 13:04	27°♄36'24	19°24'25
	4326 Oct 05 23:54	0°♄			4327 Sep 10 19:50	0°♄	
morning set	4326 Oct 11 17:26	10°♄47'12		asc. node	4327 Sep 14 06:04	4°♄29'14	
				morning set	4327 Sep 25 18:29	25°♄11'11	
superior conj	4326 Oct 20 14:29	27°♄45'29	1°25'47		4327 Sep 28 04:02	0°♄	
minimum elong	4326 Oct 20 17:53	28°♄01'18	1°25'28				
	4326 Oct 21 19:31	0°♄		superior conj	4327 Oct 03 19:55	11°♄16'20	1°39'14
max. Earth dist.	4326 Oct 27 23:34	11°♄02'49	1.40083 AU	minimum elong	4327 Oct 03 21:45	11°♄25'20	1°39'08
evening rise	4326 Nov 01 05:07	18°♄15'30		max. Earth dist.	4327 Oct 10 03:52	23°♄17'32	1.37986 AU
desc. node	4326 Nov 03 05:04	21°♄33'49		evening rise	4327 Oct 13 22:05	0°♄03'08	
	4326 Nov 08 11:30	0°♄			4327 Oct 13 21:23	0°♄	
	4326 Nov 29 16:56	0°♄		desc. node	4327 Oct 21 02:04	12°♄10'33	
evening max el	4326 Dec 06 01:09	7°♄07'14	23°47'49		4327 Nov 01 18:37	0°♄	
retrograde	4326 Dec 16 21:32	13°♄31'10		evening max el	4327 Nov 18 13:47	20°♄49'29	25°04'54
evening set	4326 Dec 22 01:07	11°♄22'45		retrograde	4327 Nov 30 10:30	27°♄41'43	
asc. node	4326 Dec 24 08:14	9°♄02'01		evening set	4327 Dec 06 03:41	25°♄18'43	
inferior conj	4326 Dec 27 11:24	4°♄57'09	1°02'48	min. Earth dist.	4327 Dec 10 15:46	20°♄16'15	0.67430 AU
minimum elong	4326 Dec 27 10:00	5°♄01'58	1°02'14	asc. node	4327 Dec 11 05:17	19°♄32'06	
min. Earth dist.	4326 Dec 26 20:59	5°♄46'15	0.67908 AU	inferior conj	4327 Dec 11 16:57	18°♄53'48	0°09'57
	4326 Dec 31 12:04	30°♄		minimum elong	4327 Dec 11 16:42	18°♄54'38	0°09'52
morning rise	4327 Jan 01 18:53	28°♄52'03		transit middle	4327 Dec 11 16:42	18°♄54'38	0°09'52
direct	4327 Jan 05 20:05	27°♄19'28		transit begin	4327 Dec 11 14:30	19°♄01'51	
	4327 Jan 11 18:49	0°♄		transit end	4327 Dec 11 18:54	18°♄47'26	
morning max el	4327 Jan 13 23:47	2°♄00'58	20°44'17	morning rise	4327 Dec 17 05:56	12°♄55'28	
desc. node	4327 Jan 30 04:19	23°♄16'32		direct	4327 Dec 20 18:41	11°♄43'34	
	4327 Feb 03 16:53	0°♄		morning max el	4327 Dec 28 01:56	15°♄50'11	19°37'16
morning set	4327 Feb 12 09:57	13°♄19'43			4328 Jan 08 00:59	0°♄	
max. Earth dist.	4327 Feb 21 01:22	27°♄02'46	1.43048 AU	greatest brilliancy	4328 Jan 10 04:33	3°♄09'50	-0.7m
	4327 Feb 22 20:55	0°♄		desc. node	4328 Jan 17 01:22	13°♄32'14	
				morning set	4328 Jan 22 06:29	21°♄32'54	
superior conj	4327 Feb 27 19:10	8°♄10'06	-2°08'01		4328 Jan 27 17:13	0°♄	
minimum elong	4327 Feb 27 18:54	8°♄08'59	2°08'02	max. Earth dist.	4328 Feb 03 13:15	10°♄44'30	1.44457 AU
evening rise	4327 Mar 11 19:08	28°♄58'48					
	4327 Mar 12 08:56	0°♄		superior conj	4328 Feb 07 21:59	17°♄42'28	-1°57'52
asc. node	4327 Mar 22 07:32	17°♄02'58		minimum elong	4328 Feb 07 15:36	17°♄16'52	1°57'30
evening max el	4327 Mar 28 19:20	25°♄35'52	18°06'45		4328 Feb 15 10:53	0°♄	

evening rise	4328 Feb 21 16:43	10° H 26'11		superior conj	4329 Jan 17 04:40	26° Z 24'57	-1°28'08
	4328 Mar 04 12:54	0° Y		minimum elong	4329 Jan 16 19:23	25° Z 48'29	1°27'10
asc. node	4328 Mar 08 04:34	5° Y 14'28			4329 Jan 19 11:22	0° \approx	
evening max el	4328 Mar 11 08:11	8° Y 55'29	18°17'13	evening rise	4329 Feb 01 15:20	20° \approx 56'19	
retrograde	4328 Mar 17 18:29	12° Y 22'11			4329 Feb 07 06:25	0° H	
evening set	4328 Mar 20 17:49	11° Y 34'56		greatest brilliancy	4329 Feb 08 13:23	2° H 04'17	-0.9m
inferior conj	4328 Mar 26 17:26	6° Y 12'45	3°34'38	evening max el	4329 Feb 22 19:24	22° H 23'17	18°45'49
minimum elong	4328 Mar 26 17:55	6° Y 11'23	3°34'37	asc. node	4329 Feb 23 01:36	22° H 38'50	
min. Earth dist.	4328 Mar 29 04:53	3° Y 26'32	0.63666 AU	retrograde	4329 Mar 01 11:41	26° H 06'27	
morning rise	4328 Apr 01 17:06	0° Y 04'46		evening set	4329 Mar 04 17:23	25° H 06'30	
	4328 Apr 01 19:31	30° R H		inferior conj	4329 Mar 10 09:25	19° H 26'44	3°32'23
direct	4328 Apr 08 13:57	27° H 20'51		minimum elong	4329 Mar 10 08:26	19° H 29'45	3°32'19
desc. node	4328 Apr 14 00:33	28° H 48'11		min. Earth dist.	4329 Mar 12 05:09	17° H 12'34	0.65353 AU
	4328 Apr 16 01:48	0° Y		morning rise	4329 Mar 15 23:02	13° H 14'17	
morning max el	4328 Apr 22 09:21	5° Y 18'56	27°40'22	direct	4329 Mar 22 13:57	10° H 23'47	
	4328 May 11 01:48	0° B		desc. node	4329 Mar 31 21:36	14° H 36'31	
morning set	4328 May 27 03:06	28° B 37'54		morning max el	4329 Apr 04 19:15	18° H 10'28	26°56'27
	4328 May 27 19:32	0° II			4329 Apr 14 18:01	0° Y	
max. Earth dist.	4328 Jun 01 05:16	9° II 03'59	1.32958 AU		4329 May 04 00:24	0° B	
				morning set	4329 May 10 13:36	12° B 04'15	
superior conj	4328 Jun 03 23:20	14° II 55'22	-0°01'59	max. Earth dist.	4329 May 14 23:04	20° B 43'08	1.34118 AU
minimum elong	4328 Jun 03 23:26	14° II 55'55	0°01'59				
behind sun begin	4328 Jun 03 18:08	14° II 27'28		superior conj	4329 May 19 00:58	29° B 06'04	-0°30'44
behind sun end	4328 Jun 04 04:44	15° II 24'23		minimum elong	4329 May 19 02:36	29° B 14'33	0°30'24
asc. node	4328 Jun 04 03:53	15° II 19'47			4329 May 19 11:17	0° II	
	4328 Jun 10 23:31	0° E		asc. node	4329 May 22 00:53	5° II 24'27	
evening rise	4328 Jun 11 00:46	0° E 06'41		evening rise	4329 May 26 11:01	14° II 44'12	
	4328 Jun 27 21:12	0° O			4329 Jun 03 05:11	0° E	
evening max el	4328 Jul 03 15:10	6° O 37'22	23°01'43	evening max el	4329 Jun 15 09:51	17° E 10'24	21°28'09
desc. node	4328 Jul 10 23:46	11° O 55'12		retrograde	4329 Jun 27 14:55	23° E 11'32	
retrograde	4328 Jul 17 00:29	13° O 18'09		desc. node	4329 Jun 27 20:47	23° E 11'23	
evening set	4328 Jul 20 15:05	12° O 49'43		evening set	4329 Jun 30 01:03	22° E 58'08	
min. Earth dist.	4328 Jul 28 00:09	9° O 31'15	0.55483 AU	inferior conj	4329 Jul 09 10:00	18° E 58'14	-3°15'54
inferior conj	4328 Jul 29 15:18	8° O 34'33	-4°39'14	minimum elong	4329 Jul 09 01:43	19° E 09'47	3°13'22
minimum elong	4328 Jul 29 08:16	8° O 44'46	4°37'59	min. Earth dist.	4329 Jul 09 10:42	18° E 57'14	0.54837 AU
morning rise	4328 Aug 07 03:42	4° O 42'52		morning rise	4329 Jul 18 03:18	15° E 04'01	
direct	4328 Aug 10 02:21	4° O 22'20		direct	4329 Jul 21 12:33	14° E 39'10	
morning max el	4328 Aug 21 00:02	9° O 26'25	20°38'27	morning max el	4329 Aug 02 23:31	20° E 31'58	22°11'06
asc. node	4328 Aug 31 03:07	22° O 51'06			4329 Aug 10 21:35	0° O	
	4328 Sep 04 02:21	0° P		asc. node	4329 Aug 18 00:09	11° O 49'08	
morning set	4328 Sep 09 01:07	9° P 50'57		morning set	4329 Aug 24 11:09	24° O 40'40	
					4329 Aug 26 23:37	0° P	
superior conj	4328 Sep 16 13:21	25° P 22'13	1°44'02				
minimum elong	4328 Sep 16 13:34	25° P 23'22	1°44'01	superior conj	4329 Aug 31 15:07	9° P 52'42	1°41'34
	4328 Sep 18 20:19	0° A		minimum elong	4329 Aug 31 14:03	9° P 47'00	1°41'31
max. Earth dist.	4328 Sep 21 11:25	5° A 11'20	1.36046 AU	max. Earth dist.	4329 Sep 04 02:44	17° P 08'00	1.34429 AU
evening rise	4328 Sep 25 11:14	12° A 46'32		evening rise	4329 Sep 08 16:16	26° P 14'45	
	4328 Oct 05 08:42	0° M			4329 Sep 10 15:19	0° A	
desc. node	4328 Oct 06 23:05	2° M 34'59		desc. node	4329 Sep 23 20:06	22° A 41'09	
	4328 Oct 26 19:03	0° J			4329 Sep 28 17:43	0° M	
evening max el	4328 Oct 31 02:25	4° J 32'22	26°11'47	evening max el	4329 Oct 13 15:05	18° M 07'46	27°00'54
retrograde	4328 Nov 12 18:23	11° J 41'46		retrograde	4329 Oct 26 20:38	25° M 24'38	
evening set	4328 Nov 19 01:09	9° J 07'09		evening set	4329 Nov 02 15:23	22° M 43'48	
min. Earth dist.	4328 Nov 23 06:11	4° J 40'03	0.66605 AU	min. Earth dist.	4329 Nov 06 13:51	18° M 52'30	0.65429 AU
inferior conj	4328 Nov 24 18:34	2° J 47'52	-0°47'41	inferior conj	4329 Nov 08 14:07	16° M 35'03	-1°48'40
minimum elong	4328 Nov 24 19:50	2° J 43'55	0°47'07	minimum elong	4329 Nov 08 17:11	16° M 26'18	1°47'24
asc. node	4328 Nov 27 02:20	0° J 02'39		asc. node	4329 Nov 13 23:22	11° M 27'26	
	4328 Nov 27 03:18	30° R M		morning rise	4329 Nov 14 19:54	10° M 58'37	
morning rise	4328 Nov 30 15:03	26° M 58'57		direct	4329 Nov 17 13:42	10° M 17'50	
direct	4328 Dec 03 17:15	26° M 04'29		morning max el	4329 Nov 24 01:38	13° M 47'15	18°10'24
morning max el	4328 Dec 10 11:15	29° M 47'19	18°45'36		4329 Dec 05 15:19	0° J	
	4328 Dec 10 16:17	0° J		morning set	4329 Dec 12 14:38	11° J 22'30	
	4328 Dec 31 08:56	0° Z		desc. node	4329 Dec 20 19:24	24° J 40'56	
morning set	4328 Dec 31 20:02	0° Z 43'42			4329 Dec 24 03:14	0° Z	
desc. node	4329 Jan 02 22:24	4° Z 01'50					
max. Earth dist.	4329 Jan 16 06:43	24° Z 58'43	1.45198 AU	superior conj	4329 Dec 27 08:38	5° Z 06'48	-0°44'01
				minimum elong	4329 Dec 27 03:08	4° Z 45'01	0°43'16

max. Earth dist.	4329 Dec 30 02:24	9°  25'49	1.45194 AU	superior conj	4330 Dec 07 05:48	14°  42'43	0°03'06
	4330 Jan 12 06:45	0°  ~		minimum elong	4330 Dec 07 06:08	14°  44'07	0°03'03
evening rise	4330 Jan 12 15:57	0°  ~35'47		behind sun begin	4330 Dec 06 20:23	14°  04'17	
greatest brilliancy	4330 Jan 25 01:09	19°  ~41'07	-0.7m	behind sun end	4330 Dec 07 15:54	15°  23'52	
	4330 Feb 01 04:52	0°  ~		desc. node	4330 Dec 07 16:25	15°  26'01	
evening max el	4330 Feb 06 02:50	5°  ~54'24	19°31'15	max. Earth dist.	4330 Dec 12 20:42	23°  45'53	1.44458 AU
asc. node	4330 Feb 09 22:38	9°  ~02'33			4330 Dec 16 19:29	0°  ~	
retrograde	4330 Feb 13 08:43	10°  ~04'39		evening rise	4330 Dec 23 02:55	9°  ~47'33	
evening set	4330 Feb 16 21:40	8°  ~51'13			4331 Jan 05 12:25	0°  ~	
inferior conj	4330 Feb 22 08:56	2°  ~55'54	3°16'22	evening max el	4331 Jan 20 05:07	19°  ~27'06	20°31'28
minimum elong	4330 Feb 22 06:58	3°  ~02'20	3°16'02	asc. node	4331 Jan 27 19:39	24°  ~11'15	
min. Earth dist.	4330 Feb 23 13:40	1°  ~21'42	0.66631 AU	retrograde	4331 Jan 28 06:57	24°  ~12'27	
	4330 Feb 24 15:19	30°  ~  ~		evening set	4331 Feb 01 04:35	22°  ~44'40	
morning rise	4330 Feb 27 16:02	26°  ~41'48		inferior conj	4331 Feb 06 13:24	16°  ~36'34	2°49'32
direct	4330 Mar 05 20:01	23°  ~57'15		minimum elong	4331 Feb 06 10:58	16°  ~44'50	2°48'56
	4330 Mar 16 20:26	0°  ~		min. Earth dist.	4331 Feb 07 04:38	15°  ~44'32	0.67488 AU
morning max el	4330 Mar 18 04:50	1°  ~19'21	25°47'26	morning rise	4331 Feb 11 17:10	10°  ~22'42	
desc. node	4330 Mar 18 18:38	1°  ~54'39		direct	4331 Feb 17 07:28	7°  ~53'18	
	4330 Apr 08 19:03	0°  ~		morning max el	4331 Feb 28 13:30	14°  ~36'45	24°23'12
morning set	4330 Apr 23 09:53	24°  ~04'50		desc. node	4331 Mar 05 15:39	20°  ~17'17	
	4330 Apr 26 05:28	0°  ~			4331 Mar 13 03:08	0°  ~	
max. Earth dist.	4330 Apr 27 05:26	1°  ~53'55	1.35734 AU		4331 Apr 01 16:29	0°  ~	
				morning set	4331 Apr 05 10:39	6°  ~26'16	
superior conj	4330 May 02 18:33	12°  ~48'02	-1°00'04	max. Earth dist.	4331 Apr 09 02:41	12°  ~57'13	1.37729 AU
minimum elong	4330 May 02 21:48	13°  ~04'24	0°59'29				
asc. node	4330 May 08 21:54	25°  ~21'24		superior conj	4331 Apr 16 00:54	25°  ~53'31	-1°27'55
evening rise	4330 May 10 17:37	29°  ~05'31		minimum elong	4331 Apr 16 05:26	26°  ~15'23	1°27'16
	4330 May 11 04:18	0°  ~			4331 Apr 18 03:42	0°  ~	
evening max el	4330 May 28 15:47	28°  ~16'28	20°08'53	evening rise	4331 Apr 24 18:09	13°  ~04'04	
	4330 May 30 14:21	0°  ~		asc. node	4331 Apr 25 18:56	15°  ~06'30	
retrograde	4330 Jun 08 05:08	3°  ~25'42			4331 May 03 20:33	0°  ~	
evening set	4330 Jun 10 03:57	3°  ~15'53		evening max el	4331 May 11 09:51	10°  ~04'38	19°08'50
desc. node	4330 Jun 14 17:50	1°  ~45'09		retrograde	4331 May 20 07:06	14°  ~02'43	
	4330 Jun 18 00:19	30°  ~  ~		evening set	4331 May 22 07:47	14°  ~02'00	
inferior conj	4330 Jun 19 05:37	29°  ~16'45	-1°20'03	inferior conj	4331 May 30 15:45	10°  ~00'35	0°34'18
minimum elong	4330 Jun 19 01:52	29°  ~22'20	1°18'39	minimum elong	4331 May 30 17:08	9°  ~58'14	0°33'47
min. Earth dist.	4330 Jun 20 22:57	28°  ~15'19	0.55141 AU	desc. node	4331 Jun 01 14:51	8°  ~40'20	
morning rise	4330 Jun 27 22:17	24°  ~15'26		min. Earth dist.	4331 Jun 02 14:05	8°  ~01'42	0.56353 AU
direct	4330 Jul 01 23:55	24°  ~23'29		morning rise	4331 Jun 07 23:19	5°  ~08'01	
	4330 Jul 14 10:54	0°  ~		direct	4331 Jun 12 23:38	4°  ~09'25	
morning max el	4330 Jul 15 15:15	1°  ~04'10	23°54'05	morning max el	4331 Jun 27 05:20	11°  ~27'24	25°33'22
	4330 Aug 04 06:16	0°  ~			4331 Jul 11 11:09	0°  ~	
asc. node	4330 Aug 04 21:11	1°  ~01'30		asc. node	4331 Jul 22 18:12	20°  ~05'00	
morning set	4330 Aug 08 22:43	9°  ~03'41		morning set	4331 Jul 24 10:14	24°  ~02'37	
					4331 Jul 27 00:21	0°  ~	
superior conj	4330 Aug 15 22:22	24°  ~03'31	1°33'02				
minimum elong	4330 Aug 15 20:26	24°  ~02'02	1°32'52	superior conj	4331 Jul 31 08:50	9°  ~03'24	1°19'20
max. Earth dist.	4330 Aug 18 02:43	29°  ~01'53	1.33209 AU	minimum elong	4331 Jul 31 06:32	9°  ~01'42	1°19'01
	4330 Aug 18 10:15	0°  ~		max. Earth dist.	4331 Aug 01 09:46	11°  ~04'01	1.32412 AU
evening rise	4330 Aug 23 09:03	10°  ~00'16		evening rise	4331 Aug 07 10:16	24°  ~04'43	
	4330 Sep 02 23:23	0°  ~			4331 Aug 10 00:53	0°  ~	
desc. node	4330 Sep 10 17:07	12°  ~02'51			4331 Aug 27 14:25	0°  ~	
	4330 Sep 24 16:14	0°  ~		desc. node	4331 Aug 28 14:08	1°  ~02'57	
evening max el	4330 Sep 26 02:35	1°  ~24'17	27°25'17	evening max el	4331 Sep 08 10:55	14°  ~09'36	27°19'11
retrograde	4330 Oct 09 16:55	8°  ~42'03		retrograde	4331 Sep 22 06:37	21°  ~02'41	
evening set	4330 Oct 16 19:43	6°  ~03'37		evening set	4331 Sep 29 10:35	18°  ~05'56	
min. Earth dist.	4330 Oct 20 12:40	2°  ~46'05	0.63903 AU	min. Earth dist.	4331 Oct 03 01:17	16°  ~09'23	0.62072 AU
inferior conj	4330 Oct 23 01:09	0°  ~	-2°50'42	inferior conj	4331 Oct 06 00:43	13°  ~02'51	-3°50'02
minimum elong	4330 Oct 23 05:59	29°  ~05'28	2°48'58	minimum elong	4331 Oct 06 06:41	13°  ~11'33	3°48'20
	4330 Oct 23 05:00	30°  ~  ~		morning rise	4331 Oct 13 04:33	8°  ~02'22	
morning rise	4330 Oct 29 17:37	24°  ~04'13		direct	4331 Oct 15 13:07	7°  ~05'09	
asc. node	4330 Oct 31 20:24	24°  ~19'09		asc. node	4331 Oct 18 17:27	8°  ~04'47	
direct	4330 Nov 01 05:24	24°  ~18'27		morning max el	4331 Oct 22 10:06	11°  ~02'19	17°52'18
morning max el	4330 Nov 07 18:17	27°  ~04'32	17°52'22		4331 Nov 03 18:59	0°  ~	
	4330 Nov 09 19:28	0°  ~		morning set	4331 Nov 07 07:35	6°  ~19'33	
morning set	4330 Nov 24 12:35	23°  ~11'01					
	4330 Nov 28 09:55	0°  ~		superior conj	4331 Nov 18 05:10	25°  ~35'21	0°43'35

minimum elong	4331 Nov 18 08:47	25°  50'50	0°43'06	superior conj	4332 Oct 30 05:39	7°  41'21	1°13'31
	4331 Nov 20 19:32	0° 		minimum elong	4332 Oct 30 09:38	7°  59'19	1°13'03
desc. node	4331 Nov 24 13:25	6°  13'11		max. Earth dist.	4332 Nov 06 20:43	21°  02'06	1.41266 AU
max. Earth dist.	4331 Nov 25 11:06	7°  41'49	1.43092 AU	desc. node	4332 Nov 10 10:27	26°  18'34	
evening rise	4331 Dec 02 15:31	19°  09'32		evening rise	4332 Nov 11 20:30	29°  18'34	
	4331 Dec 09 17:05	0° 			4332 Nov 12 06:43	0° 	
	4331 Dec 31 07:44	0° 			4332 Dec 02 06:36	0° 	
evening max el	4332 Jan 03 01:57	3°  00'53	21°43'16	evening max el	4332 Dec 15 18:13	16°  37'29	23°01'52
retrograde	4332 Jan 12 04:20	8°  25'25		retrograde	4332 Dec 25 23:13	22°  34'03	
asc. node	4332 Jan 14 16:42	7°  51'20		evening set	4332 Dec 30 19:18	20°  34'25	
evening set	4332 Jan 16 12:20	6°  42'18		asc. node	4332 Dec 31 13:45	19°  59'54	
inferior conj	4332 Jan 21 20:33	0°  24'36	2°13'50	inferior conj	4333 Jan 05 04:28	14°  31'46	1°30'39
minimum elong	4332 Jan 21 18:09	0°  32'54	2°13'04	minimum elong	4333 Jan 05 02:34	14°  32'49	1°29'56
min. Earth dist.	4332 Jan 21 23:38	0°  13'51	0.67945 AU	min. Earth dist.	4333 Jan 04 20:21	14°  35'46	0.68029 AU
	4332 Jan 22 03:38	30°  08'30		morning rise	4333 Jan 10 09:44	8°  30'41	
morning rise	4332 Jan 26 23:48	24°  31'24		direct	4333 Jan 14 18:57	6°  32'55	
direct	4332 Jan 31 23:28	22°  30'04		morning max el	4333 Jan 23 13:06	11°  32'45	21°28'48
morning max el	4332 Feb 10 23:01	27°  35'01	22°53'59	desc. node	4333 Feb 06 09:43	29°  30'36	
	4332 Feb 12 20:50	0° 			4333 Feb 07 00:40	0° 	
desc. node	4332 Feb 20 12:41	9°  25'29		morning set	4333 Feb 24 04:02	25°  54'51	
	4332 Mar 05 19:40	0° 			4333 Feb 26 17:27	0° 	
morning set	4332 Mar 16 09:45	16°  31'24		max. Earth dist.	4333 Mar 02 22:14	6°  35'18	1.42004 AU
max. Earth dist.	4332 Mar 20 21:45	24°  36'53	1.39912 AU				
	4332 Mar 24 02:18	0° 		superior conj	4333 Mar 10 10:18	19°  31'22	-2°05'45
superior conj	4332 Mar 28 15:49	8°  11'53	-1°51'14	minimum elong	4333 Mar 10 12:45	19°  41'59	2°05'41
minimum elong	4332 Mar 28 20:29	8°  33'17	1°50'49		4333 Mar 16 08:44	0° 	
evening rise	4332 Apr 07 09:34	26°  01'39		evening rise	4333 Mar 21 12:09	9°  19'30	
	4332 Apr 09 05:24	0° 		asc. node	4333 Mar 29 13:02	23°  39'06	
asc. node	4332 Apr 11 15:59	4°  34'28			4333 Apr 02 13:49	0° 	
evening max el	4332 Apr 23 13:34	22°  30'13	18°29'06	evening max el	4333 Apr 06 23:23	5°  23'39	18°09'20
retrograde	4332 May 01 03:34	26°  14'49		retrograde	4333 Apr 13 18:09	8°  49'43	
evening set	4332 May 03 10:49	25°  55'11		evening set	4333 Apr 16 08:04	8°  20'24	
inferior conj	4332 May 10 22:55	21°  32'43	2°02'40	inferior conj	4333 Apr 23 02:51	3°  28'44	2°59'11
minimum elong	4332 May 11 02:29	21°  17'26	2°01'37	minimum elong	4333 Apr 23 05:56	3°  21'36	2°58'35
min. Earth dist.	4332 May 14 09:06	18°  42'26	0.58219 AU	min. Earth dist.	4333 Apr 26 10:11	0°  26'36	0.60386 AU
desc. node	4332 May 18 11:52	16°  30'25			4333 Apr 26 22:29	30°  08'30	
morning rise	4332 May 18 14:58	15°  59'01		morning rise	4333 Apr 30 01:32	27°  39'35	
direct	4332 May 24 13:47	14°  27'44		desc. node	4333 May 05 08:55	25°  38'35	
morning max el	4332 Jun 07 23:04	22°  08'50	26°53'08	direct	4333 May 06 15:58	25°  33'50	
	4332 Jun 14 21:06	0° 			4333 May 17 01:58	0° 	
	4332 Jul 03 07:29	0° 		morning max el	4333 May 20 23:06	3°  27'29	27°40'57
morning set	4332 Jul 07 20:07	9°  12'44			4333 Jun 09 11:13	0° 	
asc. node	4332 Jul 08 15:15	10°  53'52		morning set	4333 Jun 22 02:31	23°  46'00	
					4333 Jun 25 01:25	0° 	
superior conj	4332 Jul 14 20:39	24°  58'00	1°01'10	asc. node	4333 Jun 25 12:17	0° 	
minimum elong	4332 Jul 14 18:26	24°  15'48	1°00'46	max. Earth dist.	4333 Jun 28 08:03	7°  50'01	1.32059 AU
max. Earth dist.	4332 Jul 14 20:48	24°  28'50	1.32029 AU				
	4332 Jul 17 08:54	0° 		superior conj	4333 Jun 29 07:59	9°  18'27	0°39'08
evening rise	4332 Jul 21 17:14	9°  22'43		minimum elong	4333 Jun 29 06:20	9°  09'24	0°38'46
	4332 Aug 01 09:01	0° 		evening rise	4333 Jul 06 03:35	24°  10'49	
desc. node	4332 Aug 14 11:09	19°  32'12			4333 Jul 08 22:27	0° 	
evening max el	4332 Aug 20 13:39	26°  39'43	26°39'43		4333 Jul 26 18:16	0° 	
	4332 Aug 25 04:22	0° 		desc. node	4333 Aug 01 08:11	6°  26'00	
retrograde	4332 Sep 03 12:15	3°  22'48		evening max el	4333 Aug 02 08:52	7°  26'37	25°29'14
evening set	4332 Sep 10 07:31	1°  25'29		retrograde	4333 Aug 16 07:55	14°  31'55	
	4332 Sep 12 13:20	30°  08'30		evening set	4333 Aug 22 05:37	13°  10'52	
min. Earth dist.	4332 Sep 14 03:33	28°  39'20	0.60042 AU	min. Earth dist.	4333 Aug 26 20:44	10°  31'41	0.58002 AU
inferior conj	4332 Sep 17 09:26	26°  39'01	-4°40'02	inferior conj	4333 Aug 29 23:44	8°  21'06	-5°09'54
minimum elong	4332 Sep 17 14:56	26°  01'42	4°39'01	minimum elong	4333 Aug 30 01:54	8°  17'19	5°09'46
morning rise	4332 Sep 25 00:22	21°  32'27		morning rise	4333 Sep 07 00:27	4°  03'51	
direct	4332 Sep 27 08:58	21°  32'50		direct	4333 Sep 09 12:33	3°  34'43	
asc. node	4332 Oct 04 14:30	24°  36'00		morning max el	4333 Sep 18 02:08	7°  48'34	18°51'31
morning max el	4332 Oct 04 21:52	24°  53'29	18°11'30	asc. node	4333 Sep 21 11:33	11°  37'01	
	4332 Oct 09 04:05	0° 			4333 Oct 02 10:21	0° 	
morning set	4332 Oct 20 17:43	20°  01'33		morning set	4333 Oct 04 14:19	4°  13'05	
	4332 Oct 26 01:05	0° 		superior conj	4333 Oct 13 02:05	20°  45'36	1°32'39

minimum elong	4333 Oct 13 04:51	20°  58'50	1°32'25	superior conj	4334 Sep 26 13:08	4°  33'03	1°42'14
	4333 Oct 18 01:17	0°  11		minimum elong	4334 Sep 26 14:16	4°  38'42	1°42'12
max. Earth dist.	4333 Oct 20 02:21	3°  40'29	1.39194 AU	max. Earth dist.	4334 Oct 02 07:28	15°  43'58	1.37132 AU
evening rise	4333 Oct 24 00:16	10°  11'29'40		evening rise	4334 Oct 06 02:16	22°  41'55	
desc. node	4333 Oct 28 07:28	17°  11'40'54			4334 Oct 10 06:00	0°  11	
	4333 Nov 05 03:18	0°  17		desc. node	4334 Oct 15 04:30	8°  11'13'04	
	4333 Nov 28 00:31	0°  18			4334 Oct 29 22:26	0°  17	
evening max el	4333 Nov 28 07:36	0°  17'40	24°21'24	evening max el	4334 Nov 10 19:55	14°  17'00'03	25°34'59
retrograde	4333 Dec 09 14:31	6°  35'40'08		retrograde	4334 Nov 23 01:23	21°  17'01'06	
evening set	4333 Dec 14 23:57	4°  39'12		evening set	4334 Nov 29 00:34	18°  17'32'19	
asc. node	4333 Dec 18 10:48	0°  35'41'15		min. Earth dist.	4334 Dec 03 09:29	13°  17'45'04	0.67123 AU
	4333 Dec 19 03:31	30°  11'17'16		inferior conj	4334 Dec 04 15:27	12°  17'09'12	-0°14'01
min. Earth dist.	4333 Dec 19 16:24	29°  17'16	0.67751 AU	minimum elong	4334 Dec 04 15:49	12°  17'08'03	0°13'51
inferior conj	4333 Dec 20 11:23	28°  17'13'35	0°41'02	transit middle	4334 Dec 04 15:49	12°  17'08'03	0°13'51
minimum elong	4333 Dec 20 10:25	28°  17'16'50	0°40'39	transit begin	4334 Dec 04 14:22	12°  17'12'41	
morning rise	4333 Dec 25 20:57	22°  17'11'17		transit end	4334 Dec 04 17:16	12°  17'03'24	
direct	4333 Dec 29 16:44	20°  17'47'46		asc. node	4334 Dec 05 07:50	11°  17'17'04	
morning max el	4334 Jan 06 10:41	25°  17'12'33	20°14'03	morning rise	4334 Dec 10 07:25	6°  17'14'49	
	4334 Jan 10 15:55	0°  18		direct	4334 Dec 13 15:24	5°  17'10'56	
desc. node	4334 Jan 24 06:45	19°  17'11'38		morning max el	4334 Dec 20 16:10	9°  17'06'01	19°13'21
	4334 Jan 31 09:51	0°  19		greatest brilliancy	4335 Jan 03 09:34	27°  17'37'51	-0.7m
morning set	4334 Feb 03 02:06	4°  19'07'17			4335 Jan 04 22:54	0°  18	
max. Earth dist.	4334 Feb 13 06:44	20°  19'09'08	1.43719 AU	desc. node	4335 Jan 11 03:46	9°  17'33'40	
				morning set	4335 Jan 13 03:12	12°  17'37'33	
superior conj	4334 Feb 19 03:52	29°  19'42'23	-2°06'05		4335 Jan 24 06:34	0°  19	
minimum elong	4334 Feb 19 01:03	29°  19'30'46	2°06'00	max. Earth dist.	4335 Jan 26 21:22	4°  19'06'56	1.44853 AU
	4334 Feb 19 08:08	0°  20					
evening rise	4334 Mar 03 21:34	21°  19'18'52		superior conj	4335 Jan 29 20:35	8°  19'48'30	-1°47'33
	4334 Mar 08 21:52	0°  21		minimum elong	4335 Jan 29 12:12	8°  19'15'16	1°46'52
asc. node	4334 Mar 16 10:05	12°  19'12'53			4335 Feb 11 23:12	0°  20	
evening max el	4334 Mar 21 11:57	18°  19'35'53	18°08'56	evening rise	4335 Feb 13 09:37	2°  20'21'50	
retrograde	4334 Mar 27 22:38	21°  19'58'46		asc. node	4335 Mar 03 07:08	0°  21	
evening set	4334 Mar 30 18:32	21°  19'58'20			4335 Mar 03 05:16	0°  21	
inferior conj	4334 Apr 05 24:00	16°  19'06'40	3°28'04	evening max el	4335 Mar 05 00:16	1°  19'58'51	18°27'13
minimum elong	4334 Apr 06 01:29	16°  19'02'45	3°27'56	retrograde	4335 Mar 11 12:18	5°  19'31'35	
min. Earth dist.	4334 Apr 08 19:48	13°  19'08'49	0.62527 AU	evening set	4335 Mar 14 14:10	4°  19'39'09	
morning rise	4334 Apr 12 07:05	10°  19'03'17			4335 Mar 19 16:40	30°  19'11'17	
direct	4334 Apr 19 03:54	7°  19'30'01		inferior conj	4335 Mar 20 10:09	29°  19'09'09	3°35'36
desc. node	4334 Apr 22 05:57	7°  19'58'00		minimum elong	4335 Mar 20 09:58	29°  19'09'42	3°35'37
morning max el	4334 May 03 05:08	15°  19'29'07	27°51'17	min. Earth dist.	4335 Mar 22 14:54	26°  19'35'03	0.64422 AU
	4334 May 15 01:36	0°  20		morning rise	4335 Mar 26 05:03	22°  19'58'30	
	4334 Jun 02 01:50	0°  21		direct	4335 Apr 01 23:58	20°  19'10'08	
morning set	4334 Jun 06 03:23	8°  20'00'15		desc. node	4335 Apr 09 02:59	22°  19'39'19	
max. Earth dist.	4334 Jun 11 15:37	19°  20'30'58	1.32507 AU	morning max el	4335 Apr 15 14:29	28°  19'05'41	27°25'25
asc. node	4334 Jun 12 09:20	21°  20'06'20			4335 Apr 17 10:15	0°  20	
					4335 May 08 19:51	0°  20	
superior conj	4334 Jun 13 17:06	23°  20'58'17	0°13'49	morning set	4335 May 20 20:04	21°  20'46'37	
minimum elong	4334 Jun 13 16:27	23°  20'54'45	0°13'40		4335 May 24 22:18	0°  21	
behind sun begin	4334 Jun 13 13:46	23°  20'40'11		max. Earth dist.	4335 May 25 15:14	1°  21'27'18	1.33391 AU
behind sun end	4334 Jun 13 19:08	24°  20'09'20					
	4334 Jun 16 11:30	0°  21		superior conj	4335 May 28 22:04	8°  21'20'56	-0°14'01
evening rise	4334 Jun 20 15:23	8°  21'59'43		minimum elong	4335 May 28 22:47	8°  21'24'44	0°13'52
	4334 Jul 01 11:54	0°  22		behind sun begin	4335 May 28 20:02	8°  21'10'11	
evening max el	4334 Jul 14 22:11	18°  21'00'49	23°57'41	behind sun end	4335 May 29 01:31	8°  21'39'17	
desc. node	4334 Jul 19 05:12	21°  21'03'45'56		asc. node	4335 May 30 06:23	11°  21'13'11	
retrograde	4334 Jul 28 15:59	24°  21'55'40		evening rise	4335 Jun 05 02:42	23°  21'42'29	
evening set	4334 Aug 02 03:56	24°  21'10'57			4335 Jun 08 03:38	0°  22	
min. Earth dist.	4334 Aug 08 08:30	21°  21'10'47	0.56241 AU	evening max el	4335 Jun 26 12:28	28°  21'24'12	22°20'42
inferior conj	4334 Aug 10 17:43	19°  21'03'17	-5°04'18		4335 Jun 28 06:25	0°  22	
minimum elong	4334 Aug 10 13:53	19°  21'04'11	5°03'58	desc. node	4335 Jul 06 02:12	4°  21'24'16	
morning rise	4334 Aug 19 02:24	15°  21'04'51		retrograde	4335 Jul 09 12:07	4°  21'51'12	
direct	4334 Aug 21 20:31	15°  21'02'61		evening set	4335 Jul 12 12:34	4°  21'31'03	
morning max el	4334 Aug 31 20:00	20°  21'04'31	19°53'21	min. Earth dist.	4335 Jul 20 19:02	0°  21'56'11	0.55095 AU
asc. node	4334 Sep 08 08:35	29° 21'03'30'05		inferior conj	4335 Jul 21 18:17	0° 21'23'19	-4°09'39
	4334 Sep 08 15:25	0° 22		minimum elong	4335 Jul 21 09:54	0° 21'35'11	4°07'39
morning set	4334 Sep 18 18:01	18° 21'04'43'39			4335 Jul 22 10:48	30° 21'04'43	
	4334 Sep 24 06:47	0° 22		morning rise	4335 Jul 30 09:10	26° 21'32'59	

direct	4335 Aug 02 11:28	26°☿11'21		morning rise	4336 Jul 09 05:23	6°☿38'41	
	4335 Aug 12 05:09	0°♊		direct	4336 Jul 12 20:47	6°☿10'07	
morning max el	4335 Aug 14 02:00	1°♊35'50	21°15'57	morning max el	4336 Jul 25 21:30	12°☿24'54	22°54'21
asc. node	4335 Aug 26 05:37	18°♊11'36			4336 Aug 08 01:29	0°♊	
	4335 Sep 01 09:32	0°♊		asc. node	4336 Aug 12 02:39	7°♊21'50	
morning set	4335 Sep 03 02:19	3°♊29'28		morning set	4336 Aug 17 13:11	18°♊21'20	
					4336 Aug 22 23:52	0°♊	
superior conj	4335 Sep 10 10:32	18°♊51'07	1°43'47				
minimum elong	4335 Sep 10 10:09	18°♊49'10	1°43'47	superior conj	4336 Aug 24 14:55	3°♊29'11	1°38'38
max. Earth dist.	4335 Sep 14 17:34	27°♊35'11	1.35308 AU	minimum elong	4336 Aug 24 13:25	3°♊21'10	1°38'32
	4335 Sep 15 22:52	0°♊		max. Earth dist.	4336 Aug 27 12:31	9°♊36'59	1.33858 AU
evening rise	4335 Sep 18 22:42	5°♊46'10		evening rise	4336 Sep 01 09:12	19°♊30'16	
desc. node	4335 Oct 02 01:31	28°♊30'50			4336 Sep 06 21:55	0°♊	
	4335 Oct 03 00:13	0°♊		desc. node	4336 Sep 17 22:31	18°♊26'58	
evening max el	4335 Oct 24 08:27	27°♊40'46	26°35'15		4336 Sep 26 01:59	0°♊	
	4335 Oct 26 22:05	0°♊		evening max el	4336 Oct 05 20:57	11°♊10'20	27°14'45
retrograde	4335 Nov 06 07:10	4°♊55'21		retrograde	4336 Oct 19 07:04	18°♊28'22	
evening set	4335 Nov 12 19:16	2°♊17'06		evening set	4336 Oct 26 05:40	15°♊47'37	
	4335 Nov 15 04:46	30°♊		min. Earth dist.	4336 Oct 30 01:39	12°♊10'49	0.64819 AU
min. Earth dist.	4335 Nov 16 21:21	28°♊05'16	0.66143 AU	inferior conj	4336 Nov 01 07:03	9°♊44'31	-2°15'01
inferior conj	4335 Nov 18 14:46	26°♊01'25	-1°13'15	minimum elong	4336 Nov 01 10:53	9°♊33'59	2°13'31
minimum elong	4335 Nov 18 16:47	25°♊55'22	1°12'23	morning rise	4336 Nov 07 17:13	4°♊14'05	
asc. node	4335 Nov 22 04:51	22°♊05'32		asc. node	4336 Nov 08 01:52	4°♊04'55	
morning rise	4335 Nov 24 15:01	20°♊17'30		direct	4336 Nov 10 08:05	3°♊38'02	
direct	4335 Nov 27 13:16	19°♊29'30		morning max el	4336 Nov 16 19:40	7°♊04'52	18°00'31
morning max el	4335 Dec 04 04:01	23°♊05'47	18°28'33		4336 Dec 02 06:50	0°♊	
	4335 Dec 09 18:27	0°♊		morning set	4336 Dec 04 11:34	3°♊40'10	
morning set	4335 Dec 24 04:39	22°♊25'06		desc. node	4336 Dec 14 21:48	20°♊50'01	
	4335 Dec 28 22:46	0°♊					
desc. node	4335 Dec 29 00:48	0°♊08'04		superior conj	4336 Dec 18 08:54	26°♊23'51	-0°23'43
				minimum elong	4336 Dec 18 06:00	26°♊12'14	0°23'18
superior conj	4336 Jan 08 23:36	17°♊24'17	-1°10'33		4336 Dec 20 15:13	0°♊	
minimum elong	4336 Jan 08 15:14	16°♊51'27	1°09'34	max. Earth dist.	4336 Dec 22 10:53	2°♊52'38	1.44972 AU
max. Earth dist.	4336 Jan 09 15:37	18°♊27'04	1.45285 AU	evening rise	4337 Jan 03 15:37	21°♊52'15	
	4336 Jan 17 00:22	0°♊			4337 Jan 08 22:36	0°♊	
evening rise	4336 Jan 24 22:24	12°♊28'43		greatest brilliancy	4337 Jan 17 17:40	13°♊17'11	-0.6m
greatest brilliancy	4336 Feb 03 13:33	27°♊40'37	-0.8m	evening max el	4337 Jan 29 15:32	29°♊00'41	19°55'17
	4336 Feb 05 01:30	0°♊			4337 Jan 30 15:42	0°♊	
evening max el	4336 Feb 16 10:04	15°♊28'17	19°03'11	asc. node	4337 Feb 04 01:09	2°♊59'27	
asc. node	4336 Feb 18 04:09	17°♊05'47		retrograde	4337 Feb 06 05:08	3°♊24'39	
retrograde	4336 Feb 23 07:26	19°♊21'58		evening set	4337 Feb 09 21:37	2°♊05'17	
evening set	4336 Feb 26 15:59	18°♊16'35			4337 Feb 12 04:16	30°♊	
inferior conj	4336 Mar 03 05:41	12°♊30'06	3°27'03	inferior conj	4337 Feb 15 07:37	26°♊04'27	3°06'09
minimum elong	4336 Mar 03 04:13	12°♊34'44	3°26'53	minimum elong	4337 Feb 15 05:23	26°♊11'53	3°05'41
min. Earth dist.	4336 Mar 04 19:00	10°♊31'59	0.65949 AU	min. Earth dist.	4337 Feb 16 06:28	24°♊48'00	0.67052 AU
morning rise	4336 Mar 08 16:06	6°♊16'31		morning rise	4337 Feb 20 12:56	19°♊50'23	
direct	4336 Mar 15 02:53	3°♊26'49		direct	4337 Feb 26 11:28	17°♊11'09	
desc. node	4336 Mar 26 00:02	9°♊09'03		morning max el	4337 Mar 10 09:16	24°♊17'59	25°12'45
morning max el	4336 Mar 28 00:22	11°♊05'31	26°29'29	desc. node	4337 Mar 12 21:04	26°♊57'08	
	4336 Apr 12 01:21	0°♊			4337 Mar 15 12:08	0°♊	
	4336 Apr 30 09:28	0°♊			4337 Apr 05 11:40	0°♊	
morning set	4336 May 03 01:03	4°♊54'53		morning set	4337 Apr 15 13:45	17°♊12'12	
max. Earth dist.	4336 May 07 03:47	12°♊50'58	1.34745 AU	max. Earth dist.	4337 Apr 19 05:27	23°♊53'58	1.36544 AU
					4337 Apr 22 10:37	0°♊	
superior conj	4336 May 11 20:35	22°♊19'57	-0°43'14				
minimum elong	4336 May 11 22:54	22°♊31'53	0°42'46	superior conj	4337 Apr 25 09:53	5°♊47'59	-1°12'13
	4336 May 15 13:07	0°♊		minimum elong	4337 Apr 25 13:46	6°♊07'09	1°11'35
asc. node	4336 May 16 03:25	1°♊14'53		asc. node	4337 May 03 00:27	21°♊07'31	
evening rise	4336 May 19 11:36	8°♊13'13		evening rise	4337 May 03 15:57	22°♊25'52	
	4336 May 31 05:22	0°♊			4337 May 07 11:34	0°♊	
evening max el	4336 Jun 07 11:36	9°♊09'20	20°52'22	evening max el	4337 May 20 23:00	20°♊33'55	19°40'56
retrograde	4336 Jun 19 00:45	14°♊48'45		retrograde	4337 May 30 18:18	25°♊20'30	
evening set	4336 Jun 21 03:46	14°♊38'01		evening set	4337 Jun 01 17:06	25°♊10'00	
desc. node	4336 Jun 21 23:14	14°♊28'30		desc. node	4337 Jun 08 20:16	22°♊08'08	
inferior conj	4336 Jun 30 11:31	10°♊40'50	-2°28'51	inferior conj	4337 Jun 10 11:58	21°♊07'04	-0°29'28
minimum elong	4336 Jun 30 04:41	10°♊50'31	2°26'29	minimum elong	4337 Jun 10 10:39	21°♊09'09	0°28'59
min. Earth dist.	4336 Jul 01 06:29	10°♊13'54	0.54841 AU	min. Earth dist.	4337 Jun 12 19:40	19°♊40'19	0.55557 AU

morning rise	4337 Jun 19 01:50	16° Π 35'47		desc. node	4338 May 26 17:19	28° \mathcal{B} 58'08	
direct	4337 Jun 23 12:58	15° Π 51'30		morning rise	4338 May 30 08:13	26° \mathcal{B} 59'26	
morning max el	4337 Jul 07 11:33	22° Π 49'16	24°37'44	direct	4338 Jun 04 18:26	25° \mathcal{B} 48'07	
	4337 Jul 13 21:04	0° \mathcal{E}			4338 Jun 15 07:31	0° Π	
asc. node	4337 Jul 29 23:41	26° \mathcal{E} 55'27		morning max el	4338 Jun 19 02:41	3° Π 16'46	26°10'42
	4337 Jul 31 11:43	0° Ω			4338 Jul 08 06:28	0° \mathcal{E}	
morning set	4337 Aug 02 00:59	3° Ω 15'18		asc. node	4338 Jul 16 20:45	16° \mathcal{E} 45'05	
				morning set	4338 Jul 17 12:01	18° \mathcal{E} 05'26	
					4338 Jul 22 23:49	0° Ω	
superior conj	4337 Aug 08 23:48	18° Ω 19'22	1°27'49				
minimum elong	4337 Aug 08 21:39	18° Ω 07'37	1°27'34				
max. Earth dist.	4337 Aug 10 16:05	21° Ω 58'01	1.32823 AU	superior conj	4338 Jul 24 11:03	3° Ω 14'09	1°12'09
	4337 Aug 14 10:41	0° \mathcal{M}		minimum elong	4338 Jul 24 08:44	3° Ω 01'20	1°11'46
evening rise	4337 Aug 16 06:00	3° \mathcal{M} 43'34		max. Earth dist.	4338 Jul 25 01:24	4° Ω 33'11	1.32200 AU
	4337 Aug 30 15:40	0° \mathcal{L}		evening rise	4338 Jul 31 09:57	18° Ω 16'00	
desc. node	4337 Sep 04 19:32	7° \mathcal{L} 52'22			4338 Aug 06 06:41	0° \mathcal{M}	
evening max el	4337 Sep 18 07:40	24° \mathcal{L} 16'09	27°26'41	desc. node	4338 Aug 22 16:35	26° \mathcal{M} 33'58	
	4337 Sep 26 02:28	0° \mathcal{M}			4338 Aug 25 09:18	0° \mathcal{L}	
retrograde	4337 Oct 02 00:24	1° \mathcal{M} 31'52		evening max el	4338 Aug 31 13:53	6° \mathcal{L} 44'10	27°06'25
	4337 Oct 07 13:41	30° \mathcal{R} \mathcal{L}		retrograde	4338 Sep 14 10:37	13° \mathcal{L} 56'27	
evening set	4337 Oct 09 04:45	28° \mathcal{L} 58'13		evening set	4338 Sep 21 12:34	11° \mathcal{L} 41'57	
min. Earth dist.	4337 Oct 12 20:20	25° \mathcal{L} 53'08	0.63166 AU	min. Earth dist.	4338 Sep 25 04:12	8° \mathcal{L} 59'45	0.61229 AU
inferior conj	4337 Oct 15 13:38	23° \mathcal{L} 12'25	-3°16'29	inferior conj	4338 Sep 28 07:18	6° \mathcal{L} 16'44	-4°12'54
minimum elong	4337 Oct 15 19:04	22° \mathcal{L} 59'00	3°14'41	minimum elong	4338 Sep 28 13:21	6° \mathcal{L} 03'33	4°11'24
morning rise	4337 Oct 22 10:52	17° \mathcal{L} 58'57		morning rise	4338 Oct 05 15:59	1° \mathcal{L} 23'51	
direct	4337 Oct 24 21:01	17° \mathcal{L} 31'13		direct	4338 Oct 08 00:16	1° \mathcal{L} 01'23	
asc. node	4337 Oct 25 22:55	17° \mathcal{L} 36'51		asc. node	4338 Oct 12 19:58	2° \mathcal{L} 40'20	
morning max el	4337 Oct 31 12:17	20° \mathcal{L} 56'52	17°49'59	morning max el	4338 Oct 15 02:48	4° \mathcal{L} 34'20	17°58'05
	4337 Nov 07 08:15	0° \mathcal{M}		morning set	4338 Oct 30 21:24	29° \mathcal{L} 25'47	
morning set	4337 Nov 16 19:17	16° \mathcal{M} 06'45			4338 Oct 31 04:51	0° \mathcal{M}	
	4337 Nov 24 19:46	0° \mathcal{X}					
				superior conj	4338 Nov 10 03:25	17° \mathcal{M} 56'46	0°57'39
superior conj	4337 Nov 28 16:45	6° \mathcal{X} 30'55	0°21'26	minimum elong	4338 Nov 10 07:28	18° \mathcal{M} 14'30	0°57'07
minimum elong	4337 Nov 28 18:54	6° \mathcal{X} 39'51	0°21'09		4338 Nov 17 05:05	0° \mathcal{X}	
desc. node	4337 Dec 01 18:49	11° \mathcal{X} 36'09		max. Earth dist.	4338 Nov 17 17:04	0° \mathcal{X} 49'39	1.42361 AU
max. Earth dist.	4337 Dec 05 04:14	17° \mathcal{X} 05'52	1.43957 AU	desc. node	4338 Nov 18 15:50	2° \mathcal{X} 23'29	
	4337 Dec 13 08:50	0° \mathcal{Z}		evening rise	4338 Nov 23 19:29	10° \mathcal{X} 42'10	
evening rise	4337 Dec 14 01:15	1° \mathcal{Z} 03'27			4338 Dec 06 11:15	0° \mathcal{Z}	
	4338 Jan 02 14:07	0° \approx		evening max el	4338 Dec 26 10:10	26° \mathcal{Z} 08'30	22°16'07
evening max el	4338 Jan 12 15:31	12° \approx 33'48	21°00'53		4338 Dec 30 22:17	0° \approx	
retrograde	4338 Jan 21 03:08	17° \approx 35'05		retrograde	4339 Jan 04 23:44	1° \approx 49'57	
asc. node	4338 Jan 21 22:12	17° \approx 31'39		asc. node	4339 Jan 08 19:14	0° \approx 32'50	
evening set	4338 Jan 25 05:06	16° \approx 00'39		evening set	4339 Jan 09 12:45	29° \mathcal{Z} 59'49	
inferior conj	4338 Jan 30 13:27	9° \approx 48'08	2°35'21		4339 Jan 09 12:39	30° \mathcal{R} \mathcal{Z}	
minimum elong	4338 Jan 30 10:59	9° \approx 56'38	2°34'39	inferior conj	4339 Jan 14 21:10	23° \mathcal{Z} 38'53	1°56'21
min. Earth dist.	4338 Jan 30 23:19	9° \approx 14'07	0.67735 AU	minimum elong	4339 Jan 14 18:56	23° \mathcal{Z} 46'39	1°55'35
morning rise	4338 Feb 04 16:42	3° \approx 35'12		min. Earth dist.	4339 Jan 14 19:19	23° \mathcal{Z} 45'19	0.68024 AU
direct	4338 Feb 10 00:51	1° \approx 14'17		morning rise	4339 Jan 20 01:00	17° \mathcal{Z} 28'32	
morning max el	4338 Feb 20 17:54	7° \approx 37'00	23°45'16	direct	4339 Jan 24 18:20	15° \mathcal{Z} 29'49	
desc. node	4338 Feb 27 18:05	15° \approx 40'41		morning max el	4339 Feb 03 05:08	21° \mathcal{Z} 03'25	22°16'51
	4338 Mar 10 05:08	0° \mathcal{H}			4339 Feb 10 20:08	0° \approx	
morning set	4338 Mar 28 04:16	28° \mathcal{H} 22'16		desc. node	4339 Feb 14 15:06	5° \approx 04'14	
	4338 Mar 29 03:04	0° \mathcal{Y}			4339 Mar 03 11:38	0° \mathcal{H}	
max. Earth dist.	4338 Apr 01 01:14	5° \mathcal{Y} 06'03	1.38654 AU	morning set	4339 Mar 08 15:08	8° \mathcal{H} 12'29	
				max. Earth dist.	4339 Mar 13 22:21	16° \mathcal{H} 58'29	1.40830 AU
					4339 Mar 21 10:32	0° \mathcal{Y}	
superior conj	4338 Apr 08 10:14	18° \mathcal{Y} 34'39	-1°38'34				
minimum elong	4338 Apr 08 15:02	18° \mathcal{Y} 57'18	1°38'01				
	4338 Apr 14 08:49	0° \mathcal{B}		superior conj	4339 Mar 21 17:05	0° \mathcal{Y} 29'16	-1°58'46
evening rise	4338 Apr 17 13:03	6° \mathcal{B} 12'20		minimum elong	4339 Mar 21 21:11	0° \mathcal{Y} 47'35	1°58'31
asc. node	4338 Apr 19 21:30	10° \mathcal{B} 45'57		evening rise	4339 Mar 31 23:34	19° \mathcal{Y} 24'30	
	4338 May 01 12:07	0° Π		asc. node	4339 Apr 06 18:33	0° \mathcal{B} 04'57	
evening max el	4338 May 03 21:32	2° Π 38'22	18°49'24		4339 Apr 06 17:27	0° \mathcal{B}	
retrograde	4338 May 12 04:02	6° Π 41'33		evening max el	4339 Apr 17 04:12	15° \mathcal{B} 16'32	18°18'13
evening set	4338 May 14 07:22	6° Π 26'19		retrograde	4339 Apr 24 08:47	18° \mathcal{B} 51'39	
inferior conj	4338 May 22 06:42	2° Π 06'43	1°15'41	evening set	4339 Apr 26 18:48	18° \mathcal{B} 28'16	
minimum elong	4338 May 22 09:25	2° Π 01'47	1°14'45	inferior conj	4339 May 03 23:04	13° \mathcal{B} 48'36	2°30'22
	4338 May 25 04:43	30° \mathcal{R} \mathcal{B}		minimum elong	4339 May 04 02:40	13° \mathcal{B} 40'57	2°29'28
min. Earth dist.	4338 May 25 11:57	29° \mathcal{B} 47'24	0.57086 AU	min. Earth dist.	4339 May 07 09:26	10° \mathcal{B} 54'45	0.59123 AU

morning rise	4339 May 11 07:39	8°8'11"20		min. Earth dist.	4340 Apr 18 14:07	23°9'04"21	0.61316 AU
desc. node	4339 May 13 14:20	7°8'08"18		morning rise	4340 Apr 22 02:30	20°9'11"28	
direct	4339 May 17 13:57	6°8'25"09		direct	4340 Apr 28 20:51	17°9'52"19	
morning max el	4339 May 31 23:16	14°8'13"14	27°17'54	desc. node	4340 Apr 29 11:21	17°9'53"23	
	4339 Jun 13 14:39	0°II		morning max el	4340 May 13 02:01	25°9'50"03	27°49'55
	4339 Jun 30 12:30	0°☾			4340 May 16 22:44	0°8	
morning set	4339 Jul 01 20:38	2°☾46"33			4340 Jun 06 02:24	0°II	
asc. node	4339 Jul 03 17:48	6°☾45"30		morning set	4340 Jun 15 00:58	17°II12'36	
				asc. node	4340 Jun 19 14:52	26°II52'06	
superior conj	4339 Jul 08 22:52	18°☾07"48	0°52'16	max. Earth dist.	4340 Jun 20 22:53	29°II45'37	1.32189 AU
minimum elong	4339 Jul 08 20:51	17°☾56"38	0°51'51		4340 Jun 21 01:32	0°☾	
max. Earth dist.	4339 Jul 08 12:56	17°☾13"02	1.31988 AU				
	4339 Jul 14 08:52	0°Ω		superior conj	4340 Jun 22 09:30	2°☾54"38	0°28'45
evening rise	4339 Jul 15 18:35	3°Ω00"06		minimum elong	4340 Jun 22 08:14	2°☾47"39	0°28'28
	4339 Jul 30 05:05	0°♊		evening rise	4340 Jun 29 05:46	17°☾49"13	
desc. node	4339 Aug 09 13:37	14°♊13'49			4340 Jul 05 05:14	0°Ω	
evening max el	4339 Aug 13 13:12	18°♊24'50	26°13'01	evening max el	4340 Jul 25 05:27	29°Ω19'59	24°52'08
retrograde	4339 Aug 27 12:31	25°♊33'55			4340 Jul 25 22:31	0°♊	
evening set	4339 Sep 03 00:18	23°♊50'57		desc. node	4340 Jul 26 10:38	0°♊27'21	
min. Earth dist.	4339 Sep 07 02:10	21°♊15'57	0.59154 AU	retrograde	4340 Aug 08 03:50	6°♊22'35	
inferior conj	4339 Sep 10 08:29	18°♊47'50	-4°56'02	evening set	4340 Aug 13 12:01	5°♊17'58	
minimum elong	4339 Sep 10 12:58	18°♊39'18	4°55'26	min. Earth dist.	4340 Aug 18 16:57	2°♊31'30	0.57190 AU
morning rise	4339 Sep 18 03:51	14°♊17'43		inferior conj	4340 Aug 21 14:16	0°♊37'28	-5°12'54
direct	4339 Sep 20 13:26	13°♊58'00		minimum elong	4340 Aug 21 14:04	0°♊37'48	5°12'55
morning max el	4339 Sep 28 11:50	17°♊47'49	18°26'01		4340 Aug 22 13:05	30°♊Ω	
asc. node	4339 Sep 29 17:01	19°♊02'43		morning rise	4340 Aug 29 18:33	26°Ω29'14	
	4339 Oct 07 07:14	0°♊		direct	4340 Sep 01 08:43	26°Ω10'08	
morning set	4339 Oct 14 12:27	13°♊21'08			4340 Sep 09 23:56	0°♊	
	4339 Oct 23 06:42	0°♊		morning max el	4340 Sep 10 12:04	0°♊27'47	19°15'09
				asc. node	4340 Sep 15 14:04	6°♊29'05	
superior conj	4339 Oct 23 13:05	0°♊29'30	1°22'53	morning set	4340 Sep 27 12:27	27°♊42'15	
minimum elong	4339 Oct 23 16:40	0°♊46'03	1°22'31		4340 Sep 28 16:04	0°♊	
max. Earth dist.	4339 Oct 31 00:19	13°♊50'26	1.40390 AU				
evening rise	4339 Nov 04 09:48	21°♊16'27		superior conj	4340 Oct 05 16:20	13°♊53'52	1°37'47
desc. node	4339 Nov 05 12:52	23°♊08'04		minimum elong	4340 Oct 05 18:25	14°♊04'02	1°37'39
	4339 Nov 09 19:10	0°♊		max. Earth dist.	4340 Oct 12 04:47	26°♊10'40	1.38298 AU
	4339 Nov 30 14:24	0°♊			4340 Oct 14 07:45	0°♊	
evening max el	4339 Dec 09 00:49	9°♊45'57	23°35'57	evening rise	4340 Oct 15 23:27	2°♊55'00	
retrograde	4339 Dec 19 17:22	16°♊04'55		desc. node	4340 Oct 22 09:55	13°♊46'19	
evening set	4339 Dec 24 18:56	13°♊58'57			4340 Nov 01 22:48	0°♊	
asc. node	4339 Dec 26 16:17	12°♊06'26		evening max el	4340 Nov 20 13:39	23°♊27'52	24°53'53
min. Earth dist.	4339 Dec 29 16:07	8°♊17'21	0.67950 AU		4340 Nov 30 05:46	0°♊	
inferior conj	4339 Dec 30 04:54	7°♊33'39	1°10'20	retrograde	4340 Dec 02 06:56	0°♊16'09	
minimum elong	4339 Dec 30 03:20	7°♊38'58	1°09'44		4340 Dec 04 05:53	30°♊♊	
morning rise	4340 Jan 04 11:43	1°♊27'36		evening set	4340 Dec 07 22:04	27°♊55'17	
	4340 Jan 07 09:08	30°♊♊		min. Earth dist.	4340 Dec 12 11:18	22°♊47'41	0.67527 AU
direct	4340 Jan 08 14:56	29°♊51'37		asc. node	4340 Dec 12 13:17	22°♊41'09	
	4340 Jan 09 21:34	0°♊		inferior conj	4340 Dec 13 10:50	21°♊30'05	0°18'20
morning max el	4340 Jan 16 22:14	4°♊39'17	20°55'24	minimum elong	4340 Dec 13 10:23	21°♊31'35	0°18'09
desc. node	4340 Feb 01 12:07	24°♊56'16		morning rise	4340 Dec 18 22:51	15°♊30'34	
	4340 Feb 04 22:36	0°♊		direct	4340 Dec 22 13:25	14°♊15'40	
morning set	4340 Feb 15 22:45	16°♊47'33		morning max el	4340 Dec 29 23:08	18°♊26'32	19°46'16
max. Earth dist.	4340 Feb 24 01:35	29°♊43'52	1.42793 AU		4341 Jan 08 03:46	0°♊	
	4340 Feb 24 05:33	0°♊		greatest brilliancy	4341 Jan 12 04:30	5°♊51'02	-0.7m
				desc. node	4341 Jan 18 09:09	15°♊09'14	
superior conj	4340 Mar 02 01:19	11°♊19'48	-2°07'58	morning set	4341 Jan 24 18:46	24°♊57'42	
minimum elong	4340 Mar 02 01:52	11°♊22'06	2°07'57		4341 Jan 28 00:52	0°♊	
	4340 Mar 12 18:12	0°♊		max. Earth dist.	4341 Feb 05 12:39	13°♊20'04	1.44289 AU
evening rise	4340 Mar 13 19:21	1°♊52'16					
asc. node	4340 Mar 23 15:36	18°♊57'15		superior conj	4341 Feb 10 07:51	21°♊01'44	-2°00'41
evening max el	4340 Mar 30 15:33	28°♊18'40	18°06'51	minimum elong	4341 Feb 10 02:22	20°♊39'34	2°00'24
	4340 Apr 01 14:52	0°♊			4341 Feb 15 19:33	0°♊	
retrograde	4340 Apr 06 05:43	1°♊41'37		evening rise	4341 Feb 23 20:04	13°♊27'47	
evening set	4340 Apr 08 22:09	1°♊07'50			4341 Mar 05 16:34	0°♊	
	4340 Apr 10 23:32	30°♊♊		asc. node	4341 Mar 10 12:37	7°♊14'43	
inferior conj	4340 Apr 15 10:49	26°♊07'49	3°14'24	evening max el	4341 Mar 14 04:23	11°♊36'30	18°14'30
minimum elong	4340 Apr 15 13:17	26°♊01'46	3°14'02	retrograde	4341 Mar 20 14:26	15°♊01'40	

evening set	4341 Mar 23 12:55	14° Υ 16'09		retrograde	4342 Mar 04 06:53	28° H 43'28	
inferior conj	4341 Mar 29 13:56	8° Υ 56'39	3°33'31	evening set	4342 Mar 07 11:34	27° H 45'27	
minimum elong	4341 Mar 29 14:41	8° Υ 54'36	3°33'28	inferior conj	4342 Mar 13 04:31	22° H 08'01	3°33'41
min. Earth dist.	4341 Apr 01 03:37	6° Υ 06'55	0.63380 AU	minimum elong	4342 Mar 13 03:43	22° H 10'25	3°33'38
morning rise	4341 Apr 04 15:25	2° Υ 49'47		min. Earth dist.	4342 Mar 15 02:32	19° H 48'29	0.65125 AU
direct	4341 Apr 11 12:33	0° Υ 08'14		morning rise	4342 Mar 18 19:23	15° H 55'56	
desc. node	4341 Apr 16 08:22	1° Υ 16'54		direct	4342 Mar 25 11:30	13° H 05'41	
morning max el	4341 Apr 25 09:30	8° Υ 06'39	27°44'21	desc. node	4342 Apr 03 05:23	16° H 48'51	
	4341 May 12 06:23	0° Z		morning max el	4342 Apr 07 19:24	20° H 54'55	27°04'51
	4341 May 29 07:28	0° Π			4342 Apr 15 16:00	0° Υ	
morning set	4341 May 29 22:40	1° Π 15'40			4342 May 05 09:27	0° Z	
max. Earth dist.	4341 Jun 04 03:24	11° Π 58'25	1.32825 AU	morning set	4342 May 13 10:51	14° Z 47'14	
asc. node	4341 Jun 06 11:53	16° Π 59'56		max. Earth dist.	4342 May 17 22:51	23° Z 42'09	1.33917 AU
					4342 May 21 00:13	0° Π	
superior conj	4341 Jun 06 17:05	17° Π 27'55	0°02'17				
minimum elong	4341 Jun 06 16:58	17° Π 27'18	0°02'15	superior conj	4342 May 21 19:37	1° Π 41'31	-0°26'18
behind sun begin	4341 Jun 06 11:43	16° Π 59'02		minimum elong	4342 May 21 21:00	1° Π 48'46	0°26'01
behind sun end	4341 Jun 06 22:14	17° Π 55'37		asc. node	4342 May 24 08:55	7° Π 05'12	
	4341 Jun 12 12:16	0° Z		evening rise	4342 May 29 04:09	17° Π 15'04	
evening rise	4341 Jun 13 17:34	2° Z 36'13			4342 Jun 04 13:03	0° Z	
	4341 Jun 28 17:25	0° Ω		evening max el	4342 Jun 18 11:35	20° Z 14'49	21°41'21
evening max el	4341 Jul 06 18:23	9° Ω 46'02	23°16'17	desc. node	4342 Jun 30 04:39	26° Z 22'06	
desc. node	4341 Jul 13 07:40	14° Ω 41'21		retrograde	4342 Jun 30 21:54	26° Z 23'19	
retrograde	4341 Jul 20 06:17	16° Ω 30'53		evening set	4342 Jul 03 11:14	26° Z 08'32	
evening set	4341 Jul 24 02:23	15° Ω 58'42		inferior conj	4342 Jul 12 19:51	22° Z 06'55	-3°31'21
min. Earth dist.	4341 Jul 31 03:48	12° Ω 45'30	0.55660 AU	minimum elong	4342 Jul 12 11:19	22° Z 18'50	3°28'52
inferior conj	4341 Aug 02 00:08	11° Ω 40'32	-4°47'34	min. Earth dist.	4342 Jul 12 14:08	22° Z 14'54	0.54875 AU
minimum elong	4341 Aug 01 17:50	11° Ω 49'49	4°46'36	morning rise	4342 Jul 21 12:40	18° Z 14'30	
morning rise	4341 Aug 10 11:37	7° Ω 47'47		direct	4342 Jul 24 19:56	17° Z 50'42	
direct	4341 Aug 13 09:06	7° Ω 27'31		morning max el	4342 Aug 06 01:49	23° Z 35'52	21°56'24
morning max el	4341 Aug 24 00:48	12° Ω 24'29	20°26'03		4342 Aug 11 18:16	0° Ω	
asc. node	4341 Sep 02 11:06	24° Ω 44'30		asc. node	4342 Aug 20 08:09	13° Ω 37'22	
	4341 Sep 05 11:17	0° P		morning set	4342 Aug 27 03:59	27° Ω 08'20	
morning set	4341 Sep 11 18:22	12° P 20'04			4342 Aug 28 12:41	0° P	
superior conj	4341 Sep 19 08:12	27° P 55'09	1°43'47	superior conj	4342 Sep 03 08:55	12° P 22'20	1°42'21
minimum elong	4341 Sep 19 08:40	27° P 57'27	1°43'47	minimum elong	4342 Sep 03 08:00	12° P 17'34	1°42'19
	4341 Sep 20 08:55	0° Z		max. Earth dist.	4342 Sep 07 01:32	20° P 01'04	1.34645 AU
max. Earth dist.	4341 Sep 24 11:40	8° Z 06'47	1.36322 AU	evening rise	4342 Sep 11 12:42	28° P 52'19	
evening rise	4341 Sep 28 09:49	15° Z 30'28			4342 Sep 12 02:48	0° Z	
	4341 Oct 06 16:52	0° M		desc. node	4342 Sep 26 03:58	24° Z 22'11	
desc. node	4341 Oct 09 06:57	4° M 12'57			4342 Sep 29 21:04	0° M	
	4341 Oct 27 12:47	0° X		evening max el	4342 Oct 16 14:47	20° M 47'20	26°54'58
evening max el	4341 Nov 03 02:13	7° X 10'49	26°02'44	retrograde	4342 Oct 29 18:40	28° M 03'58	
retrograde	4341 Nov 15 15:31	14° X 18'05		evening set	4342 Nov 05 11:51	25° M 23'27	
evening set	4341 Nov 21 20:24	11° X 44'50		min. Earth dist.	4342 Nov 09 11:12	21° M 26'58	0.65625 AU
min. Earth dist.	4341 Nov 26 02:27	7° X 12'32	0.66752 AU	inferior conj	4342 Nov 11 09:43	19° M 12'45	-1°39'17
inferior conj	4341 Nov 27 13:08	5° X 24'31	-0°38'39	minimum elong	4342 Nov 11 12:30	19° M 04'41	1°38'08
minimum elong	4341 Nov 27 14:10	5° X 21'18	0°38'13	asc. node	4342 Nov 16 07:21	14° M 21'12	
asc. node	4341 Nov 29 10:18	3° X 07'42		morning rise	4342 Nov 17 14:01	13° M 34'25	
	4341 Dec 02 16:39	30° K M		direct	4342 Nov 20 08:54	12° M 51'55	
morning rise	4341 Dec 03 08:23	29° M 34'08		morning max el	4342 Nov 26 21:21	16° M 22'44	18°14'36
direct	4341 Dec 06 12:04	28° M 37'17			4342 Dec 06 21:10	0° X	
	4341 Dec 10 11:29	0° X		morning set	4342 Dec 15 18:45	14° X 22'16	
morning max el	4341 Dec 13 07:31	2° X 22'48	18°52'17	desc. node	4342 Dec 23 03:13	26° X 14'56	
	4342 Jan 01 16:08	0° Z			4342 Dec 25 11:35	0° Z	
morning set	4342 Jan 04 04:38	3° Z 56'58		superior conj	4342 Dec 30 19:43	8° Z 27'17	-0°51'10
desc. node	4342 Jan 05 06:11	5° Z 37'08		minimum elong	4342 Dec 30 13:20	8° Z 02'08	0°50'20
max. Earth dist.	4342 Jan 19 05:46	27° Z 31'48	1.45132 AU	max. Earth dist.	4343 Jan 02 01:09	11° Z 57'21	1.45238 AU
					4343 Jan 13 14:11	0° \approx	
superior conj	4342 Jan 20 16:43	29° Z 49'12	-1°33'46				
minimum elong	4342 Jan 20 07:25	29° Z 12'38	1°32'53	evening rise	4343 Jan 16 01:49	3° \approx 52'37	
	4342 Jan 20 19:28	0° \approx		greatest brilliancy	4343 Jan 27 19:03	22° \approx 02'33	-0.7m
evening rise	4342 Feb 04 22:15	24° \approx 06'50			4343 Feb 02 04:20	0° H	
	4342 Feb 08 13:25	0° H		evening max el	4343 Feb 09 00:03	8° H 33'52	19°23'27
asc. node	4342 Feb 25 09:37	24° H 47'01		asc. node	4343 Feb 12 06:38	11° H 20'41	
evening max el	4342 Feb 25 15:59	25° H 03'23	18°40'24	retrograde	4343 Feb 16 03:33	12° H 39'43	

evening set	4343 Feb 19 15:18	11° K 28'25	evening rise	4343 Dec 26 13:57	13° Z 06'03
inferior conj	4343 Feb 25 03:07	5° K 35'15 3°19'31		4344 Jan 06 17:19	0° \approx
minimum elong	4343 Feb 25 01:16	5° K 41'16 3°19'15	evening max el	4344 Jan 23 03:12	22° \approx 06'19 20°21'41
min. Earth dist.	4343 Feb 26 10:01	3° K 54'42 0.66466 AU	asc. node	4344 Jan 30 03:40	26° \approx 41'26
	4343 Mar 01 18:32	30° R \approx	retrograde	4344 Jan 31 01:45	26° \approx 46'02
morning rise	4343 Mar 02 10:58	29° \approx 21'06	evening set	4344 Feb 03 21:58	25° \approx 20'31
direct	4343 Mar 08 16:45	26° \approx 34'55	inferior conj	4344 Feb 09 07:01	19° \approx 14'15 2°54'11
	4343 Mar 16 17:11	0° K	minimum elong	4344 Feb 09 04:38	19° \approx 22'21 2°53'37
morning max el	4343 Mar 21 05:11	4° K 02'01 25°58'55	min. Earth dist.	4344 Feb 10 00:13	18° \approx 15'47 0.67388 AU
desc. node	4343 Mar 21 02:25	3° K 55'02	morning rise	4344 Feb 14 11:06	13° \approx 00'11
	4343 Apr 10 00:45	0° Y	direct	4344 Feb 20 03:35	10° \approx 27'56
morning set	4343 Apr 26 09:35	27° Y 35'37	morning max el	4344 Mar 02 13:53	17° \approx 18'02 24°36'13
	4343 Apr 27 16:36	0° B	desc. node	4344 Mar 06 23:28	22° \approx 08'58
max. Earth dist.	4343 Apr 30 06:50	4° B 55'49 1.35465 AU		4344 Mar 13 04:12	0° K
				4344 Apr 02 01:15	0° Y
superior conj	4343 May 05 14:36	15° B 27'59 -0°55'40	morning set	4344 Apr 07 13:39	9° Y 26'36
minimum elong	4343 May 05 17:36	15° B 43'15 0°55'07	max. Earth dist.	4344 Apr 11 04:52	15° Y 57'00 1.37413 AU
asc. node	4343 May 11 05:57	27° B 03'22			
	4343 May 12 16:11	0° II	superior conj	4344 Apr 17 22:53	28° Y 39'28 -1°23'54
evening rise	4343 May 13 11:25	1° II 38'52	minimum elong	4344 Apr 18 03:17	29° Y 00'46 1°23'16
	4343 May 30 10:37	0° E		4344 Apr 18 15:28	0° B
evening max el	4343 May 31 15:39	1° E 14'45 20°19'32	evening rise	4344 Apr 26 13:03	15° B 41'04
retrograde	4343 Jun 11 11:23	6° E 31'59	asc. node	4344 Apr 27 02:59	16° B 50'20
evening set	4343 Jun 13 10:43	6° E 22'11		4344 May 04 01:44	0° II
desc. node	4343 Jun 17 01:39	5° E 18'06	evening max el	4344 May 13 08:08	12° II 56'59 19°16'31
inferior conj	4343 Jun 22 14:22	2° E 24'01 -1°38'17	retrograde	4344 May 22 10:49	17° II 23'18
minimum elong	4343 Jun 22 09:45	2° E 30'47 1°36'36	evening set	4344 May 24 10:49	17° II 11'24
min. Earth dist.	4343 Jun 24 02:14	1° E 31'27 0.55030 AU	inferior conj	4344 Jun 01 21:45	13° II 02'36 0°18'17
	4343 Jun 26 20:19	30° R II	minimum elong	4344 Jun 01 22:31	13° II 01'20 0°17'59
morning rise	4343 Jul 01 07:35	28° II 11'01	desc. node	4344 Jun 02 22:42	12° II 21'00
direct	4343 Jul 05 06:15	27° II 37'22	min. Earth dist.	4344 Jun 04 16:55	11° II 11'36 0.56122 AU
	4343 Jul 13 06:46	0° E	morning rise	4344 Jun 10 07:10	8° II 15'32
morning max el	4343 Jul 18 18:25	4° E 11'52 23°38'39	direct	4344 Jun 15 04:06	7° II 20'54
	4343 Aug 05 16:21	0° Q	morning max el	4344 Jun 29 08:18	14° II 34'19 25°19'30
asc. node	4343 Aug 07 05:12	2° Q 58'18		4344 Jul 11 14:11	0° E
morning set	4343 Aug 11 15:28	12° Q 01'44	asc. node	4344 Jul 24 02:15	22° E 39'18
			morning set	4344 Jul 26 03:06	26° E 54'31
superior conj	4343 Aug 18 15:32	27° Q 06'38 1°34'42		4344 Jul 27 13:51	0° Q
minimum elong	4343 Aug 18 13:42	26° Q 56'43 1°34'32			
	4343 Aug 19 23:49	0° P	superior conj	4344 Aug 02 01:40	11° Q 59'41 1°21'44
max. Earth dist.	4343 Aug 21 00:13	2° P 10'02 1.33360 AU	minimum elong	4344 Aug 01 23:23	11° Q 47'09 1°21'25
evening rise	4343 Aug 26 04:00	12° P 49'49	max. Earth dist.	4344 Aug 03 06:25	14° Q 36'56 1.32501 AU
	4343 Sep 04 07:52	0° A	evening rise	4344 Aug 09 04:11	27° Q 12'22
desc. node	4343 Sep 13 00:59	14° A 06'35		4344 Aug 10 12:59	0° P
	4343 Sep 25 02:54	0° M		4344 Aug 27 15:44	0° A
evening max el	4343 Sep 29 02:35	4° M 07'46 27°23'30	desc. node	4344 Aug 29 22:00	3° A 15'13
retrograde	4343 Oct 12 16:05	11° M 26'04	evening max el	4344 Sep 10 11:41	16° A 59'00 27°22'16
evening set	4343 Oct 19 17:55	8° M 46'37	retrograde	4344 Sep 24 06:48	24° A 13'58
min. Earth dist.	4343 Oct 23 11:32	5° M 24'16 0.64150 AU	evening set	4344 Oct 01 11:06	21° A 47'00
inferior conj	4343 Oct 25 22:15	2° M 50'16 -2°41'23	min. Earth dist.	4344 Oct 05 01:53	18° A 52'54 0.62362 AU
minimum elong	4343 Oct 26 02:49	2° M 38'13 2°39'42	inferior conj	4344 Oct 07 23:46	16° A 09'17 -3°41'29
	4343 Oct 28 18:50	30° R A	minimum elong	4344 Oct 08 05:39	15° A 55'29 3°39'43
morning rise	4343 Nov 01 13:03	27° A 26'57	morning rise	4344 Oct 15 01:54	11° A 04'09
asc. node	4343 Nov 03 04:24	26° A 58'55	direct	4344 Oct 17 10:44	10° A 39'09
direct	4343 Nov 04 01:30	26° A 54'58	asc. node	4344 Oct 20 01:28	11° A 10'34
	4343 Nov 10 05:32	0° M	morning max el	4344 Oct 24 06:03	14° A 07'15 17°51'04
morning max el	4343 Nov 10 13:54	0° M 20'22 17°53'54		4344 Nov 04 03:22	0° M
morning set	4343 Nov 27 13:02	26° M 10'10	morning set	4344 Nov 09 05:21	9° M 01'06
	4343 Nov 29 19:05	0° X			
desc. node	4343 Dec 10 00:15	16° X 59'18	superior conj	4344 Nov 20 08:49	28° M 33'38 0°38'05
			minimum elong	4344 Nov 20 12:09	28° M 47'48 0°37'37
superior conj	4343 Dec 10 13:28	17° X 52'57 -0°03'50		4344 Nov 21 05:12	0° X
minimum elong	4343 Dec 10 13:01	17° X 51'08 0°03'46	desc. node	4344 Nov 25 21:16	7° X 46'15
behind sun begin	4343 Dec 10 03:10	17° X 11'10	max. Earth dist.	4344 Nov 27 10:48	10° X 19'19 1.43337 AU
behind sun end	4343 Dec 10 22:52	18° X 31'03	evening rise	4344 Dec 05 01:18	22° X 24'02
max. Earth dist.	4343 Dec 15 19:38	26° X 18'44 1.44612 AU		4344 Dec 09 23:54	0° Z
	4343 Dec 18 03:39	0° Z		4344 Dec 31 02:10	0° \approx

evening max el	4345 Jan 05 00:52	5° \approx 39'56	21°32'02		4345 Dec 03 09:46	0° \approx	
retrograde	4345 Jan 13 23:19	10° \approx 58'16		evening max el	4345 Dec 18 17:43	19° \approx 15'49	22°49'56
asc. node	4345 Jan 16 00:44	10° \approx 35'22		retrograde	4345 Dec 28 18:38	25° \approx 13'12	
evening set	4345 Jan 18 05:43	9° \approx 17'28		evening set	4346 Jan 02 12:53	23° \approx 16'19	
inferior conj	4345 Jan 23 13:55	3° \approx 01'06	2°19'45	asc. node	4346 Jan 02 21:47	22° \approx 57'08	
minimum elong	4345 Jan 23 11:30	3° \approx 09'30	2°19'00	inferior conj	4346 Jan 07 21:50	16° \approx 53'18	1°37'38
min. Earth dist.	4345 Jan 23 18:46	2° \approx 44'18	0.67905 AU	minimum elong	4346 Jan 07 19:50	17° \approx 00'14	1°36'54
	4345 Jan 25 19:30	30° \approx 8'3		min. Earth dist.	4346 Jan 07 15:18	17° \approx 15'52	0.68042 AU
morning rise	4345 Jan 28 17:05	26° \approx 348'56		morning rise	4346 Jan 13 02:40	10° \approx 344'41	
direct	4345 Feb 02 19:00	24° \approx 336'54		direct	4346 Jan 17 13:58	8° \approx 55'34	
	4345 Feb 12 07:15	0° \approx		morning max el	4346 Jan 26 12:13	14° \approx 08'09	21°40'56
morning max el	4345 Feb 12 23:00	0° \approx 39'01	23°07'11		4346 Feb 08 04:02	0° \approx	
desc. node	4345 Feb 21 20:30	11° \approx 10'59		desc. node	4346 Feb 08 17:31	0° \approx 47'29	
	4345 Mar 07 01:57	0° \approx		morning set	4346 Feb 27 15:21	29° \approx 18'22	
morning set	4345 Mar 19 16:57	20° \approx 3'48			4346 Feb 28 01:47	0° \approx	
max. Earth dist.	4345 Mar 23 23:52	27° \approx 3'21'05	1.39585 AU	max. Earth dist.	4346 Mar 05 23:32	9° \approx 36'45	1.41709 AU
	4345 Mar 25 12:22	0° \approx					
				superior conj	4346 Mar 13 14:16	22° \approx 34'23	-2°04'21
superior conj	4345 Mar 31 16:27	11° \approx 05'53	-1°48'09	minimum elong	4346 Mar 13 17:15	22° \approx 47'26	2°04'13
minimum elong	4345 Mar 31 21:14	11° \approx 05'27'54	1°47'42		4346 Mar 17 18:54	0° \approx	
evening rise	4345 Apr 10 06:06	29° \approx 05'14'03		evening rise	4346 Mar 24 10:50	12° \approx 08'10	
	4345 Apr 10 15:41	0° \approx		asc. node	4346 Mar 31 21:05	25° \approx 05'29'39	
asc. node	4345 Apr 14 00:02	6° \approx 8'21'18			4346 Apr 03 14:44	0° \approx	
evening max el	4345 Apr 26 10:42	25° \approx 8'17'53	18°33'46	evening max el	4346 Apr 09 19:46	8° \approx 07'10	18°11'01
retrograde	4345 May 04 04:32	29° \approx 8'06'39		retrograde	4346 Apr 16 16:43	11° \approx 8'35'12	
evening set	4345 May 06 10:48	28° \approx 8'48'14		evening set	4346 Apr 19 05:39	11° \approx 8'07'27	
inferior conj	4345 May 14 01:44	24° \approx 8'20'28	1°51'17	inferior conj	4346 Apr 26 02:45	6° \approx 8'18'46	2°52'31
minimum elong	4345 May 14 05:11	24° \approx 8'13'47	1°50'14	minimum elong	4346 Apr 26 06:00	6° \approx 8'11'22	2°51'49
min. Earth dist.	4345 May 17 11:08	21° \approx 8'43'41	0.57913 AU	min. Earth dist.	4346 Apr 29 11:07	3° \approx 8'18'05	0.60055 AU
desc. node	4345 May 20 19:43	19° \approx 8'31'36		morning rise	4346 May 03 03:58	0° \approx 8'32'22	
morning rise	4345 May 21 20:22	18° \approx 8'59'33			4346 May 04 02:44	30° \approx 8'0'0	
direct	4345 May 27 16:10	17° \approx 8'33'35		desc. node	4346 May 07 16:44	28° \approx 05'42'49	
morning max el	4345 Jun 11 01:12	25° \approx 8'11'28	26°43'04	direct	4346 May 09 16:29	28° \approx 05'31'41	
	4345 Jun 15 12:04	0° \approx			4346 May 15 12:36	0° \approx	
	4345 Jul 04 18:09	0° \approx		morning max el	4346 May 24 00:23	6° \approx 8'23'58	27°36'12
morning set	4345 Jul 10 13:21	11° \approx 8'41'48			4346 Jun 10 17:10	0° \approx	
asc. node	4345 Jul 10 23:19	12° \approx 8'34'25		morning set	4346 Jun 24 20:23	26° \approx 8'17'10	
					4346 Jun 26 14:48	0° \approx	
superior conj	4345 Jul 17 13:25	26° \approx 8'55'15	1°04'13	asc. node	4346 Jun 27 20:21	2° \approx 8'37'50	
minimum elong	4345 Jul 17 11:09	26° \approx 8'42'48	1°03'48	max. Earth dist.	4346 Jul 01 04:43	9° \approx 8'55'19	1.32030 AU
max. Earth dist.	4345 Jul 17 17:11	27° \approx 8'16'03	1.32063 AU				
	4345 Jul 18 22:54	0° \approx		superior conj	4346 Jul 02 00:54	11° \approx 8'46'25	0°42'42
evening rise	4345 Jul 24 10:28	11° \approx 8'51'26		minimum elong	4346 Jul 01 23:09	11° \approx 8'36'44	0°42'20
	4345 Aug 02 17:05	0° \approx		evening rise	4346 Jul 08 20:26	26° \approx 8'38'32	
desc. node	4345 Aug 16 19:02	21° \approx 8'33'20			4346 Jul 10 10:43	0° \approx	
evening max el	4345 Aug 23 15:28	29° \approx 8'08'49	26°47'40		4346 Jul 27 13:59	0° \approx	
	4345 Aug 24 13:40	0° \approx		desc. node	4346 Aug 03 16:03	8° \approx 8'39'47	
retrograde	4345 Sep 06 13:33	6° \approx 8'19'03		evening max el	4346 Aug 05 11:41	10° \approx 8'29'04	25°41'17
evening set	4345 Sep 13 10:58	4° \approx 8'17'01		retrograde	4346 Aug 19 10:46	17° \approx 8'35'19	
min. Earth dist.	4345 Sep 17 05:32	1° \approx 8'39'48	0.60355 AU	evening set	4346 Aug 25 12:40	16° \approx 8'08'21	
	4345 Sep 19 06:32	30° \approx 8'8'0		min. Earth dist.	4346 Aug 29 23:43	13° \approx 8'30'57	0.58296 AU
inferior conj	4345 Sep 20 10:54	29° \approx 8'01'08	-4°33'28	inferior conj	4346 Sep 02 04:04	11° \approx 8'15'15	-5°07'17
minimum elong	4345 Sep 20 16:38	28° \approx 8'49'20	4°32'19	minimum elong	4346 Sep 02 06:56	11° \approx 8'10'06	5°07'05
morning rise	4345 Sep 28 00:15	24° \approx 8'17'20		morning rise	4346 Sep 10 03:28	6° \approx 8'54'46	
direct	4345 Sep 30 08:43	23° \approx 8'56'16		direct	4346 Sep 12 14:51	6° \approx 8'35'24	
asc. node	4345 Oct 06 22:31	26° \approx 8'49'15		morning max el	4346 Sep 21 00:09	10° \approx 8'35'12	18°44'16
morning max el	4345 Oct 07 18:34	27° \approx 8'35'20	18°07'21	asc. node	4346 Sep 23 19:33	13° \approx 8'40'21	
	4345 Oct 09 23:22	0° \approx			4346 Oct 03 20:44	0° \approx	
morning set	4345 Oct 23 13:33	22° \approx 8'37'16		morning set	4346 Oct 07 08:48	6° \approx 8'44'51	
	4345 Oct 27 12:13	0° \approx					
				superior conj	4346 Oct 15 23:39	23° \approx 8'25'50	1°30'23
superior conj	4345 Nov 02 05:50	10° \approx 8'29'13	1°09'41	minimum elong	4346 Oct 16 02:39	23° \approx 8'40'03	1°30'08
minimum elong	4345 Nov 02 09:54	10° \approx 8'47'24	1°09'12		4346 Oct 19 12:27	0° \approx	
max. Earth dist.	4345 Nov 09 21:24	23° \approx 8'46'14	1.41564 AU	max. Earth dist.	4346 Oct 23 03:28	6° \approx 8'30'48	1.39504 AU
desc. node	4345 Nov 12 18:18	28° \approx 8'32'40		evening rise	4346 Oct 27 03:27	13° \approx 8'25'39	
	4345 Nov 13 15:38	0° \approx		desc. node	4346 Oct 30 15:21	19° \approx 8'15'04	
evening rise	4345 Nov 15 03:11	2° \approx 8'24'13			4346 Nov 06 10:01	0° \approx	

	4346 Nov 28 12:45	0°♄		evening max el	4347 Nov 13 19:37	16°♄37'15	25°24'42
evening max el	4346 Dec 01 07:19	2°♄55'14	24°09'43	retrograde	4347 Nov 25 22:12	23°♄35'43	
retrograde	4346 Dec 12 10:35	9°♄27'32		evening set	4347 Dec 01 19:16	21°♄08'51	
evening set	4346 Dec 17 17:58	7°♄14'46		min. Earth dist.	4347 Dec 06 05:16	16°♄16'16	0.67236 AU
asc. node	4346 Dec 20 18:47	4°♄00'49		inferior conj	4347 Dec 07 09:34	14°♄44'56	-0°05'19
min. Earth dist.	4346 Dec 22 11:34	1°♄47'47	0.67815 AU	minimum elong	4347 Dec 07 09:42	14°♄44'30	0°05'16
inferior conj	4346 Dec 23 04:59	0°♄49'01	0°48'58	transit middle	4347 Dec 07 09:42	14°♄44'30	0°05'16
minimum elong	4346 Dec 23 03:51	0°♄52'52	0°48'30	transit begin	4347 Dec 07 07:04	14°♄53'02	
	4346 Dec 23 19:34	30°♄♂		transit end	4347 Dec 07 12:21	14°♄35'58	
morning rise	4346 Dec 28 13:47	24°♄45'47		asc. node	4347 Dec 07 15:48	14°♄24'51	
direct	4347 Jan 01 11:25	23°♄19'10		morning rise	4347 Dec 13 00:27	8°♄49'07	
morning max el	4347 Jan 09 08:39	27°♄49'31	20°24'21	direct	4347 Dec 16 10:01	7°♄42'32	
	4347 Jan 11 09:25	0°♄		morning max el	4347 Dec 23 12:58	11°♄41'31	19°21'23
desc. node	4347 Jan 26 14:33	20°♄49'22		greatest brilliancy	4348 Jan 05 21:15	29°♄32'48	-0.7m
	4347 Feb 01 16:48	0°♄			4348 Jan 06 04:29	0°♄	
morning set	4347 Feb 06 15:14	7°♄34'42		desc. node	4348 Jan 13 11:35	11°♄09'12	
max. Earth dist.	4347 Feb 16 06:45	22°♄47'27	1.43498 AU	morning set	4348 Jan 16 14:10	15°♄57'28	
	4347 Feb 20 17:10	0°♄			4348 Jan 25 14:41	0°♄	
				max. Earth dist.	4348 Jan 29 20:19	6°♄39'28	1.44730 AU
superior conj	4347 Feb 22 11:40	2°♄55'27	-2°07'11				
minimum elong	4347 Feb 22 09:47	2°♄47'40	2°07'08	superior conj	4348 Feb 02 07:44	12°♄10'13	-1°51'38
evening rise	4347 Mar 06 23:05	24°♄15'02		minimum elong	4348 Feb 01 23:57	11°♄39'16	1°51'05
	4347 Mar 10 06:00	0°♄			4348 Feb 13 07:40	0°♄	
asc. node	4347 Mar 18 18:06	14°♄08'17		evening rise	4348 Feb 16 14:29	5°♄26'30	
evening max el	4347 Mar 24 08:02	21°♄16'28	18°07'45		4348 Mar 02 23:45	0°♄	
retrograde	4347 Mar 30 19:23	24°♄39'02		asc. node	4348 Mar 04 15:07	2°♄07'48	
evening set	4347 Apr 02 14:20	24°♄00'26		evening max el	4348 Mar 06 20:33	4°♄38'14	18°23'20
inferior conj	4347 Apr 08 21:33	18°♄51'42	3°25'12	retrograde	4348 Mar 13 07:51	8°♄08'38	
minimum elong	4347 Apr 08 23:17	18°♄47'11	3°25'00	evening set	4348 Mar 16 08:47	7°♄18'04	
min. Earth dist.	4347 Apr 11 19:25	15°♄51'40	0.62219 AU	inferior conj	4348 Mar 22 05:59	1°♄50'49	3°35'34
morning rise	4347 Apr 15 06:45	12°♄49'46		minimum elong	4348 Mar 22 06:02	1°♄50'42	3°35'34
direct	4347 Apr 22 03:09	10°♄19'48			4348 Mar 23 20:15	30°♄♂	
desc. node	4347 Apr 24 13:45	10°♄37'19		min. Earth dist.	4348 Mar 24 13:09	29°♄12'04	0.64165 AU
morning max el	4347 May 06 05:40	18°♄19'06	27°52'08	morning rise	4348 Mar 28 02:28	25°♄40'58	
	4347 May 16 01:06	0°♄		direct	4348 Apr 03 22:12	22°♄53'47	
	4347 Jun 03 12:36	0°♄		desc. node	4348 Apr 10 10:46	24°♄59'09	
morning set	4347 Jun 08 22:11	10°♄34'19			4348 Apr 16 18:02	0°♄	
max. Earth dist.	4347 Jun 14 12:56	22°♄21'18	1.32408 AU	morning max el	4348 Apr 17 14:36	0°♄50'43	27°31'18
asc. node	4347 Jun 14 17:23	22°♄45'14			4348 May 09 03:04	0°♄	
				morning set	4348 May 22 16:16	24°♄25'23	
superior conj	4347 Jun 16 10:26	26°♄27'47	0°17'50		4348 May 25 11:02	0°♄	
minimum elong	4347 Jun 16 09:36	26°♄23'17	0°17'39	max. Earth dist.	4348 May 27 13:51	4°♄21'46	1.33224 AU
	4347 Jun 18 01:19	0°♄					
evening rise	4347 Jun 23 08:04	11°♄27'07		superior conj	4348 May 30 16:08	10°♄53'30	-0°09'41
	4347 Jul 02 18:15	0°♄		minimum elong	4348 May 30 16:38	10°♄56'06	0°09'34
evening max el	4347 Jul 18 01:27	21°♄07'21	24°12'05	behind sun begin	4348 May 30 12:16	10°♄32'49	
desc. node	4347 Jul 21 13:03	24°♄06'32		behind sun end	4348 May 30 21:00	11°♄19'24	
retrograde	4347 Jul 31 20:53	28°♄05'00		asc. node	4348 May 31 14:25	12°♄52'33	
evening set	4347 Aug 05 14:16	27°♄15'23		evening rise	4348 Jun 06 19:34	26°♄11'12	
min. Earth dist.	4347 Aug 11 12:07	24°♄19'11	0.56467 AU		4348 Jun 08 15:20	0°♄	
inferior conj	4347 Aug 14 01:02	22°♄44'18	-5°08'10		4348 Jun 27 03:39	0°♄	
minimum elong	4347 Aug 13 22:10	22°♄48'48	5°07'59	evening max el	4348 Jun 28 15:11	1°♄30'51	22°35'01
morning rise	4347 Aug 22 08:39	18°♄44'21		desc. node	4348 Jul 07 10:02	7°♄19'29	
direct	4347 Aug 25 01:37	18°♄25'03		retrograde	4348 Jul 11 18:42	8°♄03'14	
morning max el	4347 Sep 03 19:45	22°♄57'39	19°42'47	evening set	4348 Jul 14 23:48	7°♄40'33	
	4347 Sep 09 16:40	0°♄		min. Earth dist.	4348 Jul 22 22:48	4°♄11'45	0.55210 AU
asc. node	4347 Sep 10 16:35	1°♄28'58		inferior conj	4348 Jul 24 03:50	3°♄30'24	-4°21'21
morning set	4347 Sep 21 11:35	21°♄13'39		minimum elong	4348 Jul 23 19:48	3°♄41'52	4°19'36
	4347 Sep 25 19:28	0°♄			4348 Jul 31 12:02	30°♄♂	
				morning rise	4348 Aug 01 17:52	29°♄39'55	
superior conj	4347 Sep 29 08:47	7°♄07'34	1°41'19	direct	4348 Aug 04 18:47	29°♄18'45	
minimum elong	4347 Sep 29 10:10	7°♄14'25	1°41'16		4348 Aug 08 21:33	0°♄	
max. Earth dist.	4347 Oct 05 08:00	18°♄36'58	1.37425 AU	morning max el	4348 Aug 16 03:31	4°♄36'06	21°02'24
evening rise	4347 Oct 09 02:18	25°♄29'10		asc. node	4348 Aug 27 13:38	20°♄02'10	
	4347 Oct 11 15:50	0°♄			4348 Sep 01 21:05	0°♄	
desc. node	4347 Oct 17 12:21	9°♄48'50		morning set	4348 Sep 04 19:21	5°♄57'10	
	4347 Oct 30 23:57	0°♄					

superior conj	4348 Sep 12 04:53	21° \mathbb{M} 21'56	1°44'01	superior conj	4349 Aug 27 08:26	5° \mathbb{M} 57'28	1°39'49
minimum elong	4348 Sep 12 04:43	21° \mathbb{M} 21'04	1°44'00	minimum elong	4349 Aug 27 07:04	5° \mathbb{M} 50'14	1°39'43
	4348 Sep 16 11:17	0° \mathbb{L}		max. Earth dist.	4349 Aug 30 10:52	12° \mathbb{M} 28'53	1.34051 AU
max. Earth dist.	4348 Sep 16 17:08	0° \mathbb{L} 28'54	1.35562 AU	evening rise	4349 Sep 04 05:00	22° \mathbb{M} 05'38	
evening rise	4348 Sep 20 20:19	8° \mathbb{L} 26'49			4349 Sep 08 08:32	0° \mathbb{L}	
desc. node	4348 Oct 03 09:23	0° \mathbb{M} 09'17		desc. node	4349 Sep 20 06:24	20° \mathbb{L} 09'11	
	4348 Oct 03 07:03	0° \mathbb{M}			4349 Sep 27 01:30	0° \mathbb{M}	
	4348 Oct 26 00:24	0° \mathbb{J}		evening max el	4349 Oct 08 20:54	13° \mathbb{M} 51'11	27°10'25
evening max el	4348 Oct 26 08:13	0° \mathbb{J} 19'01	26°27'25	retrograde	4349 Oct 22 05:28	21° \mathbb{M} 08'44	
retrograde	4348 Nov 08 04:47	7° \mathbb{J} 32'00		evening set	4349 Oct 29 02:48	18° \mathbb{M} 27'51	
evening set	4348 Nov 14 14:59	4° \mathbb{J} 54'58		min. Earth dist.	4349 Nov 01 23:41	14° \mathbb{M} 45'58	0.65042 AU
min. Earth dist.	4348 Nov 18 18:07	0° \mathbb{J} 37'41	0.66314 AU	inferior conj	4349 Nov 04 03:15	12° \mathbb{M} 22'42	-2°05'36
	4348 Nov 19 06:40	30° \mathbb{R} \mathbb{M}		minimum elong	4349 Nov 04 06:49	12° \mathbb{M} 12'47	2°04'11
inferior conj	4348 Nov 20 09:44	28° \mathbb{M} 37'50	-1°04'03	morning rise	4349 Nov 10 11:51	6° \mathbb{M} 50'01	
minimum elong	4348 Nov 20 11:29	28° \mathbb{M} 32'32	1°03'18	asc. node	4349 Nov 10 09:53	6° \mathbb{M} 52'20	
asc. node	4348 Nov 23 12:49	25° \mathbb{M} 05'43		direct	4349 Nov 13 03:43	6° \mathbb{M} 12'22	
morning rise	4348 Nov 26 08:38	22° \mathbb{M} 52'02		morning max el	4349 Nov 19 15:14	9° \mathbb{M} 39'51	18°03'34
direct	4348 Nov 29 08:13	22° \mathbb{M} 01'51			4349 Dec 03 14:49	0° \mathbb{J}	
morning max el	4348 Dec 05 23:57	25° \mathbb{M} 40'17	18°34'07	morning set	4349 Dec 07 14:00	6° \mathbb{J} 34'24	
	4348 Dec 09 17:10	0° \mathbb{J}		desc. node	4349 Dec 17 05:41	22° \mathbb{J} 23'08	
morning set	4348 Dec 26 11:15	25° \mathbb{J} 31'27					
	4348 Dec 29 06:54	0° \mathbb{Z}		superior conj	4349 Dec 21 18:39	29° \mathbb{J} 39'27	-0°30'56
desc. node	4348 Dec 30 08:38	1° \mathbb{Z} 41'56		minimum elong	4349 Dec 21 14:49	29° \mathbb{J} 24'11	0°30'24
					4349 Dec 21 23:49	0° \mathbb{Z}	
superior conj	4349 Jan 11 11:35	20° \mathbb{Z} 47'02	-1°17'04	max. Earth dist.	4349 Dec 25 09:48	5° \mathbb{Z} 24'17	1.45065 AU
minimum elong	4349 Jan 11 02:45	20° \mathbb{Z} 12'22	1°16'04	evening rise	4350 Jan 07 02:15	25° \mathbb{Z} 09'52	
max. Earth dist.	4349 Jan 11 14:15	20° \mathbb{Z} 57'28	1.45271 AU		4350 Jan 10 05:27	0° \mathbb{X}	
	4349 Jan 17 08:30	0° \mathbb{X}		greatest brilliancy	4350 Jan 20 15:26	15° \mathbb{X} 51'24	-0.7m
evening rise	4349 Jan 27 06:37	15° \mathbb{X} 41'05			4350 Jan 31 00:27	0° \mathbb{X}	
greatest brilliancy	4349 Feb 05 02:09	29° \mathbb{X} 41'07	-0.8m	evening max el	4350 Feb 01 13:09	1° \mathbb{X} 39'42	19°46'36
	4349 Feb 05 06:57	0° \mathbb{X}		asc. node	4350 Feb 06 09:09	5° \mathbb{X} 22'05	
evening max el	4349 Feb 18 06:55	18° \mathbb{X} 07'21	18°56'47	retrograde	4350 Feb 08 23:52	5° \mathbb{X} 58'39	
asc. node	4349 Feb 19 12:07	19° \mathbb{X} 17'01		evening set	4350 Feb 12 15:08	4° \mathbb{X} 41'18	
retrograde	4349 Feb 25 02:20	21° \mathbb{X} 57'02			4350 Feb 17 01:56	30° \mathbb{R} \mathbb{X}	
evening set	4349 Feb 28 09:52	20° \mathbb{X} 53'35		inferior conj	4350 Feb 18 01:30	28° \mathbb{X} 42'22	3°09'58
inferior conj	4349 Mar 06 00:20	15° \mathbb{X} 09'28	3°29'10	minimum elong	4350 Feb 17 23:22	28° \mathbb{X} 49'28	3°09'34
minimum elong	4349 Mar 05 23:02	15° \mathbb{X} 13'33	3°29'03	min. Earth dist.	4350 Feb 19 02:23	27° \mathbb{X} 19'44	0.66914 AU
min. Earth dist.	4349 Mar 07 15:54	13° \mathbb{X} 05'33	0.65751 AU	morning rise	4350 Feb 23 07:24	22° \mathbb{X} 28'19	
morning rise	4349 Mar 11 11:48	8° \mathbb{X} 56'14		direct	4350 Mar 01 07:54	19° \mathbb{X} 47'05	
direct	4349 Mar 18 00:11	6° \mathbb{X} 05'58		morning max el	4350 Mar 13 09:37	26° \mathbb{X} 59'19	25°25'10
desc. node	4349 Mar 28 07:49	11° \mathbb{X} 14'45		desc. node	4350 Mar 15 04:52	28° \mathbb{X} 52'52	
morning max el	4349 Mar 31 00:28	13° \mathbb{X} 47'43	26°39'22		4350 Mar 16 05:08	0° \mathbb{X}	
	4349 Apr 13 03:51	0° \mathbb{Y}			4350 Apr 06 19:03	0° \mathbb{Y}	
	4349 May 01 19:48	0° \mathbb{Z}		morning set	4350 Apr 18 14:45	20° \mathbb{Y} 06'05	
morning set	4349 May 05 23:15	7° \mathbb{Z} 40'00		max. Earth dist.	4350 Apr 22 07:33	26° \mathbb{Y} 56'05	1.36257 AU
max. Earth dist.	4349 May 10 04:10	15° \mathbb{Z} 50'10	1.34515 AU		4350 Apr 23 22:18	0° \mathbb{Z}	
superior conj	4349 May 14 15:49	24° \mathbb{Z} 56'39	-0°38'45	superior conj	4350 Apr 28 06:43	8° \mathbb{Z} 30'01	-1°07'55
minimum elong	4349 May 14 17:53	25° \mathbb{Z} 07'22	0°38'21	minimum elong	4350 Apr 28 10:23	8° \mathbb{Z} 48'15	1°07'18
	4349 May 17 02:03	0° \mathbb{H}		asc. node	4350 May 05 08:30	22° \mathbb{Z} 49'43	
asc. node	4349 May 18 11:27	2° \mathbb{H} 55'16		evening rise	4350 May 06 10:14	25° \mathbb{Z} 00'24	
evening rise	4349 May 22 04:59	10° \mathbb{H} 44'17			4350 May 08 21:58	0° \mathbb{H}	
	4349 Jun 01 07:51	0° \mathbb{O}		evening max el	4350 May 23 22:10	23° \mathbb{H} 28'57	19°50'13
evening max el	4349 Jun 10 12:41	12° \mathbb{O} 11'04	21°04'35	retrograde	4350 Jun 02 23:38	28° \mathbb{H} 23'17	
retrograde	4349 Jun 22 07:34	17° \mathbb{O} 58'10		evening set	4350 Jun 04 22:16	28° \mathbb{H} 13'07	
desc. node	4349 Jun 24 07:04	17° \mathbb{O} 48'59		desc. node	4350 Jun 11 04:04	25° \mathbb{H} 46'07	
evening set	4349 Jun 24 12:42	17° \mathbb{O} 46'43		inferior conj	4350 Jun 13 19:41	24° \mathbb{H} 11'40	-0°47'16
inferior conj	4349 Jul 03 21:13	13° \mathbb{O} 49'02	-2°46'08	minimum elong	4350 Jun 13 17:30	24° \mathbb{H} 15'01	0°46'27
minimum elong	4349 Jul 03 13:45	13° \mathbb{O} 59'31	2°43'40	min. Earth dist.	4350 Jun 15 22:38	22° \mathbb{H} 53'42	0.55396 AU
min. Earth dist.	4349 Jul 04 09:52	13° \mathbb{O} 31'11	0.54818 AU	morning rise	4350 Jun 22 10:41	19° \mathbb{H} 45'32	
morning rise	4349 Jul 12 14:59	9° \mathbb{O} 50'07		direct	4350 Jun 26 18:27	19° \mathbb{H} 04'26	
direct	4349 Jul 16 04:10	9° \mathbb{O} 22'58		morning max el	4350 Jul 10 14:43	25° \mathbb{H} 56'17	24°22'42
morning max el	4349 Jul 29 00:15	15° \mathbb{O} 30'09	22°39'04		4350 Jul 14 11:10	0° \mathbb{O}	
	4349 Aug 09 06:31	0° \mathbb{O}		asc. node	4350 Aug 01 07:46	28° \mathbb{O} 38'31	
asc. node	4349 Aug 14 10:42	9° \mathbb{O} 08'09			4350 Aug 01 23:54	0° \mathbb{O}	
morning set	4349 Aug 20 06:00	20° \mathbb{O} 48'22		morning set	4350 Aug 04 17:46	5° \mathbb{O} 42'07	
	4349 Aug 24 13:34	0° \mathbb{M}					

superior conj	4350 Aug 11 16:48	20° Ω 46'01	1°29'48	asc. node	4351 Jul 19 04:50	18° \mathfrak{D} 26'16	
minimum elong	4350 Aug 11 14:43	20° Ω 34'40	1°29'34	morning set	4351 Jul 20 05:01	20° \mathfrak{D} 33'20	
max. Earth dist.	4350 Aug 13 13:15	24° Ω 46'34	1.32948 AU		4351 Jul 24 13:53	0° Ω	
	4350 Aug 16 00:04	0° \mathfrak{M}					
evening rise	4350 Aug 19 00:28	6° \mathfrak{M} 14'44		superior conj	4351 Jul 27 03:50	5° Ω 40'47	1°14'49
	4350 Aug 31 22:10	0° \mathfrak{L}		minimum elong	4351 Jul 27 01:30	5° Ω 27'57	1°14'28
desc. node	4350 Sep 07 03:25	9° \mathfrak{L} 39'47		max. Earth dist.	4351 Jul 27 21:52	7° Ω 19'58	1.32261 AU
evening max el	4350 Sep 21 07:57	27° \mathfrak{L} 01'02	27°26'51	evening rise	4351 Aug 03 03:31	20° Ω 44'59	
	4350 Sep 24 19:00	0° \mathfrak{M}			4351 Aug 07 17:40	0° \mathfrak{M}	
retrograde	4350 Oct 04 23:51	4° \mathfrak{M} 17'24		desc. node	4351 Aug 25 00:26	28° \mathfrak{M} 29'11	
evening set	4350 Oct 12 03:49	1° \mathfrak{M} 41'50			4351 Aug 26 03:50	0° \mathfrak{L}	
	4350 Oct 14 06:18	30° \mathfrak{R} \mathfrak{L}		evening max el	4351 Sep 03 14:56	9° \mathfrak{L} 35'30	27°11'37
min. Earth dist.	4350 Oct 15 19:48	28° \mathfrak{L} 32'37	0.63430 AU	retrograde	4351 Sep 17 11:21	16° \mathfrak{L} 48'48	
inferior conj	4350 Oct 18 11:28	25° \mathfrak{L} 53'16	-3°07'24	evening set	4351 Sep 24 14:16	14° \mathfrak{L} 30'31	
minimum elong	4350 Oct 18 16:42	25° \mathfrak{L} 40'08	3°05'36	min. Earth dist.	4351 Sep 28 05:21	11° \mathfrak{L} 45'47	0.61525 AU
morning rise	4350 Oct 25 07:02	20° \mathfrak{L} 37'15		inferior conj	4351 Oct 01 07:18	9° \mathfrak{L} 02'00	-4°05'01
direct	4350 Oct 27 17:44	20° \mathfrak{L} 08'30		minimum elong	4351 Oct 01 13:22	8° \mathfrak{L} 48'31	4°03'26
asc. node	4350 Oct 28 06:58	20° \mathfrak{L} 10'00		morning rise	4351 Oct 08 14:19	4° \mathfrak{L} 05'58	
morning max el	4350 Nov 03 07:58	23° \mathfrak{L} 33'42	17°50'27	direct	4351 Oct 10 22:36	3° \mathfrak{L} 42'59	
	4350 Nov 08 10:58	0° \mathfrak{M}		asc. node	4351 Oct 15 04:02	5° \mathfrak{L} 00'37	
morning set	4350 Nov 19 18:29	18° \mathfrak{M} 51'53		morning max el	4351 Oct 17 23:04	7° \mathfrak{L} 14'25	17°55'41
	4350 Nov 26 05:25	0° \mathfrak{L}			4351 Nov 01 14:59	0° \mathfrak{M}	
				morning set	4351 Nov 02 18:16	2° \mathfrak{M} 04'29	
superior conj	4350 Dec 01 22:41	9° \mathfrak{L} 35'34	0°15'05				
minimum elong	4350 Dec 02 00:16	9° \mathfrak{L} 42'03	0°14'51	superior conj	4351 Nov 13 05:32	20° \mathfrak{M} 50'37	0°52'50
behind sun begin	4350 Dec 01 20:31	9° \mathfrak{L} 26'34		minimum elong	4351 Nov 13 09:29	21° \mathfrak{M} 07'46	0°52'18
behind sun end	4350 Dec 02 04:00	9° \mathfrak{L} 57'30			4351 Nov 18 14:33	0° \mathfrak{L}	
desc. node	4350 Dec 04 02:42	13° \mathfrak{L} 09'04		max. Earth dist.	4351 Nov 20 17:10	3° \mathfrak{L} 29'44	1.42627 AU
max. Earth dist.	4350 Dec 08 03:45	19° \mathfrak{L} 41'04	1.44146 AU	desc. node	4351 Nov 20 23:44	3° \mathfrak{L} 56'45	
	4350 Dec 14 16:43	0° \mathfrak{L}		evening rise	4351 Nov 27 04:05	13° \mathfrak{L} 53'17	
evening rise	4350 Dec 17 12:02	4° \mathfrak{L} 20'36			4351 Dec 07 16:57	0° \mathfrak{L}	
	4351 Jan 03 16:39	0° \mathfrak{M}		evening max el	4351 Dec 29 09:18	28° \mathfrak{L} 47'04	22°04'27
evening max el	4351 Jan 15 13:57	15° \mathfrak{M} 12'38	20°50'22		4351 Dec 30 15:11	0° \mathfrak{M}	
retrograde	4351 Jan 23 22:02	20° \mathfrak{M} 08'16		retrograde	4352 Jan 07 18:58	4° \mathfrak{M} 22'46	
asc. node	4351 Jan 24 06:13	20° \mathfrak{M} 07'38		asc. node	4352 Jan 11 03:15	3° \mathfrak{M} 23'02	
evening set	4351 Jan 27 22:28	18° \mathfrak{M} 36'08		evening set	4352 Jan 12 06:11	2° \mathfrak{M} 35'06	
inferior conj	4351 Feb 02 06:56	12° \mathfrak{M} 25'00	2°40'35		4352 Jan 14 18:47	30° \mathfrak{R} \mathfrak{L}	
minimum elong	4351 Feb 02 04:29	12° \mathfrak{M} 33'28	2°39'55	inferior conj	4352 Jan 17 14:30	26° \mathfrak{L} 15'09	2°02'47
min. Earth dist.	4351 Feb 02 18:38	11° \mathfrak{M} 44'49	0.67657 AU	minimum elong	4352 Jan 17 12:12	26° \mathfrak{L} 23'08	2°02'00
morning rise	4351 Feb 07 10:19	6° \mathfrak{M} 11'44		min. Earth dist.	4352 Jan 17 14:22	26° \mathfrak{L} 15'39	0.68008 AU
direct	4351 Feb 12 20:36	3° \mathfrak{M} 47'51		morning rise	4352 Jan 22 18:05	20° \mathfrak{L} 04'10	
morning max el	4351 Feb 23 18:16	10° \mathfrak{M} 17'59	23°58'36	direct	4352 Jan 27 13:36	18° \mathfrak{L} 01'57	
desc. node	4351 Mar 02 01:54	17° \mathfrak{M} 29'16		morning max el	4352 Feb 06 04:52	23° \mathfrak{L} 43'05	22°29'38
	4351 Mar 11 09:09	0° \mathfrak{M}			4352 Feb 11 17:47	0° \mathfrak{M}	
	4351 Mar 30 12:35	0° \mathfrak{Y}		desc. node	4352 Feb 16 22:57	6° \mathfrak{M} 47'44	
morning set	4351 Mar 31 08:59	1° \mathfrak{Y} 27'23			4352 Mar 03 19:00	0° \mathfrak{M}	
max. Earth dist.	4351 Apr 04 03:48	8° \mathfrak{Y} 04'53	1.38328 AU	morning set	4352 Mar 11 00:08	11° \mathfrak{M} 29'44	
				max. Earth dist.	4352 Mar 15 23:52	19° \mathfrak{M} 48'07	1.40513 AU
superior conj	4351 Apr 11 09:15	21° \mathfrak{Y} 23'25	-1°34'53		4352 Mar 21 20:51	0° \mathfrak{Y}	
minimum elong	4351 Apr 11 13:59	21° \mathfrak{Y} 45'57	1°34'18				
	4351 Apr 15 20:21	0° \mathfrak{L}		superior conj	4352 Mar 23 18:58	3° \mathfrak{Y} 26'18	-1°56'19
evening rise	4351 Apr 20 08:35	8° \mathfrak{L} 51'21		minimum elong	4352 Mar 23 23:20	3° \mathfrak{Y} 45'58	1°55'59
asc. node	4351 Apr 22 05:32	12° \mathfrak{L} 30'40		evening rise	4352 Apr 02 20:52	22° \mathfrak{Y} 08'54	
	4351 May 02 06:31	0° \mathfrak{M}			4352 Apr 07 01:46	0° \mathfrak{L}	
evening max el	4351 May 06 19:11	5° \mathfrak{M} 27'50	18°55'45	asc. node	4352 Apr 08 02:33	1° \mathfrak{L} 52'51	
retrograde	4351 May 15 06:40	9° \mathfrak{M} 36'41		evening max el	4352 Apr 19 00:53	18° \mathfrak{L} 01'45	18°21'38
evening set	4351 May 17 08:59	9° \mathfrak{M} 22'29		retrograde	4352 Apr 26 08:33	21° \mathfrak{L} 39'52	
inferior conj	4351 May 25 11:21	5° \mathfrak{M} 05'46	1°01'30	evening set	4352 Apr 28 17:34	21° \mathfrak{L} 17'53	
minimum elong	4351 May 25 13:39	5° \mathfrak{M} 01'40	1°00'42	inferior conj	4352 May 06 00:31	16° \mathfrak{L} 41'28	2°21'07
min. Earth dist.	4351 May 28 14:29	2° \mathfrak{M} 53'15	0.56818 AU	minimum elong	4352 May 06 04:09	16° \mathfrak{L} 33'54	2°20'08
desc. node	4351 May 29 01:06	2° \mathfrak{M} 35'25		min. Earth dist.	4352 May 09 11:07	13° \mathfrak{L} 51'08	0.58800 AU
morning rise	4351 Jun 02 15:04	0° \mathfrak{M} 03'27		morning rise	4352 May 13 11:43	11° \mathfrak{L} 08'01	
	4351 Jun 02 18:28	30° \mathfrak{R} \mathfrak{L}		desc. node	4352 May 14 22:07	10° \mathfrak{L} 26'44	
direct	4351 Jun 07 21:49	28° \mathfrak{L} 56'49		direct	4352 May 19 15:33	9° \mathfrak{L} 26'59	
	4351 Jun 13 02:07	0° \mathfrak{M}		morning max el	4352 Jun 03 01:00	17° \mathfrak{L} 13'01	27°09'58
morning max el	4351 Jun 22 05:28	6° \mathfrak{M} 22'04	25°58'12		4352 Jun 13 14:40	0° \mathfrak{M}	
	4351 Jul 09 13:53	0° \mathfrak{L}			4352 Jul 01 00:39	0° \mathfrak{L}	

morning set	4352 Jul 03 14:04	5°☿16'15		asc. node	4353 Jun 21 22:51	28°♊31'37	
asc. node	4352 Jul 05 01:51	8°☿25'30			4353 Jun 22 15:13	0°☿	
				max. Earth dist.	4353 Jun 23 19:41	2°☿34'52	1.32136 AU
superior conj	4352 Jul 10 15:38	20°☿35'15	0°55'32				
minimum elong	4352 Jul 10 13:32	20°☿23'40	0°55'08	superior conj	4353 Jun 25 02:32	5°☿23'47	0°32'32
max. Earth dist.	4352 Jul 10 09:12	19°☿59'43	1.31991 AU	minimum elong	4353 Jun 25 01:07	5°☿16'01	0°32'14
	4352 Jul 14 22:26	0°♌		evening rise	4353 Jul 01 22:30	20°☿17'16	
evening rise	4352 Jul 17 11:34	5°♌28'03			4353 Jul 06 15:41	0°♌	
	4352 Jul 30 09:49	0°♍			4353 Jul 25 23:45	0°♍	
desc. node	4352 Aug 10 21:26	16°♍19'59		evening max el	4353 Jul 28 08:41	2°♍25'32	25°05'29
evening max el	4352 Aug 15 15:26	21°♍23'54	26°23'02	desc. node	4353 Jul 28 18:26	2°♍48'34	
retrograde	4352 Aug 29 14:39	28°♍33'31		retrograde	4353 Aug 11 07:27	9°♍29'01	
evening set	4352 Sep 05 05:18	26°♍45'22		evening set	4353 Aug 16 20:35	8°♍18'45	
min. Earth dist.	4352 Sep 09 04:47	24°♍10'19	0.59460 AU	min. Earth dist.	4353 Aug 21 20:19	5°♍35'08	0.57469 AU
inferior conj	4352 Sep 12 11:09	21°♍38'50	-4°50'53	inferior conj	4353 Aug 24 19:54	3°♍35'04	-5°12'45
minimum elong	4352 Sep 12 16:04	21°♍29'16	4°50'09	minimum elong	4353 Aug 24 20:36	3°♍33'53	5°12'44
morning rise	4352 Sep 20 05:01	17°♍05'08			4353 Aug 31 02:03	30°♌♌	
direct	4352 Sep 22 14:08	16°♍45'11		morning rise	4353 Sep 01 22:58	29°♌23'38	
morning max el	4352 Sep 30 09:05	20°♍32'04	18°20'31	direct	4353 Sep 04 12:22	29°♌04'29	
asc. node	4352 Oct 01 01:04	21°♍12'01			4353 Sep 08 17:26	0°♍	
	4352 Oct 07 12:44	0°♎		morning max el	4353 Sep 13 10:43	3°♍17'12	19°06'24
morning set	4352 Oct 16 07:39	15°♎55'14		asc. node	4353 Sep 17 22:06	8°♍29'31	
	4352 Oct 23 18:00	0°♏		morning set	4353 Sep 30 06:28	0°♎12'54	
					4353 Sep 30 03:52	0°♎	
superior conj	4352 Oct 25 12:04	3°♏14'08	1°19'44				
minimum elong	4352 Oct 25 15:49	3°♏31'19	1°19'20	superior conj	4353 Oct 08 12:58	16°♎31'21	1°36'07
max. Earth dist.	4352 Nov 02 01:01	16°♏36'40	1.40701 AU	minimum elong	4353 Oct 08 15:18	16°♎42'39	1°35'58
evening rise	4352 Nov 06 15:01	24°♏18'29		max. Earth dist.	4353 Oct 15 05:46	29°♎02'47	1.38611 AU
desc. node	4352 Nov 06 20:46	24°♏42'04			4353 Oct 15 18:29	0°♏	
	4352 Nov 10 03:18	0°♐		evening rise	4353 Oct 19 01:12	5°♏47'14	
	4352 Nov 30 14:03	0°♑		desc. node	4353 Oct 24 17:46	15°♏21'19	
evening max el	4352 Dec 11 00:28	12°♑24'21	23°24'01		4353 Nov 03 03:55	0°♐	
retrograde	4352 Dec 21 13:05	18°♑37'55		evening max el	4353 Nov 23 13:29	26°♐05'41	24°42'42
evening set	4352 Dec 26 12:39	16°♑34'25			4353 Nov 28 01:50	0°♑	
asc. node	4352 Dec 28 00:16	15°♑08'50		retrograde	4353 Dec 05 03:11	2°♑49'54	
inferior conj	4352 Dec 31 22:19	10°♑09'35	1°17'47	evening set	4353 Dec 10 16:19	0°♑31'07	
minimum elong	4352 Dec 31 20:38	10°♑15'23	1°17'07		4353 Dec 11 06:14	30°♌♐	
min. Earth dist.	4352 Dec 31 11:11	10°♑47'48	0.67987 AU	asc. node	4353 Dec 14 21:18	25°♐49'16	
morning rise	4353 Jan 06 04:32	4°♑02'44		min. Earth dist.	4353 Dec 15 06:41	25°♐18'30	0.67613 AU
direct	4353 Jan 10 09:51	2°♑23'18		inferior conj	4353 Dec 16 04:36	24°♐05'44	0°26'35
morning max el	4353 Jan 18 20:48	7°♑17'10	21°06'47	minimum elong	4353 Dec 16 03:57	24°♐07'53	0°26'18
desc. node	4353 Feb 02 19:59	26°♑36'21		morning rise	4353 Dec 21 15:43	18°♐05'12	
	4353 Feb 05 03:52	0°♒		direct	4353 Dec 25 08:05	16°♐47'17	
morning set	4353 Feb 18 11:16	20°♒14'18		morning max el	4354 Jan 01 20:30	21°♐02'42	19°55'41
	4353 Feb 24 14:11	0°♓			4354 Jan 09 05:06	0°♑	
max. Earth dist.	4353 Feb 26 02:01	2°♓25'50	1.42526 AU	desc. node	4354 Jan 20 17:01	16°♑46'42	
				morning set	4354 Jan 28 07:27	28°♑23'41	
superior conj	4353 Mar 05 06:55	14°♓27'38	-2°07'31		4354 Jan 29 08:23	0°♒	
minimum elong	4353 Mar 05 08:12	14°♓33'09	2°07'30	max. Earth dist.	4354 Feb 08 12:23	15°♒56'57	1.44104 AU
	4353 Mar 14 03:50	0°♔					
evening rise	4353 Mar 16 19:07	4°♔44'12		superior conj	4354 Feb 13 17:17	24°♒19'44	-2°03'02
asc. node	4353 Mar 25 23:34	20°♔49'57		minimum elong	4354 Feb 13 12:44	24°♒01'12	2°02'51
	4353 Apr 01 12:14	0°♕			4354 Feb 17 04:19	0°♓	
evening max el	4353 Apr 02 11:47	1°♕01'30	18°07'21	evening rise	4354 Feb 26 22:58	16°♓28'15	
retrograde	4353 Apr 09 03:18	4°♕25'09			4354 Mar 06 21:57	0°♔	
evening set	4353 Apr 11 18:53	3°♕52'57		asc. node	4354 Mar 12 20:35	9°♔13'27	
	4353 Apr 17 06:33	30°♌♕		evening max el	4354 Mar 17 00:34	14°♔17'33	18°12'09
inferior conj	4353 Apr 18 09:36	28°♔55'54	3°09'29	retrograde	4354 Mar 23 10:36	17°♔41'33	
minimum elong	4353 Apr 18 12:18	28°♔49'25	3°09'01	evening set	4354 Mar 26 08:12	16°♔57'48	
min. Earth dist.	4353 Apr 21 14:31	25°♔52'22	0.60992 AU	inferior conj	4354 Apr 01 10:42	11°♔40'58	3°31'56
morning rise	4353 Apr 25 03:42	23°♔01'57		minimum elong	4354 Apr 01 11:42	11°♔38'14	3°31'52
direct	4353 May 01 20:55	20°♔47'16		min. Earth dist.	4354 Apr 04 02:33	8°♔48'06	0.63089 AU
desc. node	4353 May 01 19:09	20°♔47'17		morning rise	4354 Apr 07 14:05	5°♔35'14	
morning max el	4353 May 16 02:46	28°♔43'41	27°47'34	direct	4354 Apr 14 11:16	2°♔56'24	
	4353 May 17 08:40	0°♖		desc. node	4354 Apr 18 16:11	3°♔48'29	
	4353 Jun 07 10:47	0°♗		morning max el	4354 Apr 28 09:46	10°♔55'03	27°47'31
morning set	4353 Jun 17 19:09	19°♗45'14			4354 May 13 09:52	0°♖	

	4354 May 30 19:09	0°♂			4355 Apr 16 11:33	0°♂	
morning set	4354 Jun 01 18:00	3°♂52'12			4355 May 06 18:04	0°♂	
max. Earth dist.	4354 Jun 07 01:20	14°♂51'42	1.32706 AU	morning set	4355 May 16 07:50	17°♂29'12	
asc. node	4354 Jun 08 19:52	18°♂39'26		max. Earth dist.	4355 May 20 22:22	26°♂40'10	1.33725 AU
					4355 May 22 13:09	0°♂	
superior conj	4354 Jun 09 10:41	19°♂59'21	0°06'28				
minimum elong	4354 Jun 09 10:23	19°♂57'41	0°06'23	superior conj	4355 May 24 14:08	4°♂16'12	-0°21'52
behind sun begin	4354 Jun 09 05:32	19°♂31'30		minimum elong	4355 May 24 15:16	4°♂22'12	0°21'39
behind sun end	4354 Jun 09 15:13	20°♂23'53		asc. node	4355 May 26 16:54	8°♂45'13	
	4354 Jun 14 01:26	0°♂		evening rise	4355 May 31 21:13	19°♂45'23	
evening rise	4354 Jun 16 10:19	5°♂05'00			4355 Jun 05 22:18	0°♂	
	4354 Jun 29 17:35	0°♂		evening max el	4355 Jun 21 13:33	23°♂19'46	21°54'51
evening max el	4354 Jul 09 21:33	12°♂53'43	23°30'47	desc. node	4355 Jul 02 12:27	29°♂28'41	
desc. node	4354 Jul 15 15:26	17°♂22'53		retrograde	4355 Jul 04 04:52	29°♂35'18	
retrograde	4354 Jul 23 11:42	19°♂42'19		evening set	4355 Jul 06 21:45	29°♂18'55	
evening set	4354 Jul 27 13:25	19°♂06'00		min. Earth dist.	4355 Jul 15 17:40	25°♂32'10	0.54931 AU
min. Earth dist.	4354 Aug 03 07:20	15°♂57'39	0.55851 AU	inferior conj	4355 Jul 16 05:41	25°♂15'20	-3°45'53
inferior conj	4354 Aug 05 08:30	14°♂44'39	-4°54'41	minimum elong	4355 Jul 15 21:03	25°♂27'26	3°43'32
minimum elong	4354 Aug 05 03:00	14°♂52'51	4°53'57	morning rise	4355 Jul 24 21:54	21°♂24'11	
morning rise	4354 Aug 13 19:02	10°♂50'30		direct	4355 Jul 28 03:19	21°♂01'17	
direct	4354 Aug 16 15:21	10°♂30'32		morning max el	4355 Aug 09 04:00	26°♂39'07	21°41'59
morning max el	4354 Aug 27 01:14	15°♂20'36	20°14'12		4355 Aug 12 09:01	0°♂	
asc. node	4354 Sep 04 19:08	26°♂38'20		asc. node	4355 Aug 22 16:11	15°♂26'23	
	4354 Sep 06 18:53	0°♂		morning set	4355 Aug 29 20:52	29°♂36'13	
morning set	4354 Sep 14 11:40	14°♂48'48			4355 Aug 30 01:26	0°♂	
	4354 Sep 21 21:39	0°♂					
superior conj	4354 Sep 22 03:13	0°♂28'05	1°43'23	superior conj	4355 Sep 06 02:51	14°♂52'33	1°43'00
minimum elong	4354 Sep 22 03:55	0°♂31'34	1°43'22	minimum elong	4355 Sep 06 02:08	14°♂48'45	1°42'58
max. Earth dist.	4354 Sep 27 12:00	11°♂01'26	1.36600 AU	max. Earth dist.	4355 Sep 10 00:31	22°♂54'25	1.34867 AU
evening rise	4354 Oct 01 08:43	18°♂14'47			4355 Sep 13 14:34	0°♂	
	4354 Oct 08 01:37	0°♂		evening rise	4355 Sep 14 09:26	1°♂30'50	
desc. node	4354 Oct 11 14:47	5°♂50'05		desc. node	4355 Sep 28 11:47	26°♂02'34	
	4354 Oct 28 09:28	0°♂			4355 Oct 01 01:30	0°♂	
evening max el	4354 Nov 06 01:57	9°♂48'42	25°53'22	evening max el	4355 Oct 19 14:28	23°♂26'48	26°48'32
retrograde	4354 Nov 18 12:33	16°♂53'57			4355 Oct 28 23:20	0°♂	
evening set	4354 Nov 24 15:29	14°♂22'08		retrograde	4355 Nov 01 16:41	0°♂43'03	
min. Earth dist.	4354 Nov 28 22:31	9°♂44'40	0.66888 AU		4355 Nov 05 04:29	30°♂	
inferior conj	4354 Nov 30 07:34	8°♂00'47	-0°29'46	evening set	4355 Nov 08 08:10	28°♂03'05	
minimum elong	4354 Nov 30 08:21	7°♂58'19	0°29'25	min. Earth dist.	4355 Nov 12 08:24	24°♂01'20	0.65812 AU
asc. node	4354 Dec 01 18:21	6°♂13'22		inferior conj	4355 Nov 14 05:11	21°♂50'30	-1°29'59
morning rise	4354 Dec 06 01:38	2°♂09'02		minimum elong	4355 Nov 14 07:41	21°♂43'09	1°28'55
direct	4354 Dec 09 06:47	1°♂09'47		asc. node	4355 Nov 18 15:25	17°♂17'00	
morning max el	4354 Dec 16 03:56	4°♂58'20	18°59'22	morning rise	4355 Nov 20 08:03	16°♂10'14	
	4355 Jan 02 23:02	0°♂		direct	4355 Nov 23 04:02	15°♂25'56	
morning set	4355 Jan 07 13:54	7°♂12'09		morning max el	4355 Nov 29 17:09	18°♂58'29	18°19'08
desc. node	4355 Jan 07 14:03	7°♂12'46			4355 Dec 08 01:44	0°♂	
max. Earth dist.	4355 Jan 22 04:49	0°♂04'48	1.45050 AU	morning set	4355 Dec 18 23:31	17°♂24'00	
	4355 Jan 22 03:35	0°♂		desc. node	4355 Dec 25 11:05	27°♂49'21	
					4355 Dec 26 19:50	0°♂	
superior conj	4355 Jan 24 04:37	3°♂13'05	-1°39'03	superior conj	4356 Jan 03 07:08	11°♂48'58	-0°58'14
minimum elong	4355 Jan 23 19:30	2°♂37'06	1°38'13	minimum elong	4356 Jan 02 23:58	11°♂20'44	0°57'18
evening rise	4355 Feb 08 04:39	27°♂16'00		max. Earth dist.	4356 Jan 04 23:49	14°♂28'38	1.45267 AU
	4355 Feb 09 20:53	0°♂			4356 Jan 14 21:49	0°♂	
asc. node	4355 Feb 27 17:37	26°♂53'32		evening rise	4356 Jan 19 11:18	7°♂08'39	
evening max el	4355 Feb 28 12:28	27°♂43'18	18°35'23	greatest brilliancy	4356 Jan 30 11:54	24°♂20'12	-0.8m
	4355 Mar 03 04:56	0°♂			4356 Feb 03 06:03	0°♂	
retrograde	4355 Mar 07 02:13	1°♂20'39		evening max el	4356 Feb 11 21:12	11°♂13'32	19°16'03
evening set	4355 Mar 10 05:53	0°♂24'35		asc. node	4356 Feb 14 14:41	13°♂37'11	
	4355 Mar 10 21:14	30°♂		retrograde	4356 Feb 18 22:27	15°♂15'03	
inferior conj	4355 Mar 15 23:49	24°♂49'38	3°34'37	evening set	4356 Feb 22 09:02	14°♂05'52	
minimum elong	4355 Mar 15 23:15	24°♂51'22	3°34'36	inferior conj	4356 Feb 27 21:27	8°♂15'00	3°22'25
min. Earth dist.	4355 Mar 18 00:11	22°♂24'50	0.64889 AU	minimum elong	4356 Feb 27 19:44	8°♂20'33	3°22'11
morning rise	4355 Mar 21 16:03	18°♂37'55		min. Earth dist.	4356 Feb 29 06:35	6°♂28'09	0.66292 AU
direct	4355 Mar 28 09:13	15°♂48'09		morning rise	4356 Mar 04 06:08	2°♂00'53	
desc. node	4355 Apr 05 13:14	19°♂03'21			4356 Mar 07 04:28	30°♂	
morning max el	4355 Apr 10 19:36	23°♂39'49	27°12'37	direct	4356 Mar 10 13:42	29°♂13'16	


































































































































	4356 Mar 14 05:10	0° H	min. Earth dist.	4357 Feb 11 19:53	20° \approx 47'22	0.67279 AU
desc. node	4356 Mar 22 10:17	5° H 57'13	morning rise	4357 Feb 16 05:10	15° \approx 38'06	
morning max el	4356 Mar 23 05:32	6° H 45'00 26°10'00	direct	4357 Feb 21 23:49	13° \approx 03'10	
	4356 Apr 10 05:42	0° Y	morning max el	4357 Mar 05 14:13	19° \approx 59'30	24°49'10
morning set	4356 Apr 28 08:55	0° B 25'21	desc. node	4357 Mar 09 07:20	24° \approx 02'08	
	4356 Apr 28 03:28	0° B		4357 Mar 14 03:37	0° H	
max. Earth dist.	4356 May 02 07:59	7° B 57'28 1.35202 AU		4357 Apr 03 09:35	0° Y	
			morning set	4357 Apr 10 16:09	12° Y 25'51	
superior conj	4356 May 07 10:28	18° B 07'42 -0°51'13	max. Earth dist.	4357 Apr 14 07:02	18° Y 57'58	1.37100 AU
minimum elong	4356 May 07 13:14	18° B 21'48 0°50'43		4357 Apr 20 03:06	0° B	
asc. node	4356 May 12 13:58	28° B 45'05				
	4356 May 13 04:24	0° II	superior conj	4357 Apr 20 20:36	1° B 25'10	-1°19'48
evening rise	4356 May 15 05:10	4° II 12'12	minimum elong	4357 Apr 21 00:49	1° B 45'49	1°19'10
	4356 May 29 22:00	0° E	evening rise	4357 Apr 29 07:49	18° B 18'11	
evening max el	4356 Jun 02 15:56	4° E 14'54 20°30'40	asc. node	4357 Apr 29 11:01	18° B 34'13	
retrograde	4356 Jun 13 17:58	9° E 40'02		4357 May 05 08:48	0° II	
evening set	4356 Jun 15 18:09	9° E 30'05	evening max el	4357 May 16 06:42	15° II 51'06	19°24'39
desc. node	4356 Jun 18 09:29	8° E 49'06	retrograde	4357 May 25 15:01	20° II 24'10	
inferior conj	4356 Jun 24 23:32	5° E 32'38 -1°56'34	evening set	4357 May 27 14:27	20° II 12'51	
minimum elong	4356 Jun 24 18:04	5° E 40'32 1°54'35	inferior conj	4357 Jun 05 04:17	16° II 06'22	0°01'39
min. Earth dist.	4356 Jun 26 05:40	4° E 49'01 0.54942 AU	minimum elong	4357 Jun 05 04:21	16° II 06'15	0°01'37
morning rise	4356 Jul 03 17:06	1° E 23'43	transit middle	4357 Jun 05 04:21	16° II 06'15	0°01'37
direct	4356 Jul 07 13:04	0° E 52'03	transit begin	4357 Jun 05 00:30	16° II 12'31	
morning max el	4356 Jul 20 21:35	7° E 20'01 23°23'07	transit end	4357 Jun 05 08:13	15° II 59'59	
	4356 Aug 06 01:18	0° O	desc. node	4357 Jun 05 06:31	16° II 02'45	
asc. node	4356 Aug 08 13:14	4° O 43'57	min. Earth dist.	4357 Jun 07 19:49	14° II 23'38	0.55908 AU
morning set	4356 Aug 13 08:14	14° O 29'44	morning rise	4357 Jun 13 15:24	11° II 24'55	
			direct	4357 Jun 18 08:56	10° II 34'05	
superior conj	4356 Aug 20 08:49	29° O 35'28 1°36'13	morning max el	4357 Jul 02 11:20	17° II 42'18	25°05'11
minimum elong	4356 Aug 20 07:06	29° O 26'12 1°36'05		4357 Jul 12 14:38	0° E	
	4356 Aug 20 13:23	0° M	asc. node	4357 Jul 26 10:17	24° E 22'18	
max. Earth dist.	4356 Aug 22 21:55	5° M 01'12 1.33525 AU	morning set	4357 Jul 28 19:58	29° E 22'54	
evening rise	4356 Aug 27 23:12	15° M 24'32		4357 Jul 29 02:58	0° O	
	4356 Sep 04 16:57	0° E				
desc. node	4356 Sep 14 08:49	15° E 51'39	superior conj	4357 Aug 04 18:34	14° O 27'36	1°24'01
	4356 Sep 24 18:29	0° M	minimum elong	4357 Aug 04 16:19	14° O 15'18	1°23'44
evening max el	4356 Oct 01 02:35	6° M 50'59 27°20'59	max. Earth dist.	4357 Aug 06 03:14	17° O 25'52	1.32606 AU
retrograde	4356 Oct 14 15:03	14° M 09'27	evening rise	4357 Aug 11 22:16	29° O 44'01	
evening set	4356 Oct 21 15:50	11° M 29'19		4357 Aug 12 01:23	0° M	
min. Earth dist.	4356 Oct 25 10:15	8° M 01'56 0.64393 AU		4357 Aug 28 18:42	0° E	
inferior conj	4356 Oct 27 19:06	5° M 30'24 -2°32'00	desc. node	4357 Sep 01 05:50	5° E 06'26	
minimum elong	4356 Oct 27 23:25	5° M 18'51 2°30'22	evening max el	4357 Sep 13 12:21	19° E 47'48	27°24'29
morning rise	4356 Nov 03 08:16	0° M 04'30	retrograde	4357 Sep 27 06:43	27° E 02'56	
	4356 Nov 03 12:36	30° R E	evening set	4357 Oct 04 11:09	24° E 33'29	
asc. node	4356 Nov 04 12:28	29° E 40'59	min. Earth dist.	4357 Oct 08 02:09	21° E 35'39	0.62650 AU
direct	4356 Nov 05 21:29	29° E 31'13	inferior conj	4357 Oct 10 22:28	18° E 52'50	-3°32'42
	4356 Nov 08 06:18	0° M	minimum elong	4357 Oct 11 04:12	18° E 39'06	3°30'55
morning max el	4356 Nov 12 09:29	2° M 57'00 17°55'47	morning rise	4357 Oct 17 22:53	13° E 44'38	
morning set	4356 Nov 29 13:57	29° M 00'45	direct	4357 Oct 20 08:06	13° E 18'44	
	4356 Nov 30 03:58	0° X	asc. node	4357 Oct 22 09:30	13° E 38'35	
desc. node	4356 Dec 11 08:07	18° X 32'56	morning max el	4357 Oct 27 01:51	16° E 45'51	17°50'16
				4357 Nov 05 10:38	0° M	
superior conj	4356 Dec 12 21:39	21° X 04'41 -0°10'49	morning set	4357 Nov 12 03:26	11° M 43'52	
minimum elong	4356 Dec 12 20:22	20° X 59'32 0°10'38		4357 Nov 22 14:48	0° X	
behind sun begin	4356 Dec 12 12:34	20° X 28'05				
behind sun end	4356 Dec 13 04:10	21° X 30'57	superior conj	4357 Nov 23 12:59	1° X 33'48	0°32'21
max. Earth dist.	4356 Dec 17 18:26	28° X 51'00 1.44754 AU	minimum elong	4357 Nov 23 15:58	1° X 46'21	0°31'56
	4356 Dec 18 11:53	0° Z	desc. node	4357 Nov 28 05:09	9° X 19'48	
evening rise	4356 Dec 29 00:53	16° Z 24'33	max. Earth dist.	4357 Nov 30 10:26	12° X 56'36	1.43568 AU
	4357 Jan 06 22:51	0° \approx	evening rise	4357 Dec 08 11:21	25° X 39'45	
greatest brilliancy	4357 Jan 12 16:35	8° \approx 32'59 -0.6m		4357 Dec 11 06:54	0° Z	
evening max el	4357 Jan 25 01:09	24° \approx 45'46 20°12'14		4357 Dec 31 23:42	0° \approx	
asc. node	4357 Jan 31 11:45	29° \approx 09'49	evening max el	4358 Jan 07 23:40	8° \approx 19'30	21°20'59
retrograde	4357 Feb 01 20:31	29° \approx 19'54	retrograde	4358 Jan 16 18:12	13° \approx 31'40	
evening set	4357 Feb 05 15:23	27° \approx 56'35	asc. node	4358 Jan 18 08:46	13° \approx 17'41	
inferior conj	4357 Feb 11 00:43	21° \approx 52'13 2°58'38	evening set	4358 Jan 20 23:02	11° \approx 53'07	
minimum elong	4357 Feb 10 22:23	22° \approx 00'06 2°58'07	inferior conj	4358 Jan 26 07:16	5° \approx 38'06	2°25'30

minimum elong	4358 Jan 26 04:49	5° \approx 46'35	2°24'46	evening set	4359 Jan 05 06:23	25° \approx 52'05	
min. Earth dist.	4358 Jan 26 13:52	5° \approx 15'17	0.67855 AU	asc. node	4359 Jan 05 05:47	25° \approx 53'19	
	4358 Jan 30 19:44	30° \approx 8'3		inferior conj	4359 Jan 10 15:07	19° \approx 32'43	1°44'29
morning rise	4358 Jan 31 10:25	29° \approx 32'540		minimum elong	4359 Jan 10 13:01	19° \approx 36'58	1°43'44
direct	4358 Feb 05 14:32	27° \approx 310'25		min. Earth dist.	4359 Jan 10 10:11	19° \approx 34'47	0.68046 AU
	4358 Feb 12 05:55	0° \approx		morning rise	4359 Jan 15 19:33	13° \approx 320'33	
morning max el	4358 Feb 15 23:03	3° \approx 19'39	23°20'29	direct	4359 Jan 20 08:58	11° \approx 328'04	
desc. node	4358 Feb 24 04:22	12° \approx 57'57		morning max el	4359 Jan 29 11:29	16° \approx 347'46	21°53'18
	4358 Mar 08 07:32	0° \approx			4359 Feb 09 06:05	0° \approx	
morning set	4358 Mar 22 23:27	23° \approx 14'42		desc. node	4359 Feb 11 01:23	2° \approx 29'57	
	4358 Mar 26 22:11	0° \approx			4359 Mar 01 09:41	0° \approx	
max. Earth dist.	4358 Mar 27 02:11	0° \approx 17'26	1.39258 AU	morning set	4359 Mar 03 02:05	2° \approx 41'04	
				max. Earth dist.	4359 Mar 09 00:56	12° \approx 24'56	1.41409 AU
superior conj	4358 Apr 03 16:37	13° \approx 58'55	-1°44'54				
minimum elong	4358 Apr 03 21:27	14° \approx 21'22	1°44'23	superior conj	4359 Mar 16 17:37	25° \approx 36'17	-2°02'38
	4358 Apr 12 02:18	0° \approx		minimum elong	4359 Mar 16 21:04	25° \approx 51'29	2°02'28
evening rise	4358 Apr 13 02:19	1° \approx 55'57			4359 Mar 19 05:00	0° \approx	
asc. node	4358 Apr 16 08:04	8° \approx 07'59		evening rise	4359 Mar 27 09:06	14° \approx 56'12	
evening max el	4358 Apr 29 07:55	28° \approx 06'20	18°38'49	asc. node	4359 Apr 03 05:04	27° \approx 19'59	
	4358 May 01 13:54	0° \approx			4359 Apr 04 18:36	0° \approx	
retrograde	4358 May 07 05:52	1° \approx 59'47		evening max el	4359 Apr 12 16:08	10° \approx 51'22	18°13'09
evening set	4358 May 09 11:08	1° \approx 42'30		retrograde	4359 Apr 19 15:33	14° \approx 821'39	
	4358 May 13 08:02	30° \approx 8'8		evening set	4359 Apr 22 03:27	13° \approx 855'29	
inferior conj	4358 May 17 04:59	27° \approx 817'37	1°39'12	inferior conj	4359 Apr 29 02:58	9° \approx 809'51	2°45'12
minimum elong	4358 May 17 08:13	27° \approx 811'27	1°38'10	minimum elong	4359 Apr 29 06:23	9° \approx 802'17	2°44'25
min. Earth dist.	4358 May 20 13:14	24° \approx 846'35	0.57615 AU	min. Earth dist.	4359 May 02 12:13	6° \approx 811'05	0.59725 AU
desc. node	4358 May 23 03:32	23° \approx 803'15		morning rise	4359 May 06 06:45	3° \approx 826'24	
morning rise	4358 May 25 02:06	22° \approx 801'23		desc. node	4359 May 10 00:34	1° \approx 850'59	
direct	4358 May 30 18:41	20° \approx 840'42		direct	4359 May 12 17:13	1° \approx 830'47	
morning max el	4358 Jun 14 03:30	28° \approx 815'21	26°32'20	morning max el	4359 May 27 01:46	9° \approx 821'46	27°30'38
	4358 Jun 15 20:47	0° \approx			4359 Jun 11 21:44	0° \approx	
	4358 Jul 06 03:56	0° \approx		morning set	4359 Jun 27 14:06	28° \approx 848'29	
morning set	4358 Jul 13 06:29	14° \approx 11'04			4359 Jun 28 03:46	0° \approx	
asc. node	4358 Jul 13 07:19	14° \approx 15'27		asc. node	4359 Jun 30 04:21	4° \approx 17'50	
				max. Earth dist.	4359 Jul 04 01:12	12° \approx 43'37	1.32004 AU
superior conj	4358 Jul 20 06:08	29° \approx 22'43	1°07'08				
minimum elong	4358 Jul 20 03:50	29° \approx 10'05	1°06'45	superior conj	4359 Jul 04 17:44	14° \approx 14'45	0°46'12
max. Earth dist.	4358 Jul 20 13:35	0° \approx 03'52	1.32105 AU	minimum elong	4359 Jul 04 15:52	14° \approx 04'28	0°45'50
	4358 Jul 20 12:53	0° \approx		evening rise	4359 Jul 11 13:15	29° \approx 06'45	
evening rise	4358 Jul 27 03:45	14° \approx 020'41			4359 Jul 11 23:18	0° \approx	
	4358 Aug 04 01:57	0° \approx			4359 Jul 28 12:48	0° \approx	
desc. node	4358 Aug 19 02:49	23° \approx 833'03		desc. node	4359 Aug 05 23:49	10° \approx 852'06	
	4358 Aug 24 15:17	0° \approx		evening max el	4359 Aug 08 14:19	13° \approx 831'31	25°52'59
evening max el	4358 Aug 26 17:04	2° \approx 04'05	26°54'53	retrograde	4359 Aug 22 13:30	20° \approx 838'56	
retrograde	4358 Sep 09 14:36	9° \approx 014'46		evening set	4359 Aug 28 19:14	19° \approx 806'08	
evening set	4358 Sep 16 13:53	7° \approx 08'09		min. Earth dist.	4359 Sep 02 02:37	16° \approx 830'03	0.58593 AU
min. Earth dist.	4358 Sep 20 07:13	4° \approx 29'32	0.60664 AU	inferior conj	4359 Sep 05 07:59	14° \approx 809'33	-5°04'00
inferior conj	4358 Sep 23 11:55	1° \approx 049'05	-4°26'30	minimum elong	4359 Sep 05 11:31	14° \approx 803'07	5°03'39
minimum elong	4358 Sep 23 17:49	1° \approx 036'41	4°25'13	morning rise	4359 Sep 13 06:02	9° \approx 845'49	
	4358 Sep 25 17:36	30° \approx 8'8		direct	4359 Sep 15 16:43	9° \approx 826'22	
morning rise	4358 Sep 30 23:40	27° \approx 802'01		morning max el	4359 Sep 23 21:59	13° \approx 822'20	18°37'25
direct	4358 Oct 03 08:01	26° \approx 840'29		asc. node	4359 Sep 26 03:34	15° \approx 846'12	
asc. node	4358 Oct 09 06:32	29° \approx 804'49			4359 Oct 05 06:02	0° \approx	
	4358 Oct 10 07:54	0° \approx		morning set	4359 Oct 10 03:26	9° \approx 818'02	
morning max el	4358 Oct 10 15:06	0° \approx 17'10	18°03'41				
morning set	4358 Oct 26 09:34	25° \approx 814'20		superior conj	4359 Oct 18 21:33	26° \approx 808'07	1°27'54
	4358 Oct 28 22:59	0° \approx		minimum elong	4359 Oct 19 00:47	26° \approx 823'15	1°27'36
					4359 Oct 20 23:29	0° \approx	
superior conj	4358 Nov 05 06:27	13° \approx 819'13	1°05'36	max. Earth dist.	4359 Oct 26 04:26	9° \approx 820'48	1.39817 AU
minimum elong	4358 Nov 05 10:33	13° \approx 837'25	1°05'06	evening rise	4359 Oct 30 07:08	16° \approx 824'05	
max. Earth dist.	4358 Nov 12 22:01	26° \approx 830'27	1.41851 AU	desc. node	4359 Nov 01 23:09	20° \approx 849'46	
desc. node	4358 Nov 15 02:09	0° \approx 06'30			4359 Nov 07 17:01	0° \approx	
	4358 Nov 15 00:34	0° \approx			4359 Nov 29 05:29	0° \approx	
evening rise	4358 Nov 18 10:21	5° \approx 031'59		evening max el	4359 Dec 04 06:58	5° \approx 833'38	23°57'53
	4358 Dec 04 13:32	0° \approx		retrograde	4359 Dec 15 06:33	12° \approx 801'34	
evening max el	4358 Dec 21 17:05	21° \approx 854'54	22°38'01	evening set	4359 Dec 20 11:53	9° \approx 851'06	
retrograde	4358 Dec 31 13:57	27° \approx 846'41		asc. node	4359 Dec 23 02:48	7° \approx 807'15	

inferior conj	4359 Dec 25 22:30	3° S 25'21	0°56'45	min. Earth dist.	4360 Dec 08 01:00	18° S 48'03	0.67346 AU
minimum elong	4359 Dec 25 21:12	3° S 29'45	0°56'14	asc. node	4360 Dec 08 23:50	17° S 33'46	
min. Earth dist.	4359 Dec 25 06:41	4° S 19'00	0.67873 AU	inferior conj	4360 Dec 09 03:38	17° S 21'25	0°03'14
	4359 Dec 28 13:58	30° R 7		minimum elong	4360 Dec 09 03:33	17° S 21'42	0°03'13
morning rise	4359 Dec 31 06:34	27° S 21'05		transit middle	4360 Dec 09 03:33	17° S 21'42	0°03'13
direct	4360 Jan 04 06:06	25° S 51'18		transit begin	4360 Dec 09 00:49	17° S 30'35	
	4360 Jan 11 19:35	0° S		transit end	4360 Dec 09 06:16	17° S 12'49	
morning max el	4360 Jan 12 06:46	0° S 27'29	20°34'54	morning rise	4360 Dec 14 17:28	11° S 24'13	
desc. node	4360 Jan 28 22:26	22° S 28'34		direct	4360 Dec 18 04:44	10° S 14'48	
	4360 Feb 02 23:13	0° \approx		morning max el	4360 Dec 25 09:55	14° S 17'49	19°29'44
morning set	4360 Feb 10 04:16	11° \approx 02'49			4361 Jan 06 09:04	0° S	
max. Earth dist.	4360 Feb 19 06:41	25° \approx 26'42	1.43266 AU	greatest brilliancy	4361 Jan 07 13:32	1° S 45'51	-0.7m
	4360 Feb 22 01:56	0° H		desc. node	4361 Jan 14 19:28	12° S 45'58	
				morning set	4361 Jan 19 01:41	19° S 19'43	
superior conj	4360 Feb 25 18:50	6° H 07'36	-2°07'50		4361 Jan 25 22:32	0° \approx	
minimum elong	4360 Feb 25 17:52	6° H 03'33	2°07'50	max. Earth dist.	4361 Jan 31 19:22	9° \approx 13'18	1.44590 AU
evening rise	4360 Mar 09 00:04	27° H 10'30					
	4360 Mar 10 14:32	0° Y		superior conj	4361 Feb 04 18:31	15° \approx 31'51	-1°55'17
asc. node	4360 Mar 20 02:05	16° Y 03'30		minimum elong	4361 Feb 04 11:28	15° \approx 03'40	1°54'50
evening max el	4360 Mar 26 04:06	23° Y 58'00	18°07'02		4361 Feb 13 16:07	0° H	
retrograde	4360 Apr 01 16:17	27° Y 20'29		evening rise	4361 Feb 18 18:51	8° H 30'44	
evening set	4360 Apr 04 10:19	26° Y 43'37			4361 Mar 03 22:57	0° Y	
inferior conj	4360 Apr 10 19:22	21° Y 37'56	3°21'46	asc. node	4361 Mar 06 23:07	4° Y 09'59	
minimum elong	4360 Apr 10 21:22	21° Y 32'50	3°21'31	evening max el	4361 Mar 09 16:51	7° Y 18'59	18°19'52
min. Earth dist.	4360 Apr 13 19:16	18° Y 36'07	0.61907 AU	retrograde	4361 Mar 16 03:32	10° Y 47'14	
morning rise	4360 Apr 17 06:46	15° Y 37'40		evening set	4361 Mar 19 03:36	9° Y 58'29	
direct	4360 Apr 24 02:35	13° Y 11'12		inferior conj	4361 Mar 25 02:04	4° Y 34'00	3°35'08
desc. node	4360 Apr 25 21:37	13° Y 20'38		minimum elong	4361 Mar 25 02:21	4° Y 33'11	3°35'08
morning max el	4360 May 08 06:13	21° Y 10'23	27°52'11	min. Earth dist.	4361 Mar 27 11:34	1° Y 51'00	0.63898 AU
	4360 May 15 22:00	0° B			4361 Mar 29 05:58	30° R 8	
	4360 Jun 03 22:41	0° II		morning rise	4361 Mar 31 00:14	28° H 25'05	
morning set	4360 Jun 10 16:49	13° II 08'39		direct	4361 Apr 06 20:38	25° H 39'29	
asc. node	4360 Jun 16 01:22	24° II 24'45		desc. node	4361 Apr 12 18:40	27° H 22'49	
max. Earth dist.	4360 Jun 16 10:04	25° II 11'44	1.32316 AU		4361 Apr 16 15:01	0° Y	
				morning max el	4361 Apr 20 14:43	3° Y 37'17	27°36'32
superior conj	4360 Jun 18 03:41	28° II 57'52	0°21'48		4361 May 10 09:17	0° B	
minimum elong	4360 Jun 18 02:41	28° II 52'26	0°21'35	morning set	4361 May 25 12:16	27° B 04'16	
	4360 Jun 18 15:03	0° S			4361 May 26 23:25	0° II	
evening rise	4360 Jun 25 00:45	13° S 55'18		max. Earth dist.	4361 May 30 12:17	7° II 16'30	1.33073 AU
	4360 Jul 03 01:54	0° Ω					
evening max el	4360 Jul 20 04:48	24° Ω 14'56	24°26'26	superior conj	4361 Jun 02 10:08	13° II 26'32	-0°05'21
desc. node	4360 Jul 22 20:50	26° Ω 36'10		minimum elong	4361 Jun 02 10:24	13° II 27'59	0°05'19
	4360 Jul 28 08:18	0° M		behind sun begin	4361 Jun 02 05:19	13° II 00'44	
retrograde	4360 Aug 03 01:36	1° M 14'50		behind sun end	4361 Jun 02 15:30	13° II 55'16	
evening set	4360 Aug 08 00:18	0° M 20'07		asc. node	4361 Jun 02 22:25	14° II 32'22	
	4360 Aug 08 21:07	30° R 8		evening rise	4361 Jun 09 12:26	28° II 40'37	
min. Earth dist.	4360 Aug 13 15:47	27° Ω 27'40	0.56706 AU		4361 Jun 10 03:30	0° S	
inferior conj	4360 Aug 16 08:02	25° Ω 45'42	-5°10'57		4361 Jun 27 13:31	0° Ω	
minimum elong	4360 Aug 16 06:07	25° Ω 48'44	5°10'51	evening max el	4361 Jul 01 18:07	4° Ω 38'33	22°49'23
morning rise	4360 Aug 24 14:31	21° Ω 43'04		desc. node	4361 Jul 09 17:52	10° Ω 11'26	
direct	4360 Aug 27 06:24	21° Ω 23'54		retrograde	4361 Jul 15 00:58	11° Ω 15'37	
morning max el	4360 Sep 05 19:17	25° Ω 51'07	19°32'39	evening set	4361 Jul 18 11:04	10° Ω 50'00	
	4360 Sep 09 12:51	0° M		min. Earth dist.	4361 Jul 26 02:32	7° Ω 26'55	0.55350 AU
asc. node	4360 Sep 12 00:37	3° M 27'03		inferior conj	4361 Jul 27 13:08	6° Ω 37'14	-4°31'49
morning set	4360 Sep 23 05:19	23° M 44'12		minimum elong	4361 Jul 27 05:35	6° Ω 48'05	4°30'21
	4360 Sep 26 07:51	0° L		morning rise	4361 Aug 05 02:17	2° Ω 46'14	
				direct	4361 Aug 08 01:57	2° Ω 25'25	
superior conj	4360 Oct 01 04:44	9° L 43'59	1°40'13	morning max el	4361 Aug 19 04:46	7° Ω 35'37	20°49'18
minimum elong	4360 Oct 01 06:22	9° L 52'02	1°40'08	asc. node	4361 Aug 29 21:41	21° Ω 53'56	
max. Earth dist.	4360 Oct 07 08:43	21° L 30'55	1.37728 AU		4361 Sep 03 07:47	0° M	
evening rise	4360 Oct 11 02:51	28° L 18'57		morning set	4361 Sep 07 12:30	8° M 25'35	
	4360 Oct 12 01:46	0° M					
desc. node	4360 Oct 18 20:10	11° M 24'59		superior conj	4361 Sep 14 23:26	23° M 53'42	1°44'03
	4360 Oct 31 02:30	0° S		minimum elong	4361 Sep 14 23:29	23° M 53'57	1°44'04
evening max el	4360 Nov 15 19:26	19° S 15'31	25°14'06		4361 Sep 17 23:48	0° L	
retrograde	4360 Nov 27 18:56	26° S 10'47		max. Earth dist.	4361 Sep 19 16:58	3° L 23'31	1.35823 AU
evening set	4360 Dec 03 13:53	23° S 45'59		evening rise	4361 Sep 23 18:17	11° L 08'53	

	4361 Oct 04 14:25	0°♍		4362 Sep 09 19:32	0°♎
desc. node	4361 Oct 05 17:10	1°♍47'24	desc. node	4362 Sep 22 14:12	21°♎50'47
	4361 Oct 26 10:45	0°♌		4362 Sep 28 02:41	0°♍
evening max el	4361 Oct 29 08:04	2°♌57'46 26°19'10	evening max el	4362 Oct 11 20:48	16°♍32'01 27°05'35
retrograde	4361 Nov 11 02:13	10°♌08'53	retrograde	4362 Oct 25 03:47	23°♍49'13
evening set	4361 Nov 17 10:34	7°♌33'09	evening set	4362 Oct 31 23:45	21°♍08'19
min. Earth dist.	4361 Nov 21 14:45	3°♌10'32 0.66476 AU	min. Earth dist.	4362 Nov 04 21:29	17°♍21'26 0.65253 AU
inferior conj	4361 Nov 23 04:37	1°♌14'47 -0°54'55	inferior conj	4362 Nov 06 23:17	15°♍01'12 -1°56'10
minimum elong	4361 Nov 23 06:06	1°♌10'14 0°54'16	minimum elong	4362 Nov 07 02:35	14°♍51'55 1°54'50
	4361 Nov 24 05:19	30°♋♍	asc. node	4362 Nov 12 17:59	9°♍42'38
asc. node	4361 Nov 25 20:55	28°♍08'06	morning rise	4362 Nov 13 06:21	9°♍26'28
morning rise	4361 Nov 29 02:11	25°♍27'15	direct	4362 Nov 15 23:16	8°♍47'09
direct	4361 Dec 02 03:10	24°♍34'47	morning max el	4362 Nov 22 10:54	12°♍15'32 18°07'03
morning max el	4361 Dec 08 20:02	28°♍15'28 18°40'04		4362 Dec 04 22:04	0°♌
	4361 Dec 10 10:53	0°♌	morning set	4362 Dec 10 17:04	9°♌31'08
morning set	4361 Dec 29 18:36	28°♌40'40	desc. node	4362 Dec 19 13:29	23°♌56'41
	4361 Dec 30 14:40	0°♎		4362 Dec 23 08:17	0°♎
desc. node	4362 Jan 01 16:29	3°♎16'39			
			superior conj	4362 Dec 25 04:58	2°♎57'24 -0°38'11
superior conj	4362 Jan 14 23:42	24°♎10'56 -1°23'18	minimum elong	4362 Dec 25 00:12	2°♎38'29 0°37'32
minimum elong	4362 Jan 14 14:32	23°♎34'59 1°22'19	max. Earth dist.	4362 Dec 28 08:51	7°♎56'50 1.45144 AU
max. Earth dist.	4362 Jan 14 13:04	23°♎29'13 1.45239 AU	evening rise	4363 Jan 10 12:42	28°♎27'48
	4362 Jan 18 16:35	0°♎		4363 Jan 11 12:31	0°♎
evening rise	4362 Jan 30 14:27	18°♎53'20	greatest brilliancy	4363 Jan 23 11:22	18°♎19'35 -0.7m
	4362 Feb 06 13:04	0°♏		4363 Jan 31 17:33	0°♏
greatest brilliancy	4362 Feb 07 12:09	1°♏31'50 -0.9m	evening max el	4363 Feb 04 10:39	4°♏19'05 19°38'11
evening max el	4362 Feb 21 03:44	20°♏47'22 18°50'44	asc. node	4363 Feb 08 17:15	7°♏43'21
asc. node	4362 Feb 21 20:11	21°♏27'43	retrograde	4363 Feb 11 18:40	8°♏33'14
retrograde	4362 Feb 27 21:22	24°♏33'22	evening set	4363 Feb 15 08:42	7°♏17'57
evening set	4362 Mar 03 03:55	23°♏31'47	inferior conj	4363 Feb 20 19:32	1°♏20'56 3°13'35
inferior conj	4362 Mar 08 19:11	17°♏50'01 3°31'01	minimum elong	4363 Feb 20 17:29	1°♏27'40 3°13'13
minimum elong	4362 Mar 08 18:04	17°♏53'30 3°30'55		4363 Feb 21 20:03	30°♋♎
min. Earth dist.	4362 Mar 10 13:00	15°♏40'31 0.65542 AU	min. Earth dist.	4363 Feb 21 22:28	29°♎52'04 0.66769 AU
morning rise	4362 Mar 14 07:47	11°♏37'11	morning rise	4363 Feb 26 02:03	25°♎06'50
direct	4362 Mar 20 21:36	8°♏46'41	direct	4363 Mar 04 04:26	22°♎23'46
desc. node	4362 Mar 30 15:43	13°♏23'26	morning max el	4363 Mar 16 10:00	29°♎41'20 25°37'13
morning max el	4362 Apr 03 00:35	16°♏31'09 26°48'46		4363 Mar 16 17:21	0°♏
	4362 Apr 14 04:47	0°♐	desc. node	4363 Mar 17 12:44	0°♏50'32
	4362 May 03 05:37	0°♑		4363 Apr 08 01:49	0°♐
morning set	4362 May 08 21:09	10°♑24'48	morning set	4363 Apr 21 15:15	22°♐58'43
max. Earth dist.	4362 May 13 04:26	18°♑50'01 1.34299 AU		4363 Apr 25 09:47	0°♑
			max. Earth dist.	4363 Apr 25 09:28	29°♐58'29 1.35975 AU
superior conj	4362 May 17 10:52	27°♑33'22 -0°34'17	superior conj	4363 May 01 03:15	11°♑11'15 -1°03'35
minimum elong	4362 May 17 12:41	27°♑42'51 0°33'56	minimum elong	4363 May 01 06:41	11°♑28'28 1°02'59
	4362 May 18 14:58	0°♒	asc. node	4363 May 07 16:30	24°♑31'42
asc. node	4362 May 20 19:27	4°♒35'55	evening rise	4363 May 09 04:19	27°♑34'32
evening rise	4362 May 24 22:19	13°♒15'43		4363 May 10 09:02	0°♒
	4362 Jun 02 12:52	0°♓	evening max el	4363 May 26 21:32	26°♒25'04 20°00'01
evening max el	4362 Jun 13 14:00	15°♓13'57 21°17'05		4363 May 31 15:30	0°♓
retrograde	4362 Jun 25 14:25	21°♓08'39	retrograde	4363 Jun 06 05:21	1°♓27'23
desc. node	4362 Jun 26 14:56	21°♓06'12	evening set	4363 Jun 08 03:59	1°♓17'27
evening set	4362 Jun 27 22:05	20°♓56'13		4363 Jun 12 05:08	30°♋♒
inferior conj	4362 Jul 07 06:59	16°♓57'32 -3°02'53	desc. node	4363 Jun 13 11:57	29°♒22'41
minimum elong	4362 Jul 06 23:02	17°♓08'41 3°00'21	inferior conj	4363 Jun 17 03:46	27°♒17'19 -1°05'18
min. Earth dist.	4362 Jul 07 13:16	16°♓48'44 0.54819 AU	minimum elong	4363 Jun 17 00:44	27°♒21'55 1°04'10
morning rise	4362 Jul 16 00:32	13°♓01'21	min. Earth dist.	4363 Jun 19 01:40	26°♒08'12 0.55250 AU
direct	4362 Jul 19 11:36	12°♓35'28	morning rise	4363 Jun 25 19:43	22°♒56'03
morning max el	4362 Aug 01 02:51	18°♓34'54 22°24'00	direct	4363 Jun 30 00:11	22°♒17'49
	4362 Aug 10 09:08	0°♓	morning max el	4363 Jul 13 17:56	29°♒03'44 24°07'29
asc. node	4362 Aug 16 18:44	10°♓55'06		4363 Jul 14 17:05	0°♓
morning set	4362 Aug 22 22:51	23°♓15'41		4363 Aug 03 11:21	0°♓
	4362 Aug 26 03:07	0°♐	asc. node	4363 Aug 03 15:45	0°♓21'54
			morning set	4363 Aug 07 10:31	8°♓09'12
superior conj	4362 Aug 30 02:03	8°♐26'13 1°40'49	superior conj	4363 Aug 14 09:50	23°♓13'09 1°31'39
minimum elong	4362 Aug 30 00:51	8°♐19'50 1°40'46	minimum elong	4363 Aug 14 07:49	23°♓02'16 1°31'27
max. Earth dist.	4362 Sep 02 09:23	15°♐21'14 1.34248 AU			
evening rise	4362 Sep 07 01:01	24°♐41'46			

max. Earth dist.	4363 Aug 16 10:31	27°♎35'44	1.33080 AU	superior conj	4364 Jul 28 20:35	8°♎07'44	1°17'24
	4363 Aug 17 13:34	0°♎		minimum elong	4364 Jul 28 18:15	7°♎54'58	1°17'03
evening rise	4363 Aug 21 19:04	8°♎46'40		max. Earth dist.	4364 Jul 29 18:19	10°♎07'06	1.32334 AU
	4363 Sep 02 05:30	0°♎		evening rise	4364 Aug 04 21:10	23°♎14'33	
desc. node	4363 Sep 09 11:14	11°♎26'30			4364 Aug 08 05:07	0°♎	
evening max el	4363 Sep 24 08:07	29°♎45'27	27°26'22	desc. node	4364 Aug 26 08:15	0°♎23'14	
	4363 Sep 24 14:17	0°♎			4364 Aug 26 01:29	0°♎	
retrograde	4363 Oct 07 23:10	7°♎02'36		evening max el	4364 Sep 05 15:48	12°♎25'48	27°16'02
evening set	4363 Oct 15 02:35	4°♎25'22		retrograde	4364 Sep 19 11:52	19°♎39'54	
min. Earth dist.	4363 Oct 18 19:03	1°♎11'48	0.63686 AU	evening set	4364 Sep 26 15:28	17°♎18'15	
	4363 Oct 19 23:32	30°♎		min. Earth dist.	4364 Sep 30 06:15	14°♎30'30	0.61821 AU
inferior conj	4363 Oct 21 09:03	28°♎34'02	-2°58'11	inferior conj	4364 Oct 03 06:54	11°♎46'23	-3°56'52
minimum elong	4363 Oct 21 14:04	28°♎21'15	2°56'25	minimum elong	4364 Oct 03 12:56	11°♎32'42	3°55'13
morning rise	4363 Oct 28 02:56	23°♎15'29		morning rise	4364 Oct 10 12:13	6°♎47'10	
direct	4363 Oct 30 14:11	22°♎45'41		direct	4364 Oct 12 20:36	6°♎23'35	
asc. node	4363 Oct 30 15:01	22°♎45'41		asc. node	4364 Oct 16 12:01	7°♎22'24	
morning max el	4363 Nov 06 03:38	26°♎10'43	17°51'19	morning max el	4364 Oct 19 19:08	9°♎53'43	17°53'41
	4363 Nov 09 09:56	0°♎			4364 Nov 02 00:38	0°♎	
morning set	4363 Nov 22 18:07	21°♎38'32		morning set	4364 Nov 04 15:22	4°♎43'40	
	4363 Nov 27 14:53	0°♎					
superior conj	4363 Dec 05 05:15	12°♎42'27	0°08'29	superior conj	4364 Nov 15 08:07	23°♎45'33	0°47'47
minimum elong	4363 Dec 05 06:10	12°♎46'13	0°08'22	minimum elong	4364 Nov 15 11:54	24°♎01'52	0°47'16
behind sun begin	4363 Dec 04 21:46	12°♎11'44			4364 Nov 19 00:09	0°♎	
behind sun end	4363 Dec 05 14:34	13°♎20'38		desc. node	4364 Nov 22 07:32	5°♎29'26	
desc. node	4363 Dec 06 10:30	14°♎41'59		max. Earth dist.	4364 Nov 22 16:55	6°♎07'53	1.42885 AU
max. Earth dist.	4363 Dec 11 03:05	22°♎15'44	1.44323 AU	evening rise	4364 Nov 29 13:04	17°♎05'13	
	4363 Dec 16 00:43	0°♎			4364 Dec 07 23:13	0°♎	
evening rise	4363 Dec 20 22:59	7°♎38'36		evening max el	4364 Dec 29 23:54	0°♎	
	4364 Jan 04 20:12	0°♎			4364 Dec 31 08:19	1°♎25'28	21°52'57
evening max el	4364 Jan 18 12:13	17°♎51'33	20°40'03	retrograde	4365 Jan 09 14:05	6°♎55'13	
retrograde	4364 Jan 26 16:54	22°♎41'37		asc. node	4365 Jan 12 11:17	6°♎10'35	
asc. node	4364 Jan 26 14:17	22°♎41'33		evening set	4365 Jan 13 23:33	5°♎10'00	
evening set	4364 Jan 30 15:49	21°♎11'49			4365 Jan 18 11:55	30°♎	
inferior conj	4364 Feb 05 00:27	15°♎02'14	2°45'36	inferior conj	4365 Jan 19 07:48	28°♎51'12	2°08'59
minimum elong	4364 Feb 04 22:00	15°♎10'36	2°44'59	minimum elong	4365 Jan 19 05:27	28°♎59'23	2°08'13
min. Earth dist.	4364 Feb 05 14:01	14°♎15'44	0.67574 AU	min. Earth dist.	4365 Jan 19 09:24	28°♎45'39	0.67981 AU
morning rise	4364 Feb 10 04:01	8°♎48'36		morning rise	4365 Jan 24 11:11	22°♎39'41	
direct	4364 Feb 15 16:28	6°♎21'44		direct	4365 Jan 29 08:55	20°♎33'58	
morning max el	4364 Feb 26 18:41	12°♎59'09	24°11'47	morning max el	4365 Feb 08 04:38	26°♎22'32	22°42'37
desc. node	4364 Mar 03 09:45	19°♎19'03			4365 Feb 11 12:33	0°♎	
	4364 Mar 11 12:14	0°♎		desc. node	4365 Feb 18 06:46	8°♎31'48	
	4364 Mar 30 21:49	0°♎			4365 Mar 05 02:02	0°♎	
morning set	4364 Apr 02 13:03	4°♎30'38		morning set	4365 Mar 14 08:31	14°♎45'12	
max. Earth dist.	4364 Apr 06 06:08	11°♎03'33	1.38004 AU	max. Earth dist.	4365 Mar 19 01:31	22°♎38'54	1.40191 AU
					4365 Mar 23 07:05	0°♎	
superior conj	4364 Apr 13 07:51	24°♎10'59	-1°31'05	superior conj	4365 Mar 26 20:24	6°♎22'08	-1°53'37
minimum elong	4364 Apr 13 12:30	24°♎33'13	1°30'28	minimum elong	4365 Mar 27 00:57	6°♎42'53	1°53'15
	4364 Apr 16 08:01	0°♎		evening rise	4365 Apr 05 17:52	24°♎52'23	
evening rise	4364 Apr 22 03:52	11°♎29'31			4365 Apr 08 11:02	0°♎	
asc. node	4364 Apr 23 13:33	14°♎15'00		asc. node	4365 Apr 10 10:35	3°♎40'19	
	4364 May 02 06:32	0°♎		evening max el	4365 Apr 21 21:41	20°♎47'40	18°25'29
evening max el	4364 May 08 17:01	8°♎18'19	19°02'36	retrograde	4365 Apr 29 08:40	24°♎29'10	
retrograde	4364 May 17 09:43	12°♎33'04		evening set	4365 May 01 16:42	24°♎08'29	
evening set	4364 May 19 11:03	12°♎19'48		inferior conj	4365 May 09 02:24	19°♎35'12	2°11'06
inferior conj	4364 May 27 16:27	8°♎06'00	0°46'40	minimum elong	4365 May 09 06:01	19°♎27'52	2°10'05
minimum elong	4364 May 27 18:17	8°♎02'50	0°46'01	min. Earth dist.	4365 May 12 12:56	16°♎49'04	0.58482 AU
desc. node	4364 May 30 08:57	6°♎14'24		morning rise	4365 May 16 16:13	14°♎05'58	
min. Earth dist.	4364 May 30 17:09	6°♎00'41	0.56557 AU	desc. node	4365 May 17 05:59	13°♎48'52	
morning rise	4364 Jun 04 22:16	3°♎08'54		direct	4365 May 22 17:25	12°♎30'09	
direct	4364 Jun 10 01:34	2°♎06'39		morning max el	4365 Jun 06 02:49	20°♎13'41	27°01'16
morning max el	4364 Jun 24 08:18	9°♎28'13	25°45'09		4365 Jun 14 11:59	0°♎	
	4364 Jul 09 19:51	0°♎			4365 Jul 02 12:17	0°♎	
asc. node	4364 Jul 20 12:47	20°♎07'30		morning set	4365 Jul 06 07:24	7°♎45'37	
morning set	4364 Jul 21 21:55	23°♎01'18		asc. node	4365 Jul 07 09:48	10°♎05'17	
	4364 Jul 25 03:43	0°♎					
				superior conj	4365 Jul 13 08:22	23°♎02'32	0°58'44

minimum elong	4365 Jul 13 06:13	22°  50'35	0°58'19	max. Earth dist.	4366 Jun 26 16:23	5°  23'04	1.32091 AU
max. Earth dist.	4365 Jul 13 05:28	22°  46'28	1.32006 AU				
	4365 Jul 16 12:12	0°  0		superior conj	4366 Jun 27 19:31	7°  51'53	0°36'15
evening rise	4365 Jul 20 04:36	7°  056'11		minimum elong	4366 Jun 27 17:58	7°  43'23	0°35'55
	4365 Jul 31 16:02	0°  0		evening rise	4366 Jul 04 15:14	22°  44'37	
desc. node	4365 Aug 13 05:16	18°  024'07			4366 Jul 08 03:01	0°  0	
evening max el	4365 Aug 18 17:29	24°  021'43	26°32'19		4366 Jul 26 10:50	0°  0	
	4365 Aug 26 12:08	0°  0		desc. node	4366 Jul 31 02:17	5°  006'38	
retrograde	4365 Sep 01 16:26	1°  031'32		evening max el	4366 Jul 31 11:47	5°  029'36	25°18'26
	4365 Sep 07 17:07	30°  000'00		retrograde	4366 Aug 14 10:43	12°  000'00	
evening set	4365 Sep 08 09:40	29°  038'23		evening set	4366 Aug 20 04:37	11°  017'54	
min. Earth dist.	4365 Sep 12 07:09	27°  002'52	0.59773 AU	min. Earth dist.	4366 Aug 24 23:33	8°  036'49	0.57753 AU
inferior conj	4365 Sep 15 13:20	24°  028'30	-4°45'12	inferior conj	4366 Aug 28 01:05	6°  031'01	-5°11'39
minimum elong	4365 Sep 15 18:37	24°  018'03	4°44'18	minimum elong	4366 Aug 28 02:37	6°  028'23	5°11'36
morning rise	4365 Sep 23 05:39	19°  051'10		morning rise	4366 Sep 05 02:54	2°  016'26	
direct	4365 Sep 25 14:26	19°  030'54		direct	4366 Sep 07 15:34	1°  057'12	
asc. node	4365 Oct 03 09:02	23°  022'08		morning max el	4366 Sep 16 09:08	6°  005'09	18°58'11
morning max el	4365 Oct 03 06:05	23°  014'58	18°15'28	asc. node	4366 Sep 20 06:05	10°  030'20	
	4365 Oct 08 15:39	0°  0			4366 Oct 01 15:17	0°  0	
morning set	4365 Oct 19 03:00	18°  029'23		morning set	4366 Oct 03 00:38	2°  043'35	
	4365 Oct 25 05:22	0°  0					
superior conj	4365 Oct 28 11:23	5°  059'18	1°16'22	superior conj	4366 Oct 11 09:53	19°  009'21	1°34'16
minimum elong	4365 Oct 28 15:17	6°  016'58	1°15'55	minimum elong	4366 Oct 11 12:29	19°  021'45	1°34'04
max. Earth dist.	4365 Nov 05 01:38	19°  021'35	1.41006 AU	max. Earth dist.	4366 Oct 17 05:30	0°  0	
desc. node	4365 Nov 09 04:34	26°  015'11		evening rise	4366 Oct 18 06:52	1°  054'14	1.38923 AU
evening rise	4365 Nov 09 20:42	27°  021'17		desc. node	4366 Oct 22 03:25	8°  040'20	
	4365 Nov 11 11:50	0°  0			4366 Oct 27 01:35	16°  055'30	
	4365 Dec 01 15:21	0°  0		evening max el	4366 Nov 04 09:48	0°  0	
evening max el	4365 Dec 14 00:05	15°  002'34	23°12'07		4366 Nov 26 13:18	28°  043'12	24°31'21
retrograde	4365 Dec 24 08:38	21°  010'32		retrograde	4366 Nov 27 21:26	0°  0	
evening set	4365 Dec 29 06:18	19°  009'25		evening set	4366 Dec 07 23:22	5°  023'20	
asc. node	4365 Dec 30 08:18	18°  009'08			4366 Dec 13 10:30	3°  006'35	
inferior conj	4366 Jan 03 15:42	12°  034'51	1°25'02	asc. node	4366 Dec 16 09:17	30°  000'00	
minimum elong	4366 Jan 03 13:53	12°  051'24	1°24'21	min. Earth dist.	4366 Dec 17 05:20	28°  056'45	
min. Earth dist.	4366 Jan 03 06:11	13°  017'56	0.68012 AU	inferior conj	4366 Dec 18 01:59	27°  049'00	0.67689 AU
morning rise	4366 Jan 08 21:22	6°  033'39		minimum elong	4366 Dec 18 22:20	26°  041'05	0°34'42
direct	4366 Jan 13 04:48	4°  054'46		morning rise	4366 Dec 18 21:30	26°  043'51	0°34'22
morning max el	4366 Jan 21 19:33	9°  054'59	21°18'32	direct	4366 Dec 24 08:35	20°  039'36	
desc. node	4366 Feb 05 03:49	28°  016'31		morning max el	4366 Dec 28 02:48	19°  018'39	
	4366 Feb 06 08:32	0°  0			4367 Jan 04 18:06	23°  038'57	20°05'27
morning set	4366 Feb 21 23:27	23°  040'06		desc. node	4367 Jan 10 04:26	0°  0	
	4366 Feb 25 22:45	0°  0			4367 Jan 23 00:50	18°  023'50	
max. Earth dist.	4366 Mar 01 02:53	5°  009'40	1.42251 AU	morning set	4367 Jan 30 15:47	0°  0	
				max. Earth dist.	4367 Jan 31 20:25	1°  050'20	
superior conj	4366 Mar 08 11:57	17°  033'44	-2°06'42		4367 Feb 11 12:19	18°  034'27	1.43906 AU
minimum elong	4366 Mar 08 13:55	17°  042'10	2°06'40	superior conj	4367 Feb 17 02:11	27°  035'54	-2°04'56
	4366 Mar 15 13:44	0°  0		minimum elong	4367 Feb 16 22:35	27°  021'09	2°04'48
evening rise	4366 Mar 19 18:31	7°  034'47			4367 Feb 18 13:16	0°  0	
asc. node	4366 Mar 28 07:37	22°  041'46		evening rise	4367 Mar 02 01:24	19°  037'05	
	4366 Apr 02 03:12	0°  0			4367 Mar 08 04:41	0°  0	
evening max el	4366 Apr 05 08:03	3°  044'16	18°08'12	asc. node	4367 Mar 15 04:40	11°  010'57	
retrograde	4366 Apr 12 01:11	7°  009'00		evening max el	4367 Mar 19 20:45	16°  058'11	18°10'11
evening set	4366 Apr 14 15:53	6°  038'22		retrograde	4367 Mar 26 07:01	20°  021'25	
inferior conj	4366 Apr 21 08:46	1°  044'13	3°03'54	evening set	4367 Mar 29 03:42	19°  039'27	
minimum elong	4366 Apr 21 11:41	1°  037'20	3°03'22	inferior conj	4367 Apr 04 07:46	14°  025'19	3°29'52
	4366 Apr 23 04:46	30°  000'00		minimum elong	4367 Apr 04 09:02	14°  021'55	3°29'46
min. Earth dist.	4366 Apr 24 15:03	28°  041'13	0.60668 AU	min. Earth dist.	4367 Apr 07 01:45	11°  029'38	0.62794 AU
morning rise	4366 Apr 28 05:20	25°  052'46		morning rise	4367 Apr 10 13:08	8°  020'46	
desc. node	4366 May 04 03:01	23°  044'29		direct	4367 Apr 17 10:11	5°  044'52	
direct	4366 May 04 21:09	23°  042'51		desc. node	4367 Apr 21 00:04	6°  022'34	
	4366 May 17 10:29	0°  0		morning max el	4367 May 01 10:11	13°  043'43	27°49'51
morning max el	4366 May 19 03:41	1°  037'46	27°44'20		4367 May 14 12:13	0°  0	
	4366 Jun 08 18:27	0°  0			4367 Jun 01 06:38	0°  0	
morning set	4366 Jun 20 13:11	22°  016'39		morning set	4367 Jun 04 13:10	6°  027'24	
asc. node	4366 Jun 24 06:52	0°  0		max. Earth dist.	4367 Jun 09 23:06	17°  043'32	1.32594 AU
	4366 Jun 24 04:55	0°  0		asc. node	4367 Jun 11 03:56	20°  018'18	

superior conj	4367 Jun 12 04:14	22° Π 29'38	0°10'35	superior conj	4368 May 26 08:33	6° Π 49'53	-0°17'29
minimum elong	4367 Jun 12 03:43	22° Π 26'54	0°10'28	minimum elong	4368 May 26 09:27	6° Π 54'39	0°17'18
behind sun begin	4367 Jun 11 23:45	22° Π 05'25		asc. node	4368 May 28 00:59	10° Π 24'49	
behind sun end	4367 Jun 12 07:41	22° Π 48'24		evening rise	4368 Jun 02 14:16	22° Π 14'52	
	4367 Jun 15 15:02	0° \mathfrak{C}			4368 Jun 06 08:45	0° \mathfrak{C}	
evening rise	4367 Jun 19 03:05	7° \mathfrak{C} 32'54		evening max el	4368 Jun 23 15:50	26° \mathfrak{C} 25'05	22°08'38
	4367 Jun 30 20:44	0° Ω			4368 Jun 28 00:58	0° Ω	
evening max el	4367 Jul 13 00:50	16° Ω 00'46	23°45'19	desc. node	4368 Jul 03 20:20	2° Ω 30'50	
desc. node	4367 Jul 17 23:18	20° Ω 00'33		retrograde	4368 Jul 06 11:51	2° Ω 47'05	
retrograde	4367 Jul 26 17:03	22° Ω 52'59		evening set	4368 Jul 09 08:38	2° Ω 28'49	
evening set	4367 Jul 31 00:21	22° Ω 12'14			4368 Jul 15 17:14	30° \mathfrak{R} \mathfrak{C}	
min. Earth dist.	4367 Aug 06 10:56	19° Ω 08'29	0.56051 AU	min. Earth dist.	4368 Jul 17 21:20	28° \mathfrak{C} 48'39	0.55008 AU
inferior conj	4367 Aug 08 16:36	17° Ω 47'35	-5°00'38	inferior conj	4368 Jul 18 15:29	28° \mathfrak{C} 23'07	-3°59'33
minimum elong	4367 Aug 08 11:59	17° Ω 54'34	5°00'07	minimum elong	4368 Jul 18 06:55	28° \mathfrak{C} 35'10	3°57'21
morning rise	4367 Aug 17 02:08	13° Ω 51'47		morning rise	4368 Jul 27 07:00	24° \mathfrak{C} 32'40	
direct	4367 Aug 19 21:16	13° Ω 32'04		direct	4368 Jul 30 10:42	24° \mathfrak{C} 10'29	
morning max el	4367 Aug 30 01:30	18° Ω 15'42	20°02'48	morning max el	4368 Aug 11 06:01	29° \mathfrak{C} 41'10	21°27'53
asc. node	4367 Sep 07 03:09	28° Ω 32'30			4368 Aug 11 14:02	0° Ω	
	4367 Sep 08 00:44	0° \mathfrak{M}		asc. node	4368 Aug 24 00:12	17° Ω 15'24	
morning set	4367 Sep 17 05:07	17° \mathfrak{M} 17'41			4368 Aug 30 13:55	0° \mathfrak{M}	
	4367 Sep 23 10:28	0° \mathfrak{L}		morning set	4368 Aug 31 13:52	2° \mathfrak{M} 03'48	
superior conj	4367 Sep 24 22:31	3° \mathfrak{L} 01'37	1°42'47	superior conj	4368 Sep 07 21:00	17° \mathfrak{M} 22'51	1°43'28
minimum elong	4367 Sep 24 23:27	3° \mathfrak{L} 06'18	1°42'46	minimum elong	4368 Sep 07 20:28	17° \mathfrak{M} 20'04	1°43'28
max. Earth dist.	4367 Sep 30 12:32	13° \mathfrak{L} 55'50	1.36882 AU	max. Earth dist.	4368 Sep 11 23:44	25° \mathfrak{M} 47'43	1.35100 AU
evening rise	4367 Oct 04 08:03	21° \mathfrak{L} 00'07			4368 Sep 14 02:42	0° \mathfrak{L}	
	4367 Oct 09 10:55	0° \mathfrak{M}		evening rise	4368 Sep 16 06:31	4° \mathfrak{L} 09'57	
desc. node	4367 Oct 13 22:36	7° \mathfrak{M} 26'21		desc. node	4368 Sep 29 19:37	27° \mathfrak{L} 41'48	
	4367 Oct 29 08:27	0° \mathfrak{X}			4368 Oct 01 07:03	0° \mathfrak{M}	
evening max el	4367 Nov 09 01:42	12° \mathfrak{X} 26'05	25°43'36	evening max el	4368 Oct 21 14:12	26° \mathfrak{M} 05'28	26°41'34
retrograde	4367 Nov 21 09:34	19° \mathfrak{X} 29'11			4368 Oct 26 04:42	0° \mathfrak{X}	
evening set	4367 Nov 27 10:30	16° \mathfrak{X} 58'57		retrograde	4368 Nov 03 14:36	3° \mathfrak{X} 20'59	
min. Earth dist.	4367 Dec 01 18:31	12° \mathfrak{X} 16'15	0.67018 AU	evening set	4368 Nov 10 04:17	0° \mathfrak{X} 41'50	
inferior conj	4367 Dec 03 01:56	10° \mathfrak{X} 36'34	-0°20'55		4368 Nov 10 23:40	30° \mathfrak{R} \mathfrak{M}	
minimum elong	4367 Dec 03 02:29	10° \mathfrak{X} 34'50	0°20'41	min. Earth dist.	4368 Nov 14 05:30	26° \mathfrak{M} 34'41	0.65996 AU
asc. node	4367 Dec 04 02:23	9° \mathfrak{X} 19'45		inferior conj	4368 Nov 16 00:28	24° \mathfrak{M} 27'30	-1°20'38
morning rise	4367 Dec 08 18:51	4° \mathfrak{X} 43'27		minimum elong	4368 Nov 16 02:43	24° \mathfrak{M} 20'51	1°19'42
direct	4367 Dec 12 01:31	3° \mathfrak{X} 41'43		asc. node	4368 Nov 19 23:26	20° \mathfrak{M} 14'13	
morning max el	4367 Dec 19 00:31	7° \mathfrak{X} 33'37	19°06'44	morning rise	4368 Nov 22 01:56	18° \mathfrak{M} 45'14	
	4368 Jan 04 05:40	0° \mathfrak{Z}		direct	4368 Nov 24 23:05	17° \mathfrak{M} 59'00	
desc. node	4368 Jan 09 21:53	8° \mathfrak{Z} 47'46		morning max el	4368 Dec 01 13:02	21° \mathfrak{M} 33'29	18°23'59
morning set	4368 Jan 10 23:48	10° \mathfrak{Z} 28'35			4368 Dec 08 04:47	0° \mathfrak{X}	
	4368 Jan 23 11:51	0° \approx		morning set	4368 Dec 21 04:55	20° \mathfrak{X} 26'48	
max. Earth dist.	4368 Jan 25 03:50	2° \approx 37'08	1.44952 AU	desc. node	4368 Dec 26 18:53	29° \mathfrak{X} 22'54	
					4368 Dec 27 04:12	0° \mathfrak{Z}	
superior conj	4368 Jan 27 16:20	6° \approx 35'51	-1°43'56	superior conj	4369 Jan 05 18:50	15° \mathfrak{Z} 10'43	-1°05'07
minimum elong	4368 Jan 27 07:33	6° \approx 01'08	1°43'11	minimum elong	4369 Jan 05 10:57	14° \mathfrak{Z} 39'46	1°04'09
evening rise	4368 Feb 11 10:33	0° \mathfrak{X} 23'10		max. Earth dist.	4369 Jan 06 22:19	16° \mathfrak{Z} 58'31	1.45283 AU
	4368 Feb 11 04:54	0° \mathfrak{X}			4369 Jan 15 05:49	0° \approx	
asc. node	4368 Mar 01 01:42	28° \mathfrak{X} 58'14		evening rise	4369 Jan 21 20:23	10° \approx 22'55	
	4368 Mar 02 00:09	0° \mathfrak{Y}		greatest brilliancy	4369 Feb 01 03:35	26° \approx 32'46	-0.8m
evening max el	4368 Mar 02 08:55	0° \mathfrak{Y} 22'38	18°30'47		4369 Feb 03 09:37	0° \mathfrak{X}	
retrograde	4368 Mar 08 21:40	3° \mathfrak{Y} 57'24		evening max el	4369 Feb 13 18:14	13° \mathfrak{X} 52'32	19°09'02
evening set	4368 Mar 12 00:21	3° \mathfrak{Y} 03'17		asc. node	4369 Feb 15 22:44	15° \mathfrak{X} 51'19	
	4368 Mar 15 15:05	30° \mathfrak{R} \mathfrak{X}		retrograde	4369 Feb 20 17:22	17° \mathfrak{X} 49'48	
inferior conj	4368 Mar 17 19:22	27° \mathfrak{X} 30'57	3°35'15	evening set	4369 Feb 24 02:50	16° \mathfrak{X} 42'42	
minimum elong	4368 Mar 17 19:00	27° \mathfrak{X} 32'02	3°35'14	inferior conj	4369 Mar 01 15:54	10° \mathfrak{X} 54'12	3°25'05
min. Earth dist.	4368 Mar 19 22:05	25° \mathfrak{X} 01'00	0.64643 AU	minimum elong	4369 Mar 01 14:19	10° \mathfrak{X} 59'14	3°24'53
morning rise	4368 Mar 23 12:59	21° \mathfrak{X} 19'42		min. Earth dist.	4369 Mar 03 03:17	9° \mathfrak{X} 01'11	0.66107 AU
direct	4368 Mar 30 07:07	18° \mathfrak{X} 30'36		morning rise	4369 Mar 07 01:28	4° \mathfrak{X} 40'19	
desc. node	4368 Apr 06 21:07	21° \mathfrak{X} 19'18		direct	4369 Mar 13 10:49	1° \mathfrak{X} 51'26	
morning max el	4368 Apr 12 19:50	26° \mathfrak{X} 24'32	27°19'46	desc. node	4369 Mar 24 18:08	8° \mathfrak{X} 00'13	
	4368 Apr 16 03:59	0° \mathfrak{Y}		morning max el	4369 Mar 26 05:48	9° \mathfrak{X} 27'18	26°20'45
	4368 May 07 02:18	0° \mathfrak{B}			4369 Apr 11 09:55	0° \mathfrak{Y}	
morning set	4368 May 18 04:36	20° \mathfrak{B} 09'48			4369 Apr 29 14:12	0° \mathfrak{B}	
max. Earth dist.	4368 May 22 21:38	29° \mathfrak{B} 36'45	1.33540 AU	morning set	4369 May 01 07:53	3° \mathfrak{B} 13'16	
	4368 May 23 02:09	0° Π					

max. Earth dist.	4369 May 05 08:52	10°♄57'59	1.34951 AU	max. Earth dist.	4370 Apr 17 09:11	21°♄59'07	1.36796 AU
					4370 Apr 21 14:49	0°♄	
superior conj	4369 May 10 06:08	20°♄46'07	-0°46'46	superior conj	4370 Apr 23 17:56	4°♄09'04	-1°15'37
minimum elong	4369 May 10 08:39	20°♄59'01	0°46'17	minimum elong	4370 Apr 23 21:59	4°♄28'56	1°14'59
asc. node	4369 May 14 22:02	0°♄26'08		asc. node	4370 May 01 19:03	20°♄17'12	
	4369 May 14 17:01	0°♄		evening rise	4370 May 02 02:20	20°♄53'47	
evening rise	4369 May 17 22:47	6°♄44'25			4370 May 06 17:29	0°♄	
	4369 May 30 17:27	0°♄		evening max el	4370 May 19 05:26	18°♄45'05	19°33'14
evening max el	4369 Jun 05 16:29	7°♄15'14	20°42'09	retrograde	4370 May 28 19:35	23°♄25'18	
retrograde	4369 Jun 17 00:37	12°♄48'03		evening set	4370 May 30 18:37	23°♄14'28	
evening set	4369 Jun 19 02:06	12°♄37'47		desc. node	4370 Jun 07 14:23	19°♄42'54	
desc. node	4369 Jun 20 17:22	12°♄15'51		inferior conj	4370 Jun 08 11:14	19°♄09'59	-0°15'26
inferior conj	4369 Jun 28 08:55	8°♄40'37	-2°14'35	minimum elong	4370 Jun 08 10:33	19°♄11'05	0°15'11
minimum elong	4369 Jun 28 02:40	8°♄49'34	2°12'23	transit middle	4370 Jun 08 10:33	19°♄11'05	0°15'11
min. Earth dist.	4369 Jun 29 09:06	8°♄05'59	0.54881 AU	transit begin	4370 Jun 08 09:19	19°♄13'01	
morning rise	4369 Jul 07 02:41	4°♄35'30		transit end	4370 Jun 08 11:46	19°♄09'08	
direct	4369 Jul 10 20:08	4°♄05'32		min. Earth dist.	4370 Jun 10 22:42	17°♄35'49	0.55714 AU
morning max el	4369 Jul 24 00:36	10°♄26'29	23°07'34	morning rise	4370 Jun 16 23:52	14°♄34'04	
	4369 Aug 07 09:10	0°♄		direct	4370 Jun 21 13:59	13°♄46'50	
asc. node	4369 Aug 10 21:15	6°♄29'00		morning max el	4370 Jul 05 14:24	20°♄49'27	24°50'30
morning set	4369 Aug 16 00:59	16°♄56'26			4370 Jul 13 12:15	0°♄	
	4369 Aug 22 03:11	0°♄		asc. node	4370 Jul 28 18:17	26°♄04'41	
					4370 Jul 30 15:52	0°♄	
superior conj	4369 Aug 23 02:09	2°♄03'11	1°37'36	morning set	4370 Jul 31 12:44	1°♄49'55	
minimum elong	4369 Aug 23 00:32	1°♄54'36	1°37'30				
max. Earth dist.	4369 Aug 25 19:45	7°♄51'19	1.33702 AU	superior conj	4370 Aug 07 11:25	16°♄54'13	1°26'11
evening rise	4369 Aug 30 18:34	17°♄58'33		minimum elong	4370 Aug 07 09:13	16°♄42'13	1°25'55
	4369 Sep 06 02:50	0°♄		max. Earth dist.	4370 Aug 09 00:07	20°♄13'57	1.32721 AU
desc. node	4369 Sep 16 16:38	17°♄34'47			4370 Aug 13 14:18	0°♄	
	4369 Sep 25 14:00	0°♄		evening rise	4370 Aug 14 16:25	2°♄14'41	
evening max el	4369 Oct 04 02:31	9°♄32'31	27°17'52		4370 Aug 29 23:21	0°♄	
retrograde	4369 Oct 17 13:48	16°♄50'50		desc. node	4370 Sep 03 13:41	6°♄55'39	
evening set	4369 Oct 24 13:25	14°♄10'21		evening max el	4370 Sep 16 12:53	22°♄34'36	27°26'00
min. Earth dist.	4369 Oct 28 08:42	10°♄37'53	0.64627 AU	retrograde	4370 Sep 30 06:23	29°♄49'58	
inferior conj	4369 Oct 30 15:41	8°♄09'05	-2°22'36	evening set	4370 Oct 07 10:49	27°♄18'13	
minimum elong	4369 Oct 30 19:44	7°♄58'04	2°21'02	min. Earth dist.	4370 Oct 11 02:06	24°♄16'34	0.62928 AU
morning rise	4369 Nov 06 03:14	2°♄40'41		inferior conj	4370 Oct 13 20:48	21°♄34'48	-3°23'50
asc. node	4369 Nov 06 20:28	2°♄24'12		minimum elong	4370 Oct 14 02:24	21°♄21'13	3°22'02
direct	4369 Nov 08 17:18	2°♄05'58		morning rise	4370 Oct 20 19:31	16°♄23'43	
morning max el	4369 Nov 15 05:00	5°♄32'14	17°58'06	direct	4370 Oct 23 05:11	15°♄56'52	
	4369 Dec 01 12:42	0°♄		asc. node	4370 Oct 24 17:29	16°♄07'46	
morning set	4369 Dec 02 15:20	1°♄51'55		morning max el	4370 Oct 29 21:33	19°♄23'10	17°49'57
desc. node	4369 Dec 13 15:53	20°♄05'28			4370 Nov 06 16:43	0°♄	
				morning set	4370 Nov 15 01:51	14°♄27'00	
superior conj	4369 Dec 16 06:21	24°♄17'10	-0°17'55		4370 Nov 24 00:31	0°♄	
minimum elong	4369 Dec 16 04:11	24°♄08'30	0°17'36	superior conj	4370 Nov 26 17:44	4°♄35'07	0°26'23
	4369 Dec 19 20:23	0°♄		minimum elong	4370 Nov 26 20:17	4°♄45'46	0°26'01
max. Earth dist.	4369 Dec 20 17:12	1°♄22'19	1.44878 AU	desc. node	4370 Nov 30 12:55	10°♄52'22	
evening rise	4370 Jan 01 11:43	19°♄42'15		max. Earth dist.	4370 Dec 03 10:09	15°♄33'21	1.43784 AU
	4370 Jan 08 05:04	0°♄		evening rise	4370 Dec 11 21:42	28°♄55'48	
greatest brilliancy	4370 Jan 15 23:05	11°♄38'17	-0.6m		4370 Dec 12 14:20	0°♄	
evening max el	4370 Jan 27 22:58	27°♄24'35	20°03'04		4371 Jan 01 23:42	0°♄	
	4370 Jan 30 20:46	0°♄		evening max el	4371 Jan 10 22:18	10°♄58'25	21°10'02
asc. node	4370 Feb 02 19:45	1°♄35'33		retrograde	4371 Jan 19 13:02	16°♄04'36	
retrograde	4370 Feb 04 15:11	1°♄53'12		asc. node	4371 Jan 20 16:46	15°♄57'21	
evening set	4370 Feb 08 08:46	0°♄32'00		evening set	4371 Jan 23 16:20	14°♄28'15	
	4370 Feb 09 00:59	30°♄		inferior conj	4371 Jan 29 00:36	8°♄14'33	2°31'01
inferior conj	4370 Feb 13 18:26	24°♄29'34	3°02'52	minimum elong	4371 Jan 28 22:09	8°♄23'03	2°30'19
minimum elong	4370 Feb 13 16:09	24°♄37'12	3°02'23	min. Earth dist.	4371 Jan 29 08:57	7°♄45'45	0.67798 AU
min. Earth dist.	4370 Feb 14 15:36	23°♄18'24	0.67159 AU	morning rise	4371 Feb 03 03:47	2°♄01'52	
morning rise	4370 Feb 18 23:19	18°♄15'28			4371 Feb 06 13:28	30°♄	
direct	4370 Feb 24 20:05	15°♄38'06		direct	4371 Feb 08 10:06	29°♄43'31	
morning max el	4370 Mar 08 14:29	22°♄40'13	25°01'58		4371 Feb 10 08:50	0°♄	
desc. node	4370 Mar 11 15:08	25°♄55'37		morning max el	4371 Feb 18 23:10	5°♄59'58	23°33'47
	4370 Mar 15 01:17	0°♄		desc. node	4371 Feb 26 12:09	14°♄44'49	
	4370 Apr 04 17:40	0°♄					
morning set	4370 Apr 13 18:02	15°♄22'38					

	4371 Mar 09 12:41	0° H		direct	4372 Jan 23 04:01	14° Z 00'12	
morning set	4371 Mar 26 05:13	26° H 22'44		morning max el	4372 Feb 01 10:57	19° Z 27'16	22°05'50
	4371 Mar 28 07:59	0° Y			4372 Feb 10 06:53	0° \approx	
max. Earth dist.	4371 Mar 30 04:35	3° Y 14'10	1.38934 AU	desc. node	4372 Feb 13 09:11	4° \approx 12'17	
					4372 Mar 01 17:27	0° H	
superior conj	4371 Apr 06 16:16	16° Y 49'38	-1°41'28	morning set	4372 Mar 05 12:15	6° H 01'46	
minimum elong	4371 Apr 06 21:07	17° Y 12'18	1°40'56	max. Earth dist.	4372 Mar 11 02:21	15° H 13'10	1.41103 AU
	4371 Apr 13 13:24	0° B					
evening rise	4371 Apr 15 22:12	4° B 36'05		superior conj	4372 Mar 18 20:26	28° H 36'11	-2°00'38
asc. node	4371 Apr 18 16:04	9° B 53'30		minimum elong	4372 Mar 19 00:17	28° H 53'14	2°00'25
	4371 May 01 07:58	0° II			4372 Mar 19 15:16	0° Y	
evening max el	4371 May 02 05:12	0° II 54'22	18°44'21	evening rise	4372 Mar 29 07:01	17° Y 42'44	
retrograde	4371 May 10 07:38	4° II 52'55		asc. node	4372 Apr 04 13:06	29° Y 09'21	
evening set	4371 May 12 11:51	4° II 36'46			4372 Apr 05 00:39	0° B	
inferior conj	4371 May 20 08:39	0° II 14'43	1°26'24	evening max el	4372 Apr 14 12:35	13° B 35'32	18°15'42
minimum elong	4371 May 20 11:37	0° II 09'11	1°25'25	retrograde	4372 Apr 21 14:43	17° B 08'21	
	4371 May 20 16:34	30° R B		evening set	4372 Apr 24 01:33	16° B 43'45	
min. Earth dist.	4371 May 23 15:23	27° B 49'52	0.57324 AU	inferior conj	4372 May 01 03:36	12° B 01'19	2°37'11
desc. node	4371 May 25 11:23	26° B 36'15		minimum elong	4372 May 01 07:07	11° B 53'40	2°36'21
morning rise	4371 May 28 08:09	25° B 03'16		min. Earth dist.	4372 May 04 13:33	9° B 04'56	0.59393 AU
direct	4371 Jun 02 21:23	23° B 47'43		morning rise	4372 May 08 09:57	6° B 21'05	
	4371 Jun 15 19:56	0° II		desc. node	4372 May 11 08:24	5° B 02'31	
morning max el	4371 Jun 17 05:56	1° II 19'09	26°21'01	direct	4372 May 14 18:12	4° B 30'32	
	4371 Jul 07 12:59	0° E		morning max el	4372 May 29 03:17	12° B 20'11	27°24'17
morning set	4371 Jul 15 23:32	16° E 39'23			4372 Jun 12 00:55	0° II	
asc. node	4371 Jul 15 15:19	15° E 56'07			4372 Jun 28 16:29	0° E	
	4371 Jul 22 03:00	0° O		morning set	4372 Jun 29 07:44	1° E 19'19	
				asc. node	4372 Jul 01 12:23	5° E 57'52	
superior conj	4371 Jul 22 22:49	1° O 49'22	1°09'59				
minimum elong	4371 Jul 22 20:31	1° O 36'37	1°09'36	superior conj	4372 Jul 06 10:35	16° E 42'47	0°49'38
max. Earth dist.	4371 Jul 23 10:00	2° O 51'01	1.32151 AU	minimum elong	4372 Jul 06 08:37	16° E 31'59	0°49'15
evening rise	4371 Jul 29 21:06	16° O 49'22		max. Earth dist.	4372 Jul 05 21:38	15° E 31'25	1.31985 AU
	4371 Aug 05 11:47	0° np			4372 Jul 12 12:21	0° O	
desc. node	4371 Aug 21 10:42	25° np 30'59		evening rise	4372 Jul 13 06:09	1° O 34'51	
	4371 Aug 25 01:47	0° E			4372 Jul 28 14:17	0° np	
evening max el	4371 Aug 29 18:25	4° E 57'30	27°01'25	desc. node	4372 Aug 07 07:43	13° np 02'21	
retrograde	4371 Sep 12 15:27	12° E 08'58		evening max el	4372 Aug 10 16:48	16° np 32'41	26°04'06
evening set	4371 Sep 19 16:21	9° E 57'58		retrograde	4372 Aug 24 16:06	23° np 41'06	
min. Earth dist.	4371 Sep 23 08:40	7° E 17'35	0.60970 AU	evening set	4372 Aug 31 01:16	22° np 02'41	
inferior conj	4371 Sep 26 12:34	4° E 35'38	-4°19'13	min. Earth dist.	4372 Sep 04 05:26	19° np 27'25	0.58895 AU
minimum elong	4371 Sep 26 18:34	4° E 22'45	4°17'48	inferior conj	4372 Sep 07 11:28	17° np 02'34	-4°59'56
	4371 Oct 03 05:58	30° R np		minimum elong	4372 Sep 07 15:34	16° np 54'55	4°59'28
morning rise	4371 Oct 03 22:41	29° np 45'25		morning rise	4372 Sep 15 08:07	12° np 35'25	
direct	4371 Oct 06 06:58	29° np 23'25		direct	4372 Sep 17 18:10	12° np 15'52	
	4371 Oct 09 05:57	0° E		morning max el	4372 Sep 25 19:38	16° np 08'23	18°31'01
asc. node	4371 Oct 11 14:31	1° E 21'33		asc. node	4372 Sep 27 11:35	17° np 53'02	
morning max el	4371 Oct 13 11:30	2° E 57'58	18°00'29		4372 Oct 05 14:17	0° E	
morning set	4371 Oct 29 05:52	27° E 51'32		morning set	4372 Oct 11 22:16	11° E 51'13	
	4371 Oct 30 09:39	0° M					
superior conj	4371 Nov 08 07:35	16° M 10'12	1°01'16	superior conj	4372 Oct 20 19:50	28° E 50'55	1°25'10
minimum elong	4371 Nov 08 11:40	16° M 28'13	1°00'45	minimum elong	4372 Oct 20 23:16	29° E 06'52	1°24'50
max. Earth dist.	4371 Nov 15 22:26	29° M 12'48	1.42130 AU	max. Earth dist.	4372 Oct 21 10:44	0° M	
	4371 Nov 16 09:49	0° A		evening rise	4372 Oct 28 05:14	12° M 08'45	1.40131 AU
desc. node	4371 Nov 17 09:57	1° A 39'35		desc. node	4372 Nov 01 11:22	19° M 23'21	
evening rise	4371 Nov 21 18:03	8° A 40'37			4372 Nov 03 07:00	22° M 23'52	
	4371 Dec 05 18:12	0° Z			4372 Nov 08 00:36	0° A	
evening max el	4371 Dec 24 16:21	24° Z 33'27	22°26'08		4372 Nov 29 01:39	0° Z	
	4372 Jan 01 07:47	0° \approx		evening max el	4372 Dec 06 06:37	8° Z 11'33	23°46'04
retrograde	4372 Jan 03 09:16	0° \approx 19'42		retrograde	4372 Dec 17 02:28	14° Z 34'48	
	4372 Jan 05 08:24	30° R Z		evening set	4372 Dec 22 05:45	12° Z 26'45	
evening set	4372 Jan 07 23:51	28° Z 27'29		asc. node	4372 Dec 24 10:49	10° Z 12'04	
asc. node	4372 Jan 07 13:47	28° Z 47'17		min. Earth dist.	4372 Dec 27 01:49	6° Z 49'31	0.67920 AU
inferior conj	4372 Jan 13 08:25	22° Z 05'49	1°51'09	inferior conj	4372 Dec 27 16:01	6° Z 01'08	1°04'24
minimum elong	4372 Jan 13 06:14	22° Z 13'22	1°50'24	minimum elong	4372 Dec 27 14:34	6° Z 06'04	1°03'49
min. Earth dist.	4372 Jan 13 05:07	22° Z 17'15	0.68044 AU	morning rise	4373 Jan 01 23:23	29° A 55'54	
morning rise	4372 Jan 18 12:30	15° Z 56'01			4373 Jan 01 21:16	30° R A	
				direct	4373 Jan 06 00:53	28° A 22'50	


























































































































	4373 Jan 10 13:38	0°♄		transit middle	4373 Dec 11 21:20	19°♄58'40	0°11'36
morning max el	4373 Jan 14 05:04	3°♄05'06	20°45'45	transit begin	4373 Dec 11 19:24	20°♄05'00	
desc. node	4373 Jan 30 06:14	24°♄07'28		transit end	4373 Dec 11 23:16	19°♄52'19	
	4373 Feb 03 05:20	0°♄		morning rise	4373 Dec 17 10:27	13°♄59'12	
morning set	4373 Feb 12 17:14	14°♄30'35		direct	4373 Dec 20 23:29	12°♄46'51	
max. Earth dist.	4373 Feb 21 06:49	28°♄06'42	1.43016 AU	morning max el	4373 Dec 28 07:02	16°♄54'02	19°38'26
	4373 Feb 22 10:41	0°♄			4374 Jan 07 12:39	0°♄	
				greatest brilliancy	4374 Jan 10 09:15	4°♄11'23	-0.7m
superior conj	4373 Feb 28 01:31	9°♄18'18	-2°08'06	desc. node	4374 Jan 17 03:16	14°♄22'41	
minimum elong	4373 Feb 28 01:24	9°♄17'50	2°08'05	morning set	4374 Jan 22 13:41	22°♄43'28	
	4373 Mar 11 23:36	0°♄			4374 Jan 27 06:18	0°♄	
evening rise	4373 Mar 12 00:41	0°♄04'46		max. Earth dist.	4374 Feb 03 18:40	11°♄48'14	1.44434 AU
asc. node	4373 Mar 22 10:09	17°♄58'07					
evening max el	4373 Mar 29 00:17	26°♄40'10	18°06'44	superior conj	4374 Feb 08 04:53	18°♄52'24	-1°58'28
	4373 Apr 03 19:22	0°♄		minimum elong	4374 Feb 07 22:40	18°♄27'23	1°58'08
retrograde	4373 Apr 04 13:26	0°♄02'46			4374 Feb 15 00:43	0°♄	
	4373 Apr 05 07:33	30°♄07'36		evening rise	4374 Feb 21 22:44	11°♄33'44	
evening set	4373 Apr 07 06:36	29°♄27'36			4374 Mar 05 01:15	0°♄	
inferior conj	4373 Apr 13 17:33	24°♄25'00	3°17'50	asc. node	4374 Mar 09 07:11	6°♄11'15	
minimum elong	4373 Apr 13 19:49	24°♄19'21	3°17'31	evening max el	4374 Mar 12 13:10	10°♄00'04	18°16'47
min. Earth dist.	4373 Apr 16 19:23	21°♄22'00	0.61589 AU	retrograde	4374 Mar 18 23:24	13°♄26'29	
morning rise	4373 Apr 20 07:14	18°♄26'43		evening set	4374 Mar 21 22:37	12°♄39'29	
direct	4373 Apr 27 02:19	16°♄04'04		inferior conj	4374 Mar 27 22:25	7°♄17'41	3°34'19
desc. node	4373 Apr 28 05:27	16°♄07'48		minimum elong	4374 Mar 27 22:57	7°♄16'11	3°34'17
morning max el	4373 May 11 06:53	24°♄02'43	27°51'23	min. Earth dist.	4374 Mar 30 10:11	4°♄30'54	0.63625 AU
	4373 May 16 15:43	0°♄		morning rise	4374 Apr 02 22:21	1°♄09'49	
	4373 Jun 05 08:12	0°♄			4374 Apr 04 14:04	30°♄08'46	
morning set	4373 Jun 13 11:20	15°♄42'35		direct	4374 Apr 09 19:14	28°♄26'16	
asc. node	4373 Jun 18 09:26	26°♄04'35		desc. node	4374 Apr 15 02:28	29°♄49'15	
max. Earth dist.	4373 Jun 19 07:05	28°♄01'46	1.32239 AU		4374 Apr 15 10:55	0°♄	
	4373 Jun 20 04:49	0°♄		morning max el	4374 Apr 23 14:52	6°♄24'29	27°41'01
					4374 May 11 14:33	0°♄	
superior conj	4373 Jun 20 20:54	1°♄27'51	0°25'43	morning set	4374 May 28 08:00	29°♄42'13	
minimum elong	4373 Jun 20 19:44	1°♄21'32	0°25'28		4374 May 28 11:35	0°♄	
evening rise	4373 Jun 27 17:30	16°♄23'36		max. Earth dist.	4374 Jun 02 10:31	10°♄10'34	1.32937 AU
	4373 Jul 04 10:50	0°♄					
evening max el	4373 Jul 23 08:11	27°♄22'03	24°40'28	superior conj	4374 Jun 05 04:00	15°♄59'03	-0°01'06
desc. node	4373 Jul 25 04:45	29°♄02'57		minimum elong	4374 Jun 05 04:03	15°♄59'20	0°01'05
	4373 Jul 26 08:46	0°♄		behind sun begin	4374 Jun 04 22:44	15°♄30'48	
retrograde	4373 Aug 06 05:59	4°♄23'33		behind sun end	4374 Jun 05 09:22	16°♄27'53	
evening set	4373 Aug 11 09:52	3°♄23'33		asc. node	4374 Jun 05 06:29	16°♄12'28	
min. Earth dist.	4373 Aug 16 19:27	0°♄34'29	0.56962 AU		4374 Jun 11 16:07	0°♄	
	4373 Aug 17 17:05	30°♄08'00		evening rise	4374 Jun 12 05:16	1°♄09'49	
inferior conj	4373 Aug 19 14:35	28°♄45'52	-5°12'34		4374 Jun 28 06:44	0°♄	
minimum elong	4373 Aug 19 13:38	28°♄47'24	5°12'34	evening max el	4374 Jul 04 21:09	7°♄46'16	23°03'48
morning rise	4373 Aug 27 19:55	24°♄40'15		desc. node	4374 Jul 12 01:45	12°♄59'38	
direct	4373 Aug 30 10:48	24°♄21'10		retrograde	4374 Jul 18 06:51	14°♄27'38	
morning max el	4373 Sep 08 18:32	28°♄43'12	19°22'59	evening set	4374 Jul 21 22:18	13°♄58'38	
	4373 Sep 10 01:13	0°♄		min. Earth dist.	4374 Jul 29 06:13	10°♄40'59	0.55508 AU
asc. node	4373 Sep 14 08:39	5°♄25'56		inferior conj	4374 Jul 30 22:07	9°♄43'06	-4°41'08
morning set	4373 Sep 25 23:10	26°♄14'44		minimum elong	4374 Jul 30 15:12	9°♄53'10	4°39'55
	4373 Sep 27 20:07	0°♄		morning rise	4374 Aug 08 10:21	5°♄51'17	
				direct	4374 Aug 11 08:52	5°♄30'46	
superior conj	4373 Oct 04 00:56	12°♄20'42	1°38'54	morning max el	4374 Aug 22 05:42	10°♄33'49	20°36'39
minimum elong	4373 Oct 04 02:50	12°♄29'56	1°38'48	asc. node	4374 Sep 01 05:42	23°♄46'24	
max. Earth dist.	4373 Oct 10 09:33	24°♄24'11	1.38036 AU		4374 Sep 04 17:30	0°♄	
	4373 Oct 13 12:04	0°♄		morning set	4374 Sep 10 05:42	10°♄54'12	
evening rise	4373 Oct 14 03:49	1°♄09'32					
desc. node	4373 Oct 21 04:03	13°♄00'53		superior conj	4374 Sep 17 18:08	26°♄25'53	1°43'57
	4373 Nov 01 06:13	0°♄		minimum elong	4374 Sep 17 18:25	26°♄27'17	1°43'57
evening max el	4373 Nov 18 19:18	21°♄53'41	25°03'20		4374 Sep 19 12:26	0°♄	
retrograde	4373 Nov 30 15:33	28°♄45'22		max. Earth dist.	4374 Sep 22 17:00	6°♄18'24	1.36087 AU
evening set	4373 Dec 06 08:25	26°♄22'41		evening rise	4374 Sep 26 16:34	13°♄51'49	
min. Earth dist.	4373 Dec 10 20:40	21°♄19'30	0.67447 AU		4374 Oct 05 22:19	0°♄	
asc. node	4373 Dec 11 07:52	20°♄42'53		desc. node	4374 Oct 08 01:04	3°♄25'49	
inferior conj	4373 Dec 11 21:38	19°♄57'42	0°11'44		4374 Oct 27 02:08	0°♄	
minimum elong	4373 Dec 11 21:20	19°♄58'40	0°11'36	evening max el	4374 Nov 01 07:54	5°♄36'39	26°10'32

retrograde	4374 Nov 13 23:30	12°♊45'46		retrograde	4375 Oct 28 01:56	26°♍29'40	
evening set	4374 Nov 20 06:00	10°♊11'23		evening set	4375 Nov 03 20:26	23°♍48'54	
min. Earth dist.	4374 Nov 24 11:12	5°♊43'33	0.66628 AU	min. Earth dist.	4375 Nov 07 19:01	19°♍56'54	0.65458 AU
inferior conj	4374 Nov 25 23:21	3°♊51'54	-0°45'49	inferior conj	4375 Nov 09 19:04	17°♍39'50	-1°46'45
minimum elong	4374 Nov 26 00:35	3°♊48'05	0°45'17	minimum elong	4375 Nov 09 22:05	17°♍31'13	1°45'31
asc. node	4374 Nov 28 04:55	1°♊12'31		asc. node	4375 Nov 15 01:56	12°♍35'33	
	4374 Nov 29 08:34	30°♋♍		morning rise	4375 Nov 16 00:39	12°♍03'08	
morning rise	4374 Dec 01 19:39	28°♍02'47		direct	4375 Nov 18 18:36	11°♍22'08	
direct	4374 Dec 04 22:04	27°♍07'59		morning max el	4375 Nov 25 06:35	14°♍51'41	18°10'57
	4374 Dec 10 18:45	0°♊			4375 Dec 06 04:24	0°♊	
morning max el	4374 Dec 11 16:14	0°♊51'05	18°46'27	morning set	4375 Dec 13 20:43	12°♊30'00	
	4374 Dec 31 22:05	0°♊		desc. node	4375 Dec 21 21:20	25°♊31'06	
morning set	4375 Jan 02 02:39	1°♊52'25			4375 Dec 24 16:35	0°♊	
desc. node	4375 Jan 04 00:17	4°♊51'53					
max. Earth dist.	4375 Jan 17 12:03	26°♊01'59	1.45191 AU	superior conj	4375 Dec 28 15:44	6°♊17'14	-0°45'25
				minimum elong	4375 Dec 28 10:03	5°♊54'48	0°44'38
superior conj	4375 Jan 18 11:50	27°♊35'20	-1°29'14	max. Earth dist.	4375 Dec 31 07:47	10°♊29'27	1.45206 AU
minimum elong	4375 Jan 18 02:31	26°♊58'46	1°28'17		4376 Jan 12 19:43	0°♋	
	4375 Jan 20 00:37	0°♋		evening rise	4376 Jan 13 22:52	1°♋45'34	
evening rise	4375 Feb 02 21:49	22°♋04'53		greatest brilliancy	4376 Jan 26 05:55	20°♋43'24	-0.7m
	4375 Feb 07 19:44	0°♋			4376 Feb 01 15:04	0°♋	
greatest brilliancy	4375 Feb 09 15:22	2°♋55'23	-0.9m	evening max el	4376 Feb 07 07:58	6°♋58'41	19°30'04
evening max el	4375 Feb 24 00:26	23°♋27'33	18°45'00	asc. node	4376 Feb 11 01:14	10°♋02'56	
asc. node	4375 Feb 24 04:14	23°♋37'07		retrograde	4376 Feb 14 13:29	11°♋08'14	
retrograde	4375 Mar 02 16:29	27°♋10'14		evening set	4376 Feb 18 02:17	9°♋55'05	
evening set	4375 Mar 05 22:03	26°♋10'31		inferior conj	4376 Feb 23 13:36	4°♋00'04	3°16'55
inferior conj	4375 Mar 11 14:11	20°♋31'05	3°32'32	minimum elong	4376 Feb 23 11:40	4°♋06'24	3°16'37
minimum elong	4375 Mar 11 13:15	20°♋33'58	3°32'28	min. Earth dist.	4376 Feb 24 18:40	2°♋24'54	0.66613 AU
min. Earth dist.	4375 Mar 13 10:15	18°♋16'07	0.65324 AU		4376 Feb 26 17:19	30°♋♋	
morning rise	4375 Mar 17 03:59	14°♋18'37		morning rise	4376 Feb 28 20:49	27°♋45'53	
direct	4375 Mar 23 19:03	11°♋28'11		direct	4376 Mar 06 01:03	25°♋01'07	
desc. node	4375 Apr 01 23:29	15°♋34'05			4376 Mar 15 21:46	0°♋	
morning max el	4375 Apr 06 00:43	19°♋15'13	26°57'37	morning max el	4376 Mar 18 10:23	2°♋23'57	25°48'59
	4375 Apr 15 03:59	0°♌		desc. node	4376 Mar 18 20:31	2°♋49'47	
	4375 May 04 14:58	0°♌			4376 Apr 08 07:53	0°♌	
morning set	4375 May 11 18:41	13°♌08'42		morning set	4376 Apr 23 15:19	25°♌50'33	
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				max. Earth dist.	4376 Apr 27 11:05	3°♌00'54	1.35697 AU
superior conj	4375 May 20 05:43	0°♍09'32	-0°29'51				
minimum elong	4375 May 20 07:17	0°♍17'46	0°29'31	superior conj	4376 May 02 23:30	13°♌52'08	-0°59'12
	4375 May 20 03:53	0°♍		minimum elong	4376 May 03 02:42	14°♌08'18	0°58'38
asc. node	4375 May 23 03:31	6°♍17'00		asc. node	4376 May 09 00:32	26°♌14'11	
evening rise	4375 May 27 15:32	15°♍46'59		evening rise	4376 May 10 22:14	0°♍08'40	
	4375 Jun 03 19:47	0°♍			4376 May 10 20:33	0°♍	
evening max el	4375 Jun 16 15:31	18°♍17'47	21°29'57	evening max el	4376 May 28 21:11	29°♍22'58	20°10'19
retrograde	4375 Jun 28 21:20	24°♍20'04			4376 May 29 12:49	0°♍	
desc. node	4375 Jun 28 22:44	24°♍20'03		retrograde	4376 Jun 08 11:27	4°♍33'23	
evening set	4375 Jul 01 07:55	24°♍06'28		evening set	4376 Jun 10 10:18	4°♍23'35	
inferior conj	4375 Jul 10 16:49	20°♍06'23	-3°18'58	desc. node	4376 Jun 14 19:45	2°♍58'16	
minimum elong	4375 Jul 10 08:28	20°♍18'03	3°16'26	inferior conj	4376 Jun 19 12:16	0°♍24'37	-1°23'32
min. Earth dist.	4375 Jul 10 16:38	20°♍06'38	0.54837 AU	minimum elong	4376 Jun 19 08:21	0°♍30'26	1°22'05
morning rise	4375 Jul 19 09:59	16°♍12'32			4376 Jun 20 04:48	30°♋♍	
direct	4375 Jul 22 19:00	15°♍47'48		min. Earth dist.	4376 Jun 21 04:50	29°♍24'25	0.55121 AU
morning max el	4375 Aug 04 05:18	21°♍39'36	22°09'09	morning rise	4376 Jun 28 04:56	26°♍07'58	
	4375 Aug 11 08:20	0°♎		direct	4376 Jul 02 06:14	25°♍32'18	
asc. node	4375 Aug 19 02:45	12°♎43'17			4376 Jul 13 07:53	0°♍	
morning set	4375 Aug 25 15:41	25°♎43'43		morning max el	4376 Jul 15 21:09	2°♍12'11	23°52'04
	4375 Aug 27 16:18	0°♎			4376 Aug 03 21:51	0°♎	
				asc. node	4376 Aug 04 23:47	2°♎06'56	
superior conj	4375 Sep 01 19:46	10°♎55'58	1°41'44	morning set	4376 Aug 09 03:14	10°♎37'10	
minimum elong	4375 Sep 01 18:43	10°♎50'28	1°41'41				
max. Earth dist.	4375 Sep 05 08:07	18°♎14'47	1.34453 AU	superior conj	4376 Aug 16 02:54	25°♎41'28	1°33'24
evening rise	4375 Sep 09 21:16	27°♎19'12		minimum elong	4376 Aug 16 01:00	25°♎31'07	1°33'13
	4375 Sep 11 06:45	0°♏			4376 Aug 18 03:00	0°♎	
desc. node	4375 Sep 24 22:05	23°♏32'50		max. Earth dist.	4376 Aug 18 07:54	0°♎26'10	1.33223 AU
	4375 Sep 29 05:08	0°♎		evening rise	4376 Aug 23 13:50	11°♎20'04	
evening max el	4375 Oct 14 20:36	19°♎12'47	27°00'07		4376 Sep 02 13:27	0°♏	

desc. node	4376 Sep 10 19:05	13°♄13'23			4377 Aug 09 16:54	0°♈	
	4376 Sep 23 20:30	0°♈			4377 Aug 27 01:28	0°♄	
evening max el	4376 Sep 26 08:07	2°♈29'44	27°25'07	desc. node	4377 Aug 28 16:06	2°♄16'36	
retrograde	4376 Oct 09 22:21	9°♈47'38		evening max el	4377 Sep 08 16:35	15°♄15'46	27°19'40
evening set	4376 Oct 17 01:00	7°♈09'04		retrograde	4377 Sep 22 12:12	22°♄30'23	
min. Earth dist.	4376 Oct 20 18:03	3°♈50'51	0.63939 AU	evening set	4377 Sep 29 16:13	20°♄05'45	
inferior conj	4376 Oct 23 06:18	1°♈14'59	-2°48'55	min. Earth dist.	4377 Oct 03 06:56	17°♄14'41	0.62115 AU
minimum elong	4376 Oct 23 11:05	1°♈02'35	2°47'11	inferior conj	4377 Oct 06 06:08	14°♄30'40	-3°48'30
	4376 Oct 24 11:39	30°♈♄		minimum elong	4377 Oct 06 12:06	14°♄16'53	3°46'46
morning rise	4376 Oct 29 22:33	25°♄53'52		morning rise	4377 Oct 13 09:46	9°♄28'15	
asc. node	4376 Oct 31 22:58	25°♄24'07		direct	4377 Oct 15 18:20	9°♄03'57	
direct	4376 Nov 01 10:24	25°♄22'58		asc. node	4377 Oct 18 20:01	9°♄46'35	
morning max el	4376 Nov 07 23:13	28°♄48'05	17°52'32	morning max el	4377 Oct 22 15:05	12°♄32'58	17°52'04
	4376 Nov 09 02:22	0°♈			4377 Nov 03 09:28	0°♈	
morning set	4376 Nov 24 18:09	24°♈26'55		morning set	4377 Nov 07 12:45	7°♈24'16	
	4376 Nov 28 00:04	0°♄					
superior conj	4376 Dec 07 12:24	15°♄51'36	0°01'45	superior conj	4377 Nov 18 11:11	26°♈42'26	0°42'30
minimum elong	4376 Dec 07 12:35	15°♄52'23	0°01'43	minimum elong	4377 Nov 18 14:45	26°♈57'40	0°42'00
behind sun begin	4376 Dec 07 02:42	15°♄12'05			4377 Nov 20 09:42	0°♄	
behind sun end	4376 Dec 07 22:28	16°♄32'35		desc. node	4377 Nov 24 15:23	7°♄03'00	
desc. node	4376 Dec 07 18:24	16°♄16'05		max. Earth dist.	4377 Nov 25 16:33	8°♄45'48	1.43133 AU
max. Earth dist.	4376 Dec 13 02:04	24°♄49'26	1.44487 AU	evening rise	4377 Dec 02 22:25	20°♄18'50	
	4376 Dec 16 08:41	0°♄			4377 Dec 09 05:42	0°♄	
evening rise	4376 Dec 23 09:58	10°♄57'20		evening max el	4377 Dec 30 15:22	0°♈	
	4377 Jan 05 00:28	0°♈			4378 Jan 03 07:18	4°♈04'58	21°41'39
evening max el	4377 Jan 20 10:21	20°♈31'08	20°30'03	retrograde	4378 Jan 12 09:08	9°♈28'35	
asc. node	4377 Jan 27 22:14	25°♈13'57		asc. node	4378 Jan 14 19:16	8°♈56'58	
retrograde	4377 Jan 28 11:43	25°♈15'40		evening set	4378 Jan 16 16:55	7°♈45'47	
evening set	4377 Feb 01 09:10	23°♈48'10		inferior conj	4378 Jan 22 01:08	1°♈28'16	2°15'04
inferior conj	4377 Feb 06 18:00	17°♈40'19	2°50'26	minimum elong	4378 Jan 21 22:44	1°♈36'35	2°14'18
minimum elong	4377 Feb 06 15:35	17°♈48'33	2°49'51	min. Earth dist.	4378 Jan 22 04:28	1°♈16'39	0.67944 AU
min. Earth dist.	4377 Feb 07 09:31	16°♈47'21	0.67478 AU		4378 Jan 23 02:42	30°♈♄	
morning rise	4377 Feb 11 21:49	11°♈26'24		morning rise	4378 Jan 27 04:22	25°♄16'21	
direct	4377 Feb 17 12:26	8°♈56'35		direct	4378 Feb 01 04:22	23°♄07'10	
morning max el	4377 Feb 28 19:04	15°♈41'01	24°24'59	morning max el	4378 Feb 11 04:31	29°♄03'04	22°55'46
desc. node	4377 Mar 05 17:34	21°♈10'32			4378 Feb 12 02:35	0°♈	
	4377 Mar 12 13:57	0°♈		desc. node	4378 Feb 20 14:36	10°♈17'30	
	4377 Apr 01 06:33	0°♈			4378 Mar 06 08:26	0°♈	
morning set	4377 Apr 05 16:35	7°♈33'17		morning set	4378 Mar 17 16:17	17°♈59'58	
max. Earth dist.	4377 Apr 09 08:25	14°♈03'48	1.37681 AU	max. Earth dist.	4378 Mar 22 03:30	25°♈32'43	1.39867 AU
					4378 Mar 24 17:02	0°♈	
superior conj	4377 Apr 16 06:08	26°♈58'33	-1°27'09	superior conj	4378 Mar 29 21:25	9°♈17'51	-1°50'41
minimum elong	4377 Apr 16 10:39	27°♈20'21	1°26'31	minimum elong	4378 Mar 30 02:07	9°♈39'25	1°50'17
	4377 Apr 17 19:34	0°♄		evening rise	4378 Apr 08 14:37	27°♈36'04	
evening rise	4377 Apr 24 22:57	14°♄07'55			4378 Apr 09 20:49	0°♄	
asc. node	4377 Apr 25 21:34	15°♄59'44		asc. node	4378 Apr 12 18:36	5°♄28'01	
	4377 May 03 09:55	0°♈		evening max el	4378 Apr 24 18:40	23°♄35'18	18°29'45
evening max el	4377 May 11 15:07	11°♈10'44	19°09'56	retrograde	4378 May 02 09:12	27°♄20'30	
retrograde	4377 May 20 13:09	15°♈31'40		evening set	4378 May 04 16:17	27°♄01'04	
evening set	4377 May 22 13:41	15°♈19'12		inferior conj	4378 May 12 04:48	22°♄30'48	2°00'21
inferior conj	4377 May 30 22:06	11°♈08'11	0°31'06	minimum elong	4378 May 12 08:20	22°♄23'47	1°59'18
minimum elong	4377 May 30 23:22	11°♈06'02	0°30'39	min. Earth dist.	4378 May 15 14:52	19°♄49'28	0.58173 AU
desc. node	4377 Jun 01 16:46	9°♈55'40		morning rise	4378 May 19 21:13	17°♄05'58	
min. Earth dist.	4377 Jun 02 19:58	9°♈10'27	0.56315 AU	desc. node	4378 May 19 13:48	17°♄15'26	
morning rise	4377 Jun 08 05:53	6°♈16'27		direct	4378 May 25 19:36	15°♄35'27	
direct	4377 Jun 13 05:45	5°♈18'23		morning max el	4378 Jun 09 04:50	23°♄16'02	26°51'47
morning max el	4377 Jun 27 11:15	12°♈35'44	25°31'30		4378 Jun 15 05:38	0°♈	
	4377 Jul 10 23:57	0°♈			4378 Jul 03 23:15	0°♈	
asc. node	4377 Jul 22 20:50	21°♈50'10		morning set	4378 Jul 09 00:41	10°♈15'20	
morning set	4377 Jul 24 14:47	25°♈29'42		asc. node	4378 Jul 09 17:53	11°♈46'14	
	4377 Jul 26 17:15	0°♈					
superior conj	4377 Jul 31 13:21	10°♈35'22	1°19'52	superior conj	4378 Jul 16 01:08	25°♈30'19	1°01'49
minimum elong	4377 Jul 31 11:03	10°♈22'42	1°19'32	minimum elong	4378 Jul 15 22:55	25°♈18'04	1°01'26
max. Earth dist.	4377 Aug 01 14:50	12°♈54'58	1.32421 AU	max. Earth dist.	4378 Jul 16 01:48	25°♈33'57	1.32033 AU
evening rise	4377 Aug 07 14:56	25°♈45'08		evening rise	4378 Jul 18 02:03	0°♈	
					4378 Jul 22 21:46	10°♈25'11	

	4378 Aug 01 23:22	0°♎	evening rise	4379 Jul 07 08:04	25°♊12'50	
desc. node	4378 Aug 15 13:07	20°♎27'00		4379 Jul 09 14:52	0°♎	
evening max el	4378 Aug 21 19:27	27°♎19'12 26°40'53		4379 Jul 27 03:37	0°♎	
	4378 Aug 24 21:55	0°♊	desc. node	4379 Aug 02 10:09	7°♎23'03	
retrograde	4378 Sep 04 17:57	4°♊29'09	evening max el	4379 Aug 03 14:47	8°♎33'43	25°30'59
evening set	4378 Sep 11 13:33	2°♊31'09	retrograde	4379 Aug 17 13:48	15°♎39'05	
	4378 Sep 15 06:42	30°♎♎	evening set	4379 Aug 23 12:11	14°♎17'08	
min. Earth dist.	4378 Sep 15 09:22	29°♎54'51 0.60085 AU	min. Earth dist.	4379 Aug 28 02:41	11°♎38'14	0.58041 AU
inferior conj	4378 Sep 18 15:09	27°♎18'05 -4°39'00	inferior conj	4379 Aug 31 05:52	9°♎26'59	-5°09'43
minimum elong	4378 Sep 18 20:43	27°♎06'49 4°37'58	minimum elong	4379 Aug 31 08:10	9°♎22'55	5°09'35
morning rise	4378 Sep 26 05:54	22°♎37'12	morning rise	4379 Sep 08 06:25	5°♎09'16	
direct	4378 Sep 28 14:26	22°♎16'33	direct	4379 Sep 10 18:23	4°♎49'58	
asc. node	4378 Oct 05 17:05	25°♎34'43	morning max el	4379 Sep 19 07:23	8°♎53'25	18°50'29
morning max el	4378 Oct 06 02:55	25°♎57'54 18°10'54	asc. node	4379 Sep 22 14:10	12°♎33'38	
	4378 Oct 09 14:21	0°♊		4379 Oct 03 01:58	0°♊	
morning set	4378 Oct 21 22:37	21°♊05'05	morning set	4379 Oct 05 19:02	5°♊15'51	
	4378 Oct 26 16:28	0°♌				
superior conj	4378 Oct 31 11:10	8°♌46'37 1°12'44	superior conj	4379 Oct 14 07:12	21°♊49'30	1°32'09
minimum elong	4378 Oct 31 15:10	9°♌04'38 1°12'16	minimum elong	4379 Oct 14 10:02	22°♊02'55	1°31'56
max. Earth dist.	4378 Nov 08 02:22	22°♌07'06 1.41307 AU	max. Earth dist.	4379 Oct 18 16:29	0°♌	
desc. node	4378 Nov 11 12:26	27°♌49'12	evening rise	4379 Oct 21 08:03	4°♌46'06	1.39236 AU
	4378 Nov 12 20:26	0°♌	desc. node	4379 Oct 25 06:12	11°♌35'52	
evening rise	4378 Nov 13 02:57	0°♌26'26		4379 Oct 29 09:27	18°♌30'29	
	4378 Dec 02 17:41	0°♊		4379 Nov 05 16:03	0°♌	
evening max el	4378 Dec 16 23:41	17°♊41'42 23°00'10	evening max el	4379 Nov 28 05:10	0°♊	
retrograde	4378 Dec 27 04:06	23°♊43'59	retrograde	4379 Nov 29 13:04	1°♊21'24	24°19'46
evening set	4378 Dec 31 23:56	21°♊45'09	evening set	4379 Dec 10 19:29	7°♊57'23	
asc. node	4379 Jan 01 16:19	21°♊08'35	asc. node	4379 Dec 16 04:37	5°♊42'45	
inferior conj	4379 Jan 06 09:04	15°♊21'34 1°32'09	min. Earth dist.	4379 Dec 19 13:22	2°♊04'22	
minimum elong	4379 Jan 06 07:09	15°♊28'12 1°31'26		4379 Dec 20 21:13	0°♊20'08	0.67762 AU
min. Earth dist.	4379 Jan 06 01:10	15°♊48'52 0.68033 AU	inferior conj	4379 Dec 21 03:14	30°♎♌	
morning rise	4379 Jan 11 14:15	9°♊13'27	minimum elong	4379 Dec 21 16:00	29°♌17'04	0°42'43
direct	4379 Jan 15 23:47	7°♊27'10	morning rise	4379 Dec 21 15:00	29°♌20'27	0°42'18
morning max el	4379 Jan 24 18:30	12°♊33'55 21°30'30	direct	4379 Dec 27 01:27	23°♌14'40	
desc. node	4379 Feb 07 11:39	29°♊57'55	morning max el	4379 Dec 30 21:30	21°♌50'42	
	4379 Feb 07 12:14	0°♌		4380 Jan 07 15:54	26°♌16'12	20°15'27
morning set	4379 Feb 25 11:13	27°♌05'28	desc. node	4380 Jan 11 00:26	0°♊	
	4379 Feb 27 07:01	0°♌		4380 Jan 25 08:41	20°♊01'59	
max. Earth dist.	4379 Mar 04 04:00	7°♌55'40 1.41967 AU	morning set	4380 Jan 31 22:46	0°♌	
			max. Earth dist.	4380 Feb 04 09:29	5°♌18'00	
superior conj	4379 Mar 11 16:25	20°♌38'53 -2°05'34		4380 Feb 14 12:15	21°♌12'48	1.43694 AU
minimum elong	4379 Mar 11 18:59	20°♌50'00 2°05'28		4380 Feb 19 22:07	0°♌	
	4379 Mar 16 23:39	0°♎	superior conj	4380 Feb 20 10:29	0°♌50'55	-2°06'22
evening rise	4379 Mar 22 17:33	10°♎25'01	minimum elong	4380 Feb 20 07:51	0°♌40'02	2°06'18
asc. node	4379 Mar 30 15:38	24°♎33'19	evening rise	4380 Mar 04 03:20	22°♌25'04	
	4379 Apr 03 01:15	0°♎		4380 Mar 08 12:10	0°♎	
evening max el	4379 Apr 08 04:24	6°♎28'01 18°09'29	asc. node	4380 Mar 16 12:40	13°♎07'47	
retrograde	4379 Apr 14 23:26	9°♎54'17	evening max el	4380 Mar 21 16:53	19°♎39'27	18°08'41
evening set	4379 Apr 17 13:11	9°♎25'13	retrograde	4380 Mar 28 03:39	23°♎02'14	
inferior conj	4379 Apr 24 08:18	4°♎33'56 2°57'46	evening set	4380 Mar 30 23:23	22°♎22'05	
minimum elong	4379 Apr 24 11:25	4°♎26'44 2°57'08	inferior conj	4380 Apr 06 05:06	17°♎10'48	3°27'23
min. Earth dist.	4379 Apr 27 15:47	1°♎31'58 0.60342 AU	minimum elong	4380 Apr 06 06:38	17°♎06'46	3°27'14
	4379 Apr 29 12:27	30°♎♎	min. Earth dist.	4380 Apr 09 01:13	14°♎12'34	0.62486 AU
morning rise	4379 May 01 07:22	28°♎45'06	morning rise	4380 Apr 12 12:31	11°♎07'33	
desc. node	4379 May 06 10:51	26°♎46'02	direct	4380 Apr 19 09:14	8°♎34'46	
direct	4379 May 07 21:32	26°♎40'06	desc. node	4380 Apr 22 07:52	9°♎00'14	
	4379 May 16 20:00	0°♎	morning max el	4380 May 03 10:41	16°♎33'58	27°51'30
morning max el	4379 May 22 04:47	4°♎33'33 27°40'21		4380 May 14 12:43	0°♎	
	4379 Jun 10 00:59	0°♎		4380 Jun 01 17:30	0°♎	
morning set	4379 Jun 23 07:10	24°♎48'34	morning set	4380 Jun 06 08:12	9°♎03'09	
	4379 Jun 25 18:21	0°♎	max. Earth dist.	4380 Jun 11 20:44	20°♎35'58	1.32486 AU
asc. node	4379 Jun 26 14:56	1°♎50'15	asc. node	4380 Jun 12 11:59	21°♎58'00	
max. Earth dist.	4379 Jun 29 13:04	8°♎11'50 1.32052 AU				
superior conj	4379 Jun 30 12:30	10°♎20'34 0°39'53	superior conj	4380 Jun 13 21:42	25°♎00'35	0°14'40
minimum elong	4379 Jun 30 10:50	10°♎11'23 0°39'32	minimum elong	4380 Jun 13 21:01	24°♎56'50	0°14'31
			behind sun begin	4380 Jun 13 18:52	24°♎45'11	

behind sun end	4380 Jun 13 23:10	25° Π 08'30		max. Earth dist.	4381 May 25 20:33	2° Π 32'59	1.33365 AU
	4380 Jun 16 04:39	0° \mathfrak{G}					
evening rise	4380 Jun 20 19:51	10° \mathfrak{G} 01'40		superior conj	4381 May 29 02:46	9° Π 23'42	-0°13'06
	4380 Jul 01 01:47	0° Ω		minimum elong	4381 May 29 03:26	9° Π 27'15	0°12'58
evening max el	4380 Jul 15 04:12	19° Ω 08'46	23°59'50	behind sun begin	4381 May 29 00:13	9° Π 10'11	
desc. node	4380 Jul 19 07:09	22° Ω 35'50		behind sun end	4381 May 29 06:39	9° Π 44'20	
retrograde	4380 Jul 28 22:16	26° Ω 04'08		asc. node	4381 May 30 08:59	12° Π 04'47	
evening set	4380 Aug 02 11:05	25° Ω 18'41		evening rise	4381 Jun 05 07:13	24° Π 44'38	
min. Earth dist.	4380 Aug 08 14:34	22° Ω 19'12	0.56267 AU		4381 Jun 07 19:54	0° \mathfrak{G}	
inferior conj	4380 Aug 11 00:21	20° Ω 50'37	-5°05'26	evening max el	4381 Jun 26 18:22	29° \mathfrak{G} 31'52	22°22'44
minimum elong	4380 Aug 10 20:41	20° Ω 56'15	5°05'06		4381 Jun 27 06:08	0° Ω	
morning rise	4380 Aug 19 08:53	16° Ω 52'44		desc. node	4381 Jul 06 04:10	5° Ω 29'41	
direct	4380 Aug 22 02:49	16° Ω 33'16		retrograde	4381 Jul 09 18:37	5° Ω 59'41	
morning max el	4380 Sep 01 01:34	21° Ω 10'50	19°51'48	evening set	4381 Jul 12 19:44	5° Ω 39'10	
asc. node	4380 Sep 08 11:13	0° \mathfrak{M} 28'34		min. Earth dist.	4381 Jul 21 01:06	2° Ω 05'14	0.55109 AU
	4380 Sep 08 03:49	0° \mathfrak{M}		inferior conj	4381 Jul 22 01:11	1° Ω 31'08	-4°12'06
morning set	4380 Sep 18 22:39	19° \mathfrak{M} 47'27		minimum elong	4381 Jul 21 16:51	1° Ω 42'58	4°10'09
	4380 Sep 23 23:05	0° \mathfrak{L}			4381 Jul 24 19:17	30° \mathfrak{R} \mathfrak{G}	
superior conj	4380 Sep 26 18:02	5° \mathfrak{L} 36'32	1°42'01	morning rise	4381 Jul 30 15:54	27° \mathfrak{G} 40'50	
minimum elong	4380 Sep 26 19:13	5° \mathfrak{L} 42'26	1°41'59	direct	4381 Aug 02 18:02	27° \mathfrak{G} 19'15	
max. Earth dist.	4380 Oct 02 13:08	16° \mathfrak{L} 50'23	1.37174 AU		4381 Aug 10 21:46	0° Ω	
evening rise	4380 Oct 06 07:48	23° \mathfrak{L} 47'14		morning max el	4381 Aug 14 07:46	2° Ω 42'44	21°14'01
	4380 Oct 09 20:27	0° \mathfrak{M}		asc. node	4381 Aug 26 08:14	19° Ω 05'40	
desc. node	4380 Oct 15 06:28	9° \mathfrak{M} 03'01			4381 Sep 01 01:47	0° \mathfrak{M}	
	4380 Oct 29 08:58	0° \mathfrak{J}		morning set	4381 Sep 03 06:53	4° \mathfrak{M} 31'45	
evening max el	4380 Nov 11 01:24	15° \mathfrak{J} 03'42	25°33'30	superior conj	4381 Sep 10 15:15	19° \mathfrak{M} 53'44	1°43'50
retrograde	4380 Nov 23 06:28	22° \mathfrak{J} 04'23		minimum elong	4381 Sep 10 14:55	19° \mathfrak{M} 52'01	1°43'49
evening set	4380 Nov 29 05:20	19° \mathfrak{J} 35'54		max. Earth dist.	4381 Sep 14 23:04	28° \mathfrak{M} 41'18	1.35345 AU
min. Earth dist.	4380 Dec 03 14:24	14° \mathfrak{J} 47'54	0.67143 AU		4381 Sep 15 14:58	0° \mathfrak{L}	
inferior conj	4380 Dec 04 20:10	13° \mathfrak{J} 12'35	-0°12'11	evening rise	4381 Sep 19 03:53	6° \mathfrak{L} 50'12	
minimum elong	4380 Dec 04 20:28	13° \mathfrak{J} 11'35	0°12'03	desc. node	4381 Oct 02 03:30	29° \mathfrak{L} 20'59	
transit middle	4380 Dec 04 20:28	13° \mathfrak{J} 11'35	0°12'03		4381 Oct 02 13:23	0° \mathfrak{M}	
transit begin	4380 Dec 04 18:36	13° \mathfrak{J} 17'35		evening max el	4381 Oct 24 13:55	28° \mathfrak{M} 44'10	26°34'08
transit end	4380 Dec 04 22:21	13° \mathfrak{J} 05'36			4381 Oct 25 22:26	0° \mathfrak{J}	
asc. node	4380 Dec 05 10:25	12° \mathfrak{J} 27'08		retrograde	4381 Nov 06 12:21	5° \mathfrak{J} 58'31	
morning rise	4380 Dec 10 11:58	7° \mathfrak{J} 18'02		evening set	4381 Nov 13 00:10	3° \mathfrak{J} 20'28	
direct	4380 Dec 13 20:10	6° \mathfrak{J} 13'45			4381 Nov 16 08:27	30° \mathfrak{R} \mathfrak{M}	
morning max el	4380 Dec 20 21:13	10° \mathfrak{J} 09'18	19°14'23	min. Earth dist.	4381 Nov 17 02:25	29° \mathfrak{M} 07'50	0.66171 AU
greatest brilliancy	4381 Jan 03 12:30	28° \mathfrak{J} 32'10	-0.7m	inferior conj	4381 Nov 18 19:35	27° \mathfrak{M} 04'30	-1°11'23
	4381 Jan 04 11:38	0° \mathfrak{Z}		minimum elong	4381 Nov 18 21:33	26° \mathfrak{M} 58'36	1°10'33
desc. node	4381 Jan 11 05:42	10° \mathfrak{Z} 23'22		asc. node	4381 Nov 22 07:26	23° \mathfrak{M} 13'25	
morning set	4381 Jan 13 10:11	13° \mathfrak{Z} 46'47		morning rise	4381 Nov 24 19:39	21° \mathfrak{M} 20'19	
	4381 Jan 23 19:57	0° \approx		direct	4381 Nov 27 18:04	20° \mathfrak{M} 32'01	
max. Earth dist.	4381 Jan 27 02:42	5° \approx 09'31	1.44839 AU	morning max el	4381 Dec 04 08:55	24° \mathfrak{M} 08'32	18°29'14
					4381 Dec 09 05:22	0° \mathfrak{J}	
superior conj	4381 Jan 30 03:39	9° \approx 58'04	-1°48'22	morning set	4381 Dec 24 10:57	23° \mathfrak{J} 31'52	
minimum elong	4381 Jan 29 19:22	9° \approx 25'10	1°47'44		4381 Dec 28 12:22	0° \mathfrak{Z}	
	4381 Feb 11 13:07	0° \mathfrak{H}		desc. node	4381 Dec 29 02:45	0° \mathfrak{Z} 57'09	
evening rise	4381 Feb 13 15:49	3° \mathfrak{H} 29'03					
	4381 Mar 02 13:35	0° \mathfrak{Y}		superior conj	4382 Jan 09 06:43	18° \mathfrak{Z} 33'30	-1°11'49
asc. node	4381 Mar 03 09:42	1° \mathfrak{Y} 01'55		minimum elong	4382 Jan 08 22:14	18° \mathfrak{Z} 00'16	1°10'49
evening max el	4381 Mar 05 05:15	3° \mathfrak{Y} 02'23	18°26'38	max. Earth dist.	4382 Jan 09 20:50	19° \mathfrak{Z} 28'51	1.45283 AU
retrograde	4381 Mar 11 17:09	6° \mathfrak{Y} 34'43			4382 Jan 16 13:48	0° \approx	
evening set	4381 Mar 14 18:53	5° \mathfrak{Y} 42'32		evening rise	4382 Jan 25 05:00	13° \approx 36'33	
inferior conj	4381 Mar 20 15:02	0° \mathfrak{Y} 12'57	3°35'29	greatest brilliancy	4382 Feb 03 17:45	28° \approx 39'51	-0.8m
minimum elong	4381 Mar 20 14:54	0° \mathfrak{Y} 13'22	3°35'29		4382 Feb 04 14:21	0° \mathfrak{H}	
	4381 Mar 20 19:27	30° \mathfrak{R} \mathfrak{H}		evening max el	4382 Feb 16 15:08	16° \mathfrak{H} 31'45	19°02'19
min. Earth dist.	4381 Mar 22 20:09	27° \mathfrak{H} 38'06	0.64386 AU	asc. node	4382 Feb 18 06:42	18° \mathfrak{H} 04'00	
morning rise	4381 Mar 26 10:10	24° \mathfrak{H} 02'20		retrograde	4382 Feb 23 12:13	20° \mathfrak{H} 24'52	
direct	4381 Apr 02 05:12	21° \mathfrak{H} 14'10		evening set	4382 Feb 26 20:38	19° \mathfrak{H} 19'44	
desc. node	4381 Apr 09 04:53	23° \mathfrak{H} 37'50		inferior conj	4382 Mar 04 10:25	13° \mathfrak{H} 33'37	3°27'23
morning max el	4381 Apr 15 20:00	29° \mathfrak{H} 10'01	27°26'18	minimum elong	4382 Mar 04 08:59	13° \mathfrak{H} 38'07	3°27'15
	4381 Apr 16 15:32	0° \mathfrak{Y}		min. Earth dist.	4382 Mar 06 00:04	11° \mathfrak{H} 34'37	0.65919 AU
	4381 May 08 09:45	0° \mathfrak{B}		morning rise	4382 Mar 09 20:59	7° \mathfrak{H} 20'03	
morning set	4381 May 21 01:03	22° \mathfrak{B} 50'11		direct	4382 Mar 16 07:59	4° \mathfrak{H} 30'16	
	4381 May 24 14:49	0° Π		desc. node	4382 Mar 27 01:54	10° \mathfrak{H} 04'46	

morning max el	4382 Mar 29 05:53	12°  09'31	26°30'59	desc. node	4383 Mar 13 22:57	27°  50'24	
	4382 Apr 12 13:03	0°  Y			4383 Mar 15 20:20	0°  H	
	4382 May 01 00:36	0°  8			4383 Apr 06 01:20	0°  Y	
morning set	4382 May 04 06:20	5°  859'34		morning set	4383 Apr 16 19:22	18°  Y17'24	
max. Earth dist.	4382 May 08 09:24	13°  857'40	1.34712 AU	max. Earth dist.	4383 Apr 20 11:15	25°  Y00'22	1.36503 AU
					4383 Apr 23 02:31	0°  8	
superior conj	4382 May 13 01:28	23°  823'31	-0°42'18	superior conj	4383 Apr 26 14:56	6°  851'35	-1°11'23
minimum elong	4382 May 13 03:44	23°  835'13	0°41'52	minimum elong	4383 Apr 26 18:47	7°  810'36	1°10'45
	4382 May 16 05:47	0°  II			4383 May 04 03:02	21°  859'24	
asc. node	4382 May 17 06:01	2°  II06'50		asc. node	4383 May 04 20:39	23°  828'25	
evening rise	4382 May 20 16:13	9°  II15'56		evening rise	4383 May 08 03:20	0°  II	
	4382 May 31 17:43	0°  6			4383 May 22 04:21	21°  II39'17	19°42'12
evening max el	4382 Jun 08 17:16	10°  616'17	20°54'03	evening max el	4383 Jun 01 00:31	26°  II27'01	
retrograde	4382 Jun 20 07:14	15°  656'47		retrograde	4383 Jun 02 23:15	26°  II16'35	
evening set	4382 Jun 22 10:32	15°  645'57		evening set	4383 Jun 09 22:09	23°  II21'44	
desc. node	4382 Jun 23 01:08	15°  639'03		desc. node	4383 Jun 11 18:32	22°  II13'51	-0°32'57
inferior conj	4382 Jul 01 18:25	11°  648'41	-2°32'14	inferior conj	4383 Jun 11 17:02	22°  II16'11	0°32'23
minimum elong	4382 Jul 01 11:28	11°  658'32	2°29'52	minimum elong	4383 Jun 14 01:33	20°  II48'23	0.55532 AU
min. Earth dist.	4382 Jul 02 12:29	11°  623'03	0.54841 AU	min. Earth dist.	4383 Jun 20 08:30	17°  II43'21	
morning rise	4382 Jul 10 12:13	7°  647'00		morning rise	4383 Jun 24 19:13	16°  II59'30	
direct	4382 Jul 14 03:22	7°  618'36		direct	4383 Jul 08 17:28	23°  II56'23	24°35'42
morning max el	4382 Jul 27 03:24	13°  632'11	22°52'10	morning max el	4383 Jul 14 05:47	0°  6	
	4382 Aug 08 15:22	0°  Q			4383 Jul 31 02:20	27°  647'39	
asc. node	4382 Aug 13 05:16	8°  Q14'47		asc. node	4383 Aug 01 04:17	0°  Q	
morning set	4382 Aug 18 17:43	19°  Q23'14		morning set	4383 Aug 03 05:30	4°  Q17'05	
	4382 Aug 23 16:55	0°  np					
superior conj	4382 Aug 25 19:32	4°  np31'10	1°38'53	superior conj	4383 Aug 10 04:21	19°  Q21'04	1°28'15
minimum elong	4382 Aug 25 18:04	4°  np23'20	1°38'47	minimum elong	4383 Aug 10 02:12	19°  Q09'25	1°28'00
max. Earth dist.	4382 Aug 28 17:47	10°  np42'14	1.33886 AU	max. Earth dist.	4383 Aug 11 21:13	23°  Q02'52	1.32837 AU
evening rise	4382 Sep 02 14:08	20°  np33'17		evening rise	4383 Aug 15 03:28	0°  np	
	4382 Sep 07 13:10	0°  Q			4383 Aug 17 10:44	4°  np45'56	
desc. node	4382 Sep 19 00:30	19°  Q17'34		desc. node	4383 Aug 31 05:07	0°  Q	
	4382 Sep 26 12:08	0°  ml			4383 Sep 05 21:30	8°  Q44'00	
evening max el	4382 Oct 07 02:28	12°  ml14'02	27°14'10	evening max el	4383 Sep 19 13:18	25°  Q20'46	27°26'48
retrograde	4382 Oct 20 12:23	19°  ml31'58		retrograde	4383 Sep 25 09:54	0°  ml	
evening set	4382 Oct 27 10:46	16°  ml51'16		evening set	4383 Oct 03 05:54	2°  ml36'34	
min. Earth dist.	4382 Oct 31 06:54	13°  ml13'44	0.64851 AU	min. Earth dist.	4383 Oct 10 10:11	0°  ml02'41	
inferior conj	4382 Nov 02 12:02	10°  ml47'50	-2°13'12	inferior conj	4383 Oct 10 11:41	30°  RQ	
minimum elong	4382 Nov 02 15:50	10°  ml37'24	2°11'42	minimum elong	4383 Oct 14 01:50	26°  Q57'00	0.63200 AU
morning rise	4382 Nov 08 22:00	5°  ml17'04		morning rise	4383 Oct 16 18:54	24°  Q16'30	-3°14'47
asc. node	4382 Nov 09 04:28	5°  ml10'04		asc. node	4383 Oct 17 00:18	24°  Q03'07	3°12'59
direct	4382 Nov 11 13:00	4°  ml40'48		direct	4383 Oct 23 15:55	19°  Q02'41	
morning max el	4382 Nov 18 00:32	8°  ml07'40	18°00'53	morning max el	4383 Oct 26 02:07	18°  Q34'50	
	4382 Dec 02 20:55	0°  x			4383 Oct 27 01:32	18°  Q39'27	
morning set	4382 Dec 05 17:21	4°  x45'22		morning set	4383 Nov 01 17:15	22°  Q00'26	17°50'04
desc. node	4382 Dec 15 23:47	21°  x38'55		desc. node	4383 Nov 07 20:54	0°  ml	
					4383 Nov 18 00:43	17°  ml11'25	
superior conj	4382 Dec 19 15:43	27°  x32'04	-0°25'06	superior conj	4383 Nov 25 10:12	0°  x	
minimum elong	4382 Dec 19 12:38	27°  x19'45	0°24'40	minimum elong	4383 Nov 29 23:10	7°  x38'26	0°20'11
	4382 Dec 21 04:53	0°  Z			4383 Nov 30 01:12	7°  x46'53	0°19'53
max. Earth dist.	4382 Dec 23 16:11	3°  Z54'42	1.44987 AU	max. Earth dist.	4383 Dec 02 20:50	12°  x25'24	
evening rise	4383 Jan 04 22:33	23°  Z00'39		evening rise	4383 Dec 06 09:49	18°  x09'29	1.43987 AU
	4383 Jan 09 11:37	0°  Z			4383 Dec 13 22:03	0°  Z	
greatest brilliancy	4383 Jan 18 23:05	14°  Z20'32	-0.6m	greatest brilliancy	4383 Dec 15 08:22	2°  Z12'41	
	4383 Jan 30 19:13	0°  H			4384 Jan 03 01:24	0°  Z	
evening max el	4383 Jan 30 20:41	0°  H03'46	19°54'03	evening max el	4384 Jan 13 20:50	13°  Z37'16	20°59'17
asc. node	4383 Feb 05 03:44	3°  H59'42		asc. node	4384 Jan 22 07:55	18°  Z37'39	
retrograde	4383 Feb 07 09:51	4°  H27'00		retrograde	4384 Jan 23 00:46	18°  Z34'59	
evening set	4383 Feb 11 02:12	3°  H07'52		evening set	4384 Jan 26 09:41	17°  Z03'32	
	4383 Feb 14 06:37	30°  RZ			4384 Jan 31 18:03	10°  Z51'09	2°36'26
inferior conj	4383 Feb 16 12:13	27°  Z07'20	3°06'51	inferior conj	4384 Jan 31 15:35	10°  Z59'39	2°35'44
minimum elong	4383 Feb 16 10:01	27°  Z14'40	3°06'26	minimum elong	4384 Feb 01 04:10	10°  Z16'17	0.67732 AU
min. Earth dist.	4383 Feb 17 11:23	25° Z49'57	0.67035 AU	min. Earth dist.	4384 Feb 05 21:19	4° Z38'10	
morning rise	4383 Feb 21 17:38	20° Z53'14		morning rise	4384 Feb 11 05:47	2° Z16'48	
direct	4383 Feb 27 16:26	18° Z13'43		direct	4384 Feb 21 23:28	8° Z40'33	23°47'04
morning max el	4383 Mar 11 14:47	25° Z21'19	25°14'30	morning max el			

desc. node	4384 Feb 28 20:02	16° \approx 32'41		morning max el	4385 Feb 03 10:36	22° \approx 06'41	22°18'34
	4384 Mar 09 17:15	0° \approx			4385 Feb 10 05:59	0° \approx	
morning set	4384 Mar 28 10:24	29° \approx 28'50		desc. node	4385 Feb 14 17:06	5° \approx 55'17	
	4384 Mar 28 17:41	0° \approx			4385 Mar 03 01:01	0° \approx	
max. Earth dist.	4384 Apr 01 07:02	6° \approx 11'30	1.38610 AU	morning set	4385 Mar 08 21:55	9° \approx 20'59	
				max. Earth dist.	4385 Mar 14 03:58	18° \approx 02'38	1.40786 AU
superior conj	4384 Apr 08 15:35	19° \approx 38'55	-1°37'54		4385 Mar 21 01:35	0° \approx	
minimum elong	4384 Apr 08 20:23	20° \approx 01'35	1°37'20				
	4384 Apr 14 00:50	0° \approx		superior conj	4385 Mar 21 22:51	1° \approx 34'50	-1°58'22
evening rise	4384 Apr 17 17:54	7° \approx 15'17		minimum elong	4385 Mar 22 03:01	1° \approx 53'28	1°58'05
asc. node	4384 Apr 20 00:04	11° \approx 38'05		evening rise	4385 Apr 01 04:42	20° \approx 28'25	
	4384 Apr 30 20:57	0° \approx			4385 Apr 06 08:14	0° \approx	
evening max el	4384 May 04 02:39	3° \approx 42'42	18°50'17	asc. node	4385 Apr 06 21:07	0° \approx 57'49	
retrograde	4384 May 12 09:53	7° \approx 46'44		evening max el	4385 Apr 17 09:13	16° \approx 20'27	18°18'42
evening set	4384 May 14 13:01	7° \approx 31'41		retrograde	4385 Apr 24 14:15	19° \approx 56'02	
inferior conj	4384 May 22 12:48	3° \approx 12'30	1°12'53	evening set	4385 Apr 27 00:04	19° \approx 32'53	
minimum elong	4384 May 22 15:27	3° \approx 07'43	1°11'59	inferior conj	4385 May 04 04:44	14° \approx 53'42	2°28'30
min. Earth dist.	4384 May 25 17:45	0° \approx 54'09	0.57042 AU	minimum elong	4385 May 04 08:20	14° \approx 46'04	2°27'33
desc. node	4384 May 26 19:12	0° \approx 11'23		min. Earth dist.	4385 May 07 15:10	12° \approx 00'18	0.59070 AU
	4384 May 27 02:15	30° \approx 8		morning rise	4385 May 11 13:41	9° \approx 16'59	
morning rise	4384 May 30 14:37	28° \approx 05'57		desc. node	4385 May 13 16:15	8° \approx 18'04	
direct	4384 Jun 05 00:21	26° \approx 55'18		direct	4385 May 17 19:37	7° \approx 31'33	
	4384 Jun 13 23:32	0° \approx		morning max el	4385 Jun 01 05:00	15° \approx 19'28	27°16'58
morning max el	4384 Jun 19 08:32	4° \approx 23'31	26°09'06		4385 Jun 13 02:21	0° \approx	
	4384 Jul 07 21:05	0° \approx			4385 Jun 30 04:56	0° \approx	
asc. node	4384 Jul 16 23:22	17° \approx 36'58		morning set	4385 Jul 02 01:16	3° \approx 49'06	
morning set	4384 Jul 17 16:34	19° \approx 07'27		asc. node	4385 Jul 03 20:25	7° \approx 37'21	
	4384 Jul 22 17:06	0° \approx		max. Earth dist.	4385 Jul 08 17:58	18° \approx 18'06	1.31982 AU
superior conj	4384 Jul 24 15:33	4° \approx 15'57	1°12'43	superior conj	4385 Jul 09 03:23	19° \approx 10'02	0°52'58
minimum elong	4384 Jul 24 13:14	4° \approx 03'08	1°12'22	minimum elong	4385 Jul 09 01:21	18° \approx 58'46	0°52'35
max. Earth dist.	4384 Jul 25 06:27	5° \approx 37'57	1.32203 AU		4385 Jul 14 01:51	0° \approx	
evening rise	4384 Jul 31 14:33	19° \approx 18'07		evening rise	4385 Jul 15 23:06	4° \approx 02'21	
	4384 Aug 05 22:21	0° \approx			4385 Jul 29 18:05	0° \approx	
desc. node	4384 Aug 22 18:31	27° \approx 27'13		desc. node	4385 Aug 09 15:31	15° \approx 09'25	
	4384 Aug 24 17:47	0° \approx		evening max el	4385 Aug 13 19:07	19° \approx 31'53	26°14'33
evening max el	4384 Aug 31 19:36	7° \approx 49'46	27°07'15	retrograde	4385 Aug 27 18:26	26° \approx 40'59	
retrograde	4384 Sep 14 16:17	15° \approx 02'13		evening set	4385 Sep 03 06:40	24° \approx 57'13	
evening set	4384 Sep 21 18:25	12° \approx 47'08		min. Earth dist.	4385 Sep 07 08:08	22° \approx 22'15	0.59201 AU
min. Earth dist.	4384 Sep 25 09:58	10° \approx 04'35	0.61272 AU	inferior conj	4385 Sep 10 14:28	19° \approx 53'37	-4°55'18
inferior conj	4384 Sep 28 12:53	7° \approx 21'28	-4°11'31	minimum elong	4385 Sep 10 19:04	19° \approx 44'52	4°54'40
minimum elong	4384 Sep 28 18:58	7° \approx 08'12	4°10'01	morning rise	4385 Sep 18 09:40	15° \approx 22'57	
morning rise	4384 Oct 05 21:22	2° \approx 28'07		direct	4385 Sep 20 19:09	15° \approx 03'14	
direct	4384 Oct 08 05:37	2° \approx 05'37		morning max el	4385 Sep 28 17:03	18° \approx 52'38	18°25'07
asc. node	4384 Oct 12 22:36	3° \approx 40'17		asc. node	4385 Sep 29 19:40	20° \approx 00'38	
morning max el	4384 Oct 15 07:51	5° \approx 38'20	17°57'40		4385 Oct 06 21:09	0° \approx	
	4384 Oct 30 20:06	0° \approx		morning set	4385 Oct 14 17:16	14° \approx 24'04	
morning set	4384 Oct 31 02:28	0° \approx 29'16			4385 Oct 22 22:11	0° \approx	
superior conj	4384 Nov 10 09:14	19° \approx 02'24	0°56'40	superior conj	4385 Oct 23 18:27	1° \approx 33'52	1°22'13
minimum elong	4384 Nov 10 13:16	19° \approx 20'01	0°56'09	minimum elong	4385 Oct 23 22:04	1° \approx 50'32	1°21'51
	4384 Nov 16 19:18	0° \approx		max. Earth dist.	4385 Oct 31 05:56	14° \approx 54'58	1.40441 AU
max. Earth dist.	4384 Nov 17 22:37	1° \approx 53'21	1.42404 AU	evening rise	4385 Nov 04 16:04	22° \approx 23'15	
desc. node	4384 Nov 18 17:51	3° \approx 12'33		desc. node	4385 Nov 05 14:51	23° \approx 57'11	
evening rise	4384 Nov 24 02:13	11° \approx 50'10			4385 Nov 09 08:43	0° \approx	
	4384 Dec 05 23:38	0° \approx			4385 Nov 30 00:19	0° \approx	
evening max el	4384 Dec 26 15:34	27° \approx 11'41	22°14'25	evening max el	4385 Dec 09 06:17	10° \approx 49'10	23°34'15
	4384 Dec 29 17:19	0° \approx		retrograde	4385 Dec 19 22:19	17° \approx 07'23	
retrograde	4385 Jan 05 04:34	2° \approx 52'21		evening set	4385 Dec 24 23:34	15° \approx 01'46	
asc. node	4385 Jan 08 21:50	1° \approx 38'57		asc. node	4385 Dec 26 18:54	13° \approx 14'57	
evening set	4385 Jan 09 17:21	1° \approx 02'33		inferior conj	4385 Dec 30 09:30	8° \approx 36'30	1°11'55
	4385 Jan 10 20:36	30° \approx 8		minimum elong	4385 Dec 30 07:55	8° \approx 41'55	1°11'17
inferior conj	4385 Jan 15 01:45	24° \approx 41'45	1°57'43	min. Earth dist.	4385 Dec 29 20:56	9° \approx 19'28	0.67959 AU
minimum elong	4385 Jan 14 23:31	24° \approx 49'34	1°56'56	morning rise	4386 Jan 04 16:13	2° \approx 30'21	
min. Earth dist.	4385 Jan 15 00:09	24° \approx 47'21	0.68028 AU	direct	4386 Jan 08 19:45	0° \approx 53'51	
morning rise	4385 Jan 20 05:32	18° \approx 31'17		morning max el	4386 Jan 17 03:32	5° \approx 42'21	20°56'55
direct	4385 Jan 24 23:11	16° \approx 32'03		desc. node	4386 Feb 01 14:07	25° \approx 46'44	

	4386 Feb 04 11:06	0°♊		direct	4386 Dec 23 18:11	15°♊18'12	
morning set	4386 Feb 16 06:02	17°♊57'36		morning max el	4386 Dec 31 04:16	19°♊29'38	19°47'32
	4386 Feb 23 19:27	0°♋			4387 Jan 08 15:07	0°♋	
max. Earth dist.	4386 Feb 24 07:08	0°♋47'29	1.42756 AU	greatest brilliancy	4387 Jan 13 10:29	6°♋56'31	-0.6m
				desc. node	4387 Jan 19 11:08	15°♋59'19	
superior conj	4386 Mar 03 07:38	12°♋27'11	-2°07'57	morning set	4387 Jan 26 02:04	26°♋07'49	
minimum elong	4386 Mar 03 08:20	12°♋30'07	2°07'57		4387 Jan 28 14:06	0°♌	
	4386 Mar 13 09:07	0°♍		max. Earth dist.	4387 Feb 06 18:07	14°♌23'17	1.44265 AU
evening rise	4386 Mar 15 00:52	2°♍57'32					
asc. node	4386 Mar 24 18:09	19°♍51'16		superior conj	4387 Feb 11 14:43	22°♌10'48	-2°01'12
evening max el	4386 Mar 31 20:31	29°♍22'26	18°06'52	minimum elong	4387 Feb 11 09:23	21°♌49'15	2°00'57
	4386 Apr 01 12:26	0°♎			4387 Feb 16 09:34	0°♎	
retrograde	4386 Apr 07 10:50	2°♎45'25		evening rise	4387 Feb 25 02:02	14°♎34'28	
evening set	4386 Apr 10 03:08	2°♎11'52			4387 Mar 06 05:50	0°♏	
	4386 Apr 13 14:51	30°♏♏		asc. node	4387 Mar 11 15:11	8°♏10'14	
inferior conj	4386 Apr 16 16:06	27°♏12'16	3°13'20	evening max el	4387 Mar 15 09:22	12°♏40'14	18°14'06
minimum elong	4386 Apr 16 18:36	27°♏06'08	3°12'55	retrograde	4387 Mar 21 19:23	16°♏05'10	
min. Earth dist.	4386 Apr 19 19:39	24°♏08'44	0.61270 AU	evening set	4387 Mar 24 17:44	15°♏19'54	
morning rise	4386 Apr 23 08:08	21°♏16'12		inferior conj	4387 Mar 30 18:57	10°♏00'45	3°33'03
direct	4386 Apr 30 02:19	18°♏57'43		minimum elong	4387 Mar 30 19:45	9°♏58'33	3°33'01
desc. node	4386 Apr 30 13:17	18°♏58'19		min. Earth dist.	4387 Apr 02 08:57	7°♏10'32	0.63342 AU
morning max el	4386 May 14 07:36	26°♏55'19	27°49'41	morning rise	4387 Apr 05 20:44	3°♏53'59	
	4386 May 17 05:24	0°♐		direct	4387 Apr 12 17:51	1°♏12'51	
	4386 Jun 06 17:11	0°♑		desc. node	4387 Apr 17 10:19	2°♏17'40	
morning set	4386 Jun 16 05:40	18°♑15'05		morning max el	4387 Apr 26 15:01	9°♏11'16	27°44'50
asc. node	4386 Jun 20 17:26	27°♑43'25			4387 May 12 18:58	0°♒	
	4386 Jun 21 18:40	0°♓			4387 May 29 23:36	0°♑	
max. Earth dist.	4386 Jun 22 03:56	0°♓50'21	1.32179 AU	morning set	4387 May 31 03:31	2°♑18'34	
				max. Earth dist.	4387 Jun 05 08:34	13°♑03'25	1.32808 AU
superior conj	4386 Jun 23 14:02	3°♓56'39	0°29'34				
minimum elong	4386 Jun 23 12:43	3°♓49'30	0°29'16	superior conj	4387 Jun 07 21:42	18°♑30'09	0°03'10
evening rise	4386 Jun 30 10:14	18°♓50'59		minimum elong	4387 Jun 07 21:33	18°♑29'20	0°03'07
	4386 Jul 05 20:57	0°♈		behind sun begin	4387 Jun 07 16:20	18°♑01'18	
	4386 Jul 26 00:12	0°♉		behind sun end	4387 Jun 08 02:45	18°♑57'24	
evening max el	4386 Jul 26 11:26	0°♉27'16	24°54'03	asc. node	4387 Jun 07 14:27	17°♑51'11	
desc. node	4386 Jul 27 12:32	1°♉25'29			4387 Jun 13 05:14	0°♊	
retrograde	4386 Aug 09 09:51	7°♉29'55		evening rise	4387 Jun 14 22:02	3°♊38'00	
evening set	4386 Aug 14 18:49	6°♉24'27			4387 Jun 29 04:54	0°♋	
min. Earth dist.	4386 Aug 19 22:57	3°♉38'27	0.57229 AU	evening max el	4387 Jul 08 00:17	10°♋53'19	23°18'18
inferior conj	4386 Aug 22 20:34	1°♉43'36	-5°13'14	desc. node	4387 Jul 14 09:32	15°♋43'26	
minimum elong	4386 Aug 22 20:33	1°♉43'39	5°13'14	retrograde	4387 Jul 21 12:29	17°♋38'42	
	4386 Aug 25 13:26	30°♋♋		evening set	4387 Jul 25 09:27	17°♋05'55	
morning rise	4386 Aug 31 00:42	27°♋34'54		min. Earth dist.	4387 Aug 01 09:46	13°♋53'26	0.55683 AU
direct	4386 Sep 02 14:44	27°♋15'49		inferior conj	4387 Aug 03 06:46	12°♋47'24	-4°49'13
	4386 Sep 09 21:42	0°♌		minimum elong	4387 Aug 03 00:35	12°♋56'30	4°48'17
morning max el	4386 Sep 11 17:24	1°♌32'49	19°13'53	morning rise	4387 Aug 11 18:05	8°♌54'30	
asc. node	4386 Sep 16 16:42	7°♌24'54		direct	4387 Aug 14 15:27	8°♌34'16	
morning set	4386 Sep 28 17:06	28°♌44'36		morning max el	4387 Aug 25 06:21	13°♌30'19	20°24'25
	4386 Sep 29 08:15	0°♍		asc. node	4387 Sep 03 13:43	25°♌39'00	
					4387 Sep 06 02:06	0°♎	
superior conj	4386 Oct 06 21:20	14°♍57'06	1°37'25	morning set	4387 Sep 12 22:56	13°♎22'19	
minimum elong	4386 Oct 06 23:29	15°♍07'30	1°37'17				
max. Earth dist.	4386 Oct 13 10:27	27°♍16'11	1.38343 AU	superior conj	4387 Sep 20 12:59	28°♎57'54	1°43'41
	4386 Oct 14 22:46	0°♎		minimum elong	4387 Sep 20 13:29	29°♎00'27	1°43'40
evening rise	4386 Oct 17 05:11	4°♎00'24			4387 Sep 21 01:16	0°♏	
desc. node	4386 Oct 23 11:51	14°♎35'34		max. Earth dist.	4387 Sep 25 17:14	9°♏12'52	1.36358 AU
	4386 Nov 02 10:58	0°♐		evening rise	4387 Sep 29 15:09	16°♏34'54	
evening max el	4386 Nov 21 19:08	24°♐31'13	24°52'20		4387 Oct 07 06:53	0°♑	
	4386 Nov 28 19:28	0°♑		desc. node	4387 Oct 10 08:51	5°♑02'43	
retrograde	4386 Dec 03 11:55	1°♑18'59			4387 Oct 27 21:19	0°♒	
	4386 Dec 07 17:43	30°♒♒		evening max el	4387 Nov 04 07:41	8°♒14'26	26°01'26
evening set	4386 Dec 09 02:46	28°♒58'26		retrograde	4387 Nov 16 20:37	15°♒21'28	
min. Earth dist.	4386 Dec 13 16:10	23°♒50'09	0.67540 AU	evening set	4387 Nov 23 01:12	12°♒48'26	
asc. node	4386 Dec 13 15:55	23°♒50'58		min. Earth dist.	4387 Nov 27 07:23	8°♒15'27	0.66774 AU
inferior conj	4386 Dec 14 15:30	22°♒33'11	0°20'03	inferior conj	4387 Nov 28 17:53	6°♒27'55	-0°36'51
minimum elong	4386 Dec 14 15:00	22°♒34'49	0°19'51	minimum elong	4387 Nov 28 18:51	6°♒24'52	0°36'24
morning rise	4386 Dec 20 03:22	16°♒33'32		asc. node	4387 Nov 30 12:57	4°♒17'02	

morning rise	4387 Dec 04 12:58	0° J 37'23		direct	4388 Nov 20 13:46	13° M 55'39	
	4387 Dec 05 20:10	30° K M		morning max el	4388 Nov 27 02:17	17° M 26'38	18°15'09
direct	4387 Dec 07 16:51	29° M 40'11			4388 Dec 06 09:57	0° J	
	4387 Dec 09 14:33	0° J		morning set	4388 Dec 16 00:52	15° J 29'18	
morning max el	4387 Dec 14 12:31	3° J 26'03	18°53'12	desc. node	4388 Dec 23 05:10	27° J 04'40	
	4388 Jan 02 05:20	0° Z			4388 Dec 25 01:04	0° Z	
morning set	4388 Jan 05 11:21	5° Z 05'22					
desc. node	4388 Jan 06 08:08	6° Z 26'46		superior conj	4388 Dec 31 02:48	9° Z 37'05	-0°52'32
max. Earth dist.	4388 Jan 20 11:06	28° Z 34'22	1.45127 AU	minimum elong	4388 Dec 30 20:16	9° Z 11'20	0°51'41
	4388 Jan 21 08:53	0° \approx		max. Earth dist.	4389 Jan 02 06:28	13° Z 00'06	1.45251 AU
					4389 Jan 13 03:24	0° \approx	
superior conj	4388 Jan 21 23:50	0° \approx 58'46	-1°34'49	evening rise	4389 Jan 16 08:37	5° \approx 01'26	
minimum elong	4388 Jan 21 14:33	0° \approx 22'14	1°33'55	greatest brilliancy	4389 Jan 27 23:30	23° \approx 03'02	-0.7m
evening rise	4388 Feb 06 04:37	25° \approx 14'20			4389 Feb 01 15:41	0° H	
	4388 Feb 09 03:04	0° H		evening max el	4389 Feb 09 05:08	9° H 37'25	19°22'23
asc. node	4388 Feb 26 12:13	25° H 44'03		asc. node	4389 Feb 12 09:15	12° H 20'00	
evening max el	4388 Feb 26 20:59	26° H 06'43	18°39'40	retrograde	4389 Feb 16 08:19	13° H 42'36	
retrograde	4388 Mar 04 11:42	29° H 46'23		evening set	4389 Feb 19 19:55	12° H 31'35	
evening set	4388 Mar 07 16:15	28° H 48'36		inferior conj	4389 Feb 25 07:48	6° H 38'44	3°20'02
inferior conj	4388 Mar 13 09:19	23° H 11'32	3°33'45	minimum elong	4389 Feb 25 05:59	6° H 44'39	3°19'46
minimum elong	4388 Mar 13 08:35	23° H 13'47	3°33'43	min. Earth dist.	4389 Feb 26 15:02	4° H 57'15	0.66445 AU
min. Earth dist.	4388 Mar 15 07:41	20° H 51'11	0.65094 AU	morning rise	4389 Mar 02 15:46	0° H 24'33	
morning rise	4388 Mar 19 00:24	16° H 59'26			4389 Mar 03 03:05	30° R \approx	
direct	4388 Mar 25 16:37	14° H 09'18		direct	4389 Mar 08 21:48	27° \approx 38'10	
desc. node	4388 Apr 03 07:21	17° H 46'07			4389 Mar 15 10:59	0° H	
morning max el	4388 Apr 08 00:54	21° H 58'58	27°05'58	desc. node	4389 Mar 21 04:23	4° H 50'05	
	4388 Apr 15 01:21	0° Y		morning max el	4389 Mar 21 10:44	5° H 06'02	26°00'27
	4388 May 04 23:59	0° B			4389 Apr 09 13:26	0° Y	
morning set	4388 May 13 15:56	15° B 51'05		morning set	4389 Apr 26 14:59	28° Y 40'40	
max. Earth dist.	4388 May 18 04:16	24° B 48'10	1.33885 AU		4389 Apr 27 08:04	0° B	
	4388 May 20 16:54	0° II		max. Earth dist.	4389 Apr 30 12:27	6° B 02'22	1.35424 AU
superior conj	4388 May 22 00:22	2° II 44'27	-0°25'23	superior conj	4389 May 05 19:32	16° B 31'46	-0°54'47
minimum elong	4388 May 22 01:42	2° II 51'27	0°25'07	minimum elong	4389 May 05 22:30	16° B 46'49	0°54'14
asc. node	4388 May 24 11:30	7° II 56'49		asc. node	4389 May 11 08:32	27° B 55'29	
evening rise	4388 May 29 08:40	18° II 17'21			4389 May 12 08:37	0° II	
	4388 Jun 04 04:19	0° B		evening rise	4389 May 13 16:03	2° II 41'48	
evening max el	4388 Jun 18 17:21	21° B 22'13	21°43'17		4389 May 29 16:21	0° B	
desc. node	4388 Jun 30 06:33	27° B 29'55		evening max el	4389 May 31 21:11	2° B 21'37	20°21'07
retrograde	4388 Jul 01 04:26	27° B 31'51		retrograde	4389 Jun 11 17:52	7° B 40'04	
evening set	4388 Jul 03 18:16	27° B 16'52		evening set	4389 Jun 13 17:16	7° B 30'16	
inferior conj	4388 Jul 13 02:45	23° B 15'00	-3°34'18	desc. node	4389 Jun 17 03:35	6° B 31'01	
minimum elong	4388 Jul 12 18:11	23° B 26'59	3°31'50	inferior conj	4389 Jun 22 21:11	3° B 32'13	-1°41'53
min. Earth dist.	4388 Jul 12 20:07	23° B 24'17	0.54876 AU	minimum elong	4389 Jun 22 16:24	3° B 39'14	1°40'07
morning rise	4388 Jul 21 19:26	19° B 22'53		min. Earth dist.	4389 Jun 24 08:13	2° B 40'58	0.55014 AU
direct	4388 Jul 25 02:29	18° B 59'11			4389 Jun 29 14:58	30° R II	
morning max el	4388 Aug 06 07:40	24° B 43'23	21°54'25	morning rise	4389 Jul 01 14:22	29° II 19'52	
	4388 Aug 11 03:08	0° Ω		direct	4389 Jul 05 12:42	28° II 46'28	
asc. node	4388 Aug 20 10:45	14° Ω 31'21			4389 Jul 11 06:28	0° B	
morning set	4388 Aug 27 08:32	28° Ω 11'11		morning max el	4389 Jul 19 00:22	5° B 20'02	23°36'31
	4388 Aug 28 05:19	0° np			4389 Aug 05 07:35	0° Ω	
				asc. node	4389 Aug 07 07:47	3° Ω 51'30	
superior conj	4388 Sep 03 13:35	13° np 25'26	1°42'29	morning set	4389 Aug 11 19:59	13° Ω 04'28	
minimum elong	4388 Sep 03 12:43	13° np 20'53	1°42'27				
max. Earth dist.	4388 Sep 07 07:00	21° np 07'51	1.34672 AU	superior conj	4389 Aug 18 20:07	28° Ω 09'24	1°35'01
evening rise	4388 Sep 11 17:47	29° np 56'41		minimum elong	4389 Aug 18 18:18	27° Ω 59'39	1°34'52
	4388 Sep 11 18:28	0° L			4389 Aug 19 16:41	0° np	
desc. node	4388 Sep 26 05:53	25° L 13'05		max. Earth dist.	4389 Aug 21 05:26	3° np 16'05	1.33382 AU
	4388 Sep 29 09:05	0° M		evening rise	4389 Aug 26 08:51	13° np 53'27	
evening max el	4388 Oct 16 20:17	21° M 51'49	26°54'02		4389 Sep 03 22:20	0° L	
retrograde	4388 Oct 29 23:56	29° M 08'25		desc. node	4389 Sep 13 02:54	14° L 58'17	
evening set	4388 Nov 05 16:52	26° M 28'01			4389 Sep 24 09:33	0° M	
min. Earth dist.	4388 Nov 09 16:20	22° M 30'47	0.65656 AU	evening max el	4389 Sep 29 08:06	5° M 12'31	27°23'09
inferior conj	4388 Nov 11 14:38	20° M 16'59	-1°37'23	retrograde	4389 Oct 12 21:28	12° M 30'52	
minimum elong	4388 Nov 11 17:22	20° M 09'04	1°36'15	evening set	4389 Oct 19 23:08	9° M 51'22	
asc. node	4388 Nov 16 09:58	15° M 29'05		min. Earth dist.	4389 Oct 23 16:54	6° M 28'17	0.64185 AU
morning rise	4388 Nov 17 18:45	14° M 38'22		inferior conj	4389 Oct 26 03:20	3° M 54'37	-2°39'33

minimum elong	4389 Oct 26 07:52	3° \mathbb{M} 42'40	2°37'53	retrograde	4390 Sep 25 12:20	25° \mathbb{L} 19'33	
	4389 Oct 30 06:33	30° \mathbb{R} \mathbb{L}		evening set	4390 Oct 02 16:38	22° \mathbb{L} 52'15	
morning rise	4389 Nov 01 17:56	28° \mathbb{L} 30'56		min. Earth dist.	4390 Oct 06 07:28	19° \mathbb{L} 57'36	0.62402 AU
asc. node	4389 Nov 03 07:01	28° \mathbb{L} 03'41		inferior conj	4390 Oct 09 05:07	17° \mathbb{L} 14'07	-3°39'53
direct	4389 Nov 04 06:28	27° \mathbb{L} 58'48		minimum elong	4390 Oct 09 10:59	17° \mathbb{L} 00'19	3°38'08
	4389 Nov 09 05:08	0° \mathbb{M}		morning rise	4390 Oct 16 07:02	12° \mathbb{L} 08'32	
morning max el	4389 Nov 10 18:48	1° \mathbb{M} 24'14	17°54'07	direct	4390 Oct 18 15:53	11° \mathbb{L} 43'26	
morning set	4389 Nov 27 18:38	27° \mathbb{M} 15'43		asc. node	4390 Oct 21 04:05	12° \mathbb{L} 12'26	
	4389 Nov 29 09:16	0° \mathbb{X}		morning max el	4390 Oct 25 10:58	15° \mathbb{L} 11'26	17°50'55
desc. node	4389 Dec 10 02:13	17° \mathbb{X} 48'59			4390 Nov 04 17:32	0° \mathbb{M}	
				morning set	4390 Nov 10 10:33	10° \mathbb{M} 05'42	
superior conj	4389 Dec 10 20:06	19° \mathbb{X} 01'32	-0°05'11				
minimum elong	4389 Dec 10 19:30	18° \mathbb{X} 59'07	0°05'06	superior conj	4390 Nov 21 14:53	29° \mathbb{M} 40'46	0°36'57
behind sun begin	4389 Dec 10 09:51	18° \mathbb{X} 19'59		minimum elong	4390 Nov 21 18:09	29° \mathbb{M} 54'37	0°36'30
behind sun end	4389 Dec 11 05:09	19° \mathbb{X} 38'11			4390 Nov 21 19:25	0° \mathbb{X}	
max. Earth dist.	4389 Dec 16 00:56	27° \mathbb{X} 21'37	1.44636 AU	desc. node	4390 Nov 26 23:14	8° \mathbb{X} 36'00	
	4389 Dec 17 16:59	0° \mathbb{Z}		max. Earth dist.	4390 Nov 28 16:16	11° \mathbb{X} 23'21	1.43370 AU
evening rise	4389 Dec 26 20:58	14° \mathbb{Z} 15'31		evening rise	4390 Dec 06 08:12	23° \mathbb{X} 33'22	
	4390 Jan 06 05:41	0° \mathbb{Z}			4390 Dec 10 12:38	0° \mathbb{Z}	
evening max el	4390 Jan 23 08:24	23° \mathbb{Z} 10'17	20°20'20		4390 Dec 31 11:10	0° \mathbb{Z}	
asc. node	4390 Jan 30 06:17	27° \mathbb{Z} 43'40		evening max el	4391 Jan 06 06:13	6° \mathbb{Z} 44'16	21°30'26
retrograde	4390 Jan 31 06:30	27° \mathbb{Z} 49'11		retrograde	4391 Jan 15 04:06	12° \mathbb{Z} 01'42	
evening set	4390 Feb 04 02:33	26° \mathbb{Z} 23'58		asc. node	4391 Jan 17 03:20	11° \mathbb{Z} 40'46	
inferior conj	4390 Feb 09 11:37	20° \mathbb{Z} 18'00	2°55'05	evening set	4391 Jan 19 10:17	10° \mathbb{Z} 21'12	
minimum elong	4390 Feb 09 09:15	20° \mathbb{Z} 26'02	2°54'32	inferior conj	4391 Jan 24 18:29	4° \mathbb{Z} 05'01	2°20'57
min. Earth dist.	4390 Feb 10 05:07	19° \mathbb{Z} 18'34	0.67376 AU	minimum elong	4391 Jan 24 16:03	4° \mathbb{Z} 13'27	2°20'12
morning rise	4390 Feb 14 15:45	14° \mathbb{Z} 03'54		min. Earth dist.	4391 Jan 24 23:34	3° \mathbb{Z} 47'23	0.67902 AU
direct	4390 Feb 20 08:33	11° \mathbb{Z} 31'15			4391 Jan 27 20:46	30° \mathbb{R} \mathbb{Z}	
morning max el	4390 Mar 03 19:26	18° \mathbb{Z} 22'15	24°38'02	morning rise	4391 Jan 29 21:38	27° \mathbb{Z} 52'50	
desc. node	4390 Mar 08 01:27	23° \mathbb{Z} 02'41		direct	4391 Feb 03 23:53	25° \mathbb{Z} 40'18	
	4390 Mar 13 14:28	0° \mathbb{X}			4391 Feb 12 09:17	0° \mathbb{Z}	
	4390 Apr 02 15:10	0° \mathbb{Y}		morning max el	4391 Feb 14 04:30	1° \mathbb{Z} 43'24	23°09'00
morning set	4390 Apr 08 19:32	10° \mathbb{Y} 33'29		desc. node	4391 Feb 22 22:29	12° \mathbb{Z} 03'39	
max. Earth dist.	4390 Apr 12 10:40	17° \mathbb{Y} 03'56	1.37368 AU		4391 Mar 07 14:26	0° \mathbb{X}	
				morning set	4391 Mar 20 23:22	21° \mathbb{X} 12'15	
superior conj	4390 Apr 19 04:06	29° \mathbb{Y} 44'28	-1°23'08	max. Earth dist.	4391 Mar 25 05:41	28° \mathbb{X} 27'28	1.39545 AU
minimum elong	4390 Apr 19 08:28	0° \mathbb{X} 05'41	1°22'28		4391 Mar 26 02:58	0° \mathbb{Y}	
	4390 Apr 19 07:18	0° \mathbb{X}					
evening rise	4390 Apr 27 17:52	16° \mathbb{X} 44'54		superior conj	4391 Apr 01 21:58	12° \mathbb{Y} 11'44	-1°47'35
asc. node	4390 Apr 28 05:36	17° \mathbb{X} 43'17		minimum elong	4391 Apr 02 02:46	12° \mathbb{Y} 33'53	1°47'06
	4390 May 04 15:59	0° \mathbb{I}		evening rise	4391 Apr 11 11:04	0° \mathbb{X} 18'21	
evening max el	4390 May 14 13:26	14° \mathbb{I} 03'11	19°17'39		4391 Apr 11 07:15	0° \mathbb{X}	
retrograde	4390 May 23 16:56	18° \mathbb{I} 30'31		asc. node	4391 Apr 15 02:38	7° \mathbb{X} 14'43	
evening set	4390 May 25 16:48	18° \mathbb{I} 18'43		evening max el	4391 Apr 27 15:46	26° \mathbb{X} 22'48	18°34'23
inferior conj	4390 Jun 03 04:11	14° \mathbb{I} 10'16	0°15'00		4391 May 03 14:55	0° \mathbb{I}	
minimum elong	4390 Jun 03 04:49	14° \mathbb{I} 09'13	0°14'46	retrograde	4391 May 05 10:09	0° \mathbb{I} 12'12	
transit middle	4390 Jun 03 04:49	14° \mathbb{I} 09'13	0°14'46		4391 May 07 06:14	30° \mathbb{R} \mathbb{I}	
transit begin	4390 Jun 03 03:20	14° \mathbb{I} 11'41		evening set	4391 May 07 16:15	29° \mathbb{X} 53'57	
transit end	4390 Jun 03 06:18	14° \mathbb{I} 06'45		inferior conj	4391 May 15 07:37	25° \mathbb{X} 26'35	1°48'54
desc. node	4390 Jun 04 00:37	13° \mathbb{I} 36'18		minimum elong	4391 May 15 11:01	25° \mathbb{X} 19'59	1°47'51
min. Earth dist.	4390 Jun 05 22:50	12° \mathbb{I} 20'28	0.56089 AU	min. Earth dist.	4391 May 18 16:52	22° \mathbb{X} 50'35	0.57871 AU
morning rise	4390 Jun 11 13:48	9° \mathbb{I} 24'03		desc. node	4391 May 21 21:40	20° \mathbb{X} 44'11	
direct	4390 Jun 16 10:18	8° \mathbb{I} 29'56		morning rise	4391 May 23 02:35	20° \mathbb{X} 06'20	
morning max el	4390 Jun 30 14:14	15° \mathbb{I} 42'34	25°17'32	direct	4391 May 28 21:58	18° \mathbb{X} 41'06	
	4390 Jul 12 02:11	0° \mathbb{O}		morning max el	4391 Jun 12 06:59	26° \mathbb{X} 18'33	26°41'42
asc. node	4390 Jul 25 04:51	23° \mathbb{O} 32'05			4391 Jun 15 18:43	0° \mathbb{I}	
morning set	4390 Jul 27 07:39	27° \mathbb{O} 57'19			4391 Jul 05 09:36	0° \mathbb{O}	
	4390 Jul 28 06:41	0° \mathbb{Q}		morning set	4391 Jul 11 17:55	12° \mathbb{O} 44'31	
				asc. node	4391 Jul 12 01:55	13° \mathbb{O} 26'44	
superior conj	4390 Aug 03 06:12	13° \mathbb{Q} 02'22	1°22'13				
minimum elong	4390 Aug 03 03:56	12° \mathbb{Q} 49'54	1°21'55	superior conj	4391 Jul 18 17:54	27° \mathbb{O} 57'42	1°04'50
max. Earth dist.	4390 Aug 04 11:30	15° \mathbb{Q} 42'34	1.32515 AU	minimum elong	4391 Jul 18 15:38	27° \mathbb{O} 45'12	1°04'27
evening rise	4390 Aug 10 08:52	28° \mathbb{Q} 15'33		max. Earth dist.	4391 Jul 18 22:10	28° \mathbb{O} 21'19	1.32062 AU
	4390 Aug 11 05:15	0° \mathbb{P}			4391 Jul 19 16:04	0° \mathbb{Q}	
	4390 Aug 28 03:37	0° \mathbb{L}		evening rise	4391 Jul 25 15:00	12° \mathbb{Q} 54'06	
desc. node	4390 Aug 30 23:55	4° \mathbb{L} 08'03			4391 Aug 03 07:46	0° \mathbb{P}	
evening max el	4390 Sep 11 17:20	18° \mathbb{L} 04'38	27°22'38	desc. node	4391 Aug 17 20:56	22° \mathbb{P} 28'02	

	4391 Aug 24 14:41	0°♎			4392 Jul 27 00:27	0°♐	
evening max el	4391 Aug 24 21:16	0°♎15'43	26°48'51	desc. node	4392 Aug 03 17:57	9°♐37'15	
retrograde	4391 Sep 07 19:16	7°♎26'01		evening max el	4392 Aug 05 17:37	11°♐37'08	25°43'06
evening set	4391 Sep 14 17:00	5°♎23'17		retrograde	4392 Aug 19 16:44	18°♐43'37	
min. Earth dist.	4391 Sep 18 11:21	2°♎45'55	0.60395 AU	evening set	4392 Aug 25 19:15	17°♐15'46	
inferior conj	4391 Sep 21 16:38	0°♎07'01	-4°32'22	min. Earth dist.	4392 Aug 30 05:41	14°♐38'39	0.58335 AU
minimum elong	4391 Sep 21 22:24	29°♐55'05	4°31'11	inferior conj	4392 Sep 02 10:12	12°♐22'14	-5°07'00
	4391 Sep 21 20:01	30°♐		minimum elong	4392 Sep 02 13:13	12°♐16'49	5°06'45
morning rise	4391 Sep 29 05:46	25°♐22'46		morning rise	4392 Sep 10 09:27	8°♐01'20	
direct	4391 Oct 01 14:11	25°♐01'40		direct	4392 Sep 12 20:42	7°♐41'58	
asc. node	4391 Oct 08 01:08	27°♐49'01		morning max el	4392 Sep 21 05:26	11°♐41'15	18°43'14
morning max el	4391 Oct 08 23:38	28°♐40'25	18°06'48	asc. node	4392 Sep 23 22:10	14°♐38'19	
	4391 Oct 10 06:07	0°♎			4392 Oct 03 11:51	0°♎	
morning set	4391 Oct 24 18:29	23°♎41'36		morning set	4392 Oct 07 13:34	7°♎48'44	
	4391 Oct 28 03:26	0°♍					
superior conj	4391 Nov 03 11:26	11°♍35'23	1°08'51	superior conj	4392 Oct 16 04:51	24°♎30'56	1°29'51
minimum elong	4391 Nov 03 15:30	11°♍53'34	1°08'21	minimum elong	4392 Oct 16 07:54	24°♎45'20	1°29'35
max. Earth dist.	4391 Nov 11 03:05	24°♍51'57	1.41604 AU		4392 Oct 19 03:32	0°♍	
desc. node	4391 Nov 13 20:14	29°♍22'45		max. Earth dist.	4392 Oct 23 09:10	7°♍37'14	1.39551 AU
	4391 Nov 14 05:19	0°♌		evening rise	4392 Oct 27 09:29	14°♍33'02	
evening rise	4391 Nov 16 09:44	3°♌32'59		desc. node	4392 Oct 30 17:14	20°♍05'07	
	4391 Dec 03 21:04	0°♏			4392 Nov 05 22:47	0°♌	
evening max el	4391 Dec 19 23:10	20°♏20'33	22°48'12	evening max el	4392 Nov 27 19:22	0°♏	
retrograde	4391 Dec 29 23:30	26°♏17'10		retrograde	4392 Dec 01 12:47	3°♏59'36	24°08'01
evening set	4392 Jan 03 17:30	24°♏20'35		evening set	4392 Dec 12 15:32	10°♏31'17	
asc. node	4392 Jan 04 00:23	24°♏05'51		asc. node	4392 Dec 17 22:37	8°♏18'51	
inferior conj	4392 Jan 09 02:25	17°♏57'39	1°39'06	min. Earth dist.	4392 Dec 20 21:25	5°♏11'09	
minimum elong	4392 Jan 09 00:23	18°♏04'38	1°38'21	inferior conj	4392 Dec 22 16:23	2°♏51'09	0.67828 AU
min. Earth dist.	4392 Jan 08 20:06	18°♏19'29	0.68048 AU	minimum elong	4392 Dec 23 09:36	1°♏53'03	0°50'35
morning rise	4392 Jan 14 07:10	11°♏48'58			4392 Dec 23 08:25	1°♏57'01	0°50'07
direct	4392 Jan 18 18:47	9°♏59'20		morning rise	4392 Dec 24 19:36	30°♌♌	
morning max el	4392 Jan 27 17:37	15°♏12'52	21°42'38	direct	4392 Dec 28 18:16	25°♌49'41	
	4392 Feb 08 15:05	0°♏		morning max el	4393 Jan 01 16:11	24°♌22'37	
desc. node	4392 Feb 09 19:30	1°♏39'36			4393 Jan 09 13:52	28°♌53'43	20°25'45
morning set	4392 Feb 28 22:24	0°♏28'59		desc. node	4393 Jan 10 15:24	0°♏	
	4392 Feb 28 15:08	0°♏			4393 Jan 26 16:31	21°♏40'34	
max. Earth dist.	4392 Mar 06 05:14	10°♏42'20	1.41674 AU	morning set	4393 Feb 01 05:26	0°♏	
				max. Earth dist.	4393 Feb 06 22:34	8°♏45'59	
superior conj	4392 Mar 13 20:15	23°♏41'53	-2°04'04		4393 Feb 16 12:12	23°♏51'43	1.43465 AU
minimum elong	4392 Mar 13 23:21	23°♏55'24	2°03'58		4393 Feb 20 06:54	0°♏	
	4392 Mar 17 09:44	0°♐		superior conj	4393 Feb 22 18:11	4°♏04'30	-2°07'23
evening rise	4392 Mar 24 16:08	13°♐13'44		minimum elong	4393 Feb 22 16:29	3°♏57'24	2°07'21
asc. node	4392 Mar 31 23:40	26°♐24'02		evening rise	4393 Mar 07 04:45	25°♏21'52	
	4392 Apr 03 03:27	0°♑			4393 Mar 09 20:18	0°♐	
evening max el	4392 Apr 10 00:43	9°♑11'44	18°11'13	asc. node	4393 Mar 18 20:41	15°♐04'04	
retrograde	4392 Apr 16 22:00	12°♑40'02		evening max el	4393 Mar 24 12:59	22°♐21'12	18°07'37
evening set	4392 Apr 19 10:44	12°♑12'32		retrograde	4393 Mar 31 00:26	25°♐43'44	
inferior conj	4392 Apr 26 08:12	7°♑24'15	2°50'58	evening set	4393 Apr 02 19:14	25°♐05'24	
minimum elong	4392 Apr 26 11:29	7°♑16'48	2°50'15	inferior conj	4393 Apr 09 02:42	19°♐57'07	3°24'22
min. Earth dist.	4392 Apr 29 16:43	4°♑23'46	0.60010 AU	minimum elong	4393 Apr 09 04:30	19°♐52'28	3°24'10
morning rise	4392 May 03 09:47	1°♑38'12		min. Earth dist.	4393 Apr 12 00:53	16°♐56'45	0.62173 AU
	4392 May 07 03:22	30°♑		morning rise	4393 Apr 15 12:14	13°♐55'21	
desc. node	4392 May 07 18:42	29°♐51'06		direct	4393 Apr 22 08:31	11°♐25'55	
direct	4392 May 09 22:01	29°♐38'14		desc. node	4393 Apr 24 15:44	11°♐41'28	
	4392 May 12 18:19	0°♒		morning max el	4393 May 06 11:14	19°♐25'18	27°52'14
morning max el	4392 May 24 06:01	7°♒30'21	27°35'32		4393 May 15 11:01	0°♒	
	4392 Jun 10 06:22	0°♓			4393 Jun 03 03:48	0°♓	
morning set	4392 Jun 25 01:01	27°♓20'13		morning set	4393 Jun 09 02:58	11°♓38'21	
	4392 Jun 26 07:30	0°♑		asc. node	4393 Jun 14 19:57	23°♓37'41	
asc. node	4392 Jun 27 22:55	3°♑30'00		max. Earth dist.	4393 Jun 14 18:04	23°♓27'36	1.32393 AU
max. Earth dist.	4392 Jul 01 09:41	11°♑00'36	1.32019 AU				
superior conj	4392 Jul 02 05:24	12°♑49'06	0°43'27	superior conj	4393 Jun 16 15:01	27°♓31'15	0°18'42
minimum elong	4392 Jul 02 03:37	12°♑39'16	0°43'05	minimum elong	4393 Jun 16 14:09	27°♓26'33	0°18'30
evening rise	4392 Jul 09 00:54	27°♑41'07			4393 Jun 17 18:17	0°♑	
	4392 Jul 10 03:12	0°♑		evening rise	4393 Jun 23 12:34	12°♑30'15	
					4393 Jul 02 08:32	0°♑	

evening max el	4393 Jul 18 07:29	22° Ω 16'20	24°14'10	behind sun begin	4394 May 31 16:41	11° Π 35'11	
desc. node	4393 Jul 21 14:58	25° Ω 07'43		behind sun end	4394 Jun 01 01:50	12° Π 24'00	
retrograde	4393 Aug 01 03:09	29° Ω 14'16		asc. node	4394 Jun 01 16:58	13° Π 44'54	
evening set	4393 Aug 05 21:20	28° Ω 23'53		evening rise	4394 Jun 08 00:04	27° Π 14'19	
min. Earth dist.	4393 Aug 11 18:11	25° Ω 28'17	0.56501 AU		4394 Jun 09 07:40	0° \mathfrak{C}	
inferior conj	4393 Aug 14 07:36	23° Ω 52'24	-5°09'01		4394 Jun 27 08:47	0° Ω	
minimum elong	4393 Aug 14 04:54	23° Ω 56'38	5°08'51	evening max el	4394 Jun 29 21:04	2° Ω 39'12	22°36'58
morning rise	4393 Aug 22 15:03	19° Ω 52'04		desc. node	4394 Jul 08 11:59	8° Ω 24'42	
direct	4393 Aug 25 07:51	19° Ω 32'48		retrograde	4394 Jul 13 01:02	9° Ω 12'10	
morning max el	4393 Sep 04 01:16	24° Ω 04'41	19°41'18	evening set	4394 Jul 16 06:53	8° Ω 49'03	
	4393 Sep 09 03:11	0° \mathfrak{M}		min. Earth dist.	4394 Jul 24 04:50	5° Ω 21'02	0.55233 AU
asc. node	4393 Sep 10 19:12	2° \mathfrak{M} 25'22		inferior conj	4394 Jul 25 10:37	4° Ω 38'34	-4°23'32
morning set	4393 Sep 21 16:15	22° \mathfrak{M} 17'19		minimum elong	4394 Jul 25 02:39	4° Ω 49'56	4°21'50
	4393 Sep 25 11:37	0° \mathfrak{L}		morning rise	4394 Aug 03 00:30	0° Ω 48'00	
				direct	4394 Aug 06 01:17	0° Ω 26'51	
superior conj	4393 Sep 29 13:45	8° \mathfrak{L} 12'00	1°41'04	morning max el	4394 Aug 17 09:12	5° Ω 43'11	21°00'34
minimum elong	4393 Sep 29 15:11	8° \mathfrak{L} 19'06	1°41'00	asc. node	4394 Aug 28 16:13	20° Ω 56'43	
max. Earth dist.	4393 Oct 05 13:41	19° \mathfrak{L} 44'05	1.37471 AU		4394 Sep 02 12:56	0° \mathfrak{M}	
evening rise	4393 Oct 09 07:55	26° \mathfrak{L} 35'31		morning set	4394 Sep 05 23:55	7° \mathfrak{M} 00'01	
	4393 Oct 11 06:17	0° \mathfrak{M}					
desc. node	4393 Oct 17 14:15	10° \mathfrak{M} 39'08		superior conj	4394 Sep 13 09:37	22° \mathfrak{M} 25'12	1°44'00
	4393 Oct 30 10:49	0° \mathfrak{J}		minimum elong	4394 Sep 13 09:30	22° \mathfrak{M} 24'34	1°44'00
evening max el	4393 Nov 14 01:07	17° \mathfrak{J} 41'34	25°23'11		4394 Sep 17 03:21	0° \mathfrak{L}	
retrograde	4393 Nov 26 03:16	24° \mathfrak{J} 39'34		max. Earth dist.	4394 Sep 17 22:35	1° \mathfrak{L} 35'19	1.35597 AU
evening set	4393 Dec 02 00:02	22° \mathfrak{J} 13'01		evening rise	4394 Sep 22 01:32	9° \mathfrak{L} 31'36	
min. Earth dist.	4393 Dec 06 10:11	17° \mathfrak{J} 19'39	0.67256 AU		4394 Oct 03 20:18	0° \mathfrak{M}	
inferior conj	4393 Dec 07 14:16	15° \mathfrak{J} 48'56	-0°03'34	desc. node	4394 Oct 04 11:17	0° \mathfrak{M} 59'48	
minimum elong	4393 Dec 07 14:21	15° \mathfrak{J} 48'39	0°03'30		4394 Oct 26 04:10	0° \mathfrak{J}	
transit middle	4393 Dec 07 14:21	15° \mathfrak{J} 48'39	0°03'30	evening max el	4394 Oct 27 13:43	1° \mathfrak{J} 23'27	26°26'19
transit begin	4393 Dec 07 11:38	15° \mathfrak{J} 57'28		retrograde	4394 Nov 09 09:58	8° \mathfrak{J} 36'15	
transit end	4393 Dec 07 17:05	15° \mathfrak{J} 39'50		evening set	4394 Nov 15 19:54	5° \mathfrak{J} 59'28	
asc. node	4393 Dec 07 18:26	15° \mathfrak{J} 35'27		min. Earth dist.	4394 Nov 19 23:10	1° \mathfrak{J} 41'27	0.66335 AU
morning rise	4393 Dec 13 04:59	9° \mathfrak{J} 52'55			4394 Nov 21 08:41	30° \mathfrak{R} \mathfrak{M}	
direct	4393 Dec 16 14:48	8° \mathfrak{J} 45'56		inferior conj	4394 Nov 21 14:34	29° \mathfrak{M} 42'07	-1°02'10
morning max el	4393 Dec 23 18:02	12° \mathfrak{J} 45'24	19°22'27	minimum elong	4394 Nov 21 16:16	29° \mathfrak{M} 36'58	1°01'27
	4394 Jan 05 16:46	0° \mathfrak{Z}		asc. node	4394 Nov 24 15:28	26° \mathfrak{M} 15'09	
greatest brilliancy	4394 Jan 06 01:26	0° \mathfrak{Z} 32'29	-0.7m	morning rise	4394 Nov 27 13:16	23° \mathfrak{M} 56'06	
desc. node	4394 Jan 13 13:31	11° \mathfrak{Z} 59'40		direct	4394 Nov 30 13:03	23° \mathfrak{M} 05'35	
morning set	4394 Jan 16 21:13	17° \mathfrak{Z} 07'30		morning max el	4394 Dec 07 04:55	26° \mathfrak{M} 44'17	18°34'55
	4394 Jan 25 03:51	0° \mathfrak{A}			4394 Dec 10 02:06	0° \mathfrak{J}	
max. Earth dist.	4394 Jan 30 01:37	7° \mathfrak{A} 42'41	1.44710 AU	morning set	4394 Dec 27 17:47	26° \mathfrak{J} 40'03	
					4394 Dec 29 20:10	0° \mathfrak{Z}	
superior conj	4394 Feb 02 14:43	13° \mathfrak{A} 20'18	-1°52'24	desc. node	4394 Dec 31 10:33	2° \mathfrak{Z} 32'03	
minimum elong	4394 Feb 02 07:03	12° \mathfrak{A} 49'47	1°51'51				
	4394 Feb 12 21:26	0° \mathfrak{H}		superior conj	4395 Jan 12 18:49	21° \mathfrak{Z} 57'46	-1°18'17
evening rise	4394 Feb 16 20:36	6° \mathfrak{H} 34'16		minimum elong	4395 Jan 12 09:54	21° \mathfrak{Z} 22'48	1°17'17
	4394 Mar 03 10:06	0° \mathfrak{Y}		max. Earth dist.	4395 Jan 12 19:35	22° \mathfrak{Z} 00'46	1.45268 AU
asc. node	4394 Mar 05 17:43	3° \mathfrak{Y} 05'02			4395 Jan 17 21:42	0° \mathfrak{A}	
evening max el	4394 Mar 08 01:33	5° \mathfrak{Y} 42'50	18°22'51	evening rise	4395 Jan 28 13:14	16° \mathfrak{A} 50'07	
retrograde	4394 Mar 14 12:44	9° \mathfrak{Y} 12'54			4395 Feb 05 19:52	0° \mathfrak{H}	
evening set	4394 Mar 17 13:33	8° \mathfrak{Y} 22'35		greatest brilliancy	4395 Feb 06 05:58	0° \mathfrak{H} 39'49	-0.8m
inferior conj	4394 Mar 23 10:55	2° \mathfrak{Y} 55'46	3°35'22	evening max el	4395 Feb 19 12:00	19° \mathfrak{H} 11'50	18°55'54
minimum elong	4394 Mar 23 11:00	2° \mathfrak{Y} 55'29	3°35'22	asc. node	4395 Feb 20 14:46	20° \mathfrak{H} 16'01	
min. Earth dist.	4394 Mar 25 18:25	0° \mathfrak{Y} 16'21	0.64124 AU	retrograde	4395 Feb 26 07:08	23° \mathfrak{H} 00'56	
	4394 Mar 26 00:18	30° \mathfrak{R} \mathfrak{H}		evening set	4395 Mar 01 14:33	21° \mathfrak{H} 57'42	
morning rise	4394 Mar 29 07:39	26° \mathfrak{H} 45'59		inferior conj	4395 Mar 07 05:07	16° \mathfrak{H} 13'57	3°29'28
direct	4394 Apr 05 03:27	23° \mathfrak{H} 59'03		minimum elong	4395 Mar 07 03:51	16° \mathfrak{H} 17'54	3°29'21
desc. node	4394 Apr 11 12:45	25° \mathfrak{H} 59'25		min. Earth dist.	4395 Mar 08 21:01	14° \mathfrak{H} 09'10	0.65723 AU
	4394 Apr 16 19:37	0° \mathfrak{Y}		morning rise	4395 Mar 12 16:45	10° \mathfrak{H} 00'45	
morning max el	4394 Apr 18 20:06	1° \mathfrak{Y} 56'13	27°32'07	direct	4395 Mar 19 05:19	7° \mathfrak{H} 10'26	
	4394 May 09 16:23	0° \mathfrak{B}		desc. node	4395 Mar 29 09:48	12° \mathfrak{H} 11'54	
morning set	4394 May 23 21:13	25° \mathfrak{B} 29'53		morning max el	4395 Apr 01 05:59	14° \mathfrak{H} 52'36	26°40'43
	4394 May 26 03:15	0° \mathfrak{H}			4395 Apr 13 14:49	0° \mathfrak{Y}	
max. Earth dist.	4394 May 28 19:09	5° \mathfrak{H} 28'28	1.33204 AU		4395 May 02 10:37	0° \mathfrak{B}	
				morning set	4395 May 07 04:28	8° \mathfrak{B} 45'08	
superior conj	4394 May 31 20:49	11° \mathfrak{H} 57'13	-0°08'46	max. Earth dist.	4395 May 11 09:44	16° \mathfrak{B} 57'26	1.34484 AU
minimum elong	4394 May 31 21:16	11° \mathfrak{H} 59'35	0°08'41				

superior conj	4395 May 15 20:38	26° J 00'41	-0°37'51	superior conj	4396 Apr 28 11:44	9° J 34'10	-1°07'05
minimum elong	4395 May 15 22:40	26° J 11'10	0°37'27	minimum elong	4396 Apr 28 15:21	9° J 52'14	1°06'27
	4395 May 17 18:36	0° II		asc. node	4396 May 05 11:06	23° J 42'20	
asc. node	4395 May 19 14:01	3° II 47'48		evening rise	4396 May 06 14:53	26° J 03'34	
evening rise	4395 May 23 09:33	11° II 47'31			4396 May 08 13:53	0° II	
	4395 Jun 01 21:09	0° J		evening max el	4396 May 24 03:33	24° II 35'26	19°51'39
evening max el	4395 Jun 11 18:20	13° J 18'41	21°06'19	retrograde	4396 Jun 03 05:59	29° II 31'02	
retrograde	4395 Jun 23 14:00	19° J 06'52		evening set	4396 Jun 05 04:33	29° II 20'55	
desc. node	4395 Jun 25 09:02	18° J 59'20		desc. node	4396 Jun 11 06:03	27° II 00'25	
evening set	4395 Jun 25 19:30	18° J 55'16		inferior conj	4396 Jun 14 02:20	25° II 19'42	-0°50'47
inferior conj	4395 Jul 05 04:05	14° J 57'27	-2°49'28	minimum elong	4396 Jun 13 23:59	25° II 23'17	0°49'54
minimum elong	4395 Jul 04 20:31	15° J 08'05	2°46'58	min. Earth dist.	4396 Jun 16 04:32	24° II 03'04	0.55366 AU
min. Earth dist.	4395 Jul 05 15:50	14° J 40'55	0.54819 AU	morning rise	4396 Jun 22 17:25	20° II 54'22	
morning rise	4395 Jul 13 21:46	10° J 58'58		direct	4396 Jun 27 00:45	20° II 13'39	
direct	4395 Jul 17 10:44	10° J 31'56		morning max el	4396 Jul 10 20:41	27° II 04'41	24°20'39
morning max el	4395 Jul 30 06:06	16° J 37'57	22°36'57		4396 Jul 13 16:59	0° J	
	4395 Aug 09 19:20	0° J		asc. node	4396 Aug 01 10:20	29° J 31'40	
asc. node	4395 Aug 15 13:16	10° J 01'43			4396 Aug 01 15:58	0° J	
morning set	4395 Aug 21 10:30	21° J 50'58		morning set	4396 Aug 04 22:18	6° J 45'12	
	4395 Aug 25 06:26	0° II					
superior conj	4395 Aug 28 13:02	7° II 00'12	1°40'00	superior conj	4396 Aug 11 21:21	21° J 49'01	1°30'12
minimum elong	4395 Aug 28 11:42	6° II 53'10	1°39'56	minimum elong	4396 Aug 11 19:17	21° J 37'47	1°29'59
max. Earth dist.	4395 Aug 31 16:09	13° II 34'59	1.34077 AU	max. Earth dist.	4396 Aug 13 18:28	25° J 53'03	1.32963 AU
evening rise	4395 Sep 05 09:56	23° II 09'27			4396 Aug 15 16:44	0° II	
	4395 Sep 08 23:48	0° J		evening rise	4396 Aug 19 05:14	7° II 18'28	
desc. node	4395 Sep 21 08:19	21° J 00'19			4396 Aug 31 11:43	0° J	
	4395 Sep 27 12:07	0° II		desc. node	4396 Sep 07 05:21	10° J 32'18	
evening max el	4395 Oct 10 02:26	14° J 55'54	27°09'49	evening max el	4396 Sep 21 13:33	28° J 06'34	27°26'48
retrograde	4395 Oct 23 10:47	22° J 13'24			4396 Sep 23 16:08	0° II	
evening set	4395 Oct 30 07:54	19° J 32'34		retrograde	4396 Oct 05 05:18	5° II 23'01	
min. Earth dist.	4395 Nov 03 04:55	15° J 50'00	0.65070 AU	evening set	4396 Oct 12 09:12	2° II 47'14	
inferior conj	4395 Nov 05 08:15	13° J 27'07	-2°03'43		4396 Oct 15 15:53	30° R 0	
minimum elong	4395 Nov 05 11:46	13° J 17'19	2°02'20	min. Earth dist.	4396 Oct 16 01:16	29° J 37'22	0.63470 AU
morning rise	4395 Nov 11 16:38	7° J 54'09		inferior conj	4396 Oct 18 16:43	26° J 58'14	-3°05'37
asc. node	4395 Nov 11 12:31	7° J 59'07		minimum elong	4396 Oct 18 21:55	26° J 45'09	3°03'50
direct	4395 Nov 14 08:38	7° J 16'17		morning rise	4396 Oct 25 12:03	21° J 41'50	
morning max el	4395 Nov 20 20:09	10° J 43'52	18°04'02	direct	4396 Oct 27 22:48	21° J 12'58	
	4395 Dec 04 04:27	0° J		asc. node	4396 Oct 28 09:33	21° J 13'57	
morning set	4395 Dec 08 19:56	7° J 41'13		morning max el	4396 Nov 03 12:54	24° J 38'04	17°50'30
desc. node	4395 Dec 18 07:35	23° J 12'50			4396 Nov 07 22:07	0° II	
	4395 Dec 22 13:14	0° J		morning set	4396 Nov 19 23:56	19° J 57'13	
superior conj	4395 Dec 23 01:38	0° J 49'18	-0°32'21		4396 Nov 25 19:41	0° J	
minimum elong	4395 Dec 22 21:37	0° J 33'19	0°31'47	superior conj	4396 Dec 02 05:09	10° J 43'50	0°13'46
max. Earth dist.	4395 Dec 26 15:16	6° J 27'59	1.45081 AU	minimum elong	4396 Dec 02 06:35	10° J 49'48	0°13'35
evening rise	4396 Jan 08 09:14	26° J 19'34		behind sun begin	4396 Dec 02 01:23	10° J 28'18	
	4396 Jan 10 18:20	0° J		behind sun end	4396 Dec 02 11:48	11° J 11'16	
greatest brilliancy	4396 Jan 21 20:21	16° J 53'53	-0.7m	desc. node	4396 Dec 04 04:37	13° J 58'37	
	4396 Jan 31 07:47	0° J		max. Earth dist.	4396 Dec 08 09:11	20° J 44'43	1.44178 AU
evening max el	4396 Feb 02 18:19	2° J 43'45	19°45'20		4396 Dec 14 05:52	0° J	
asc. node	4396 Feb 07 11:49	6° J 22'56		evening rise	4396 Dec 17 19:07	5° J 30'18	
retrograde	4396 Feb 10 04:37	7° J 01'55			4397 Jan 03 04:13	0° J	
evening set	4396 Feb 13 19:44	5° J 44'50		evening max el	4397 Jan 15 19:13	16° J 16'34	20°48'50
inferior conj	4396 Feb 19 06:10	29° J 46'09	3°10'39	retrograde	4397 Jan 24 02:49	21° J 11'24	
minimum elong	4396 Feb 19 04:03	29° J 53'10	3°10'15	asc. node	4397 Jan 24 08:51	21° J 11'03	
	4396 Feb 19 01:59	30° R		evening set	4397 Jan 28 03:03	19° J 39'33	
min. Earth dist.	4396 Feb 20 07:20	28° J 22'36	0.66900 AU	inferior conj	4397 Feb 02 11:31	13° J 28'38	2°41'35
morning rise	4396 Feb 24 12:09	23° J 32'03		minimum elong	4397 Feb 02 09:04	13° J 37'03	2°40'56
direct	4396 Mar 01 12:55	20° J 50'33		min. Earth dist.	4397 Feb 02 23:29	12° J 47'31	0.67652 AU
morning max el	4396 Mar 13 15:10	28° J 03'33	25°26'48	morning rise	4397 Feb 07 14:55	7° J 15'16	
desc. node	4396 Mar 15 06:50	29° J 47'22		direct	4397 Feb 13 01:31	4° J 50'57	
	4396 Mar 15 11:29	0° J		morning max el	4397 Feb 23 23:50	11° J 22'05	24°00'22
	4396 Apr 06 08:20	0° Y		desc. node	4397 Mar 02 03:52	18° J 22'09	
morning set	4396 Apr 18 20:18	21° Y 11'43			4397 Mar 10 20:45	0° J	
max. Earth dist.	4396 Apr 22 13:14	28° Y 02'49	1.36214 AU		4397 Mar 30 02:56	0° Y	
	4396 Apr 23 13:58	0° J		morning set	4397 Mar 31 15:03	2° Y 34'27	
				max. Earth dist.	4397 Apr 04 09:32	9° Y 10'51	1.38283 AU

superior conj	4397 Apr 11 14:34	22° Υ 28'17	-1°34'11	superior conj	4398 Mar 25 00:43	4° Υ 32'38	-1°55'50
minimum elong	4397 Apr 11 19:18	22° Υ 50'49	1°33'35	minimum elong	4398 Mar 25 05:08	4° Υ 52'34	1°55'31
	4397 Apr 15 12:16	0° B		evening rise	4398 Apr 04 02:00	23° Υ 13'33	
evening rise	4397 Apr 20 13:26	9° B 54'57			4398 Apr 07 16:48	0° B	
asc. node	4397 Apr 22 08:09	13° B 23'36		asc. node	4398 Apr 09 05:11	2° B 46'36	
	4397 May 01 17:42	0° II		evening max el	4398 Apr 20 05:56	19° B 06'28	18°22'07
evening max el	4397 May 07 00:20	6° II 33'05	18°56'42	retrograde	4398 Apr 27 14:02	22° B 45'02	
retrograde	4397 May 15 12:35	10° II 42'51		evening set	4398 Apr 29 22:53	22° B 23'16	
evening set	4397 May 17 14:42	10° II 28'49		inferior conj	4398 May 07 06:15	17° B 47'17	2°19'02
inferior conj	4397 May 25 17:31	6° II 12'33	0°58'37	minimum elong	4398 May 07 09:52	17° B 39'47	2°18'04
minimum elong	4397 May 25 19:44	6° II 08'37	0°57'50	min. Earth dist.	4398 May 10 16:51	14° B 57'31	0.58753 AU
min. Earth dist.	4397 May 28 20:20	4° II 01'02	0.56773 AU	morning rise	4398 May 14 17:49	12° B 14'25	
desc. node	4397 May 29 03:05	3° II 49'39		desc. node	4398 May 16 00:06	11° B 37'44	
morning rise	4397 Jun 02 21:30	1° II 11'01		direct	4398 May 20 21:18	10° B 34'07	
direct	4397 Jun 08 03:45	0° II 04'59		morning max el	4398 Jun 04 06:45	18° B 19'50	27°08'52
morning max el	4397 Jun 22 11:20	7° II 29'47	25°56'31		4398 Jun 14 01:21	0° II	
	4397 Jul 09 03:48	0° E			4398 Jul 01 16:49	0° E	
asc. node	4397 Jul 19 07:23	19° E 18'41		morning set	4398 Jul 04 18:40	6° E 18'53	
morning set	4397 Jul 20 09:34	21° E 36'11		asc. node	4398 Jul 06 04:25	9° E 17'25	
	4397 Jul 24 06:57	0° O					
superior conj	4397 Jul 27 08:19	6° O 43'25	1°15'23	superior conj	4398 Jul 11 20:08	21° E 37'33	0°56'14
minimum elong	4397 Jul 27 06:00	6° O 30'37	1°15'01	minimum elong	4398 Jul 11 18:01	21° E 25'53	0°55'49
max. Earth dist.	4397 Jul 28 02:54	8° O 25'37	1.32266 AU	max. Earth dist.	4398 Jul 11 14:11	21° E 04'43	1.31989 AU
evening rise	4397 Aug 03 08:07	21° O 47'56			4398 Jul 15 15:29	0° O	
	4397 Aug 07 09:24	0° np		evening rise	4398 Jul 18 16:05	6° O 30'23	
desc. node	4397 Aug 25 02:22	29° np 22'54			4398 Jul 30 23:24	0° np	
	4397 Aug 25 13:25	0° a		desc. node	4398 Aug 11 23:23	17° np 15'21	
evening max el	4397 Sep 03 20:36	10° a 41'26	27°12'17	evening max el	4398 Aug 16 21:15	22° np 30'37	26°24'25
retrograde	4397 Sep 17 16:57	17° a 54'47		retrograde	4398 Aug 30 20:26	29° np 40'10	
evening set	4397 Sep 24 19:59	15° a 36'00		evening set	4398 Sep 06 11:29	27° np 51'16	
min. Earth dist.	4397 Sep 28 11:01	12° a 50'50	0.61571 AU	min. Earth dist.	4398 Sep 10 10:39	25° np 16'10	0.59505 AU
inferior conj	4397 Oct 01 12:47	10° a 06'59	-4°03'36	inferior conj	4398 Sep 13 17:00	22° np 44'18	-4°50'04
minimum elong	4397 Oct 01 18:52	9° a 53'26	4°01'59	minimum elong	4398 Sep 13 22:00	22° np 34'33	4°49'17
morning rise	4397 Oct 08 19:36	5° a 10'28		morning rise	4398 Sep 21 10:41	18° np 10'03	
direct	4397 Oct 11 03:52	4° a 47'26		direct	4398 Sep 23 19:42	17° np 50'06	
asc. node	4397 Oct 15 06:35	6° a 01'11		morning max el	4398 Oct 01 14:12	21° np 36'35	18°19'44
morning max el	4397 Oct 18 04:02	8° a 18'40	17°55'18	asc. node	4398 Oct 02 03:37	22° np 09'59	
	4397 Nov 01 05:58	0° m			4398 Oct 08 01:40	0° a	
morning set	4397 Nov 02 23:18	3° m 08'15		morning set	4398 Oct 17 12:27	16° a 58'13	
					4398 Oct 24 09:27	0° m	
superior conj	4397 Nov 13 11:21	21° m 56'36	0°51'50	superior conj	4398 Oct 26 17:25	4° m 18'38	1°19'03
minimum elong	4397 Nov 13 15:16	22° m 13'34	0°51'18	minimum elong	4398 Oct 26 21:11	4° m 35'54	1°18'38
	4397 Nov 18 04:44	0° x		max. Earth dist.	4398 Nov 03 06:35	17° m 41'15	1.40746 AU
max. Earth dist.	4397 Nov 20 22:34	4° x 33'13	1.42668 AU	evening rise	4398 Nov 07 21:16	25° m 25'26	
desc. node	4397 Nov 21 01:39	4° x 45'52		desc. node	4398 Nov 07 22:39	25° m 31'05	
evening rise	4397 Nov 27 10:48	15° x 01'33			4398 Nov 10 16:54	0° x	
	4397 Dec 07 05:25	0° Z			4398 Dec 01 00:30	0° Z	
evening max el	4397 Dec 29 14:40	29° Z 50'42	22°02'50	evening max el	4398 Dec 12 05:53	13° Z 27'47	23°22'22
	4397 Dec 29 18:21	0° \approx		retrograde	4398 Dec 22 17:57	19° Z 40'37	
retrograde	4398 Jan 07 23:47	5° \approx 25'36		evening set	4398 Dec 27 17:16	17° Z 37'26	
asc. node	4398 Jan 11 05:52	4° \approx 29'04		asc. node	4398 Dec 29 02:53	16° Z 17'12	
evening set	4398 Jan 12 10:46	3° \approx 38'16		min. Earth dist.	4399 Jan 01 15:58	11° Z 50'09	0.67993 AU
	4398 Jan 15 19:31	30° R Z		inferior conj	4399 Jan 02 02:53	11° Z 12'40	1°19'16
inferior conj	4398 Jan 17 19:04	27° Z 18'28	2°04'04	minimum elong	4399 Jan 02 01:11	11° Z 18'33	1°18'37
minimum elong	4398 Jan 17 16:45	27° Z 26'30	2°03'17	morning rise	4399 Jan 07 09:01	5° Z 05'44	
min. Earth dist.	4398 Jan 17 19:10	27° Z 18'08	0.68005 AU	direct	4399 Jan 11 14:38	3° Z 25'47	
morning rise	4398 Jan 22 22:36	21° Z 07'25		morning max el	4399 Jan 20 02:06	8° Z 20'29	21°08'22
direct	4398 Jan 27 18:26	19° Z 04'41		desc. node	4399 Feb 03 21:53	27° Z 26'49	
morning max el	4398 Feb 06 10:20	24° Z 46'54	22°31'27		4399 Feb 05 16:03	0° \approx	
	4398 Feb 11 02:25	0° \approx		morning set	4399 Feb 19 18:28	21° \approx 24'20	
desc. node	4398 Feb 17 00:53	7° \approx 39'24			4399 Feb 25 03:58	0° H	
	4398 Mar 04 08:04	0° H		max. Earth dist.	4399 Feb 27 07:38	3° H 29'58	1.42491 AU
morning set	4398 Mar 12 06:54	12° H 38'56					
max. Earth dist.	4398 Mar 17 05:38	20° H 53'38	1.40467 AU	superior conj	4399 Mar 06 13:06	15° H 34'50	-2°07'27
	4398 Mar 22 11:42	0° Υ		minimum elong	4399 Mar 06 14:31	15° H 40'55	2°07'25
					4399 Mar 14 18:46	0° Υ	

evening rise	4399 Mar 18 00:34	5° Υ 49'19		evening rise	4400 Feb 17 18:22	0° H	
asc. node	4399 Mar 27 02:12	21° Υ 44'12		evening rise	4400 Feb 28 04:49	17° H 34'20	
	4399 Apr 01 19:06	0° B			4400 Mar 06 11:46	0° Υ	
evening max el	4399 Apr 03 16:44	2° B 05'16	18°07'24	asc. node	4400 Mar 12 23:13	10° Υ 08'40	
retrograde	4399 Apr 10 08:27	5° B 28'59		evening max el	4400 Mar 17 05:31	15° Υ 20'51	18°11'50
evening set	4399 Apr 12 23:54	4° B 57'01		retrograde	4400 Mar 23 15:33	18° Υ 44'43	
inferior conj	4399 Apr 19 14:55	0° B 00'21	3°08'14	evening set	4400 Mar 26 13:02	18° Υ 01'12	
minimum elong	4399 Apr 19 17:40	29° Υ 53'46	3°07'46	inferior conj	4400 Apr 01 15:45	12° Υ 44'44	3°31'24
	4399 Apr 19 15:04	30° $\text{R}\Upsilon$		minimum elong	4400 Apr 01 16:48	12° Υ 41'51	3°31'19
min. Earth dist.	4399 Apr 22 20:02	26° Υ 56'51	0.60949 AU	min. Earth dist.	4400 Apr 04 07:55	9° Υ 51'24	0.63050 AU
morning rise	4399 Apr 26 09:23	24° Υ 06'41		morning rise	4400 Apr 07 19:26	6° Υ 39'05	
desc. node	4399 May 02 21:07	21° Υ 52'49		direct	4400 Apr 14 16:33	4° Υ 00'42	
direct	4399 May 03 02:25	21° Υ 52'41		desc. node	4400 Apr 18 18:08	4° Υ 49'26	
morning max el	4399 May 17 08:21	29° Υ 48'51	27°47'11	morning max el	4400 Apr 28 15:17	11° Υ 59'23	27°47'53
	4399 May 17 12:49	0° B			4400 May 12 22:02	0° B	
	4399 Jun 08 01:16	0° II			4400 May 30 11:10	0° II	
morning set	4399 Jun 18 23:49	20° II 47'23		morning set	4400 Jun 01 22:49	4° II 54'47	
asc. node	4399 Jun 23 01:28	29° II 22'55		max. Earth dist.	4400 Jun 07 06:30	15° II 56'29	1.32687 AU
	4399 Jun 23 08:20	0° E		asc. node	4400 Jun 08 22:30	19° II 30'44	
max. Earth dist.	4399 Jun 25 00:40	3° E 39'04	1.32124 AU				
				superior conj	4400 Jun 09 15:18	21° II 01'22	0°07'20
superior conj	4399 Jun 26 07:03	6° E 25'32	0°33'20	minimum elong	4400 Jun 09 14:57	20° II 59'27	0°07'15
minimum elong	4399 Jun 26 05:37	6° E 17'36	0°33'01	behind sun begin	4400 Jun 09 10:14	20° II 33'59	
evening rise	4399 Jul 03 02:57	21° E 18'50		behind sun end	4400 Jun 09 19:40	21° II 24'56	
	4399 Jul 07 07:45	0° Ω			4400 Jun 13 18:33	0° E	
	4399 Jul 26 05:33	0° M		evening rise	4400 Jun 16 14:48	6° E 06'37	
evening max el	4399 Jul 29 14:39	3° M 32'45	25°07'26		4400 Jun 29 06:16	0° Ω	
desc. node	4399 Jul 29 20:23	3° M 46'23		evening max el	4400 Jul 10 03:33	14° Ω 01'10	23°32'53
retrograde	4399 Aug 12 13:27	10° M 36'23		desc. node	4400 Jul 15 17:25	18° Ω 24'31	
evening set	4399 Aug 18 03:20	9° M 25'15		retrograde	4400 Jul 23 18:00	20° Ω 50'20	
min. Earth dist.	4399 Aug 23 02:19	6° M 42'05	0.57502 AU	evening set	4400 Jul 27 20:34	20° Ω 13'21	
inferior conj	4399 Aug 26 02:10	4° M 41'14	-5°12'53	min. Earth dist.	4400 Aug 03 13:21	17° Ω 05'44	0.55873 AU
minimum elong	4399 Aug 26 03:01	4° M 39'47	5°12'52	inferior conj	4400 Aug 05 15:10	15° Ω 51'37	-4°56'08
morning rise	4399 Sep 03 05:04	0° M 29'24		minimum elong	4400 Aug 05 09:50	15° Ω 59'37	4°55'27
direct	4399 Sep 05 18:21	0° M 10'15		morning rise	4400 Aug 14 01:32	11° Ω 57'19	
morning max el	4399 Sep 14 16:03	4° M 22'22	19°05'15	direct	4400 Aug 16 21:43	11° Ω 37'21	
asc. node	4399 Sep 19 00:40	9° M 25'32		morning max el	4400 Aug 27 06:49	16° Ω 26'35	20°12'37
	4399 Sep 30 19:50	0° A		asc. node	4400 Sep 04 21:43	27° Ω 32'50	
morning set	4399 Oct 01 11:11	1° A 15'46			4400 Sep 06 09:01	0° M	
				morning set	4400 Sep 14 16:18	15° M 51'20	
superior conj	4399 Oct 09 18:02	17° A 35'12	1°35'43		4400 Sep 21 14:02	0° A	
minimum elong	4399 Oct 09 20:26	17° A 46'43	1°35'33				
	4399 Oct 16 09:32	0° M		superior conj	4400 Sep 22 08:05	1° A 31'11	1°43'14
max. Earth dist.	4399 Oct 16 11:31	0° M 08'55	1.38654 AU	minimum elong	4400 Sep 22 08:50	1° A 34'56	1°43'13
evening rise	4399 Oct 20 07:03	6° M 53'19		max. Earth dist.	4400 Sep 27 17:42	12° A 07'56	1.36637 AU
desc. node	4399 Oct 25 19:41	16° M 10'46		evening rise	4400 Oct 01 14:10	19° A 19'39	
	4399 Nov 03 16:16	0° A			4400 Oct 07 15:51	0° M	
evening max el	4399 Nov 24 18:59	27° A 09'26	24°41'04	desc. node	4400 Oct 11 16:43	6° M 39'49	
	4399 Nov 27 22:17	0° B			4400 Oct 27 18:58	0° A	
retrograde	4399 Dec 06 08:10	3° B 53'04		evening max el	4400 Nov 06 07:27	10° A 52'17	25°51'57
evening set	4399 Dec 11 21:01	1° B 34'35		retrograde	4400 Nov 18 17:40	17° A 57'13	
	4399 Dec 13 12:05	30° RA		evening set	4400 Nov 24 20:18	15° A 25'38	
asc. node	4399 Dec 15 23:53	26° A 59'31		min. Earth dist.	4400 Nov 29 03:29	10° A 47'27	0.66912 AU
min. Earth dist.	4399 Dec 16 11:32	26° A 21'17	0.67630 AU	inferior conj	4400 Nov 30 12:19	9° A 04'05	-0°27'54
inferior conj	4399 Dec 17 09:16	25° A 09'08	0°28'18	minimum elong	4400 Nov 30 13:03	9° A 01'46	0°27'35
minimum elong	4399 Dec 17 08:34	25° A 11'25	0°28'01	asc. node	4400 Dec 01 20:56	7° A 23'04	
morning rise	4399 Dec 22 20:14	19° A 08'28		morning rise	4400 Dec 06 06:13	3° A 12'09	
direct	4399 Dec 26 12:53	17° A 50'06		direct	4400 Dec 09 11:36	2° A 12'32	
morning max el	4400 Jan 03 01:40	22° A 06'05	19°56'58	morning max el	4400 Dec 16 08:58	6° A 01'28	19°00'19
	4400 Jan 09 15:41	0° B			4401 Jan 02 12:10	0° B	
desc. node	4400 Jan 21 18:55	17° B 36'33		morning set	4401 Jan 07 20:44	8° B 20'36	
morning set	4400 Jan 29 14:44	29° B 33'45		desc. node	4401 Jan 07 15:58	8° B 02'00	
	4400 Jan 29 21:32	0° \approx			4401 Jan 21 17:05	0° \approx	
max. Earth dist.	4400 Feb 09 17:50	17° \approx 00'03	1.44083 AU	max. Earth dist.	4401 Jan 22 10:09	1° \approx 07'05	1.45041 AU
superior conj	4400 Feb 15 00:00	25° \approx 28'12	-2°03'28	superior conj	4401 Jan 24 11:44	4° \approx 22'23	-1°40'01
minimum elong	4400 Feb 14 19:37	25° \approx 10'21	2°03'17	minimum elong	4401 Jan 24 02:39	3° \approx 46'34	1°39'12

evening rise	4401 Feb 08 10:58	28° \approx 23'05		superior conj	4402 Jan 03 14:17	12° \approx 58'13	-0°59'33
	4401 Feb 09 10:44	0° \approx		minimum elong	4402 Jan 03 06:57	12° \approx 29'26	0°58'38
asc. node	4401 Feb 27 20:14	27° \approx 50'08		max. Earth dist.	4402 Jan 05 05:03	15° \approx 30'26	1.45273 AU
evening max el	4401 Feb 28 17:28	28° \approx 46'26	18°34'43		4402 Jan 14 11:15	0° \approx	
	4401 Mar 02 00:52	0° \approx		evening rise	4402 Jan 19 18:04	8° \approx 16'45	
retrograde	4401 Mar 07 07:03	2° \approx 23'22		greatest brilliancy	4402 Jan 30 16:20	25° \approx 20'05	-0.8m
evening set	4401 Mar 10 10:36	1° \approx 27'34			4402 Feb 02 18:14	0° \approx	
	4401 Mar 12 09:37	30° \approx 8'8		evening max el	4402 Feb 12 02:16	12° \approx 16'35	19°15'01
inferior conj	4401 Mar 16 04:40	25° \approx 53'00	3°34'41	asc. node	4402 Feb 14 17:17	14° \approx 35'39	
minimum elong	4401 Mar 16 04:08	25° \approx 54'36	3°34'39	retrograde	4402 Feb 19 03:13	16° \approx 17'27	
min. Earth dist.	4401 Mar 18 05:22	23° \approx 27'24	0.64853 AU	evening set	4402 Feb 22 13:39	15° \approx 08'33	
morning rise	4401 Mar 21 21:06	19° \approx 41'18		inferior conj	4402 Feb 28 02:08	9° \approx 18'02	3°22'54
direct	4401 Mar 28 14:23	16° \approx 51'39		minimum elong	4402 Feb 28 00:27	9° \approx 23'28	3°22'40
desc. node	4401 Apr 05 15:11	20° \approx 00'48		min. Earth dist.	4402 Mar 01 11:37	7° \approx 30'15	0.66268 AU
morning max el	4401 Apr 11 01:09	24° \approx 43'48	27°13'42	morning rise	4402 Mar 05 10:57	3° \approx 03'55	
	4401 Apr 15 19:50	0° \approx		direct	4402 Mar 11 18:46	0° \approx 16'06	
	4401 May 06 08:24	0° \approx		desc. node	4402 Mar 23 12:14	6° \approx 52'01	
morning set	4401 May 16 12:55	18° \approx 32'53		morning max el	4402 Mar 24 11:04	7° \approx 48'29	26°11'31
max. Earth dist.	4401 May 21 03:48	27° \approx 46'06	1.33695 AU		4402 Apr 10 18:10	0° \approx	
	4401 May 22 05:50	0° \approx			4402 Apr 28 18:55	0° \approx	
				morning set	4402 Apr 29 14:16	1° \approx 29'40	
superior conj	4401 May 24 18:54	5° \approx 19'02	-0°20'58	max. Earth dist.	4402 May 03 13:36	9° \approx 03'30	1.35166 AU
minimum elong	4401 May 24 19:59	5° \approx 24'47	0°20'44				
asc. node	4401 May 26 19:33	9° \approx 36'56		superior conj	4402 May 08 15:22	19° \approx 10'44	-0°50'21
evening rise	4401 Jun 01 01:46	20° \approx 47'35		minimum elong	4402 May 08 18:05	19° \approx 24'37	0°49'49
	4401 Jun 05 14:04	0° \approx		asc. node	4402 May 13 16:35	29° \approx 36'45	
evening max el	4401 Jun 21 19:25	24° \approx 27'12	21°56'48		4402 May 13 21:04	0° \approx	
	4401 Jun 30 04:00	0° \approx		evening rise	4402 May 16 09:46	5° \approx 14'21	
desc. node	4401 Jul 02 14:26	0° \approx 35'31			4402 May 30 07:29	0° \approx	
retrograde	4401 Jul 04 11:26	0° \approx 43'43		evening max el	4402 Jun 03 21:28	5° \approx 20'56	20°32'15
evening set	4401 Jul 07 04:53	0° \approx 27'03		retrograde	4402 Jun 15 00:23	10° \approx 47'12	
	4401 Jul 08 22:49	30° \approx 8'8		evening set	4402 Jun 17 00:44	10° \approx 37'14	
min. Earth dist.	4401 Jul 15 23:43	26° \approx 41'17	0.54941 AU	desc. node	4402 Jun 19 11:28	10° \approx 00'12	
inferior conj	4401 Jul 16 12:38	26° \approx 23'11	-3°48'45	inferior conj	4402 Jun 26 06:20	6° \approx 39'50	-2°00'02
minimum elong	4401 Jul 16 03:59	26° \approx 35'18	3°46'24	minimum elong	4402 Jun 26 00:43	6° \approx 47'57	1°58'02
morning rise	4401 Jul 25 04:41	22° \approx 32'10		min. Earth dist.	4402 Jun 27 11:38	5° \approx 57'30	0.54933 AU
direct	4401 Jul 28 09:54	22° \approx 09'20		morning rise	4402 Jul 04 23:53	2° \approx 31'30	
morning max el	4401 Aug 09 09:51	27° \approx 46'08	21°39'59	direct	4402 Jul 08 19:33	2° \approx 00'02	
	4401 Aug 11 14:58	0° \approx		morning max el	4402 Jul 22 03:30	8° \approx 26'58	23°20'57
asc. node	4401 Aug 22 18:47	16° \approx 19'54			4402 Aug 06 16:17	0° \approx	
	4401 Aug 29 18:04	0° \approx		asc. node	4402 Aug 09 15:51	5° \approx 36'17	
morning set	4401 Aug 30 01:27	0° \approx 38'25		morning set	4402 Aug 14 12:44	15° \approx 31'09	
					4402 Aug 21 06:30	0° \approx	
superior conj	4401 Sep 06 07:35	15° \approx 55'04	1°43'04				
minimum elong	4401 Sep 06 06:54	15° \approx 51'29	1°43'04	superior conj	4402 Aug 21 13:23	0° \approx 36'58	1°36'30
max. Earth dist.	4401 Sep 10 05:59	24° \approx 00'20	1.34900 AU	minimum elong	4402 Aug 21 11:41	0° \approx 27'51	1°36'22
	4401 Sep 13 06:32	0° \approx		max. Earth dist.	4402 Aug 24 03:05	6° \approx 05'44	1.33548 AU
evening rise	4401 Sep 14 14:35	2° \approx 34'38		evening rise	4402 Aug 29 04:02	16° \approx 26'54	
desc. node	4401 Sep 28 13:44	26° \approx 52'40			4402 Sep 05 07:56	0° \approx	
	4401 Sep 30 14:09	0° \approx		desc. node	4402 Sep 15 10:46	16° \approx 52'12	
evening max el	4401 Oct 19 19:58	24° \approx 30'18	26°47'33		4402 Sep 25 03:01	0° \approx	
	4401 Oct 26 22:06	0° \approx		evening max el	4402 Oct 02 08:06	7° \approx 54'39	27°20'39
retrograde	4401 Nov 01 21:55	1° \approx 46'30		retrograde	4402 Oct 15 20:27	15° \approx 13'09	
	4401 Nov 07 08:18	30° \approx 8'8		evening set	4402 Oct 22 21:02	12° \approx 33'02	
evening set	4401 Nov 08 13:08	29° \approx 06'41		min. Earth dist.	4402 Oct 26 15:34	9° \approx 04'56	0.64421 AU
min. Earth dist.	4401 Nov 12 13:32	25° \approx 04'09	0.65841 AU	inferior conj	4402 Oct 29 00:10	6° \approx 33'45	-2°30'12
inferior conj	4401 Nov 14 10:03	22° \approx 53'47	-1°28'04	minimum elong	4402 Oct 29 04:27	6° \approx 22'18	2°28'34
minimum elong	4401 Nov 14 12:31	22° \approx 46'34	1°27'02	morning rise	4402 Nov 04 13:06	1° \approx 07'31	
asc. node	4401 Nov 18 17:59	18° \approx 24'27		asc. node	4402 Nov 05 15:03	0° \approx 45'17	
morning rise	4401 Nov 20 12:43	17° \approx 13'15		direct	4402 Nov 07 02:25	0° \approx 34'03	
direct	4401 Nov 23 08:52	16° \approx 28'41		morning max el	4402 Nov 13 14:22	3° \approx 59'56	17°56'06
morning max el	4401 Nov 29 22:05	20° \approx 01'26	18°19'45	morning set	4402 Nov 30 19:38	0° \approx 05'50	
	4401 Dec 07 14:09	0° \approx			4402 Nov 30 18:15	0° \approx	
morning set	4401 Dec 19 05:44	18° \approx 30'30		desc. node	4402 Dec 12 10:01	19° \approx 21'41	
desc. node	4401 Dec 25 13:00	28° \approx 38'14					
	4401 Dec 26 09:30	0° \approx		superior conj	4402 Dec 14 04:24	22° \approx 31'25	-0°12'13
				minimum elong	4402 Dec 14 02:57	22° \approx 30'07	0°11'59

behind sun begin	4402 Dec 13 19:59	21° ♁ 39'04		morning set	4403 Nov 13 08:40	12° ♁ 47'43	
behind sun end	4402 Dec 14 09:55	22° ♁ 35'11			4403 Nov 23 05:15	0° ♁	
max. Earth dist.	4402 Dec 18 23:48	29° ♁ 53'34	1.44770 AU				
	4402 Dec 19 01:26	0° ♁		superior conj	4403 Nov 24 19:08	2° ♁ 40'17	0°31'10
evening rise	4402 Dec 30 07:56	17° ♁ 33'35		minimum elong	4403 Nov 24 22:01	2° ♁ 52'27	0°30'46
	4403 Jan 07 11:33	0° ♁		desc. node	4403 Nov 29 07:02	10° ♁ 08'25	
greatest brilliancy	4403 Jan 14 00:04	9° ♁ 44'03	-0.6m	max. Earth dist.	4403 Dec 01 15:57	13° ♁ 59'55	1.43599 AU
evening max el	4403 Jan 26 06:23	25° ♁ 49'21	20°10'53	evening rise	4403 Dec 09 18:18	26° ♁ 48'19	
	4403 Jan 31 23:48	0° ♁			4403 Dec 11 19:59	0° ♁	
asc. node	4403 Feb 01 14:19	0° ♁ 11'10			4404 Jan 01 09:57	0° ♁	
retrograde	4403 Feb 03 01:16	0° ♁ 22'37		evening max el	4404 Jan 09 04:59	9° ♁ 22'55	21°19'23
	4403 Feb 05 00:53	30° ♁		retrograde	4404 Jan 17 22:59	14° ♁ 34'14	
evening set	4403 Feb 06 19:58	28° ♁ 59'35		asc. node	4404 Jan 19 11:21	14° ♁ 21'47	
inferior conj	4403 Feb 12 05:20	22° ♁ 55'30	2°59'28	evening set	4404 Jan 22 03:37	12° ♁ 55'56	
minimum elong	4403 Feb 12 03:01	23° ♁ 03'20	2°58'58	inferior conj	4404 Jan 27 11:50	6° ♁ 41'07	2°26'37
min. Earth dist.	4403 Feb 13 00:48	21° ♁ 49'44	0.67266 AU	minimum elong	4404 Jan 27 09:23	6° ♁ 49'35	2°25'54
morning rise	4403 Feb 17 09:50	16° ♁ 41'22		min. Earth dist.	4404 Jan 27 18:40	6° ♁ 17'28	0.67853 AU
direct	4403 Feb 23 04:49	14° ♁ 06'04		morning rise	4404 Feb 01 14:58	0° ♁ 28'39	
morning max el	4403 Mar 06 19:46	21° ♁ 03'12	24°50'57		4404 Feb 02 04:38	30° ♁	
desc. node	4403 Mar 10 09:15	24° ♁ 55'20		direct	4404 Feb 06 19:25	28° ♁ 12'56	
	4403 Mar 14 13:22	0° ♁			4404 Feb 11 23:26	0° ♁	
	4403 Apr 03 23:31	0° ♁		morning max el	4404 Feb 17 04:33	4° ♁ 23'09	23°22'17
morning set	4403 Apr 11 21:55	13° ♁ 31'34		desc. node	4404 Feb 25 06:15	13° ♁ 49'35	
max. Earth dist.	4403 Apr 15 12:50	20° ♁ 04'14	1.37062 AU		4404 Mar 07 20:02	0° ♁	
	4403 Apr 20 19:04	0° ♁		morning set	4404 Mar 23 05:45	24° ♁ 21'56	
					4404 Mar 26 12:54	0° ♁	
superior conj	4403 Apr 22 01:44	2° ♁ 29'03	-1°18'59	max. Earth dist.	4404 Mar 27 07:57	1° ♁ 22'45	1.39216 AU
minimum elong	4403 Apr 22 05:56	2° ♁ 49'34	1°18'21				
evening rise	4403 Apr 30 12:33	19° ♁ 20'50		superior conj	4404 Apr 03 22:04	15° ♁ 03'40	-1°44'16
asc. node	4403 Apr 30 13:37	19° ♁ 26'15		minimum elong	4404 Apr 04 02:54	15° ♁ 26'13	1°43'46
	4403 May 05 23:53	0° ♁			4404 Apr 11 18:10	0° ♁	
evening max el	4403 May 17 11:58	16° ♁ 56'06	19°25'47	evening rise	4404 Apr 13 07:14	2° ♁ 59'15	
retrograde	4403 May 26 21:06	21° ♁ 30'10		asc. node	4404 Apr 16 10:40	9° ♁ 00'32	
evening set	4403 May 28 20:26	21° ♁ 18'57		evening max el	4404 Apr 29 12:58	29° ♁ 10'29	18°39'32
inferior conj	4403 Jun 06 10:42	17° ♁ 12'45	-0°01'38		4404 Apr 30 10:26	0° ♁	
minimum elong	4403 Jun 06 10:38	17° ♁ 12'52	0°01'37	retrograde	4404 May 07 11:33	3° ♁ 04'39	
transit middle	4403 Jun 06 10:38	17° ♁ 12'52	0°01'37	evening set	4404 May 09 16:37	2° ♁ 47'34	
transit begin	4403 Jun 06 06:46	17° ♁ 19'07			4404 May 15 05:54	30° ♁	
transit end	4403 Jun 06 14:29	17° ♁ 06'36		inferior conj	4404 May 17 10:54	28° ♁ 23'03	1°36'40
desc. node	4403 Jun 06 08:30	17° ♁ 16'19		minimum elong	4404 May 17 14:05	28° ♁ 17'01	1°35'39
min. Earth dist.	4403 Jun 09 01:40	15° ♁ 31'14	0.55880 AU	min. Earth dist.	4404 May 20 18:57	25° ♁ 52'53	0.57571 AU
morning rise	4403 Jun 14 22:00	12° ♁ 32'07		desc. node	4404 May 23 05:29	24° ♁ 15'30	
direct	4403 Jun 19 15:06	11° ♁ 41'45		morning rise	4404 May 25 08:20	23° ♁ 07'32	
morning max el	4403 Jul 03 17:13	18° ♁ 49'10	25°03'12	direct	4404 May 31 00:28	21° ♁ 47'34	
	4403 Jul 13 01:54	0° ♁		morning max el	4404 Jun 14 09:16	29° ♁ 21'48	26°30'56
asc. node	4403 Jul 27 12:53	25° ♁ 14'08			4404 Jun 15 00:45	0° ♁	
	4403 Jul 29 19:51	0° ♁			4404 Jul 05 19:11	0° ♁	
morning set	4403 Jul 30 00:27	0° ♁ 24'22		morning set	4404 Jul 13 11:02	15° ♁ 13'08	
				asc. node	4404 Jul 13 09:55	15° ♁ 07'13	
superior conj	4403 Aug 05 23:03	15° ♁ 28'57	1°24'29				
minimum elong	4403 Aug 05 20:49	15° ♁ 16'43	1°24'11	superior conj	4404 Jul 20 10:37	0° ♁ 24'34	1°07'46
max. Earth dist.	4403 Aug 07 08:17	18° ♁ 30'18	1.32619 AU	minimum elong	4404 Jul 20 08:19	0° ♁ 11'54	1°07'22
	4403 Aug 12 18:00	0° ♁			4404 Jul 20 06:10	0° ♁	
evening rise	4403 Aug 13 02:55	0° ♁ 45'56		max. Earth dist.	4404 Jul 20 18:36	1° ♁ 08'38	1.32104 AU
	4403 Aug 29 07:26	0° ♁		evening rise	4404 Jul 27 08:18	15° ♁ 22'48	
desc. node	4403 Sep 02 07:48	5° ♁ 58'15			4404 Aug 03 17:07	0° ♁	
evening max el	4403 Sep 14 17:58	20° ♁ 52'18	27°24'49	desc. node	4404 Aug 19 04:48	24° ♁ 27'07	
retrograde	4403 Sep 28 12:12	28° ♁ 07'27			4404 Aug 23 20:20	0° ♁	
evening set	4403 Oct 05 16:39	25° ♁ 37'41		evening max el	4404 Aug 26 22:49	3° ♁ 10'09	26°55'56
min. Earth dist.	4403 Oct 09 07:43	22° ♁ 39'20	0.62686 AU	retrograde	4404 Sep 09 20:17	10° ♁ 20'57	
inferior conj	4403 Oct 12 03:47	19° ♁ 56'40	-3°31'08	evening set	4404 Sep 16 19:51	8° ♁ 13'41	
minimum elong	4403 Oct 12 09:31	19° ♁ 42'57	3°29'19	min. Earth dist.	4404 Sep 20 13:00	5° ♁ 34'52	0.60708 AU
morning rise	4403 Oct 19 03:58	14° ♁ 48'03		inferior conj	4404 Sep 23 17:36	2° ♁ 54'10	-4°25'17
direct	4403 Oct 21 13:13	14° ♁ 22'04		minimum elong	4404 Sep 23 23:33	2° ♁ 41'39	4°23'59
asc. node	4403 Oct 23 12:06	14° ♁ 39'59			4404 Sep 27 10:57	30° ♁	
morning max el	4403 Oct 28 06:46	17° ♁ 49'04	17°50'11	morning rise	4404 Oct 01 05:09	28° ♁ 06'39	
	4403 Nov 06 00:32	0° ♁		direct	4404 Oct 03 13:28	27° ♁ 45'05	

asc. node	4404 Oct 09 09:08	0° <u>Ω</u> 04'08			4405 Oct 04 20:58	0° <u>Ω</u>	
	4404 Oct 09 07:01	0° <u>Ω</u>		morning set	4405 Oct 10 08:13	10° <u>Ω</u> 20'52	
morning max el	4404 Oct 10 20:10	1° <u>Ω</u> 21'27	18°03'09				
morning set	4404 Oct 26 14:33	26° <u>Ω</u> 17'47		superior conj	4405 Oct 19 02:48	27° <u>Ω</u> 12'15	1°27'19
	4404 Oct 28 14:22	0° <u>ℓ</u>		minimum elong	4405 Oct 19 06:04	27° <u>Ω</u> 27'32	1°27'00
					4405 Oct 20 14:53	0° <u>ℓ</u>	
superior conj	4404 Nov 05 12:07	14° <u>ℓ</u> 24'34	1°04'43	max. Earth dist.	4405 Oct 26 10:04	10° <u>ℓ</u> 25'43	1.39865 AU
minimum elong	4404 Nov 05 16:13	14° <u>ℓ</u> 42'43	1°04'12	evening rise	4405 Oct 30 13:14	17° <u>ℓ</u> 30'29	
max. Earth dist.	4404 Nov 13 03:36	27° <u>ℓ</u> 34'36	1.41896 AU	desc. node	4405 Nov 02 01:07	21° <u>ℓ</u> 38'58	
	4404 Nov 14 14:37	0° <u>♊</u>			4405 Nov 07 06:16	0° <u>♊</u>	
desc. node	4404 Nov 15 04:05	0° <u>♊</u> 55'27			4405 Nov 28 13:53	0° <u>♋</u>	
evening rise	4404 Nov 18 16:57	6° <u>♊</u> 39'45		evening max el	4405 Dec 04 12:25	6° <u>♋</u> 36'51	23°56'15
	4404 Dec 04 01:29	0° <u>♋</u>		retrograde	4405 Dec 15 11:30	13° <u>♋</u> 04'11	
evening max el	4404 Dec 21 22:29	22° <u>♋</u> 58'15	22°36'18	evening set	4405 Dec 20 16:32	10° <u>♋</u> 54'04	
retrograde	4404 Dec 31 18:48	28° <u>♋</u> 49'16		asc. node	4405 Dec 23 05:23	8° <u>♋</u> 16'24	
evening set	4405 Jan 05 10:59	26° <u>♋</u> 54'59		min. Earth dist.	4405 Dec 25 11:31	5° <u>♋</u> 21'16	0.67881 AU
asc. node	4405 Jan 05 08:23	27° <u>♋</u> 00'19		inferior conj	4405 Dec 26 03:07	4° <u>♋</u> 28'18	0°58'22
inferior conj	4405 Jan 10 19:41	20° <u>♋</u> 32'41	1°45'52	minimum elong	4405 Dec 26 01:47	4° <u>♋</u> 32'48	0°57'49
minimum elong	4405 Jan 10 17:35	20° <u>♋</u> 40'00	1°45'07		4405 Dec 29 16:58	30° <u>♌</u> ♊	
min. Earth dist.	4405 Jan 10 14:59	20° <u>♋</u> 48'59	0.68051 AU	morning rise	4405 Dec 31 11:04	28° <u>♌</u> 23'55	
morning rise	4405 Jan 16 00:04	14° <u>♋</u> 23'26		direct	4406 Jan 04 10:53	26° <u>♌</u> 53'39	
direct	4405 Jan 20 13:46	12° <u>♋</u> 30'28			4406 Jan 10 21:18	0° <u>♋</u>	
morning max el	4405 Jan 29 16:54	17° <u>♋</u> 51'10	21°55'00	morning max el	4406 Jan 12 12:02	1° <u>♋</u> 30'41	20°36'22
	4405 Feb 08 17:00	0° <u>♌</u>		desc. node	4406 Jan 29 00:19	23° <u>♋</u> 18'36	
desc. node	4405 Feb 11 03:17	3° <u>♌</u> 20'38			4406 Feb 02 11:57	0° <u>♌</u>	
	4405 Feb 28 23:11	0° <u>♌</u>		morning set	4406 Feb 10 11:38	12° <u>♌</u> 13'17	
morning set	4405 Mar 03 09:03	3° <u>♌</u> 50'25		max. Earth dist.	4406 Feb 19 12:13	26° <u>♌</u> 30'23	1.43227 AU
max. Earth dist.	4405 Mar 09 06:37	13° <u>♌</u> 29'28	1.41366 AU		4406 Feb 21 15:50	0° <u>♌</u>	
superior conj	4405 Mar 16 23:32	26° <u>♌</u> 42'39	-2°02'19	superior conj	4406 Feb 26 01:18	7° <u>♌</u> 15'43	-2°07'59
minimum elong	4405 Mar 17 03:04	26° <u>♌</u> 58'15	2°02'08	minimum elong	4406 Feb 26 00:30	7° <u>♌</u> 12'21	2°07'58
	4405 Mar 18 20:01	0° <u>♍</u>		evening rise	4406 Mar 10 05:43	28° <u>♌</u> 16'29	
evening rise	4405 Mar 27 14:21	16° <u>♍</u> 00'48			4406 Mar 11 05:11	0° <u>♍</u>	
asc. node	4405 Apr 03 07:41	28° <u>♍</u> 13'37		asc. node	4406 Mar 21 04:43	16° <u>♍</u> 58'36	
	4405 Apr 04 08:23	0° <u>♎</u>		evening max el	4406 Mar 27 09:06	25° <u>♍</u> 02'19	18°07'00
evening max el	4405 Apr 12 21:08	11° <u>♎</u> 55'26	18°13'28	retrograde	4406 Apr 02 21:25	28° <u>♍</u> 24'49	
retrograde	4405 Apr 19 20:55	15° <u>♎</u> 26'05		evening set	4406 Apr 05 15:19	27° <u>♍</u> 48'13	
evening set	4405 Apr 22 08:37	15° <u>♎</u> 00'10		inferior conj	4406 Apr 12 00:37	22° <u>♍</u> 43'00	3°20'52
inferior conj	4405 Apr 29 08:31	10° <u>♎</u> 15'00	2°43'31	minimum elong	4406 Apr 12 02:41	22° <u>♍</u> 37'47	3°20'36
minimum elong	4405 Apr 29 11:56	10° <u>♎</u> 07'24	2°42'43	min. Earth dist.	4406 Apr 15 00:48	19° <u>♍</u> 40'59	0.61857 AU
min. Earth dist.	4405 May 02 17:52	7° <u>♎</u> 16'31	0.59674 AU	morning rise	4406 Apr 18 12:22	16° <u>♍</u> 42'58	
morning rise	4405 May 06 12:39	4° <u>♎</u> 31'58		direct	4406 Apr 25 08:04	14° <u>♍</u> 17'06	
desc. node	4405 May 10 02:30	2° <u>♎</u> 59'36		desc. node	4406 Apr 26 23:31	14° <u>♍</u> 25'01	
direct	4405 May 12 22:47	2° <u>♎</u> 37'05		morning max el	4406 May 09 11:50	22° <u>♍</u> 16'18	27°52'09
morning max el	4405 May 27 07:27	10° <u>♎</u> 27'57	27°29'52		4406 May 16 07:01	0° <u>♎</u>	
	4405 Jun 11 10:31	0° <u>♏</u>			4406 Jun 04 13:47	0° <u>♏</u>	
morning set	4405 Jun 27 18:44	29° <u>♏</u> 51'05		morning set	4406 Jun 11 21:35	14° <u>♏</u> 11'58	
	4405 Jun 27 20:26	0° <u>♐</u>		asc. node	4406 Jun 17 04:00	25° <u>♏</u> 16'50	
asc. node	4405 Jun 30 06:56	5° <u>♐</u> 09'36		max. Earth dist.	4406 Jun 17 15:11	26° <u>♏</u> 17'19	1.32306 AU
superior conj	4405 Jul 04 22:15	15° <u>♐</u> 16'56	0°46'57	superior conj	4406 Jun 19 08:16	0° <u>♐</u> 00'39	0°22'39
minimum elong	4405 Jul 04 20:22	15° <u>♐</u> 06'32	0°46'34	minimum elong	4406 Jun 19 07:14	29° <u>♏</u> 55'01	0°22'25
max. Earth dist.	4405 Jul 04 06:14	13° <u>♐</u> 48'38	1.31998 AU		4406 Jun 19 08:09	0° <u>♐</u>	
evening rise	4405 Jul 11 17:45	0° <u>♑</u> 08'53		evening rise	4406 Jun 26 05:16	14° <u>♐</u> 57'44	
	4405 Jul 11 16:05	0° <u>♑</u>			4406 Jul 03 16:54	0° <u>♑</u>	
	4405 Jul 28 00:32	0° <u>♒</u>		evening max el	4406 Jul 21 10:48	25° <u>♑</u> 22'47	24°28'23
desc. node	4405 Aug 06 01:49	11° <u>♒</u> 48'33		desc. node	4406 Jul 23 22:50	27° <u>♑</u> 35'52	
evening max el	4405 Aug 08 20:13	14° <u>♒</u> 38'31	25°54'36		4406 Jul 27 09:07	0° <u>♒</u>	
retrograde	4405 Aug 22 19:24	21° <u>♒</u> 46'01		retrograde	4406 Aug 04 07:43	2° <u>♒</u> 22'48	
evening set	4405 Aug 29 01:40	20° <u>♒</u> 12'22		evening set	4406 Aug 09 07:14	1° <u>♒</u> 27'17	
min. Earth dist.	4405 Sep 02 08:33	17° <u>♒</u> 36'27	0.58637 AU		4406 Aug 12 11:49	30° <u>♒</u> ♑	
inferior conj	4405 Sep 05 14:01	15° <u>♒</u> 15'21	-5°03'28	min. Earth dist.	4406 Aug 14 21:51	28° <u>♑</u> 35'18	0.56745 AU
minimum elong	4405 Sep 05 17:40	15° <u>♒</u> 08'40	5°03'07	inferior conj	4406 Aug 17 14:28	26° <u>♑</u> 52'27	-5°11'33
morning rise	4405 Sep 13 11:54	10° <u>♒</u> 51'07		minimum elong	4406 Aug 17 12:44	26° <u>♑</u> 55'13	5°11'29
direct	4405 Sep 15 22:27	10° <u>♒</u> 31'41		morning rise	4406 Aug 25 20:48	22° <u>♑</u> 49'22	
morning max el	4405 Sep 24 03:13	14° <u>♒</u> 27'11	18°36'28	direct	4406 Aug 28 12:33	22° <u>♑</u> 30'14	
asc. node	4405 Sep 26 06:09	16° <u>♒</u> 43'18		morning max el	4406 Sep 07 00:42	26° <u>♑</u> 56'44	19°31'15

































































































































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asc. node	4406 Sep 13 03:12	4°♎22'32		inferior conj	4407 Jul 28 19:56	7°♏45'03	-4°33'55
morning set	4406 Sep 24 09:57	24°♎46'42		minimum elong	4407 Jul 28 12:29	7°♏55'47	4°32'28
	4406 Sep 27 00:09	0°♏		morning rise	4407 Aug 06 08:55	3°♏53'59	
				direct	4407 Aug 09 08:29	3°♏33'10	
superior conj	4406 Oct 02 09:41	10°♏47'19	1°39'55	morning max el	4407 Aug 20 10:26	8°♏42'24	20°47'31
minimum elong	4406 Oct 02 11:23	10°♏55'36	1°39'50	asc. node	4407 Aug 31 00:17	22°♏48'32	
max. Earth dist.	4406 Oct 08 14:20	22°♏36'36	1.37772 AU		4407 Sep 03 23:18	0°♎	
evening rise	4406 Oct 12 08:29	29°♏24'17		morning set	4407 Sep 08 17:05	9°♎28'19	
	4406 Oct 12 16:34	0°♎					
desc. node	4406 Oct 19 22:10	12°♎14'45		superior conj	4407 Sep 16 04:12	24°♎56'54	1°44'01
	4406 Oct 31 14:03	0°♎		minimum elong	4407 Sep 16 04:18	24°♎57'23	1°44'01
evening max el	4406 Nov 17 00:55	20°♎19'04	25°12'37		4407 Sep 18 15:59	0°♏	
retrograde	4406 Nov 28 24:00	27°♎13'54		max. Earth dist.	4407 Sep 20 22:31	4°♏30'06	1.35858 AU
evening set	4406 Dec 04 18:38	24°♎49'26		evening rise	4407 Sep 24 23:35	12°♏13'42	
min. Earth dist.	4406 Dec 09 05:55	19°♎50'47	0.67362 AU		4407 Oct 05 03:58	0°♎	
inferior conj	4406 Dec 10 08:20	18°♎24'46	0°05'02	desc. node	4407 Oct 06 19:11	2°♎38'09	
minimum elong	4406 Dec 10 08:12	18°♎25'11	0°04'58		4407 Oct 26 16:52	0°♎	
transit middle	4406 Dec 10 08:12	18°♎25'11	0°04'58	evening max el	4407 Oct 30 13:36	4°♎02'10	26°17'57
transit begin	4406 Dec 10 05:33	18°♎33'49		retrograde	4407 Nov 12 07:24	11°♎13'00	
transit end	4406 Dec 10 10:51	18°♎16'34		evening set	4407 Nov 18 15:28	8°♎37'32	
asc. node	4406 Dec 10 02:26	18°♎44'00		min. Earth dist.	4407 Nov 22 19:47	4°♎14'11	0.66499 AU
morning rise	4406 Dec 15 22:00	12°♎27'24		inferior conj	4407 Nov 24 09:26	2°♎18'58	-0°53'00
direct	4406 Dec 19 09:31	11°♎17'34		minimum elong	4407 Nov 24 10:52	2°♎14'34	0°52'23
morning max el	4406 Dec 26 15:01	15°♎21'05	19°30'53		4407 Nov 26 08:11	30°♎	
	4407 Jan 06 21:11	0°♏		asc. node	4407 Nov 26 23:28	29°♎18'01	
greatest brilliancy	4407 Jan 08 18:23	2°♏47'22	-0.7m	morning rise	4407 Nov 30 06:49	26°♎31'13	
desc. node	4407 Jan 15 21:22	13°♏35'43		direct	4407 Dec 03 08:00	25°♎38'25	
morning set	4407 Jan 20 08:49	20°♏29'24		morning max el	4407 Dec 10 01:02	29°♎19'23	18°40'56
	4407 Jan 26 11:50	0°♏			4407 Dec 10 16:47	0°♎	
max. Earth dist.	4407 Feb 02 00:43	10°♏16'04	1.44571 AU	morning set	4407 Dec 31 01:15	29°♎49'29	
					4407 Dec 31 03:55	0°♏	
superior conj	4407 Feb 06 01:27	16°♏41'06	-1°55'57	desc. node	4408 Jan 02 18:26	4°♏06'45	
minimum elong	4407 Feb 05 18:32	16°♏13'26	1°55'31				
	4407 Feb 14 06:05	0°♎		superior conj	4408 Jan 16 06:58	25°♏21'32	-1°24'28
evening rise	4407 Feb 20 00:54	9°♎37'36		minimum elong	4408 Jan 15 21:46	24°♏45'24	1°23'29
	4407 Mar 04 10:54	0°♎		max. Earth dist.	4408 Jan 15 18:30	24°♏32'36	1.45239 AU
asc. node	4407 Mar 08 01:45	5°♎06'12			4408 Jan 19 05:53	0°♏	
evening max el	4407 Mar 10 21:51	8°♎22'45	18°19'25	evening rise	4408 Jan 31 21:03	20°♏01'59	
retrograde	4407 Mar 17 08:27	11°♎50'43			4408 Feb 07 02:20	0°♎	
evening set	4407 Mar 20 08:24	11°♎02'11		greatest brilliancy	4408 Feb 08 15:21	2°♎27'34	-0.9m
inferior conj	4407 Mar 26 07:02	5°♎38'06	3°34'51	evening max el	4408 Feb 22 08:47	21°♎51'15	18°49'50
minimum elong	4407 Mar 26 07:23	5°♎37'08	3°34'50	asc. node	4408 Feb 22 22:47	22°♎25'45	
min. Earth dist.	4407 Mar 28 16:53	2°♎54'30	0.63860 AU	retrograde	4408 Feb 29 02:10	25°♎36'40	
	4407 Mar 31 14:50	30°♎		evening set	4408 Mar 03 08:35	24°♎35'20	
morning rise	4407 Apr 01 05:28	29°♎29'17		inferior conj	4408 Mar 08 23:58	18°♎53'54	3°31'13
direct	4407 Apr 08 01:55	26°♎44'00		minimum elong	4408 Mar 08 22:53	18°♎57'15	3°31'08
desc. node	4407 Apr 13 20:33	28°♎22'35		min. Earth dist.	4408 Mar 10 18:07	16°♎43'32	0.65517 AU
	4407 Apr 16 10:29	0°♎		morning rise	4408 Mar 14 12:45	12°♎41'03	
morning max el	4407 Apr 21 20:13	4°♎41'55	27°37'13	direct	4408 Mar 21 02:43	9°♎50'34	
	4407 May 10 22:28	0°♎		desc. node	4408 Mar 30 17:37	14°♎20'09	
morning set	4407 May 26 17:10	28°♎07'47		morning max el	4408 Apr 03 06:07	17°♎35'27	26°50'01
	4407 May 27 15:41	0°♎			4408 Apr 13 15:21	0°♎	
max. Earth dist.	4407 May 31 17:31	8°♎22'10	1.33051 AU		4408 May 02 20:24	0°♎	
				morning set	4408 May 09 02:18	11°♎29'08	
superior conj	4407 Jun 03 14:47	14°♎29'23	-0°04'29	max. Earth dist.	4408 May 13 09:54	19°♎56'21	1.34265 AU
minimum elong	4407 Jun 03 15:01	14°♎30'34	0°04'25				
behind sun begin	4407 Jun 03 09:50	14°♎02'51		superior conj	4408 May 17 15:40	28°♎36'46	-0°33'23
behind sun end	4407 Jun 03 20:11	14°♎58'19		minimum elong	4408 May 17 17:26	28°♎45'59	0°33'02
asc. node	4407 Jun 04 01:03	15°♎24'25			4408 May 18 07:38	0°♎	
evening rise	4407 Jun 10 16:55	29°♎42'56		asc. node	4408 May 20 22:06	5°♎28'16	
	4407 Jun 10 20:09	0°♎		evening rise	4408 May 25 02:52	14°♎18'22	
	4407 Jun 27 21:57	0°♎			4408 Jun 02 03:06	0°♎	
evening max el	4407 Jul 03 00:03	5°♎46'32	22°51'28	evening max el	4408 Jun 13 19:43	16°♎21'29	21°18'57
desc. node	4407 Jul 10 19:49	11°♎15'35		retrograde	4408 Jun 25 20:57	22°♎17'23	
retrograde	4407 Jul 16 07:20	12°♎24'15		desc. node	4408 Jun 26 16:50	22°♎15'46	
evening set	4407 Jul 19 18:14	11°♎58'08		evening set	4408 Jun 28 05:01	22°♎04'48	

inferior conj	4408 Jul 07 13:55	18°☿05'58	-3°06'07	desc. node	4409 Jun 13 13:51	0°☿37'06	
minimum elong	4408 Jul 07 05:51	18°☿17'15	3°03'35		4409 Jun 14 17:55	30°☿II	
min. Earth dist.	4408 Jul 07 19:14	17°☿58'31	0.54815 AU	inferior conj	4409 Jun 17 10:30	28°II25'51	-1°08'53
morning rise	4408 Jul 16 07:20	14°☿10'15		minimum elong	4409 Jun 17 07:18	28°II30'41	1°07'41
direct	4408 Jul 19 18:09	13°☿44'31		min. Earth dist.	4409 Jun 19 07:38	27°II18'04	0.55225 AU
morning max el	4408 Aug 01 08:43	19°☿42'51	22°21'56	morning rise	4409 Jun 26 02:30	24°II05'21	
	4408 Aug 09 20:45	0°♊		direct	4409 Jun 30 06:32	23°II27'29	
asc. node	4408 Aug 16 21:21	11°♊49'16			4409 Jul 13 18:33	0°☿	
morning set	4408 Aug 23 03:22	24°♊18'42		morning max el	4409 Jul 13 23:55	0°☿12'33	24°05'21
	4408 Aug 25 19:51	0°♊			4409 Aug 03 03:05	0°♊	
				asc. node	4409 Aug 03 18:24	1°♊15'49	
superior conj	4408 Aug 30 06:41	9°♊29'23	1°41'01	morning set	4409 Aug 07 15:03	9°♊12'32	
minimum elong	4408 Aug 30 05:31	9°♊23'11	1°40'57				
max. Earth dist.	4408 Sep 02 14:48	16°♊28'13	1.34275 AU	superior conj	4409 Aug 14 14:23	24°♊16'25	1°32'02
evening rise	4408 Sep 07 06:01	25°♊46'05		minimum elong	4409 Aug 14 12:24	24°♊05'40	1°31'50
	4408 Sep 09 10:55	0°♋		max. Earth dist.	4409 Aug 16 15:44	28°♊42'25	1.33098 AU
desc. node	4408 Sep 22 16:11	22°♋42'21			4409 Aug 17 06:16	0°♊	
	4408 Sep 27 13:52	0°♋		evening rise	4409 Aug 21 23:51	9°♊50'39	
evening max el	4408 Oct 12 02:18	17°♋36'41	27°04'48		4409 Sep 01 19:22	0°♋	
retrograde	4408 Oct 25 09:02	24°♋53'49		desc. node	4409 Sep 09 13:11	12°♋19'04	
evening set	4408 Nov 01 04:48	22°♋12'58			4409 Sep 23 16:40	0°♋	
min. Earth dist.	4408 Nov 05 02:40	18°♋25'20	0.65287 AU	evening max el	4409 Sep 24 13:39	0°♋50'49	27°26'10
inferior conj	4408 Nov 07 04:14	16°♋05'32	-1°54'18	retrograde	4409 Oct 08 04:35	8°♋08'02	
minimum elong	4408 Nov 07 07:28	15°♋56'22	1°52'58	evening set	4409 Oct 15 07:53	5°♋30'38	
asc. node	4408 Nov 12 20:32	10°♋49'52		min. Earth dist.	4409 Oct 19 00:26	2°♋16'23	0.63727 AU
morning rise	4408 Nov 13 11:06	10°♋30'31			4409 Oct 21 05:58	30°☿♋	
direct	4408 Nov 16 04:08	9°♋50'59		inferior conj	4409 Oct 21 14:12	29°♋38'51	-2°56'26
morning max el	4408 Nov 22 15:48	13°♋19'27	18°07'32	minimum elong	4409 Oct 21 19:11	29°♋26'07	2°54'39
	4408 Dec 04 11:28	0°♌		morning rise	4409 Oct 28 07:53	24°♋19'56	
morning set	4408 Dec 10 23:02	10°♌37'51		direct	4409 Oct 30 19:12	23°♋50'00	
desc. node	4408 Dec 19 15:28	24°♌46'39		asc. node	4409 Oct 30 17:35	23°♋50'01	
	4408 Dec 22 21:44	0°♍		morning max el	4409 Nov 06 08:31	27°♋14'58	17°51'22
					4409 Nov 08 18:57	0°♋	
superior conj	4408 Dec 25 11:58	4°♍07'09	-0°39'35	morning set	4409 Nov 22 23:32	22°♋43'47	
minimum elong	4408 Dec 25 07:01	3°♍47'34	0°38'54		4409 Nov 27 05:06	0°♌	
max. Earth dist.	4408 Dec 28 14:11	8°♍59'55	1.45158 AU				
evening rise	4409 Jan 10 19:38	29°♍37'11		superior conj	4409 Dec 05 11:41	13°♌50'38	0°07'12
	4409 Jan 11 01:31	0°♎		minimum elong	4409 Dec 05 12:28	13°♌53'51	0°07'05
greatest brilliancy	4409 Jan 23 16:11	19°♎21'41	-0.7m	behind sun begin	4409 Dec 05 03:37	13°♌17'34	
	4409 Jan 31 02:58	0°♎		behind sun end	4409 Dec 05 21:19	14°♌30'03	
evening max el	4409 Feb 04 15:46	5°♎23'03	19°36'59	desc. node	4409 Dec 06 12:28	15°♌31'54	
asc. node	4409 Feb 08 19:48	8°♎43'40		max. Earth dist.	4409 Dec 11 08:21	23°♌18'47	1.44351 AU
retrograde	4409 Feb 11 23:26	9°♎36'32			4409 Dec 15 13:54	0°♍	
evening set	4409 Feb 15 13:18	8°♎21'31		evening rise	4409 Dec 21 05:57	8°♍48'01	
inferior conj	4409 Feb 21 00:10	2°♎24'47	3°14'12		4410 Jan 04 08:04	0°♎	
minimum elong	4409 Feb 20 22:10	2°♎31'26	3°13'51	evening max el	4410 Jan 18 17:26	18°♎55'37	20°38'38
min. Earth dist.	4409 Feb 22 03:25	0°♎54'59	0.66750 AU	retrograde	4410 Jan 26 21:39	23°♎44'55	
	4409 Feb 22 20:26	30°☿♎		asc. node	4410 Jan 26 16:49	23°♎44'41	
morning rise	4409 Feb 26 06:48	26°♎10'39		evening set	4410 Jan 30 20:23	22°♎15'24	
direct	4409 Mar 04 09:26	23°♎27'20		inferior conj	4410 Feb 05 05:01	16°♎06'04	2°46'35
	4409 Mar 15 21:09	0°♏		minimum elong	4410 Feb 05 02:35	16°♎14'24	2°45'58
morning max el	4409 Mar 16 15:34	0°♏45'44	25°38'54	min. Earth dist.	4410 Feb 05 18:52	15°♎18'37	0.67562 AU
desc. node	4409 Mar 17 14:40	1°♏45'19		morning rise	4410 Feb 10 08:36	9°♎52'23	
	4409 Apr 07 14:49	0°♐		direct	4410 Feb 15 21:21	7°♎25'06	
morning set	4409 Apr 21 20:48	24°♐04'38		morning max el	4410 Feb 27 00:13	14°♎03'33	24°13'38
	4409 Apr 25 01:20	0°♑		desc. node	4410 Mar 04 11:41	20°♎12'28	
max. Earth dist.	4409 Apr 25 15:10	1°♑05'35	1.35932 AU		4410 Mar 11 23:17	0°♏	
					4410 Mar 31 11:53	0°♐	
superior conj	4409 May 01 08:16	12°♑15'41	-1°02'42	morning set	4410 Apr 03 19:04	5°♐38'08	
minimum elong	4409 May 01 11:40	12°♑32'44	1°02'07	max. Earth dist.	4410 Apr 07 11:58	12°♐10'43	1.37959 AU
asc. node	4409 May 07 19:07	25°♑24'34					
evening rise	4409 May 09 08:59	28°♑38'03		superior conj	4410 Apr 14 13:08	25°♐16'21	-1°30'20
	4409 May 10 01:08	0°♒		minimum elong	4410 Apr 14 17:45	25°♐38'33	1°29'44
evening max el	4409 May 27 02:59	27°♒32'02	20°01'29		4410 Apr 16 23:49	0°♑	
	4409 May 30 01:20	0°☿		evening rise	4410 Apr 23 08:42	12°♑33'38	
retrograde	4409 Jun 06 11:47	2°☿35'40		asc. node	4410 Apr 24 16:08	15°♑08'12	
evening set	4409 Jun 08 10:23	2°☿25'46			4410 May 02 19:11	0°♒	

evening max el	4410 May 09 22:13	9° Π 24'12	19°03'35	retrograde	4411 Apr 30 14:11	25° \mathcal{B} 34'56	
retrograde	4410 May 18 15:40	13° Π 39'51		evening set	4411 May 02 22:04	25° \mathcal{B} 14'27	
evening set	4410 May 20 16:51	13° Π 26'43		inferior conj	4411 May 10 08:11	20° \mathcal{B} 41'34	2°08'56
inferior conj	4410 May 28 22:42	9° Π 13'19	0°43'37	minimum elong	4411 May 10 11:47	20° \mathcal{B} 34'17	2°07'54
minimum elong	4410 May 29 00:26	9° Π 10'21	0°43'00	min. Earth dist.	4411 May 13 18:39	17° \mathcal{B} 56'06	0.58441 AU
desc. node	4410 May 31 10:53	7° Π 29'24		morning rise	4411 May 17 22:22	15° \mathcal{B} 12'55	
min. Earth dist.	4410 May 31 23:01	7° Π 09'04	0.56522 AU	desc. node	4411 May 18 07:54	15° \mathcal{B} 00'59	
morning rise	4410 Jun 06 04:46	4° Π 17'00		direct	4411 May 23 23:12	13° \mathcal{B} 37'50	
direct	4410 Jun 11 07:37	3° Π 15'20		morning max el	4411 Jun 07 08:34	21° \mathcal{B} 20'55	27°00'01
morning max el	4410 Jun 25 14:12	10° Π 36'19	25°43'19		4411 Jun 14 21:24	0° Π	
	4410 Jul 10 09:08	0° \mathcal{E}			4411 Jul 03 04:10	0° \mathcal{E}	
asc. node	4410 Jul 21 15:25	21° \mathcal{E} 00'32		morning set	4411 Jul 07 11:59	8° \mathcal{E} 48'29	
morning set	4410 Jul 23 02:27	24° \mathcal{E} 04'08		asc. node	4411 Jul 08 12:27	10° \mathcal{E} 57'50	
	4410 Jul 25 20:42	0° Ω					
superior conj	4410 Jul 30 01:04	9° Ω 10'24	1°17'55	superior conj	4411 Jul 14 12:53	24° \mathcal{E} 05'09	0°59'23
minimum elong	4410 Jul 29 22:45	8° Ω 57'40	1°17'35	minimum elong	4411 Jul 14 10:42	23° \mathcal{E} 53'08	0°59'00
max. Earth dist.	4410 Jul 30 23:20	11° Ω 12'36	1.32343 AU	max. Earth dist.	4411 Jul 14 10:25	23° \mathcal{E} 51'36	1.32006 AU
evening rise	4410 Aug 06 01:46	24° Ω 17'35		evening rise	4411 Jul 17 05:16	0° Ω	
	4410 Aug 08 21:03	0° \mathcal{N}			4411 Jul 21 09:09	8° Ω 58'55	
	4410 Aug 26 12:03	0° \mathcal{E}		desc. node	4411 Aug 01 06:03	0° \mathcal{N}	
desc. node	4410 Aug 27 10:12	1° \mathcal{E} 16'51		evening max el	4411 Aug 14 07:13	19° \mathcal{N} 19'34	
evening max el	4410 Sep 06 21:27	13° \mathcal{E} 31'50	27°16'39		4411 Aug 19 23:19	25° \mathcal{N} 28'50	26°33'38
retrograde	4410 Sep 20 17:28	20° \mathcal{E} 46'02		retrograde	4411 Aug 25 17:00	0° \mathcal{E}	
evening set	4410 Sep 27 21:07	18° \mathcal{E} 23'57		evening set	4411 Sep 02 22:11	2° \mathcal{E} 38'40	
min. Earth dist.	4410 Oct 01 11:53	15° \mathcal{E} 35'45	0.61861 AU		4411 Sep 09 15:48	0° \mathcal{E} 44'49	
inferior conj	4410 Oct 04 12:20	12° \mathcal{E} 51'39	-3°55'24	min. Earth dist.	4411 Sep 10 22:02	30° \mathcal{R} \mathcal{N}	
minimum elong	4410 Oct 04 18:22	12° \mathcal{E} 37'55	3°53'43	inferior conj	4411 Sep 13 13:02	28° \mathcal{N} 09'13	0.59812 AU
morning rise	4410 Oct 11 17:27	7° \mathcal{E} 51'58		minimum elong	4411 Sep 16 19:09	25° \mathcal{N} 34'34	-4°44'16
direct	4410 Oct 14 01:48	7° \mathcal{E} 28'19		morning rise	4411 Sep 17 00:29	25° \mathcal{N} 23'56	4°43'21
asc. node	4410 Oct 17 14:37	8° \mathcal{E} 23'52		direct	4411 Sep 24 11:16	20° \mathcal{N} 56'44	
morning max el	4410 Oct 21 00:06	10° \mathcal{E} 58'20	17°53'24	asc. node	4411 Sep 26 19:59	20° \mathcal{N} 36'27	
	4410 Nov 02 15:16	0° \mathcal{M}		morning max el	4411 Oct 04 11:40	24° \mathcal{N} 21'21	
morning set	4410 Nov 05 20:27	5° \mathcal{M} 48'12		morning set	4411 Oct 04 11:11	24° \mathcal{N} 20'10	18°14'49
					4411 Oct 09 02:58	0° \mathcal{E}	
superior conj	4410 Nov 16 14:01	24° \mathcal{M} 52'24	0°46'43	morning set	4411 Oct 20 07:54	19° \mathcal{E} 33'32	
minimum elong	4410 Nov 16 17:45	25° \mathcal{M} 08'30	0°46'13		4411 Oct 25 20:38	0° \mathcal{M}	
	4410 Nov 19 14:14	0° \mathcal{X}		superior conj	4411 Oct 29 16:52	7° \mathcal{M} 05'04	1°15'36
desc. node	4410 Nov 23 09:29	6° \mathcal{X} 19'26		minimum elong	4411 Oct 29 20:46	7° \mathcal{M} 22'48	1°15'10
max. Earth dist.	4410 Nov 23 22:22	7° \mathcal{X} 12'13	1.42922 AU	max. Earth dist.	4411 Nov 06 07:18	20° \mathcal{M} 27'21	1.41051 AU
evening rise	4410 Nov 30 19:51	18° \mathcal{X} 14'23		desc. node	4411 Nov 10 06:31	27° \mathcal{M} 05'21	
	4410 Dec 08 11:40	0° \mathcal{Z}		evening rise	4411 Nov 11 03:06	28° \mathcal{M} 29'37	
	4410 Dec 30 06:08	0° \approx			4411 Nov 12 01:20	0° \mathcal{X}	
evening max el	4411 Jan 01 13:41	2° \approx 29'55	21°51'21		4411 Dec 02 02:04	0° \mathcal{Z}	
retrograde	4411 Jan 10 18:53	7° \approx 58'49		evening max el	4411 Dec 15 05:32	16° \mathcal{Z} 06'59	23°10'23
asc. node	4411 Jan 13 13:51	7° \approx 17'02		retrograde	4411 Dec 25 13:29	22° \mathcal{Z} 14'07	
evening set	4411 Jan 15 04:07	6° \approx 13'55		evening set	4411 Dec 30 10:55	20° \mathcal{Z} 13'19	
	4411 Jan 20 11:00	30° \mathcal{R} \mathcal{Z}		asc. node	4411 Dec 31 10:53	19° \mathcal{Z} 18'08	
inferior conj	4411 Jan 20 12:22	29° \mathcal{Z} 55'18	2°10'16	inferior conj	4412 Jan 04 20:17	13° \mathcal{Z} 49'09	1°26'32
minimum elong	4411 Jan 20 10:00	0° \approx 03'30	2°09'30	minimum elong	4412 Jan 04 18:27	13° \mathcal{Z} 55'28	1°25'50
min. Earth dist.	4411 Jan 20 14:12	29° \mathcal{Z} 48'54	0.67979 AU	min. Earth dist.	4412 Jan 04 10:59	14° \mathcal{Z} 21'10	0.68023 AU
morning rise	4411 Jan 25 15:42	23° \mathcal{Z} 43'44		morning rise	4412 Jan 10 01:52	7° \mathcal{Z} 41'32	
direct	4411 Jan 30 13:47	21° \mathcal{Z} 37'28		direct	4412 Jan 14 09:36	5° \mathcal{Z} 58'09	
morning max el	4411 Feb 09 10:07	27° \mathcal{Z} 27'06	22°44'25	morning max el	4412 Jan 23 00:53	10° \mathcal{Z} 59'08	21°20'05
	4411 Feb 11 19:24	0° \approx		desc. node	4412 Feb 06 05:45	29° \mathcal{Z} 07'55	
desc. node	4411 Feb 19 08:42	9° \approx 24'16			4412 Feb 06 20:15	0° \approx	
	4411 Mar 05 14:46	0° \mathcal{H}		morning set	4412 Feb 23 06:33	24° \approx 50'27	
morning set	4411 Mar 15 15:07	15° \mathcal{H} 54'37			4412 Feb 26 12:18	0° \mathcal{H}	
max. Earth dist.	4411 Mar 20 07:18	23° \mathcal{H} 45'20	1.40148 AU	max. Earth dist.	4412 Mar 01 08:25	6° \mathcal{H} 14'13	1.42215 AU
	4411 Mar 23 21:43	0° \mathcal{Y}					
superior conj	4411 Mar 28 02:03	7° \mathcal{Y} 28'47	-1°53'07	superior conj	4412 Mar 08 18:01	18° \mathcal{H} 41'11	-2°06'34
minimum elong	4411 Mar 28 06:39	7° \mathcal{Y} 49'44	1°52'43	minimum elong	4412 Mar 08 20:06	18° \mathcal{H} 50'10	2°06'31
evening rise	4411 Apr 06 22:56	25° \mathcal{Y} 57'24			4412 Mar 15 04:34	0° \mathcal{Y}	
	4411 Apr 09 02:13	0° \mathcal{B}		evening rise	4412 Mar 19 23:52	8° \mathcal{Y} 40'15	
asc. node	4411 Apr 11 13:09	4° \mathcal{B} 34'14		asc. node	4412 Mar 28 10:11	23° \mathcal{Y} 36'17	
evening max el	4411 Apr 23 02:45	21° \mathcal{B} 52'58	18°26'01	evening max el	4412 Apr 01 13:18	0° \mathcal{B}	
					4412 Apr 05 13:00	4° \mathcal{B} 48'45	18°08'23

retrograde	4412 Apr 12 06:23	8°♄13'42		evening max el	4413 Mar 20 01:41	18°♄02'20	18°09'58
evening set	4412 Apr 14 20:56	7°♄43'18		retrograde	4413 Mar 26 12:00	21°♄25'28	
inferior conj	4412 Apr 21 14:08	2°♄49'32	3°02'36	evening set	4413 Mar 29 08:33	20°♄43'46	
minimum elong	4412 Apr 21 17:05	2°♄42'35	3°02'02	inferior conj	4413 Apr 04 12:50	15°♄30'02	3°29'16
	4412 Apr 24 14:38	30°♄		minimum elong	4413 Apr 04 14:09	15°♄26'30	3°29'10
min. Earth dist.	4412 Apr 24 20:36	29°♄46'38	0.60619 AU	min. Earth dist.	4413 Apr 07 07:08	12°♄33'55	0.62747 AU
morning rise	4412 Apr 28 11:04	26°♄58'26		morning rise	4413 Apr 10 18:30	9°♄25'36	
desc. node	4412 May 04 04:55	24°♄51'34		direct	4413 Apr 17 15:28	6°♄50'11	
direct	4412 May 05 02:37	24°♄49'14		desc. node	4413 Apr 21 01:58	7°♄25'00	
	4412 May 16 09:44	0°♄		morning max el	4413 May 01 15:43	14°♄49'14	27°50'13
morning max el	4412 May 19 09:17	2°♄44'00	27°43'56		4413 May 13 23:30	0°♄	
	4412 Jun 08 08:19	0°♄			4413 May 31 22:13	0°♄	
morning set	4412 Jun 20 17:54	23°♄20'08		morning set	4413 Jun 04 17:59	7°♄31'18	
	4412 Jun 23 21:46	0°♄		max. Earth dist.	4413 Jun 10 04:18	18°♄49'52	1.32573 AU
asc. node	4412 Jun 24 09:29	1°♄02'58		asc. node	4413 Jun 11 06:31	21°♄10'40	
max. Earth dist.	4412 Jun 26 21:27	6°♄28'50	1.32079 AU				
				superior conj	4413 Jun 12 08:50	23°♄32'55	0°11'27
superior conj	4412 Jun 28 00:05	8°♄54'58	0°37'02	minimum elong	4413 Jun 12 08:17	23°♄29'58	0°11'20
minimum elong	4412 Jun 27 22:30	8°♄46'18	0°36'42	behind sun begin	4413 Jun 12 04:36	23°♄09'56	
evening rise	4412 Jul 04 19:45	23°♄47'35		behind sun end	4413 Jun 12 11:59	23°♄50'01	
	4412 Jul 07 19:08	0°♄			4413 Jun 15 07:59	0°♄	
	4412 Jul 25 18:42	0°♄		evening rise	4413 Jun 19 07:34	8°♄35'50	
desc. node	4412 Jul 31 04:13	6°♄05'10			4413 Jun 30 09:59	0°♄	
evening max el	4412 Jul 31 17:49	6°♄38'11	25°20'20	evening max el	4413 Jul 13 06:52	17°♄09'34	23°47'26
retrograde	4412 Aug 14 16:46	13°♄42'41		desc. node	4413 Jul 18 01:15	21°♄02'43	
evening set	4412 Aug 20 11:22	12°♄25'43		retrograde	4413 Jul 26 23:21	24°♄02'13	
min. Earth dist.	4412 Aug 25 05:35	9°♄45'02	0.57791 AU	evening set	4413 Jul 31 07:31	23°♄20'44	
inferior conj	4412 Aug 28 07:21	7°♄38'28	-5°11'37	min. Earth dist.	4413 Aug 06 16:59	20°♄17'39	0.56082 AU
minimum elong	4412 Aug 28 09:03	7°♄35'33	5°11'33	inferior conj	4413 Aug 08 23:15	18°♄55'39	-5°01'52
morning rise	4412 Sep 05 09:01	3°♄23'27		minimum elong	4413 Aug 08 18:49	19°♄02'24	5°01'24
direct	4412 Sep 07 21:34	3°♄04'13		morning rise	4413 Aug 17 08:39	14°♄59'33	
morning max el	4412 Sep 16 14:29	7°♄11'35	18°57'05	direct	4413 Aug 20 03:37	14°♄39'53	
asc. node	4412 Sep 20 08:43	11°♄28'01		morning max el	4413 Aug 30 07:05	19°♄22'38	20°01'12
	4412 Oct 01 06:52	0°♄		asc. node	4413 Sep 07 05:47	29°♄28'21	
morning set	4412 Oct 03 05:26	3°♄47'45			4413 Sep 07 13:43	0°♄	
				morning set	4413 Sep 17 09:44	18°♄20'58	
superior conj	4412 Oct 11 15:05	20°♄14'36	1°33'48		4413 Sep 23 02:42	0°♄	
minimum elong	4412 Oct 11 17:43	20°♄27'12	1°33'36				
	4412 Oct 16 20:28	0°♄		superior conj	4413 Sep 25 03:24	4°♄05'33	1°42'37
max. Earth dist.	4412 Oct 18 12:41	3°♄01'28	1.38970 AU	minimum elong	4413 Sep 25 04:24	4°♄10'30	1°42'35
evening rise	4412 Oct 22 09:25	9°♄47'50		max. Earth dist.	4413 Sep 30 18:11	15°♄02'42	1.36925 AU
desc. node	4412 Oct 27 03:34	17°♄46'06		evening rise	4413 Oct 04 13:33	22°♄05'50	
	4412 Nov 03 22:11	0°♄			4413 Oct 09 01:10	0°♄	
	4412 Nov 26 23:46	0°♄		desc. node	4413 Oct 14 00:35	8°♄16'56	
evening max el	4412 Nov 26 18:48	29°♄47'48	24°29'37		4413 Oct 28 18:27	0°♄	
retrograde	4412 Dec 08 04:21	6°♄27'17		evening max el	4413 Nov 09 07:10	13°♄30'18	25°42'11
evening set	4412 Dec 13 15:12	4°♄10'50		retrograde	4413 Nov 21 14:40	20°♄33'09	
asc. node	4412 Dec 17 07:56	0°♄07'37		evening set	4413 Nov 27 15:18	18°♄03'11	
	4412 Dec 17 10:18	30°♄		min. Earth dist.	4413 Dec 01 23:28	13°♄19'45	0.67038 AU
min. Earth dist.	4412 Dec 18 06:50	28°♄52'33	0.67708 AU	inferior conj	4413 Dec 03 06:40	11°♄40'37	-0°19'06
inferior conj	4412 Dec 19 02:59	27°♄45'15	0°36'25	minimum elong	4413 Dec 03 07:10	11°♄39'03	0°18'53
minimum elong	4412 Dec 19 02:07	27°♄48'09	0°36'03	asc. node	4413 Dec 04 04:59	10°♄30'18	
morning rise	4412 Dec 24 13:07	21°♄43'39		morning rise	4413 Dec 08 23:25	5°♄47'19	
direct	4412 Dec 28 07:36	20°♄22'15		direct	4413 Dec 12 06:17	4°♄45'14	
morning max el	4413 Jan 04 23:18	24°♄43'09	20°06'44	morning max el	4413 Dec 19 05:34	8°♄37'35	19°07'45
	4413 Jan 09 13:42	0°♄			4414 Jan 03 18:23	0°♄	
desc. node	4413 Jan 23 02:48	19°♄14'44		desc. node	4414 Jan 09 23:51	9°♄38'15	
	4413 Jan 30 04:39	0°♄		morning set	4414 Jan 11 06:44	11°♄38'19	
morning set	4413 Feb 01 03:42	3°♄01'09			4414 Jan 23 01:04	0°♄	
max. Earth dist.	4413 Feb 11 17:45	19°♄38'15	1.43881 AU	max. Earth dist.	4414 Jan 25 09:10	3°♄40'26	1.44939 AU
superior conj	4413 Feb 17 08:48	28°♄44'49	-2°05'16	superior conj	4414 Jan 27 23:26	7°♄46'13	-1°44'50
minimum elong	4413 Feb 17 05:23	28°♄30'46	2°05'10	minimum elong	4414 Jan 27 14:43	7°♄11'44	1°44'06
	4413 Feb 18 03:07	0°♄			4414 Feb 10 18:35	0°♄	
evening rise	4413 Mar 02 07:10	20°♄33'41		evening rise	4414 Feb 11 16:49	1°♄31'14	
	4413 Mar 07 18:39	0°♄		asc. node	4414 Mar 02 04:16	29°♄55'31	
asc. node	4413 Mar 15 07:14	12°♄06'33			4414 Mar 02 05:49	0°♄	

evening max el	4414 Mar 03 13:54	1° Υ 26'51	18°30'09	evening rise	4415 Jan 23 03:08	11° \approx 32'04	
retrograde	4414 Mar 10 02:31	5° Υ 01'13		greatest brilliancy	4415 Feb 02 07:56	27° \approx 33'18	-0.8m
evening set	4414 Mar 13 05:04	4° Υ 07'23			4415 Feb 03 22:02	0° X	
	4414 Mar 17 19:11	30° X		evening max el	4415 Feb 14 23:18	14° X 56'35	19°07'59
inferior conj	4414 Mar 19 00:13	28° X 35'27	3°35'10	asc. node	4415 Feb 17 01:18	16° X 50'24	
minimum elong	4414 Mar 18 23:54	28° X 36'23	3°35'10	retrograde	4415 Feb 21 22:06	18° X 53'10	
min. Earth dist.	4414 Mar 21 03:18	26° X 04'43	0.64607 AU	evening set	4415 Feb 25 07:26	17° X 46'19	
morning rise	4414 Mar 24 18:04	22° X 24'13		inferior conj	4415 Mar 02 20:35	11° X 58'10	3°25'26
direct	4414 Mar 31 12:19	19° X 35'16		minimum elong	4415 Mar 02 19:03	12° X 03'06	3°25'16
desc. node	4414 Apr 07 23:01	22° X 18'12		min. Earth dist.	4415 Mar 04 08:19	10° X 04'14	0.66087 AU
morning max el	4414 Apr 14 01:21	27° X 29'33	27°20'44	morning rise	4415 Mar 08 06:19	5° X 44'16	
	4414 Apr 16 10:19	0° Υ		direct	4415 Mar 14 15:53	2° X 55'16	
	4414 May 07 16:09	0° B		desc. node	4415 Mar 25 20:03	8° X 56'09	
morning set	4414 May 19 09:36	21° B 14'11		morning max el	4415 Mar 27 11:17	10° X 31'34	26°22'07
	4414 May 23 18:33	0° II			4415 Apr 11 21:47	0° Υ	
max. Earth dist.	4414 May 24 02:58	0° II 43'20	1.33513 AU		4415 Apr 30 05:22	0° B	
				morning set	4415 May 02 13:07	4° B 17'47	
superior conj	4414 May 27 13:14	7° II 53'24	-0°16'34	max. Earth dist.	4415 May 06 14:21	12° B 04'07	1.34919 AU
minimum elong	4414 May 27 14:05	7° II 57'55	0°16'24				
asc. node	4414 May 29 03:33	11° II 17'09		superior conj	4415 May 11 10:56	21° B 49'27	-0°45'53
evening rise	4414 Jun 03 18:45	23° II 17'45		minimum elong	4415 May 11 13:25	22° B 02'08	0°45'24
	4414 Jun 07 00:41	0° E			4415 May 15 09:37	0° II	
evening max el	4414 Jun 24 21:41	27° E 33'17	22°10'39	asc. node	4415 May 16 00:35	1° II 18'07	
	4414 Jun 27 16:41	0° Ω		evening rise	4415 May 19 03:19	7° II 46'52	
desc. node	4414 Jul 04 22:15	3° Ω 37'29			4415 May 31 04:51	0° E	
retrograde	4414 Jul 07 18:18	3° Ω 56'09		evening max el	4415 Jun 06 22:00	8° E 21'46	20°43'47
evening set	4414 Jul 10 15:45	3° Ω 37'34		retrograde	4415 Jun 18 06:58	13° E 55'44	
min. Earth dist.	4414 Jul 19 03:23	29° E 58'17	0.55022 AU	evening set	4415 Jun 20 08:41	13° E 45'24	
	4414 Jul 19 02:09	30° R E		desc. node	4415 Jun 21 19:14	13° E 26'41	
inferior conj	4414 Jul 19 22:23	29° E 31'32	-4°02'08	inferior conj	4415 Jun 29 15:40	9° E 48'18	-2°18'01
minimum elong	4414 Jul 19 13:50	29° E 43'34	3°59'59	minimum elong	4415 Jun 29 09:16	9° E 57'25	2°15'46
morning rise	4414 Jul 28 13:43	25° E 41'07		min. Earth dist.	4415 Jun 30 15:00	9° E 14'55	0.54870 AU
direct	4414 Jul 31 17:15	25° E 19'00		morning rise	4415 Jul 08 09:22	5° E 43'45	
	4414 Aug 11 14:00	0° Ω		direct	4415 Jul 12 02:35	5° E 13'58	
morning max el	4414 Aug 12 11:47	0° Ω 48'37	21°25'53	morning max el	4415 Jul 25 06:26	11° E 33'57	23°05'31
asc. node	4414 Aug 25 02:49	18° Ω 09'49			4415 Aug 07 23:20	0° Ω	
	4414 Aug 31 06:12	0° P		asc. node	4415 Aug 11 23:52	7° Ω 22'24	
morning set	4414 Sep 01 18:24	3° P 06'28		morning set	4415 Aug 17 05:28	17° Ω 58'53	
					4415 Aug 22 20:06	0° P	
superior conj	4414 Sep 09 01:41	18° P 25'50	1°43'33	superior conj	4415 Aug 24 06:42	3° P 05'45	1°37'52
minimum elong	4414 Sep 09 01:11	18° P 23'17	1°43'32	minimum elong	4415 Aug 24 05:08	2° P 57'20	1°37'46
max. Earth dist.	4414 Sep 13 05:07	26° P 53'51	1.35134 AU	max. Earth dist.	4415 Aug 27 00:59	8° P 57'20	1.33722 AU
	4414 Sep 14 18:38	0° A		evening rise	4415 Aug 31 23:25	19° P 02'07	
evening rise	4414 Sep 17 11:39	5° A 14'17			4415 Sep 06 17:47	0° A	
desc. node	4414 Sep 30 21:36	28° A 32'34		desc. node	4415 Sep 17 18:35	18° A 26'16	
	4414 Oct 01 19:54	0° M			4415 Sep 25 23:17	0° M	
evening max el	4414 Oct 22 19:40	27° M 09'37	26°40'35	evening max el	4415 Oct 05 08:04	10° M 37'24	27°17'27
	4414 Oct 26 00:34	0° J		retrograde	4415 Oct 18 19:11	17° M 55'42	
retrograde	4414 Nov 04 19:51	4° J 25'03		evening set	4415 Oct 25 18:36	15° M 15'13	
evening set	4414 Nov 11 09:13	1° J 46'06		min. Earth dist.	4415 Oct 29 14:00	11° M 42'01	0.64656 AU
	4414 Nov 13 07:10	30° R M		inferior conj	4415 Oct 31 20:44	9° M 13'36	-2°20'46
min. Earth dist.	4414 Nov 15 10:35	27° M 38'11	0.66019 AU	minimum elong	4415 Nov 01 00:45	9° M 02'42	2°19'12
inferior conj	4414 Nov 17 05:20	25° M 31'28	-1°18'47	morning rise	4415 Nov 07 08:04	3° M 44'52	
minimum elong	4414 Nov 17 07:31	25° M 24'59	1°17'51	asc. node	4415 Nov 07 23:05	3° M 30'08	
asc. node	4414 Nov 21 02:03	21° M 22'40		direct	4415 Nov 09 22:15	3° M 09'57	
morning rise	4414 Nov 23 06:34	19° M 48'58		morning max el	4415 Nov 16 09:55	6° M 36'17	17°58'28
direct	4414 Nov 26 03:54	19° M 02'27			4415 Dec 02 02:38	0° J	
morning max el	4414 Dec 02 17:57	22° M 37'11	18°24'41	morning set	4415 Dec 03 21:08	2° J 58'20	
	4414 Dec 08 16:08	0° J		desc. node	4415 Dec 14 17:53	20° J 55'31	
morning set	4414 Dec 22 11:14	21° J 34'34					
desc. node	4414 Dec 27 20:52	0° S 13'01		superior conj	4415 Dec 17 13:14	25° J 26'46	-0°19'19
	4414 Dec 27 17:36	0° S		minimum elong	4415 Dec 17 10:54	25° J 17'24	0°18'59
superior conj	4415 Jan 07 02:02	16° S 21'11	-1°06'26		4415 Dec 20 09:46	0° S	
minimum elong	4415 Jan 06 18:01	15° S 49'45	1°05'26	max. Earth dist.	4415 Dec 21 22:39	2° S 26'01	1.44897 AU
max. Earth dist.	4415 Jan 08 03:38	18° S 01'36	1.45285 AU	evening rise	4416 Jan 02 18:49	20° S 52'20	
	4415 Jan 15 19:01	0° \approx			4416 Jan 08 17:44	0° \approx	

greatest brilliancy	4416 Jan 17 04:55	12°  44'08	-0.6m	evening rise	4416 Dec 12 04:39	0°  04'46	
evening max el	4416 Jan 29 04:11	28°  28'53	20°01'41		4416 Dec 12 03:25	0°  0	
	4416 Jan 30 18:19	0°  0			4417 Jan 01 10:33	0°  0	
asc. node	4416 Feb 03 22:20	2°  37'12		evening max el	4417 Jan 11 03:36	12°  02'09	21°08'32
retrograde	4416 Feb 05 19:56	2°  56'38		retrograde	4417 Jan 19 17:50	17°  07'32	
evening set	4416 Feb 09 13:22	1°  35'43		asc. node	4417 Jan 20 19:22	17°  01'23	
	4416 Feb 11 08:34	30°  00		evening set	4417 Jan 23 20:56	15°  31'27	
inferior conj	4416 Feb 14 23:03	25°  33'32	3°03'39	inferior conj	4417 Jan 29 05:12	9°  17'57	2°32'10
minimum elong	4416 Feb 14 20:48	25°  41'06	3°03'10	minimum elong	4417 Jan 29 02:45	9°  26'27	2°31'27
min. Earth dist.	4416 Feb 15 20:30	24°  21'29	0.67149 AU	min. Earth dist.	4417 Jan 29 13:48	8°  48'17	0.67791 AU
morning rise	4416 Feb 20 04:01	19°  05'19		morning rise	4417 Feb 03 08:23	3°  05'13	
direct	4416 Feb 26 01:06	16°  41'44		direct	4417 Feb 08 15:00	0°  46'26	
morning max el	4416 Mar 08 20:03	23°  44'35	25°03'40	morning max el	4417 Feb 19 04:44	7°  03'56	23°35'39
desc. node	4416 Mar 11 17:06	26°  49'46		desc. node	4417 Feb 26 14:08	15°  37'21	
	4416 Mar 14 09:54	0°  0			4417 Mar 09 00:48	0°  0	
	4416 Apr 04 07:17	0°  0		morning set	4417 Mar 26 11:31	27°  30'37	
morning set	4416 Apr 13 23:43	16°  05'28			4417 Mar 27 22:30	0°  0	
max. Earth dist.	4416 Apr 17 14:54	23°  05'35	1.36759 AU	max. Earth dist.	4417 Mar 30 10:28	4°  20'40	1.38886 AU
	4416 Apr 21 06:38	0°  0					
				superior conj	4417 Apr 06 21:44	17°  55'08	-1°40'49
superior conj	4416 Apr 23 23:01	5°  13'15	-1°14'48	minimum elong	4417 Apr 07 02:35	18°  17'51	1°40'16
minimum elong	4416 Apr 24 03:02	5°  32'59	1°14'10		4417 Apr 13 05:13	0°  0	
asc. node	4416 May 01 21:37	21°  09'25		evening rise	4417 Apr 16 03:10	5°  40'12	
evening rise	4416 May 02 07:02	21°  08'56		asc. node	4417 Apr 18 18:39	10°  08'46	
	4416 May 06 08:56	0°  0			4417 Apr 30 13:54	0°  0	
evening max el	4416 May 19 10:42	19°  50'34	19°34'24	evening max el	4417 May 02 10:21	1°  59'35	18°45'09
retrograde	4416 May 29 01:41	24°  31'50		retrograde	4417 May 10 13:28	5°  58'59	
evening set	4416 May 31 00:37	24°  21'05		evening set	4417 May 12 17:29	5°  43'01	
desc. node	4416 Jun 07 16:16	20°  56'44		inferior conj	4417 May 20 14:44	1°  21'22	1°23'42
inferior conj	4416 Jun 08 17:39	20°  16'51	-0°18'48	minimum elong	4417 May 20 17:39	1°  15'59	1°22'44
minimum elong	4416 Jun 08 16:48	20°  18'11	0°18'29		4417 May 22 10:35	30°  00	
min. Earth dist.	4416 Jun 11 04:31	18°  43'53	0.55684 AU	min. Earth dist.	4417 May 23 21:13	28°  57'27	0.57281 AU
morning rise	4416 Jun 17 06:26	15°  41'46		desc. node	4417 May 25 13:19	27°  50'12	
direct	4416 Jun 21 20:08	14°  54'59		morning rise	4417 May 28 14:33	26°  10'37	
morning max el	4416 Jul 05 20:14	21°  56'47	24°48'36	direct	4417 Jun 03 03:16	24°  55'47	
	4416 Jul 12 21:56	0°  0			4417 Jun 14 18:16	0°  0	
asc. node	4416 Jul 28 20:53	26°  05'7		morning max el	4417 Jun 17 11:48	2°  26'44	26°19'24
	4416 Jul 30 08:25	0°  0			4417 Jul 07 03:43	0°  0	
morning set	4416 Jul 31 17:14	2°  05'21		asc. node	4417 Jul 15 17:55	16°  08'23	
				morning set	4417 Jul 16 04:06	17°  04'00	
					4417 Jul 21 20:11	0°  0	
superior conj	4416 Aug 07 15:55	17°  05'30	1°26'37				
minimum elong	4416 Aug 07 13:44	17°  04'34	1°26'22	superior conj	4417 Jul 23 03:20	2°  05'14	1°10'34
max. Earth dist.	4416 Aug 09 05:13	21°  09'29	1.32730 AU	minimum elong	4417 Jul 23 01:01	2°  38'57	1°10'12
	4416 Aug 13 06:52	0°  0		max. Earth dist.	4417 Jul 23 15:03	3°  05'18	1.32156 AU
evening rise	4416 Aug 14 21:05	3°  00'17		evening rise	4417 Jul 30 01:41	17°  05'59	
	4416 Aug 29 12:20	0°  0			4417 Aug 05 03:11	0°  0	
desc. node	4416 Sep 03 15:35	7°  48'01		desc. node	4417 Aug 21 12:35	26°  00'24	
evening max el	4416 Sep 16 18:28	23°  39'55	27°26'13		4417 Aug 24 09:06	0°  0	
	4416 Sep 25 22:25	0°  0		evening max el	4417 Aug 30 00:09	6°  03'35	27°02'18
retrograde	4416 Sep 30 11:51	0°  0		retrograde	4417 Sep 12 21:07	13°  05'06	
	4416 Oct 04 20:04	30°  00		evening set	4417 Sep 19 22:12	11°  03'29	
evening set	4416 Oct 07 16:16	28°  02'31		min. Earth dist.	4417 Sep 23 14:24	8°  02'24	0.61014 AU
min. Earth dist.	4416 Oct 11 07:37	25°  02'10	0.62967 AU	inferior conj	4417 Sep 26 18:10	5°  40'42	-4°17'53
inferior conj	4416 Oct 14 02:06	22°  03'27	-3°22'08	minimum elong	4417 Sep 27 00:12	5°  27'43	4°16'27
minimum elong	4416 Oct 14 07:39	22°  05'53	3°20'20	morning rise	4417 Oct 04 04:05	0°  0	
morning rise	4416 Oct 21 00:35	17°  02'58		direct	4417 Oct 06 12:20	0°  0	
direct	4416 Oct 23 10:19	17°  01'00		asc. node	4417 Oct 11 17:10	2°  02'28	
asc. node	4416 Oct 24 20:07	17°  01'02		morning max el	4417 Oct 13 16:32	4°  02'15	18°00'01
morning max el	4416 Oct 30 02:28	20°  02'08	17°49'53	morning set	4417 Oct 29 10:52	28°  05'06	
	4416 Nov 06 05:47	0°  0			4417 Oct 30 00:55	0°  0	
morning set	4416 Nov 15 07:09	15°  03'31					
	4416 Nov 23 14:52	0°  0		superior conj	4417 Nov 08 13:18	17°  15'45	1°00'20
superior conj	4416 Nov 26 23:58	5°  42'20	0°25'10	minimum elong	4417 Nov 08 17:22	17°  33'40	0°59'49
minimum elong	4416 Nov 27 02:25	5°  52'33	0°24'49		4417 Nov 15 23:56	0°  0	
desc. node	4416 Nov 30 14:54	11°  41'46		max. Earth dist.	4417 Nov 16 03:58	0°  0	
max. Earth dist.	4416 Dec 03 15:34	16°  43'36	1.43817 AU	desc. node	4417 Nov 17 11:55	2°  28'42	

evening rise	4417 Nov 22 00:40	9° ♊ 48'28			4418 Nov 08 14:02	0° ♊	
	4417 Dec 05 06:23	0° ♋			4418 Nov 29 11:00	0° ♋	
evening max el	4417 Dec 24 21:44	25° ♋ 36'50	22°24'31	evening max el	4418 Dec 07 12:04	9° ♋ 14'59	23°44'25
	4417 Dec 30 05:39	0° ♌		retrograde	4418 Dec 18 07:25	15° ♋ 37'37	
retrograde	4418 Jan 03 14:07	1° ♌ 22'20		evening set	4418 Dec 23 10:25	13° ♋ 29'54	
asc. node	4418 Jan 07 16:25	29° ♋ 53'53		asc. node	4418 Dec 25 13:27	11° ♋ 21'06	
	4418 Jan 07 13:01	30° ♌		inferior conj	4418 Dec 28 20:38	7° ♋ 04'18	1°05'59
evening set	4418 Jan 08 04:28	29° ♋ 30'25		minimum elong	4418 Dec 28 19:09	7° ♋ 09'21	1°05'24
inferior conj	4418 Jan 13 13:00	23° ♋ 08'51	1°52'32	min. Earth dist.	4418 Dec 28 06:39	7° ♋ 51'58	0.67928 AU
minimum elong	4418 Jan 13 10:48	23° ♋ 16'27	1°51'46	morning rise	4419 Jan 03 03:53	0° ♋ 58'56	
min. Earth dist.	4418 Jan 13 09:56	23° ♋ 19'29	0.68043 AU		4419 Jan 04 17:48	30° ♌	
morning rise	4418 Jan 18 17:02	16° ♋ 58'58		direct	4419 Jan 07 05:41	29° ♊ 25'21	
direct	4418 Jan 23 08:51	15° ♋ 02'38			4419 Jan 09 20:55	0° ♋	
morning max el	4418 Feb 01 16:24	20° ♋ 30'47	22°07'35	morning max el	4419 Jan 15 10:22	4° ♋ 08'27	20°47'17
	4418 Feb 09 17:09	0° ♌		desc. node	4419 Jan 31 08:14	24° ♋ 57'59	
desc. node	4418 Feb 13 11:11	5° ♌ 03'31			4419 Feb 03 17:55	0° ♌	
	4418 Mar 02 06:47	0° ♍		morning set	4419 Feb 14 00:35	15° ♌ 40'57	
morning set	4418 Mar 06 19:11	7° ♍ 11'12		max. Earth dist.	4419 Feb 22 12:20	29° ♌ 10'19	1.42982 AU
max. Earth dist.	4418 Mar 12 08:08	16° ♍ 18'25	1.41055 AU		4419 Feb 23 00:35	0° ♍	
superior conj	4418 Mar 20 02:19	29° ♍ 42'41	-2°00'16	superior conj	4419 Mar 01 07:54	10° ♍ 25'59	-2°08'08
minimum elong	4418 Mar 20 06:14	0° ♎ 00'06	2°00'02	minimum elong	4419 Mar 01 07:57	10° ♍ 26'10	2°08'09
	4418 Mar 20 06:13	0° ♎			4419 Mar 12 14:26	0° ♎	
evening rise	4418 Mar 30 12:16	18° ♎ 47'34		evening rise	4419 Mar 13 06:16	1° ♎ 10'17	
asc. node	4418 Apr 05 15:42	0° ♏ 03'00		asc. node	4419 Mar 23 12:44	18° ♎ 52'29	
	4418 Apr 05 15:01	0° ♏		evening max el	4419 Mar 30 05:16	27° ♎ 44'00	18°06'44
evening max el	4418 Apr 15 17:39	14° ♏ 40'12	18°16'07		4419 Apr 02 01:35	0° ♏	
retrograde	4418 Apr 22 20:11	18° ♏ 13'25		retrograde	4419 Apr 05 18:34	1° ♏ 06'38	
evening set	4418 Apr 25 06:51	17° ♏ 49'02		evening set	4419 Apr 08 11:36	0° ♏ 31'42	
inferior conj	4418 May 02 09:17	13° ♏ 07'05	2°35'22		4419 Apr 09 13:09	30° ♌	
minimum elong	4418 May 02 12:49	12° ♏ 59'25	2°34'29	inferior conj	4419 Apr 14 22:51	25° ♎ 29'32	3°16'47
min. Earth dist.	4418 May 05 19:17	10° ♏ 11'08	0.59346 AU	minimum elong	4419 Apr 15 01:09	25° ♎ 23'47	3°16'28
morning rise	4418 May 09 16:01	7° ♏ 27'18		min. Earth dist.	4419 Apr 18 00:55	22° ♎ 26'24	0.61543 AU
desc. node	4418 May 12 10:21	6° ♏ 12'27		morning rise	4419 Apr 21 12:52	19° ♎ 31'31	
direct	4418 May 15 23:56	5° ♏ 37'31		direct	4419 Apr 28 07:49	17° ♎ 09'29	
morning max el	4418 May 30 09:04	13° ♏ 26'56	27°23'16	desc. node	4419 Apr 29 07:25	17° ♎ 12'18	
	4418 Jun 12 13:01	0° ♐		morning max el	4419 May 12 12:28	25° ♎ 08'00	27°51'12
	4418 Jun 29 09:01	0° ♑			4419 May 16 23:32	0° ♏	
morning set	4418 Jun 30 12:21	2° ♑ 21'42			4419 Jun 05 23:10	0° ♐	
asc. node	4418 Jul 02 14:58	6° ♑ 49'25		morning set	4419 Jun 14 16:04	16° ♐ 45'08	
max. Earth dist.	4418 Jul 07 02:38	16° ♑ 36'06	1.31987 AU	asc. node	4419 Jun 19 12:01	26° ♐ 55'50	
				max. Earth dist.	4419 Jun 20 12:09	29° ♐ 06'26	1.32229 AU
superior conj	4418 Jul 07 15:05	17° ♑ 44'48	0°50'21		4419 Jun 20 22:00	0° ♑	
minimum elong	4418 Jul 07 13:07	17° ♑ 33'54	0°49'58	superior conj	4419 Jun 22 01:28	2° ♑ 29'54	0°26'33
	4418 Jul 13 05:20	0° ♒		minimum elong	4419 Jun 22 00:17	2° ♑ 23'24	0°26'17
evening rise	4418 Jul 14 10:40	2° ♒ 36'48		evening rise	4419 Jun 28 21:59	17° ♑ 25'21	
	4418 Jul 29 02:58	0° ♒			4419 Jul 05 02:22	0° ♒	
desc. node	4418 Aug 08 09:37	13° ♒ 57'41		evening max el	4419 Jul 24 14:09	28° ♒ 29'12	24°42'23
evening max el	4418 Aug 11 22:39	17° ♒ 39'01	26°05'34	desc. node	4419 Jul 26 06:38	0° ♒ 01'20	
retrograde	4418 Aug 25 21:55	24° ♒ 47'27			4419 Jul 26 06:01	0° ♒	
evening set	4418 Sep 01 07:34	23° ♒ 08'15		retrograde	4419 Aug 07 12:02	5° ♒ 30'48	
min. Earth dist.	4418 Sep 05 11:21	20° ♒ 33'00	0.58938 AU	evening set	4419 Aug 12 16:43	4° ♒ 29'59	
inferior conj	4418 Sep 08 17:24	18° ♒ 07'42	-4°59'22	min. Earth dist.	4419 Aug 18 01:28	1° ♒ 41'23	0.56999 AU
minimum elong	4418 Sep 08 21:36	17° ♒ 59'49	4°58'51	inferior conj	4419 Aug 20 20:56	29° ♒ 51'55	-5°13'03
morning rise	4418 Sep 16 13:52	13° ♒ 40'03		minimum elong	4419 Aug 20 20:10	29° ♒ 53'11	5°13'02
direct	4418 Sep 18 23:48	13° ♒ 20'31			4419 Aug 20 16:00	30° ♒	
morning max el	4418 Sep 27 00:48	17° ♒ 12'38	18°30'12	morning rise	4419 Aug 29 02:06	25° ♒ 45'52	
asc. node	4418 Sep 28 14:12	18° ♒ 50'11		direct	4419 Aug 31 16:53	25° ♒ 26'47	
	4418 Oct 06 04:43	0° ♓		morning max el	4419 Sep 09 23:54	29° ♒ 48'09	19°21'41
morning set	4418 Oct 13 03:04	12° ♓ 53'53			4419 Sep 10 04:54	0° ♒	
superior conj	4418 Oct 22 01:08	29° ♓ 55'01	1°24'33	asc. node	4419 Sep 15 11:16	6° ♒ 21'17	
minimum elong	4418 Oct 22 04:36	0° ♓ 11'06	1°24'13	morning set	4419 Sep 27 03:49	27° ♒ 16'53	
	4418 Oct 22 02:12	0° ♓			4419 Sep 28 12:24	0° ♓	
max. Earth dist.	4418 Oct 29 10:51	13° ♓ 13'28	1.40173 AU	superior conj	4419 Oct 05 05:54	13° ♓ 23'43	1°38'35
evening rise	4418 Nov 02 17:31	20° ♓ 29'54		minimum elong	4419 Oct 05 07:51	13° ♓ 33'12	1°38'28
desc. node	4418 Nov 04 08:56	23° ♓ 12'54					

max. Earth dist.	4419 Oct 11 15:10	25° Ω 29'30	1.38078 AU		4420 Sep 04 08:36	0° Π	
	4419 Oct 14 03:03	0° Π		morning set	4420 Sep 10 10:17	11° Π 56'42	
evening rise	4419 Oct 15 09:31	2° Π 14'41					
desc. node	4419 Oct 22 05:57	13° Π 49'56		superior conj	4420 Sep 17 22:56	27° Π 28'51	1°43'53
	4419 Nov 01 18:13	0° Σ		minimum elong	4420 Sep 17 23:15	27° Π 30'30	1°43'52
evening max el	4419 Nov 20 00:46	22° Σ 56'58	25°01'47		4420 Sep 19 04:45	0° Ω	
retrograde	4419 Dec 01 20:33	29° Σ 48'07		max. Earth dist.	4420 Sep 22 22:39	7° Ω 24'59	1.36129 AU
evening set	4419 Dec 07 13:07	27° Σ 25'47		evening rise	4420 Sep 26 21:55	14° Ω 56'25	
min. Earth dist.	4419 Dec 12 01:32	22° Σ 21'55	0.67463 AU		4420 Oct 05 12:13	0° Π	
asc. node	4419 Dec 12 10:30	21° Σ 52'35		desc. node	4420 Oct 08 02:57	4° Π 15'27	
inferior conj	4419 Dec 13 02:17	21° Σ 00'43	0°13'27		4420 Oct 26 10:03	0° Σ	
minimum elong	4419 Dec 13 01:57	21° Σ 01'49	0°13'19	evening max el	4420 Nov 01 13:24	6° Σ 40'08	26°09'10
transit middle	4419 Dec 13 01:57	21° Σ 01'49	0°13'19	retrograde	4420 Nov 14 04:37	13° Σ 48'53	
transit begin	4419 Dec 13 00:22	21° Σ 06'59		evening set	4420 Nov 20 10:50	11° Σ 14'43	
transit end	4419 Dec 13 03:31	20° Σ 56'39		min. Earth dist.	4420 Nov 24 16:10	6° Σ 46'09	0.66655 AU
morning rise	4419 Dec 18 14:57	15° Σ 02'04		inferior conj	4420 Nov 26 04:06	4° Σ 55'03	-0°43'58
direct	4419 Dec 22 04:15	13° Σ 49'17		minimum elong	4420 Nov 26 05:17	4° Σ 51'24	0°43'27
morning max el	4419 Dec 29 12:08	17° Σ 56'58	19°39'40	asc. node	4420 Nov 28 07:32	2° Σ 21'26	
	4420 Jan 08 00:25	0° Ξ			4420 Nov 30 17:17	30° Σ	
greatest brilliancy	4420 Jan 11 14:31	5° Ξ 14'08	-0.7m	morning rise	4420 Dec 02 00:13	29° Π 05'44	
desc. node	4420 Jan 18 05:15	15° Ξ 12'24		direct	4420 Dec 05 02:51	28° Π 10'35	
morning set	4420 Jan 23 20:53	23° Ξ 53'00			4420 Dec 09 17:19	0° Σ	
	4420 Jan 27 19:39	0° \approx		morning max el	4420 Dec 11 21:11	1° Σ 53'59	18°47'18
max. Earth dist.	4420 Feb 05 00:03	12° \approx 50'43	1.44416 AU		4420 Dec 31 11:26	0° Ξ	
				morning set	4421 Jan 02 09:18	3° Ξ 00'14	
superior conj	4420 Feb 09 11:44	20° \approx 00'59	-1°59'04	desc. node	4421 Jan 04 02:15	5° Ξ 41'09	
minimum elong	4420 Feb 09 05:40	19° \approx 36'33	1°58'43	max. Earth dist.	4421 Jan 17 17:23	27° Ξ 04'09	1.45187 AU
	4420 Feb 15 14:49	0° H					
evening rise	4420 Feb 23 04:41	12° H 39'48		superior conj	4421 Jan 18 18:59	28° Ξ 44'40	-1°30'20
	4420 Mar 04 14:14	0° Υ		minimum elong	4421 Jan 18 09:39	28° Ξ 08'02	1°29'23
asc. node	4420 Mar 09 09:46	7° Υ 06'25			4421 Jan 19 14:09	0° \approx	
evening max el	4420 Mar 12 18:06	11° Υ 03'05	18°16'23	evening rise	4421 Feb 03 04:15	23° \approx 12'13	
retrograde	4420 Mar 19 04:17	14° Υ 29'12			4421 Feb 07 09:22	0° H	
evening set	4420 Mar 22 03:23	13° Υ 42'26		greatest brilliancy	4421 Feb 09 15:58	3° H 39'48	-0.9m
inferior conj	4420 Mar 28 03:22	8° Υ 21'02	3°33'56	evening max el	4421 Feb 24 05:25	24° H 30'29	18°44'12
minimum elong	4420 Mar 28 03:58	8° Υ 19'23	3°33'55	asc. node	4421 Feb 24 06:48	24° H 33'59	
min. Earth dist.	4420 Mar 30 15:29	5° Υ 33'40	0.63585 AU	retrograde	4421 Mar 02 21:16	28° H 12'40	
morning rise	4420 Apr 03 03:35	2° Υ 13'15		evening set	4421 Mar 06 02:42	27° H 13'13	
	4420 Apr 07 00:59	30° H		inferior conj	4421 Mar 11 18:56	21° H 34'05	3°32'42
direct	4420 Apr 10 00:29	29° H 30'05		minimum elong	4421 Mar 11 18:03	21° H 36'50	3°32'38
	4420 Apr 13 03:25	0° Υ		min. Earth dist.	4421 Mar 13 15:21	19° H 18'19	0.65293 AU
desc. node	4420 Apr 15 04:27	0° Υ 48'55		morning rise	4421 Mar 17 08:56	15° H 21'38	
morning max el	4420 Apr 23 20:22	7° Υ 28'26	27°41'41	direct	4421 Mar 24 00:10	12° H 31'15	
	4420 May 11 03:30	0° B		desc. node	4421 Apr 02 01:29	16° H 30'38	
	4420 May 28 03:49	0° Π		morning max el	4421 Apr 06 06:13	20° H 18'45	26°58'52
morning set	4420 May 28 12:55	0° Π 45'15			4421 Apr 14 14:01	0° Υ	
max. Earth dist.	4420 Jun 02 15:45	11° Π 15'50	1.32910 AU		4421 May 04 05:41	0° B	
				morning set	4421 May 11 23:48	14° B 12'19	
superior conj	4420 Jun 05 08:39	17° Π 01'26	-0°00'11	max. Earth dist.	4421 May 16 09:55	22° B 55'21	1.34056 AU
minimum elong	4420 Jun 05 08:39	17° Π 01'29	0°00'12		4421 May 19 20:38	0° Π	
behind sun begin	4420 Jun 05 03:21	16° Π 33'00					
behind sun end	4420 Jun 05 13:57	17° Π 30'00		superior conj	4421 May 20 10:29	1° Π 12'13	-0°28'55
asc. node	4420 Jun 05 09:03	17° Π 03'39		minimum elong	4421 May 20 12:00	1° Π 20'12	0°28'37
	4420 Jun 11 09:00	0° C		asc. node	4421 May 23 06:04	7° Π 08'12	
evening rise	4420 Jun 12 09:45	2° C 11'44		evening rise	4421 May 27 20:04	16° Π 49'00	
	4420 Jun 27 17:14	0° Ω			4421 Jun 03 10:48	0° C	
evening max el	4420 Jul 05 03:11	8° Ω 54'18	23°05'59	evening max el	4421 Jun 16 21:18	19° C 24'56	21°31'54
desc. node	4420 Jul 12 03:40	14° Ω 02'58		retrograde	4421 Jun 29 03:55	25° C 28'23	
retrograde	4420 Jul 18 13:17	15° Ω 36'19		desc. node	4421 Jun 29 00:42	25° C 28'20	
evening set	4420 Jul 22 05:35	15° Ω 06'44		evening set	4421 Jul 01 14:57	25° C 14'36	
min. Earth dist.	4420 Jul 29 12:17	11° Ω 49'58	0.55529 AU	inferior conj	4421 Jul 10 23:47	21° C 14'18	-3°22'05
inferior conj	4420 Jul 31 04:58	10° Ω 50'51	-4°42'59	minimum elong	4421 Jul 10 15:23	21° C 26'02	3°19'33
minimum elong	4420 Jul 30 22:10	11° Ω 00'46	4°41'50	min. Earth dist.	4421 Jul 10 22:39	21° C 15'53	0.54838 AU
morning rise	4420 Aug 08 17:03	6° Ω 58'57		morning rise	4421 Jul 19 16:49	17° C 20'47	
direct	4420 Aug 11 15:25	6° Ω 38'28		direct	4421 Jul 23 01:36	16° C 56'11	
morning max el	4420 Aug 22 11:24	11° Ω 40'30	20°34'50	morning max el	4421 Aug 04 11:11	22° C 46'51	22°07'02
asc. node	4420 Sep 01 08:18	24° Ω 40'57			4421 Aug 10 18:38	0° Ω	

asc. node	4421 Aug 19 05:20	13° Ω 36'33		4422 Jul 13 01:00	0° \mathfrak{G}	
morning set	4421 Aug 25 20:12	26° Ω 45'52		morning max el	4422 Jul 17 03:06	3° \mathfrak{G} 19'38 23°49'57
	4421 Aug 27 09:06	0° \mathfrak{H}			4422 Aug 04 13:30	0° Ω
				asc. node	4422 Aug 06 02:22	2° Ω 59'16
superior conj	4421 Sep 02 00:24	11° \mathfrak{H} 58'16 1°41'52		morning set	4422 Aug 10 07:46	11° Ω 39'07
minimum elong	4421 Sep 01 23:24	11° \mathfrak{H} 52'59 1°41'50				
max. Earth dist.	4421 Sep 05 13:31	19° \mathfrak{H} 20'42 1.34486 AU		superior conj	4422 Aug 17 07:29	26° Ω 43'27 1°33'44
evening rise	4421 Sep 10 02:18	28° \mathfrak{H} 22'40		minimum elong	4422 Aug 17 05:35	26° Ω 33'14 1°33'34
	4421 Sep 10 22:31	0° \mathfrak{L}			4422 Aug 18 20:00	0° \mathfrak{H}
desc. node	4421 Sep 24 23:59	24° \mathfrak{L} 22'54		max. Earth dist.	4422 Aug 19 13:06	1° \mathfrak{H} 31'19 1.33244 AU
	4421 Sep 28 17:08	0° \mathfrak{M}		evening rise	4422 Aug 24 18:39	12° \mathfrak{H} 22'48
evening max el	4421 Oct 15 02:03	20° \mathfrak{M} 16'07 26°59'13			4422 Sep 03 03:57	0° \mathfrak{L}
retrograde	4421 Oct 28 07:10	27° \mathfrak{M} 32'58		desc. node	4422 Sep 11 21:00	14° \mathfrak{L} 04'21
evening set	4421 Nov 04 01:26	24° \mathfrak{M} 52'17			4422 Sep 24 02:14	0° \mathfrak{M}
min. Earth dist.	4421 Nov 08 00:09	20° \mathfrak{M} 59'32 0.65491 AU		evening max el	4422 Sep 27 13:39	3° \mathfrak{M} 33'48 27°24'52
inferior conj	4421 Nov 09 23:58	18° \mathfrak{M} 42'52 -1°44'53		retrograde	4422 Oct 11 03:47	10° \mathfrak{M} 51'45
minimum elong	4421 Nov 10 02:56	18° \mathfrak{M} 34'23 1°43'40		evening set	4422 Oct 18 06:16	8° \mathfrak{M} 13'05
asc. node	4421 Nov 15 04:34	13° \mathfrak{M} 41'52		min. Earth dist.	4422 Oct 21 23:26	4° \mathfrak{M} 54'11 0.63975 AU
morning rise	4421 Nov 16 05:21	13° \mathfrak{M} 05'56		inferior conj	4422 Oct 24 11:26	2° \mathfrak{M} 18'35 -2°47'06
direct	4421 Nov 18 23:27	12° \mathfrak{M} 24'42		minimum elong	4422 Oct 24 16:11	2° \mathfrak{M} 06'16 2°45'23
morning max el	4421 Nov 25 11:27	15° \mathfrak{M} 54'22 18°11'25			4422 Oct 26 18:57	30° \mathfrak{R} \mathfrak{L}
	4421 Dec 05 17:43	0° \mathfrak{J}		morning rise	4422 Oct 31 03:28	26° \mathfrak{L} 57'06
morning set	4421 Dec 14 02:40	13° \mathfrak{J} 35'38		asc. node	4422 Nov 02 01:36	26° \mathfrak{L} 27'43
desc. node	4421 Dec 21 23:16	26° \mathfrak{J} 19'53		direct	4422 Nov 02 15:23	26° \mathfrak{L} 26'03
	4421 Dec 24 06:17	0° \mathfrak{Z}		morning max el	4422 Nov 09 04:07	29° \mathfrak{L} 51'12 17°52'41
					4422 Nov 09 07:38	0° \mathfrak{M}
superior conj	4421 Dec 28 22:42	7° \mathfrak{Z} 25'52 -0°46'45		morning set	4422 Nov 25 23:38	25° \mathfrak{M} 31'22
minimum elong	4421 Dec 28 16:51	7° \mathfrak{Z} 02'47 0°45'59			4422 Nov 28 14:30	0° \mathfrak{J}
max. Earth dist.	4421 Dec 31 13:01	11° \mathfrak{Z} 31'06 1.45214 AU				
	4422 Jan 12 09:02	0° \mathfrak{A}		superior conj	4422 Dec 08 18:55	16° \mathfrak{J} 59'03 0°00'24
evening rise	4422 Jan 14 05:41	2° \mathfrak{A} 53'40		minimum elong	4422 Dec 08 18:58	16° \mathfrak{J} 59'15 0°00'24
greatest brilliancy	4422 Jan 26 10:47	21° \mathfrak{A} 44'53 -0.7m		behind sun begin	4422 Dec 08 09:03	16° \mathfrak{J} 18'49
	4422 Feb 01 02:00	0° \mathfrak{H}		behind sun end	4422 Dec 09 04:53	17° \mathfrak{J} 39'36
evening max el	4422 Feb 07 13:03	8° \mathfrak{H} 01'46 19°28'59		desc. node	4422 Dec 08 20:16	17° \mathfrak{J} 04'36
asc. node	4422 Feb 11 03:50	11° \mathfrak{H} 02'09		max. Earth dist.	4422 Dec 14 07:24	25° \mathfrak{J} 51'43 1.44511 AU
retrograde	4422 Feb 14 18:14	12° \mathfrak{H} 10'42			4422 Dec 16 22:12	0° \mathfrak{Z}
evening set	4422 Feb 18 06:53	10° \mathfrak{H} 57'49		evening rise	4422 Dec 24 16:57	12° \mathfrak{Z} 05'50
inferior conj	4422 Feb 23 18:15	5° \mathfrak{H} 03'08 3°17'31			4423 Jan 05 12:53	0° \mathfrak{A}
minimum elong	4422 Feb 23 16:21	5° \mathfrak{H} 09'22 3°17'12		evening max el	4423 Jan 21 15:33	21° \mathfrak{A} 34'14 20°28'39
min. Earth dist.	4422 Feb 24 23:38	3° \mathfrak{H} 27'01 0.66590 AU		asc. node	4423 Jan 29 00:53	26° \mathfrak{A} 15'40
	4422 Feb 27 20:40	30° \mathfrak{R} \mathfrak{A}		retrograde	4423 Jan 29 16:28	26° \mathfrak{A} 17'57
morning rise	4422 Mar 01 01:34	28° \mathfrak{A} 48'55		evening set	4423 Feb 02 13:44	24° \mathfrak{A} 50'45
direct	4422 Mar 07 06:02	26° \mathfrak{A} 03'55		inferior conj	4423 Feb 07 22:35	18° \mathfrak{A} 43'11 2°51'22
	4422 Mar 15 21:19	0° \mathfrak{H}		minimum elong	4423 Feb 07 20:11	18° \mathfrak{A} 51'22 2°50'47
morning max el	4422 Mar 19 15:55	3° \mathfrak{H} 27'33 25°50'39		min. Earth dist.	4423 Feb 08 14:22	17° \mathfrak{A} 49'17 0.67468 AU
desc. node	4422 Mar 19 22:29	3° \mathfrak{H} 44'16		morning rise	4423 Feb 13 02:26	12° \mathfrak{A} 29'13
	4422 Apr 08 20:48	0° \mathfrak{Y}		direct	4423 Feb 18 17:21	9° \mathfrak{A} 58'59
morning set	4422 Apr 24 20:47	26° \mathfrak{Y} 55'27		morning max el	4423 Mar 02 00:36	16° \mathfrak{A} 44'23 24°26'45
	4422 Apr 26 12:34	0° \mathfrak{B}		desc. node	4423 Mar 06 19:31	22° \mathfrak{A} 03'13
max. Earth dist.	4422 Apr 28 16:48	4° \mathfrak{B} 07'26 1.35658 AU			4423 Mar 13 00:49	0° \mathfrak{H}
					4423 Apr 01 20:45	0° \mathfrak{Y}
superior conj	4422 May 04 04:28	14° \mathfrak{B} 55'36 -0°58'20		morning set	4423 Apr 06 22:27	8° \mathfrak{Y} 39'11
minimum elong	4422 May 04 07:38	15° \mathfrak{B} 11'34 0°57'45		max. Earth dist.	4423 Apr 10 14:11	15° \mathfrak{Y} 09'35 1.37640 AU
asc. node	4422 May 10 03:07	27° \mathfrak{B} 05'52				
	4422 May 11 12:59	0° \mathfrak{I}		superior conj	4423 Apr 17 11:19	28° \mathfrak{Y} 02'28 -1°26'24
evening rise	4422 May 12 02:53	1° \mathfrak{I} 11'13		minimum elong	4423 Apr 17 15:49	28° \mathfrak{Y} 24'11 1°25'45
	4422 May 29 15:03	0° \mathfrak{G}			4423 Apr 18 11:36	0° \mathfrak{B}
evening max el	4422 May 30 02:40	0° \mathfrak{G} 29'00 20°11'48		evening rise	4423 Apr 26 03:44	15° \mathfrak{B} 10'37
retrograde	4422 Jun 09 17:51	5° \mathfrak{G} 40'38		asc. node	4423 Apr 27 00:09	16° \mathfrak{B} 51'43
evening set	4422 Jun 11 16:44	5° \mathfrak{G} 30'51			4423 May 03 23:56	0° \mathfrak{I}
desc. node	4422 Jun 15 21:42	4° \mathfrak{G} 10'51		evening max el	4423 May 12 20:18	12° \mathfrak{I} 15'22 19°10'57
inferior conj	4422 Jun 20 19:01	1° \mathfrak{G} 32'01 -1°27'07		retrograde	4423 May 21 19:06	16° \mathfrak{I} 37'11
minimum elong	4422 Jun 20 14:55	1° \mathfrak{G} 38'05 1°25'36		evening set	4423 May 23 19:29	16° \mathfrak{I} 24'50
min. Earth dist.	4422 Jun 22 10:48	0° \mathfrak{G} 33'06 0.55103 AU		inferior conj	4423 Jun 01 04:21	12° \mathfrak{I} 14'11 0°28'02
	4422 Jun 23 09:41	30° \mathfrak{R} \mathfrak{I}		minimum elong	4423 Jun 01 05:30	12° \mathfrak{I} 12'14 0°27'36
morning rise	4422 Jun 29 11:42	27° \mathfrak{I} 16'01		desc. node	4423 Jun 02 18:43	11° \mathfrak{I} 09'09
direct	4422 Jul 03 12:38	26° \mathfrak{I} 40'39		min. Earth dist.	4423 Jun 04 01:48	10° \mathfrak{I} 17'32 0.56281 AU

morning rise	4423 Jun 09 12:21	7° Π 23'15	direct	4424 May 26 01:22	16° \mathcal{B} 42'07	
direct	4423 Jun 14 11:50	6° Π 25'42	morning max el	4424 Jun 09 10:33	24° \mathcal{B} 22'16	26°50'33
morning max el	4423 Jun 28 17:06	13° Π 42'26		4424 Jun 14 13:48	0° Π	
	4423 Jul 11 12:47	0° \mathcal{E}		4424 Jul 03 15:00	0° \mathcal{E}	
asc. node	4423 Jul 23 23:25	22° \mathcal{E} 41'51	morning set	4424 Jul 09 05:15	11° \mathcal{E} 17'29	
morning set	4423 Jul 25 19:20	26° \mathcal{E} 31'35	asc. node	4424 Jul 09 20:27	12° \mathcal{E} 37'47	
	4423 Jul 27 10:20	0° \mathcal{Q}				
superior conj	4423 Aug 01 17:53	11° \mathcal{Q} 37'09	superior conj	4424 Jul 16 05:38	26° \mathcal{E} 32'16	1°02'29
minimum elong	4423 Aug 01 15:35	11° \mathcal{Q} 24'32	minimum elong	4424 Jul 16 03:24	26° \mathcal{E} 19'57	1°02'05
max. Earth dist.	4423 Aug 02 19:53	13° \mathcal{Q} 59'35	max. Earth dist.	4424 Jul 16 06:47	26° \mathcal{E} 38'37	1.32029 AU
evening rise	4423 Aug 08 19:35	26° \mathcal{Q} 47'24		4424 Jul 17 19:17	0° \mathcal{Q}	
	4423 Aug 10 09:14	0° \mathcal{N}	evening rise	4424 Jul 23 02:18	11° \mathcal{Q} 27'19	
	4423 Aug 27 13:05	0° \mathcal{L}		4424 Aug 01 13:57	0° \mathcal{N}	
desc. node	4423 Aug 29 18:01	3° \mathcal{L} 09'08	desc. node	4424 Aug 15 15:03	21° \mathcal{N} 21'37	
evening max el	4423 Sep 09 22:16	16° \mathcal{L} 21'13	evening max el	4424 Aug 22 01:18	28° \mathcal{N} 25'51	26°42'11
retrograde	4423 Sep 23 17:49	23° \mathcal{L} 35'57		4424 Aug 23 19:06	0° \mathcal{L}	
evening set	4423 Sep 30 21:53	21° \mathcal{L} 10'58	retrograde	4424 Sep 04 23:44	5° \mathcal{L} 35'52	
min. Earth dist.	4423 Oct 04 12:37	18° \mathcal{L} 19'23	evening set	4424 Sep 11 19:40	3° \mathcal{L} 37'10	
inferior conj	4423 Oct 07 11:36	15° \mathcal{L} 35'28	min. Earth dist.	4424 Sep 15 15:14	1° \mathcal{L} 00'46	0.60125 AU
minimum elong	4423 Oct 07 17:34	15° \mathcal{L} 21'38		4424 Sep 16 21:48	30° \mathcal{R} \mathcal{N}	
morning rise	4423 Oct 14 15:00	10° \mathcal{L} 32'36	inferior conj	4424 Sep 18 20:58	28° \mathcal{N} 23'42	-4°37'59
direct	4423 Oct 16 23:34	10° \mathcal{L} 08'13	minimum elong	4424 Sep 19 02:35	28° \mathcal{N} 12'17	4°36'54
asc. node	4423 Oct 19 22:38	10° \mathcal{L} 47'59	morning rise	4424 Sep 26 11:30	23° \mathcal{N} 42'20	
morning max el	4423 Oct 23 20:05	13° \mathcal{L} 37'07	direct	4424 Sep 28 19:59	23° \mathcal{N} 21'38	
	4423 Nov 03 23:59	0° \mathcal{M}	asc. node	4424 Oct 05 19:41	26° \mathcal{N} 33'42	
morning set	4423 Nov 08 18:00	8° \mathcal{M} 28'40	morning max el	4424 Oct 06 08:03	27° \mathcal{N} 02'40	18°10'18
				4424 Oct 08 23:31	0° \mathcal{L}	
superior conj	4423 Nov 19 17:17	27° \mathcal{M} 49'16	morning set	4424 Oct 22 03:35	22° \mathcal{L} 08'53	
minimum elong	4423 Nov 19 20:47	28° \mathcal{M} 04'12		4424 Oct 26 07:52	0° \mathcal{M}	
	4423 Nov 21 00:01	0° \mathcal{X}	superior conj	4424 Oct 31 16:46	9° \mathcal{M} 52'08	1°11'55
desc. node	4423 Nov 25 17:19	7° \mathcal{X} 52'07	minimum elong	4424 Oct 31 20:46	10° \mathcal{M} 10'10	1°11'27
max. Earth dist.	4423 Nov 26 22:06	9° \mathcal{X} 49'47	max. Earth dist.	4424 Nov 08 08:05	23° \mathcal{M} 12'16	1.41354 AU
evening rise	4423 Dec 04 05:22	21° \mathcal{X} 27'52	desc. node	4424 Nov 11 14:21	28° \mathcal{M} 38'27	
	4423 Dec 09 18:30	0° \mathcal{Z}		4424 Nov 12 10:15	0° \mathcal{X}	
	4423 Dec 30 23:47	0° \approx	evening rise	4424 Nov 13 09:29	1° \mathcal{X} 34'29	
evening max el	4424 Jan 04 12:40	5° \approx 08'36		4424 Dec 02 05:02	0° \mathcal{Z}	
retrograde	4424 Jan 13 13:55	10° \approx 31'17	evening max el	4424 Dec 17 05:08	18° \mathcal{Z} 45'27	22°58'25
asc. node	4424 Jan 15 21:54	10° \approx 01'59	retrograde	4424 Dec 27 08:59	24° \mathcal{Z} 46'52	
evening set	4424 Jan 17 21:30	8° \approx 48'47	evening set	4425 Jan 01 04:33	22° \mathcal{Z} 48'21	
inferior conj	4424 Jan 23 05:43	2° \approx 31'27	asc. node	4425 Jan 01 18:57	22° \mathcal{Z} 16'29	
minimum elong	4424 Jan 23 03:18	2° \approx 39'48	min. Earth dist.	4425 Jan 06 05:58	16° \mathcal{Z} 51'24	0.68043 AU
min. Earth dist.	4424 Jan 23 09:18	2° \approx 18'59	inferior conj	4425 Jan 06 13:40	16° \mathcal{Z} 24'50	1°33'36
	4424 Jan 25 02:08	30° \mathcal{R} \mathcal{Z}	minimum elong	4425 Jan 06 11:43	16° \mathcal{Z} 31'32	1°32'53
morning rise	4424 Jan 28 08:56	26° \mathcal{Z} 19'30	morning rise	4425 Jan 11 18:47	10° \mathcal{Z} 16'39	
direct	4424 Feb 02 09:15	24° \mathcal{Z} 09'49	direct	4425 Jan 16 04:37	8° \mathcal{Z} 29'52	
	4424 Feb 12 07:22	0° \approx	morning max el	4425 Jan 24 23:53	13° \mathcal{Z} 37'28	21°32'05
morning max el	4424 Feb 12 10:01	0° \approx 06'37		4425 Feb 06 23:50	0° \approx	
desc. node	4424 Feb 21 16:34	11° \approx 09'10	desc. node	4425 Feb 07 13:37	0° \approx 48'47	
	4424 Mar 05 21:16	0° \mathcal{H}	morning set	4425 Feb 25 18:16	28° \approx 15'03	
morning set	4424 Mar 17 22:43	19° \mathcal{H} 07'38		4425 Feb 26 20:38	0° \mathcal{H}	
max. Earth dist.	4424 Mar 22 09:11	26° \mathcal{H} 37'35	max. Earth dist.	4425 Mar 04 09:37	8° \mathcal{H} 59'53	1.41928 AU
	4424 Mar 24 07:51	0° \mathcal{Y}				
superior conj	4424 Mar 30 02:57	10° \mathcal{Y} 22'54	superior conj	4425 Mar 11 22:26	21° \mathcal{H} 45'32	-2°05'21
minimum elong	4424 Mar 30 07:42	10° \mathcal{Y} 44'39	minimum elong	4425 Mar 12 01:06	21° \mathcal{H} 57'09	2°05'16
evening rise	4424 Apr 08 19:36	28° \mathcal{Y} 39'35		4425 Mar 16 14:38	0° \mathcal{Y}	
	4424 Apr 09 12:27	0° \mathcal{B}	evening rise	4425 Mar 22 22:51	11° \mathcal{Y} 29'46	
asc. node	4424 Apr 12 21:12	6° \mathcal{B} 20'47	asc. node	4425 Mar 30 18:15	25° \mathcal{Y} 27'16	
evening max el	4424 Apr 24 23:43	24° \mathcal{B} 39'24		4425 Apr 02 13:22	0° \mathcal{B}	
retrograde	4424 May 02 14:46	28° \mathcal{B} 25'13	evening max el	4425 Apr 08 09:22	7° \mathcal{B} 32'03	18°09'44
evening set	4424 May 04 21:41	28° \mathcal{B} 05'58	retrograde	4425 Apr 15 04:42	10° \mathcal{B} 58'38	
inferior conj	4424 May 12 10:37	23° \mathcal{B} 36'05	evening set	4425 Apr 17 18:18	10° \mathcal{B} 29'48	
minimum elong	4424 May 12 14:07	23° \mathcal{B} 29'09	inferior conj	4425 Apr 24 13:45	5° \mathcal{B} 38'58	2°56'17
min. Earth dist.	4424 May 15 20:36	20° \mathcal{B} 55'29	minimum elong	4425 Apr 24 16:53	5° \mathcal{B} 31'43	2°55'39
desc. node	4424 May 19 15:46	18° \mathcal{B} 26'51	min. Earth dist.	4425 Apr 27 21:23	2° \mathcal{B} 37'10	0.60290 AU
morning rise	4424 May 20 03:23	18° \mathcal{B} 11'54	morning rise	4425 May 01 07:11	30° \mathcal{R} \mathcal{Y}	
				4425 May 01 13:11	29° \mathcal{Y} 50'30	

desc. node	4425 May 06 12:49	27° Υ 53'29		direct	4426 Apr 20 14:35	9° Υ 39'55	
direct	4425 May 08 03:02	27° Υ 46'17		desc. node	4426 Apr 23 09:51	10° Υ 03'03	
	4425 May 15 08:27	0° \mathcal{B}		morning max el	4426 May 04 16:14	17° Υ 39'13	27°51'39
morning max el	4425 May 22 10:26	5° \mathcal{B} 39'38	27°39'49		4426 May 14 23:23	0° \mathcal{B}	
	4425 Jun 09 14:31	0° Π			4426 Jun 02 08:58	0° Π	
morning set	4425 Jun 23 11:50	25° Π 51'29		morning set	4426 Jun 07 12:56	10° Π 06'12	
	4425 Jun 25 11:10	0° \mathcal{E}		max. Earth dist.	4426 Jun 13 01:49	21° Π 41'14	1.32472 AU
asc. node	4425 Jun 26 17:30	2° \mathcal{E} 42'08		asc. node	4426 Jun 13 14:32	22° Π 49'43	
max. Earth dist.	4425 Jun 29 18:08	9° \mathcal{E} 17'18	1.32044 AU				
				superior conj	4426 Jun 15 02:14	26° Π 03'02	0°15'31
superior conj	4425 Jun 30 17:01	11° \mathcal{E} 23'06	0°40'40	minimum elong	4426 Jun 15 01:31	25° Π 59'05	0°15'21
minimum elong	4425 Jun 30 15:20	11° \mathcal{E} 13'45	0°40'19	behind sun begin	4426 Jun 15 00:08	25° Π 51'36	
evening rise	4425 Jul 07 12:33	26° \mathcal{E} 15'16		behind sun end	4426 Jun 15 02:53	26° Π 06'34	
	4425 Jul 09 07:17	0° Ω			4426 Jun 16 21:43	0° \mathcal{E}	
	4425 Jul 26 13:23	0° \mathcal{M}		evening rise	4426 Jun 22 00:17	11° \mathcal{E} 03'44	
desc. node	4425 Aug 02 12:04	8° \mathcal{M} 20'27			4426 Jul 01 15:54	0° Ω	
evening max el	4425 Aug 03 20:46	9° \mathcal{M} 41'29	25°32'47	evening max el	4426 Jul 16 10:07	20° Ω 16'25	24°01'52
retrograde	4425 Aug 17 19:45	16° \mathcal{M} 46'56		desc. node	4426 Jul 20 09:05	23° Ω 36'23	
evening set	4425 Aug 23 18:49	15° \mathcal{M} 24'02		retrograde	4426 Jul 30 04:25	27° Ω 12'09	
min. Earth dist.	4425 Aug 28 08:41	12° \mathcal{M} 45'28	0.58084 AU	evening set	4426 Aug 03 18:04	26° Ω 25'57	
inferior conj	4425 Aug 31 12:03	10° \mathcal{M} 33'29	-5°09'32	min. Earth dist.	4426 Aug 09 20:34	23° Ω 27'02	0.56300 AU
minimum elong	4425 Aug 31 14:30	10° \mathcal{M} 29'09	5°09'22	inferior conj	4426 Aug 12 06:50	21° Ω 57'27	-5°06'25
morning rise	4425 Sep 08 12:26	6° \mathcal{M} 15'17		minimum elong	4426 Aug 12 03:21	22° Ω 02'51	5°06'08
direct	4425 Sep 11 00:17	5° \mathcal{M} 56'00		morning rise	4426 Aug 20 15:12	17° Ω 59'16	
morning max el	4425 Sep 19 12:40	9° \mathcal{M} 58'51	18°49'25	direct	4426 Aug 23 09:00	17° Ω 39'49	
asc. node	4425 Sep 22 16:44	13° \mathcal{M} 30'35		morning max el	4426 Sep 02 07:01	22° Ω 16'37	19°50'19
	4425 Oct 02 17:26	0° \mathcal{L}			4426 Sep 08 15:40	0° \mathcal{M}	
morning set	4425 Oct 05 23:47	6° \mathcal{L} 19'05		asc. node	4426 Sep 09 13:46	1° \mathcal{M} 23'39	
				morning set	4426 Sep 20 03:14	20° \mathcal{M} 49'59	
					4426 Sep 24 15:25	0° \mathcal{L}	
superior conj	4425 Oct 14 12:24	22° \mathcal{L} 53'55	1°31'40				
minimum elong	4425 Oct 14 15:16	23° \mathcal{L} 07'32	1°31'26				
	4425 Oct 18 07:42	0° \mathcal{M}		superior conj	4426 Sep 27 22:54	6° \mathcal{L} 39'48	1°41'48
max. Earth dist.	4425 Oct 21 13:47	5° \mathcal{M} 52'08	1.39283 AU	minimum elong	4426 Sep 28 00:08	6° \mathcal{L} 45'57	1°41'46
evening rise	4425 Oct 25 12:13	12° \mathcal{M} 42'35		max. Earth dist.	4426 Oct 03 18:40	17° \mathcal{L} 56'16	1.37213 AU
desc. node	4425 Oct 29 11:22	19° \mathcal{M} 20'00		evening rise	4426 Oct 07 13:17	24° \mathcal{L} 52'24	
	4425 Nov 05 04:52	0° \mathcal{X}			4426 Oct 10 10:57	0° \mathcal{M}	
	4425 Nov 27 10:48	0° \mathcal{Z}		desc. node	4426 Oct 16 08:22	9° \mathcal{M} 52'48	
evening max el	4425 Nov 29 18:33	2° \mathcal{Z} 25'15	24°18'04		4426 Oct 29 19:38	0° \mathcal{X}	
retrograde	4425 Dec 11 00:28	9° \mathcal{Z} 00'40		evening max el	4426 Nov 12 06:52	16° \mathcal{X} 07'43	25°32'07
evening set	4425 Dec 16 09:18	6° \mathcal{Z} 46'20		retrograde	4426 Nov 24 11:34	23° \mathcal{X} 08'12	
asc. node	4425 Dec 19 15:59	3° \mathcal{Z} 14'25		evening set	4426 Nov 30 10:07	20° \mathcal{X} 40'01	
min. Earth dist.	4425 Dec 21 02:04	1° \mathcal{Z} 23'02	0.67776 AU	min. Earth dist.	4426 Dec 04 19:20	15° \mathcal{X} 51'17	0.67156 AU
inferior conj	4425 Dec 21 20:38	0° \mathcal{Z} 20'36	0°44'23	inferior conj	4426 Dec 06 00:52	14° \mathcal{X} 16'33	-0°10'23
minimum elong	4425 Dec 21 19:36	0° \mathcal{Z} 24'07	0°43'58	minimum elong	4426 Dec 06 01:08	14° \mathcal{X} 15'42	0°10'15
	4425 Dec 22 02:47	30° \mathcal{R} \mathcal{X}		transit middle	4426 Dec 06 01:08	14° \mathcal{X} 15'42	0°10'15
morning rise	4425 Dec 27 05:57	24° \mathcal{X} 18'05		transit begin	4426 Dec 05 22:58	14° \mathcal{X} 22'40	
direct	4425 Dec 31 02:17	22° \mathcal{X} 53'40		transit end	4426 Dec 06 03:18	14° \mathcal{X} 08'44	
morning max el	4426 Jan 07 21:07	27° \mathcal{X} 19'53	20°16'50	asc. node	4426 Dec 06 13:00	13° \mathcal{X} 37'45	
	4426 Jan 10 08:10	0° \mathcal{Z}		morning rise	4426 Dec 11 16:30	8° \mathcal{X} 21'49	
desc. node	4426 Jan 25 10:38	20° \mathcal{Z} 52'29		direct	4426 Dec 15 00:56	7° \mathcal{X} 17'09	
	4426 Jan 31 11:38	0° \approx		morning max el	4426 Dec 22 02:17	11° \mathcal{X} 13'13	19°15'32
morning set	4426 Feb 04 16:51	6° \approx 28'41		greatest brilliancy	4427 Jan 04 15:32	29° \mathcal{X} 27'29	-0.7m
max. Earth dist.	4426 Feb 14 17:45	22° \approx 16'30	1.43665 AU		4427 Jan 05 00:07	0° \mathcal{Z}	
	4426 Feb 19 12:02	0° \mathcal{H}		desc. node	4427 Jan 12 07:38	11° \mathcal{Z} 13'47	
				morning set	4427 Jan 14 17:19	14° \mathcal{Z} 57'12	
superior conj	4426 Feb 20 17:05	1° \mathcal{H} 59'30	-2°06'39		4427 Jan 24 09:08	0° \approx	
minimum elong	4426 Feb 20 14:37	1° \mathcal{H} 49'18	2°06'35	max. Earth dist.	4427 Jan 28 08:08	6° \approx 13'11	1.44823 AU
evening rise	4426 Mar 05 09:04	23° \mathcal{H} 31'22					
	4426 Mar 09 02:29	0° Υ		superior conj	4427 Jan 31 10:49	11° \approx 08'46	-1°49'13
asc. node	4426 Mar 17 15:17	14° Υ 03'04		minimum elong	4427 Jan 31 02:38	10° \approx 36'15	1°48'35
evening max el	4426 Mar 22 21:49	20° Υ 43'20	18°08'28		4427 Feb 12 02:51	0° \mathcal{H}	
retrograde	4426 Mar 29 08:39	24° Υ 06'02		evening rise	4427 Feb 14 22:06	4° \mathcal{H} 37'18	
evening set	4426 Apr 01 04:15	23° Υ 26'10			4427 Mar 02 22:47	0° Υ	
inferior conj	4426 Apr 07 10:12	18° Υ 15'18	3°26'39	asc. node	4427 Mar 04 12:19	1° Υ 59'04	
minimum elong	4426 Apr 07 11:47	18° Υ 11'08	3°26'29	evening max el	4427 Mar 06 10:15	4° Υ 06'39	18°25'59
min. Earth dist.	4426 Apr 10 06:37	15° Υ 16'43	0.62443 AU	retrograde	4427 Mar 12 22:00	7° Υ 38'34	
morning rise	4426 Apr 13 17:56	12° Υ 12'12		evening set	4427 Mar 15 23:37	6° Υ 46'39	

inferior conj	4427 Mar 21 19:56	1°♿17'28	3°35'22	greatest brilliancy	4428 Feb 04 21:48	29°♿39'21	-0.8m
minimum elong	4427 Mar 21 19:50	1°♿17'44	3°35'21		4428 Feb 05 03:06	0°♿	
	4427 Mar 22 22:21	30°♿		evening max el	4428 Feb 17 20:13	17°♿36'04	19°01'21
min. Earth dist.	4427 Mar 24 01:25	28°♿41'52	0.64355 AU	asc. node	4428 Feb 19 09:21	19°♿03'06	
morning rise	4427 Mar 27 15:19	25°♿06'54		retrograde	4428 Feb 24 16:59	21°♿28'32	
direct	4427 Apr 03 10:26	22°♿18'55		evening set	4428 Feb 28 01:17	20°♿23'39	
desc. node	4427 Apr 10 06:53	24°♿37'15		inferior conj	4428 Mar 04 15:10	14°♿37'53	3°27'45
	4427 Apr 16 19:32	0°♿		minimum elong	4428 Mar 04 13:46	14°♿42'16	3°27'36
morning max el	4427 Apr 17 01:31	0°♿14'56	27°27'05	min. Earth dist.	4428 Mar 06 05:08	12°♿38'00	0.65895 AU
	4427 May 08 23:23	0°♿		morning rise	4428 Mar 10 01:53	8°♿24'19	
morning set	4427 May 22 06:00	23°♿53'55		direct	4428 Mar 16 13:07	5°♿34'28	
	4427 May 25 07:13	0°♿		desc. node	4428 Mar 27 03:53	11°♿01'25	
max. Earth dist.	4427 May 27 01:48	3°♿38'44	1.33343 AU	morning max el	4428 Mar 29 11:25	13°♿14'11	26°32'20
					4428 Apr 12 00:24	0°♿	
superior conj	4427 May 30 07:25	10°♿26'36	-0°12'13		4428 Apr 30 15:34	0°♿	
minimum elong	4427 May 30 08:02	10°♿29'55	0°12'05	morning set	4428 May 04 11:35	7°♿04'31	
behind sun begin	4427 May 30 04:27	10°♿10'49		max. Earth dist.	4428 May 08 14:54	15°♿04'18	1.34679 AU
behind sun end	4427 May 30 11:38	10°♿49'01					
asc. node	4427 May 31 11:34	12°♿56'43		superior conj	4428 May 13 06:19	24°♿27'22	-0°41'25
evening rise	4427 Jun 06 11:40	25°♿46'54		minimum elong	4428 May 13 08:32	24°♿38'49	0°40'58
	4427 Jun 08 12:12	0°♿			4428 May 15 22:22	0°♿	
	4427 Jun 27 08:21	0°♿		asc. node	4428 May 17 08:37	2°♿59'18	
evening max el	4427 Jun 28 00:11	0°♿39'25	22°24'42	evening rise	4428 May 20 20:47	10°♿18'56	
desc. node	4427 Jul 07 06:07	6°♿34'53			4428 May 31 06:24	0°♿	
retrograde	4427 Jul 11 01:00	7°♿08'00		evening max el	4428 Jun 08 22:54	11°♿23'41	20°55'45
evening set	4427 Jul 14 02:46	6°♿47'08		retrograde	4428 Jun 20 13:43	17°♿05'21	
min. Earth dist.	4427 Jul 22 07:04	3°♿14'05	0.55123 AU	evening set	4428 Jun 22 17:17	16°♿54'26	
inferior conj	4427 Jul 23 07:58	2°♿38'50	-4°14'31	desc. node	4428 Jun 23 03:08	16°♿49'57	
minimum elong	4427 Jul 22 23:40	2°♿50'36	4°12'36	inferior conj	4428 Jul 02 01:16	12°♿57'09	-2°35'39
	4427 Jul 28 09:56	30°♿		minimum elong	4428 Jul 01 18:11	13°♿07'10	2°33'14
morning rise	4427 Jul 31 22:31	28°♿48'33		min. Earth dist.	4428 Jul 02 18:27	12°♿32'50	0.54833 AU
direct	4427 Aug 04 00:31	28°♿27'00		morning rise	4428 Jul 10 18:59	8°♿56'04	
	4427 Aug 10 05:22	0°♿		direct	4428 Jul 14 09:54	8°♿27'49	
morning max el	4427 Aug 15 13:27	3°♿49'33	21°12'09	morning max el	4428 Jul 27 09:17	14°♿40'21	22°50'05
asc. node	4427 Aug 27 10:48	19°♿59'50			4428 Aug 08 04:39	0°♿	
	4427 Sep 01 17:50	0°♿		asc. node	4428 Aug 13 07:50	9°♿08'38	
morning set	4427 Sep 04 11:22	5°♿34'12		morning set	4428 Aug 18 22:15	20°♿26'22	
					4428 Aug 23 09:43	0°♿	
superior conj	4427 Sep 11 19:54	20°♿56'35	1°43'50	superior conj	4428 Aug 26 00:08	5°♿34'25	1°39'07
minimum elong	4427 Sep 11 19:37	20°♿55'05	1°43'51	minimum elong	4428 Aug 25 22:41	5°♿26'45	1°39'01
max. Earth dist.	4427 Sep 16 04:29	29°♿47'29	1.35376 AU	max. Earth dist.	4428 Aug 28 23:08	11°♿49'11	1.33910 AU
	4427 Sep 16 07:00	0°♿		evening rise	4428 Sep 02 19:03	21°♿37'36	
evening rise	4427 Sep 20 09:00	7°♿54'29			4428 Sep 07 04:13	0°♿	
desc. node	4427 Oct 03 05:23	0°♿11'24		desc. node	4428 Sep 19 02:25	20°♿09'20	
	4427 Oct 03 02:30	0°♿			4428 Sep 25 22:10	0°♿	
evening max el	4427 Oct 25 19:24	29°♿48'26	26°33'08	evening max el	4428 Oct 07 08:00	13°♿19'09	27°13'34
	4427 Oct 26 00:13	0°♿		retrograde	4428 Oct 20 17:41	20°♿37'00	
retrograde	4427 Nov 07 17:34	7°♿02'39		evening set	4428 Oct 27 15:54	17°♿56'20	
evening set	4427 Nov 14 05:05	4°♿24'49		min. Earth dist.	4428 Oct 31 12:10	14°♿18'03	0.64886 AU
	4427 Nov 18 11:20	30°♿		inferior conj	4428 Nov 02 17:04	11°♿52'33	-2°11'18
min. Earth dist.	4427 Nov 18 07:28	0°♿11'26	0.66192 AU	minimum elong	4428 Nov 02 20:48	11°♿42'14	2°09'50
inferior conj	4427 Nov 20 00:24	28°♿08'37	-1°09'31	morning rise	4428 Nov 09 02:48	6°♿21'27	
minimum elong	4427 Nov 20 02:19	28°♿02'52	1°08'42	asc. node	4428 Nov 09 07:04	6°♿16'45	
asc. node	4427 Nov 23 10:02	24°♿22'24		direct	4428 Nov 11 17:57	5°♿44'59	
morning rise	4427 Nov 26 00:16	22°♿24'10		morning max el	4428 Nov 18 05:26	9°♿11'52	18°01'14
direct	4427 Nov 28 22:53	21°♿35'34			4428 Dec 02 10:39	0°♿	
morning max el	4427 Dec 05 13:52	25°♿12'23	18°30'00	morning set	4428 Dec 05 23:08	5°♿51'51	
	4427 Dec 09 15:25	0°♿		desc. node	4428 Dec 16 01:40	22°♿28'37	
morning set	4427 Dec 25 17:23	24°♿40'09					
	4427 Dec 29 01:41	0°♿		superior conj	4428 Dec 19 22:34	28°♿41'35	-0°26'30
desc. node	4427 Dec 30 04:38	1°♿47'03		minimum elong	4428 Dec 19 19:19	28°♿28'35	0°26'02
					4428 Dec 20 18:15	0°♿	
superior conj	4428 Jan 10 13:56	19°♿44'11	-1°13'05	max. Earth dist.	4428 Dec 23 21:30	4°♿57'55	1.45005 AU
minimum elong	4428 Jan 10 05:22	19°♿10'34	1°12'05	evening rise	4429 Jan 05 05:31	24°♿10'20	
max. Earth dist.	4428 Jan 11 02:12	20°♿32'16	1.45284 AU		4429 Jan 09 00:23	0°♿	
	4428 Jan 17 03:00	0°♿		greatest brilliancy	4429 Jan 19 04:29	15°♿24'58	-0.6m
evening rise	4428 Jan 26 11:41	14°♿45'42					

	4429 Jan 30 00:21	0° H		evening rise	4429 Dec 15 15:18	3° Z 22'02	
evening max el	4429 Jan 31 01:52	1° H 08'09 19°52'50			4430 Jan 02 12:37	0° \approx	
asc. node	4429 Feb 05 06:23	5° H 01'12		evening max el	4430 Jan 14 02:06	14° \approx 41'31 20°57'51	
retrograde	4429 Feb 07 14:37	5° H 30'39		retrograde	4430 Jan 22 12:43	19° \approx 41'09	
evening set	4429 Feb 11 06:49	4° H 11'45		asc. node	4430 Jan 23 03:24	19° \approx 39'07	
	4429 Feb 15 07:52	30° R \approx		evening set	4430 Jan 26 14:16	18° \approx 07'19	
inferior conj	4429 Feb 16 16:53	28° \approx 11'30 3°07'36		inferior conj	4430 Jan 31 22:38	11° \approx 55'09 2°37'28	
minimum elong	4429 Feb 16 14:42	28° \approx 18'46 3°07'10		minimum elong	4430 Jan 31 20:10	12° \approx 03'37 2°36'48	
min. Earth dist.	4429 Feb 17 16:20	26° \approx 53'13 0.67017 AU		min. Earth dist.	4430 Feb 01 09:00	11° \approx 19'23 0.67720 AU	
morning rise	4429 Feb 21 22:22	21° \approx 57'23		morning rise	4430 Feb 06 01:54	5° \approx 42'07	
direct	4429 Feb 27 21:26	19° \approx 17'35		direct	4430 Feb 11 10:40	3° \approx 20'19	
morning max el	4429 Mar 11 20:21	26° \approx 25'59 25°16'15		morning max el	4430 Feb 22 05:02	9° \approx 45'12 23°48'59	
desc. node	4429 Mar 14 00:54	28° \approx 45'04		desc. node	4430 Feb 28 21:56	17° \approx 25'48	
	4429 Mar 15 03:35	0° H			4430 Mar 10 04:52	0° H	
	4429 Apr 05 14:38	0° Y			4430 Mar 29 07:54	0° Y	
morning set	4429 Apr 17 01:03	19° Y 24'01		morning set	4430 Mar 29 16:39	0° Y 37'22	
max. Earth dist.	4429 Apr 20 17:03	26° Y 08'01 1.36461 AU		max. Earth dist.	4430 Apr 02 12:59	7° Y 19'16 1.38560 AU	
	4429 Apr 22 18:07	0° B					
superior conj	4429 Apr 26 20:03	7° B 56'37 -1°10'32		superior conj	4430 Apr 09 21:01	20° Y 45'11 -1°37'13	
minimum elong	4429 Apr 26 23:51	8° B 15'28 1°09'54		minimum elong	4430 Apr 10 01:49	21° Y 07'53 1°36'38	
asc. node	4429 May 04 05:40	22° B 52'37			4430 Apr 14 16:32	0° B	
evening rise	4429 May 05 01:24	24° B 32'24		evening rise	4430 Apr 18 22:52	8° B 20'14	
	4429 May 07 18:59	0° II		asc. node	4430 Apr 21 02:44	12° B 32'13	
evening max el	4429 May 22 09:44	22° II 46'07 19°43'30			4430 May 01 06:27	0° II	
retrograde	4429 Jun 01 06:48	27° II 35'02		evening max el	4430 May 05 07:52	4° II 49'04 18°51'10	
evening set	4429 Jun 03 05:29	27° II 24'40		retrograde	4430 May 13 15:49	8° II 53'58	
desc. node	4429 Jun 10 00:10	24° II 36'36		evening set	4430 May 15 18:46	8° II 39'04	
inferior conj	4429 Jun 12 01:08	23° II 22'08 -0°36'23		inferior conj	4430 May 23 19:01	4° II 20'18 1°10'00	
minimum elong	4429 Jun 11 23:29	23° II 24'43 0°35'47		minimum elong	4430 May 23 21:34	4° II 15'41 1°09'08	
min. Earth dist.	4429 Jun 14 07:28	21° II 57'57 0.55508 AU		min. Earth dist.	4430 May 26 23:38	2° II 02'58 0.57003 AU	
morning rise	4429 Jun 20 15:13	18° II 52'26		desc. node	4430 May 27 21:11	1° II 26'40	
direct	4429 Jun 25 01:30	18° II 09'00			4430 May 30 07:07	30° R B	
morning max el	4429 Jul 08 23:26	25° II 05'00 24°33'37		morning rise	4430 May 31 21:07	29° B 14'28	
	4429 Jul 13 13:16	0° E		direct	4430 Jun 06 06:23	28° B 04'29	
asc. node	4429 Jul 31 04:54	28° E 40'50			4430 Jun 13 07:12	0° II	
	4429 Jul 31 20:30	0° O		morning max el	4430 Jun 20 14:29	5° II 32'09 26°07'20	
morning set	4429 Aug 03 10:02	5° O 20'09			4430 Jul 08 11:14	0° E	
				asc. node	4430 Jul 18 01:58	18° E 29'53	
superior conj	4429 Aug 10 08:53	20° O 24'03 1°28'40		morning set	4430 Jul 18 21:08	20° E 10'40	
minimum elong	4429 Aug 10 06:46	20° O 12'29 1°28'25			4430 Jul 23 10:09	0° O	
max. Earth dist.	4429 Aug 12 02:22	24° O 09'03 1.32854 AU		superior conj	4430 Jul 25 20:05	5° O 18'55 1°13'19	
	4429 Aug 14 20:05	0° np		minimum elong	4430 Jul 25 17:45	5° O 06'06 1°12'56	
evening rise	4429 Aug 17 15:29	5° np 49'32		max. Earth dist.	4430 Jul 26 11:30	6° O 43'46 1.32213 AU	
	4429 Aug 30 18:27	0° a		evening rise	4430 Aug 01 19:11	20° O 21'22	
desc. node	4429 Sep 05 23:28	9° a 36'46			4430 Aug 06 13:56	0° np	
evening max el	4429 Sep 19 18:52	26° a 26'11 27°26'48		desc. node	4430 Aug 23 20:30	28° np 21'22	
	4429 Sep 24 00:41	0° m			4430 Aug 25 02:34	0° a	
retrograde	4429 Oct 03 11:21	3° m 42'02		evening max el	4430 Sep 02 01:16	8° a 55'56 27°07'57	
evening set	4429 Oct 10 15:33	1° m 07'54		retrograde	4430 Sep 15 21:52	16° a 08'27	
	4429 Oct 12 02:43	30° R a		evening set	4430 Sep 23 00:09	13° a 52'51	
min. Earth dist.	4429 Oct 14 07:16	28° a 01'38 0.63240 AU		min. Earth dist.	4430 Sep 26 15:38	11° a 09'54 0.61314 AU	
inferior conj	4429 Oct 17 00:07	25° a 21'19 -3°13'05		inferior conj	4430 Sep 29 18:23	8° a 26'43 -4°10'11	
minimum elong	4429 Oct 17 05:30	25° a 07'59 3°11'16		minimum elong	4430 Sep 30 00:28	8° a 13'22 4°08'39	
morning rise	4429 Oct 23 20:56	20° a 07'08		morning rise	4430 Oct 07 02:40	3° a 32'55	
direct	4429 Oct 26 07:11	19° a 39'10		direct	4430 Oct 09 10:52	3° a 10'24	
asc. node	4429 Oct 27 04:06	19° a 42'51		asc. node	4430 Oct 14 01:09	4° a 40'49	
morning max el	4429 Nov 01 22:09	23° a 04'40 17°50'03		morning max el	4430 Oct 16 12:50	6° a 42'55 17°57'19	
	4429 Nov 07 08:54	0° m			4430 Oct 31 11:06	0° m	
morning set	4429 Nov 18 06:03	18° m 16'26		morning set	4430 Nov 01 07:30	1° m 33'30	
	4429 Nov 25 00:28	0° x					
superior conj	4429 Nov 30 05:27	8° x 46'13 0°18'56		superior conj	4430 Nov 11 15:00	20° m 08'49 0°55'42	
minimum elong	4429 Nov 30 07:22	8° x 54'11 0°18'39		minimum elong	4430 Nov 11 19:00	20° m 26'18 0°55'10	
desc. node	4429 Dec 02 22:43	13° x 14'58			4430 Nov 17 09:19	0° x	
max. Earth dist.	4429 Dec 06 15:11	19° x 13'01 1.44016 AU		max. Earth dist.	4430 Nov 19 04:08	2° x 57'54 1.42442 AU	
	4429 Dec 13 11:07	0° Z		desc. node	4430 Nov 19 19:45	4° x 02'16	
				evening rise	4430 Nov 25 08:53	12° x 58'57	

	4430 Dec 06 11:48	0°♁			4431 Nov 30 10:05	0°♁	
evening max el	4430 Dec 27 20:54	28°♁15'54	22°12'46	evening max el	4431 Dec 10 11:44	11°♁53'43	23°32'31
	4430 Dec 29 16:24	0°♁		retrograde	4431 Dec 21 03:12	18°♁11'10	
retrograde	4431 Jan 06 09:23	3°♁55'48		evening set	4431 Dec 26 04:11	16°♁05'55	
asc. node	4431 Jan 10 00:25	2°♁45'57		asc. node	4431 Dec 27 21:26	14°♁24'52	
evening set	4431 Jan 10 21:55	2°♁06'19		min. Earth dist.	4431 Dec 31 01:44	10°♁22'55	0.67970 AU
	4431 Jan 13 00:39	30°♁♁		inferior conj	4431 Dec 31 14:04	9°♁40'41	1°13'29
inferior conj	4431 Jan 16 06:18	25°♁45'38	1°59'01	minimum elong	4431 Dec 31 12:28	9°♁46'12	1°12'51
minimum elong	4431 Jan 16 04:03	25°♁53'30	1°58'15	morning rise	4432 Jan 05 20:42	3°♁34'25	
min. Earth dist.	4431 Jan 16 04:56	25°♁50'26	0.68029 AU	direct	4432 Jan 10 00:33	1°♁57'24	
morning rise	4431 Jan 21 10:03	19°♁35'05		morning max el	4432 Jan 18 08:48	6°♁46'40	20°58'26
direct	4431 Jan 26 04:00	17°♁35'20		desc. node	4432 Feb 02 16:01	26°♁37'57	
morning max el	4431 Feb 04 16:03	23°♁11'01	22°20'19		4432 Feb 04 23:13	0°♁	
	4431 Feb 10 15:08	0°♁		morning set	4432 Feb 17 13:15	19°♁08'26	
desc. node	4431 Feb 15 18:58	6°♁47'07			4432 Feb 24 09:05	0°♁	
	4431 Mar 03 14:02	0°♁		max. Earth dist.	4432 Feb 25 12:37	1°♁51'48	1.42725 AU
morning set	4431 Mar 10 04:40	10°♁30'31					
max. Earth dist.	4431 Mar 15 09:38	19°♁08'11	1.40743 AU	superior conj	4432 Mar 03 13:52	13°♁35'09	-2°07'56
	4431 Mar 21 16:21	0°♁		minimum elong	4432 Mar 03 14:42	13°♁38'41	2°07'56
					4432 Mar 12 23:52	0°♁	
superior conj	4431 Mar 23 04:35	2°♁41'27	-1°57'57	evening rise	4432 Mar 15 06:19	4°♁03'17	
minimum elong	4431 Mar 23 08:48	3°♁00'23	1°57'40	asc. node	4432 Mar 24 20:46	20°♁46'12	
evening rise	4431 Apr 02 09:49	21°♁33'22			4432 Mar 31 14:54	0°♁	
	4431 Apr 06 22:56	0°♁		evening max el	4432 Apr 01 01:26	0°♁26'41	18°06'54
asc. node	4431 Apr 07 23:45	1°♁52'07		retrograde	4432 Apr 07 15:55	3°♁49'43	
evening max el	4431 Apr 18 14:14	17°♁25'24	18°19'10	evening set	4432 Apr 10 08:06	3°♁16'24	
retrograde	4431 Apr 25 19:42	21°♁01'24			4432 Apr 15 01:58	30°♁♁	
evening set	4431 Apr 28 05:21	20°♁38'29		inferior conj	4432 Apr 16 21:21	28°♁17'13	3°12'12
inferior conj	4431 May 05 10:24	15°♁59'45	2°26'31	minimum elong	4432 Apr 16 23:54	28°♁11'00	3°11'48
minimum elong	4431 May 05 14:00	15°♁52'08	2°25'36	min. Earth dist.	4432 Apr 20 01:09	25°♁13'36	0.61223 AU
min. Earth dist.	4431 May 08 20:52	13°♁06'50	0.59023 AU	morning rise	4432 Apr 23 13:44	22°♁21'27	
morning rise	4431 May 12 19:44	10°♁23'34		direct	4432 Apr 30 07:45	20°♁03'36	
desc. node	4431 May 14 18:12	9°♁28'50		desc. node	4432 Apr 30 15:13	20°♁03'53	
direct	4431 May 19 01:19	8°♁38'51		morning max el	4432 May 14 13:09	28°♁01'04	27°49'29
morning max el	4431 Jun 02 10:43	16°♁26'30	27°15'58		4432 May 16 11:01	0°♁	
	4431 Jun 13 13:31	0°♁			4432 Jun 06 07:39	0°♁	
	4431 Jun 30 21:07	0°♁		morning set	4432 Jun 16 10:22	19°♁18'25	
morning set	4431 Jul 03 05:53	4°♁52'15		asc. node	4432 Jun 20 20:03	28°♁35'52	
asc. node	4431 Jul 04 23:02	8°♁29'57			4432 Jun 21 11:37	0°♁	
				max. Earth dist.	4432 Jun 22 08:58	1°♁55'57	1.32163 AU
superior conj	4431 Jul 10 07:54	20°♁12'52	0°53'41				
minimum elong	4431 Jul 10 05:50	20°♁01'31	0°53'17	superior conj	4432 Jun 23 18:34	4°♁59'34	0°30'22
max. Earth dist.	4431 Jul 09 22:57	19°♁23'30	1.31978 AU	minimum elong	4432 Jun 23 17:13	4°♁52'14	0°30'05
	4431 Jul 14 18:46	0°♁		evening rise	4432 Jun 30 14:41	19°♁53'42	
evening rise	4431 Jul 17 03:37	5°♁05'10			4432 Jul 05 12:36	0°♁	
	4431 Jul 30 07:11	0°♁			4432 Jul 25 03:12	0°♁	
desc. node	4431 Aug 10 17:30	16°♁05'49		evening max el	4432 Jul 26 17:29	1°♁35'59	24°56'07
evening max el	4431 Aug 15 00:59	20°♁39'26	26°16'04	desc. node	4432 Jul 27 14:31	2°♁25'02	
retrograde	4431 Aug 29 00:17	27°♁48'36		retrograde	4432 Aug 09 15:58	8°♁38'46	
evening set	4431 Sep 04 12:58	26°♁04'04		evening set	4432 Aug 15 01:43	7°♁32'25	
min. Earth dist.	4431 Sep 08 14:04	23°♁29'07	0.59241 AU	min. Earth dist.	4432 Aug 20 05:00	4°♁46'56	0.57265 AU
inferior conj	4431 Sep 11 20:24	21°♁00'02	-4°54'34	inferior conj	4432 Aug 23 02:59	2°♁51'12	-5°13'29
minimum elong	4431 Sep 12 01:05	20°♁51'04	4°53'54	minimum elong	4432 Aug 23 03:08	2°♁50'57	5°13'30
morning rise	4431 Sep 19 15:25	16°♁28'51			4432 Aug 27 20:27	30°♁♁	
direct	4431 Sep 22 00:47	16°♁09'08		morning rise	4432 Aug 31 06:57	28°♁42'02	
morning max el	4431 Sep 29 22:13	19°♁58'10	18°24'19	direct	4432 Sep 02 20:51	28°♁22'57	
asc. node	4431 Sep 30 22:13	20°♁59'11			4432 Sep 08 11:24	0°♁	
	4431 Oct 07 10:30	0°♁		morning max el	4432 Sep 11 22:48	2°♁39'17	19°12'34
morning set	4431 Oct 15 22:06	15°♁28'05		asc. node	4432 Sep 16 19:16	8°♁21'47	
	4431 Oct 23 13:26	0°♁		morning set	4432 Sep 28 21:47	29°♁48'12	
					4432 Sep 29 00:09	0°♁	
superior conj	4431 Oct 24 23:49	2°♁39'22	1°21'33				
minimum elong	4431 Oct 25 03:27	2°♁56'10	1°21'10	superior conj	4432 Oct 07 02:22	16°♁01'36	1°37'02
max. Earth dist.	4431 Nov 01 11:34	16°♁00'48	1.40485 AU	minimum elong	4432 Oct 07 04:34	16°♁12'14	1°36'54
evening rise	4431 Nov 05 22:20	23°♁31'18		max. Earth dist.	4432 Oct 13 16:11	28°♁23'04	1.38392 AU
desc. node	4431 Nov 06 16:47	24°♁47'21			4432 Oct 14 13:37	0°♁	
	4431 Nov 09 22:00	0°♁		evening rise	4432 Oct 17 10:59	5°♁07'03	

































































































































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	4432 Nov 01 23:00	0° \mathbb{A}		evening rise	4433 Sep 29 20:33	17° \mathbb{A} 40'21	
evening max el	4432 Nov 22 00:37	25° \mathbb{A} 35'25	24°50'42		4433 Oct 06 20:51	0° \mathbb{M}	
	4432 Nov 27 06:19	0° \mathbb{B}		desc. node	4433 Oct 10 10:49	5° \mathbb{M} 53'14	
retrograde	4432 Dec 03 16:54	2° \mathbb{B} 22'34			4433 Oct 27 06:08	0° \mathbb{A}	
evening set	4432 Dec 09 07:27	0° \mathbb{B} 02'20		evening max el	4433 Nov 04 13:09	9° \mathbb{A} 18'26	26°00'03
	4432 Dec 09 08:33	30° \mathbb{R} \mathbb{A}		retrograde	4433 Nov 17 01:43	16° \mathbb{A} 25'08	
asc. node	4432 Dec 13 18:28	25° \mathbb{A} 01'41		evening set	4433 Nov 23 06:01	13° \mathbb{A} 52'21	
min. Earth dist.	4432 Dec 13 21:01	24° \mathbb{A} 53'20	0.67559 AU	min. Earth dist.	4433 Nov 27 12:21	9° \mathbb{A} 18'37	0.66799 AU
inferior conj	4432 Dec 14 20:08	23° \mathbb{A} 37'00	0°21'48	inferior conj	4433 Nov 28 22:37	7° \mathbb{A} 31'37	-0°34'59
minimum elong	4432 Dec 14 19:35	23° \mathbb{A} 38'47	0°21'34	minimum elong	4433 Nov 28 23:33	7° \mathbb{A} 28'42	0°34'35
morning rise	4432 Dec 20 07:52	17° \mathbb{A} 37'14		asc. node	4433 Nov 30 15:31	5° \mathbb{A} 26'54	
direct	4432 Dec 23 22:57	16° \mathbb{A} 21'27		morning rise	4433 Dec 04 17:32	1° \mathbb{A} 40'53	
morning max el	4432 Dec 31 09:22	20° \mathbb{A} 33'27	19°48'46	direct	4433 Dec 07 21:38	0° \mathbb{A} 43'22	
	4433 Jan 08 02:01	0° \mathbb{B}		morning max el	4433 Dec 14 17:29	4° \mathbb{A} 29'31	18°54'05
greatest brilliancy	4433 Jan 13 16:50	8° \mathbb{B} 04'08	-0.6m		4434 Jan 01 18:25	0° \mathbb{B}	
desc. node	4433 Jan 19 13:02	16° \mathbb{B} 49'48		morning set	4434 Jan 05 18:04	6° \mathbb{B} 14'02	
morning set	4433 Jan 26 09:18	27° \mathbb{B} 18'24		desc. node	4434 Jan 06 10:03	7° \mathbb{B} 16'37	
	4433 Jan 28 03:07	0° \approx		max. Earth dist.	4434 Jan 20 16:24	29° \mathbb{B} 37'06	1.45116 AU
max. Earth dist.	4433 Feb 06 23:33	15° \approx 26'58	1.44242 AU		4434 Jan 20 22:13	0° \approx	
superior conj	4433 Feb 11 21:30	23° \approx 20'15	-2°01'42	superior conj	4434 Jan 22 06:57	2° \approx 08'43	-1°35'50
minimum elong	4433 Feb 11 16:21	22° \approx 59'21	2°01'28	minimum elong	4434 Jan 21 21:41	1° \approx 32'14	1°34'57
	4433 Feb 15 23:25	0° \mathbb{H}		evening rise	4434 Feb 06 10:59	26° \approx 22'19	
evening rise	4433 Feb 25 07:56	15° \mathbb{H} 41'31			4434 Feb 08 16:38	0° \mathbb{H}	
	4433 Mar 05 19:09	0° \mathbb{Y}		asc. node	4434 Feb 26 14:48	26° \mathbb{H} 41'35	
asc. node	4433 Mar 11 17:47	9° \mathbb{Y} 06'23		evening max el	4434 Feb 27 01:58	27° \mathbb{H} 10'37	18°38'56
evening max el	4433 Mar 15 14:19	13° \mathbb{Y} 44'27	18°13'45		4434 Mar 02 15:47	0° \mathbb{Y}	
retrograde	4433 Mar 22 00:18	17° \mathbb{Y} 09'10		retrograde	4434 Mar 05 16:31	0° \mathbb{Y} 49'53	
evening set	4433 Mar 24 22:32	16° \mathbb{Y} 24'08		evening set	4434 Mar 08 20:56	29° \mathbb{H} 52'22	
inferior conj	4433 Mar 30 23:56	11° \mathbb{Y} 05'23	3°32'38		4434 Mar 08 15:38	30° \mathbb{R} \mathbb{H}	
minimum elong	4433 Mar 31 00:47	11° \mathbb{Y} 03'03	3°32'34	inferior conj	4434 Mar 14 14:07	24° \mathbb{H} 15'39	3°33'52
min. Earth dist.	4433 Apr 02 14:15	8° \mathbb{Y} 14'39	0.63299 AU	minimum elong	4434 Mar 14 13:25	24° \mathbb{H} 17'46	3°33'49
morning rise	4433 Apr 06 02:00	4° \mathbb{Y} 58'43		min. Earth dist.	4434 Mar 16 12:49	21° \mathbb{H} 54'30	0.65061 AU
direct	4433 Apr 12 23:07	2° \mathbb{Y} 18'01		morning rise	4434 Mar 20 05:23	18° \mathbb{H} 03'33	
desc. node	4433 Apr 17 12:14	3° \mathbb{Y} 19'05		direct	4434 Mar 26 21:44	15° \mathbb{H} 13'30	
morning max el	4433 Apr 26 20:32	10° \mathbb{Y} 16'34	27°45'23	desc. node	4434 Apr 04 09:16	18° \mathbb{H} 43'59	
	4433 May 12 07:09	0° \mathbb{B}		morning max el	4434 Apr 09 06:24	23° \mathbb{H} 03'34	27°07'06
	4433 May 29 15:27	0° \mathbb{II}			4434 Apr 15 10:08	0° \mathbb{Y}	
morning set	4433 May 31 08:23	3° \mathbb{II} 22'34			4434 May 05 14:17	0° \mathbb{B}	
max. Earth dist.	4433 Jun 05 13:47	14° \mathbb{II} 09'43	1.32785 AU	morning set	4434 May 14 21:00	16° \mathbb{B} 55'17	
asc. node	4433 Jun 07 17:05	18° \mathbb{II} 43'44		max. Earth dist.	4434 May 19 09:41	25° \mathbb{B} 54'35	1.33859 AU
					4434 May 21 09:28	0° \mathbb{II}	
superior conj	4433 Jun 08 02:20	19° \mathbb{II} 33'34	0°04'03	superior conj	4434 May 23 05:06	3° \mathbb{II} 47'42	-0°24'29
minimum elong	4433 Jun 08 02:08	19° \mathbb{II} 32'29	0°04'00	minimum elong	4434 May 23 06:23	3° \mathbb{II} 54'26	0°24'13
behind sun begin	4433 Jun 07 21:00	19° \mathbb{II} 04'48		asc. node	4434 May 25 14:06	8° \mathbb{II} 48'58	
behind sun end	4433 Jun 08 07:16	20° \mathbb{II} 00'12		evening rise	4434 May 30 13:11	19° \mathbb{II} 19'56	
	4433 Jun 12 22:03	0° \mathbb{B}			4434 Jun 04 19:43	0° \mathbb{B}	
evening rise	4433 Jun 15 02:31	4° \mathbb{B} 40'57		evening max el	4434 Jun 19 23:05	22° \mathbb{B} 29'32	21°45'07
	4433 Jun 28 16:33	0° \mathbb{Q}		desc. node	4434 Jul 01 08:32	28° \mathbb{B} 37'22	
evening max el	4433 Jul 08 06:19	12° \mathbb{Q} 02'14	23°20'27	retrograde	4434 Jul 02 10:52	28° \mathbb{B} 40'11	
desc. node	4433 Jul 14 11:30	16° \mathbb{Q} 46'59		evening set	4434 Jul 05 01:12	28° \mathbb{B} 24'58	
retrograde	4433 Jul 21 18:50	18° \mathbb{Q} 48'11		inferior conj	4434 Jul 14 09:36	24° \mathbb{B} 22'51	-3°37'12
evening set	4433 Jul 25 16:42	18° \mathbb{Q} 14'45		minimum elong	4434 Jul 14 00:59	24° \mathbb{B} 34'53	3°34'45
min. Earth dist.	4433 Aug 01 15:51	15° \mathbb{Q} 03'03	0.55709 AU	min. Earth dist.	4434 Jul 14 02:05	24° \mathbb{B} 33'21	0.54884 AU
inferior conj	4433 Aug 03 13:34	13° \mathbb{Q} 55'50	-4°50'53	morning rise	4434 Jul 23 02:07	20° \mathbb{B} 30'57	
minimum elong	4433 Aug 03 07:31	14° \mathbb{Q} 04'45	4°49'59	direct	4434 Jul 26 09:00	20° \mathbb{B} 07'20	
morning rise	4433 Aug 12 00:43	10° \mathbb{Q} 02'46		morning max el	4434 Aug 07 13:28	25° \mathbb{B} 50'31	21°52'28
direct	4433 Aug 14 21:56	9° \mathbb{Q} 42'34			4434 Aug 11 11:06	0° \mathbb{Q}	
morning max el	4433 Aug 25 12:00	14° \mathbb{Q} 37'35	20°22'41	asc. node	4434 Aug 21 13:22	15° \mathbb{Q} 25'09	
asc. node	4433 Sep 03 16:19	26° \mathbb{Q} 34'28		morning set	4434 Aug 28 13:05	29° \mathbb{Q} 13'37	
	4433 Sep 05 16:27	0° \mathbb{P}			4434 Aug 28 21:57	0° \mathbb{P}	
morning set	4433 Sep 13 03:32	14° \mathbb{P} 25'36					
superior conj	4433 Sep 20 17:49	0° \mathbb{A} 01'40	1°43'33	superior conj	4434 Sep 04 18:15	14° \mathbb{P} 28'09	1°42'36
minimum elong	4433 Sep 20 18:22	0° \mathbb{A} 04'29	1°43'34	minimum elong	4434 Sep 04 17:26	14° \mathbb{P} 23'48	1°42'34
	4433 Sep 20 17:29	0° \mathbb{A}		max. Earth dist.	4434 Sep 08 12:23	22° \mathbb{P} 13'50	1.34700 AU

	4434 Sep 12 10:18	0°♄		superior conj	4435 Aug 20 00:40	29°♄11'35	1°35'20
evening rise	4434 Sep 12 22:50	1°♄00'34		minimum elong	4435 Aug 19 22:53	29°♄01'58	1°35'11
desc. node	4434 Sep 27 07:51	26°♄03'51			4435 Aug 20 09:40	0°♄	
	4434 Sep 29 21:21	0°♄		max. Earth dist.	4435 Aug 22 10:37	4°♄21'26	1.33399 AU
evening max el	4434 Oct 18 01:47	22°♄55'57	26°53'12	evening rise	4435 Aug 27 13:40	14°♄56'29	
	4434 Oct 29 05:34	0°♄			4435 Sep 04 13:01	0°♄	
retrograde	4434 Oct 31 05:13	0°♄12'34		desc. node	4435 Sep 14 04:53	15°♄49'49	
	4434 Nov 02 03:16	30°♄			4435 Sep 24 16:57	0°♄	
evening set	4434 Nov 06 21:53	27°♄32'15		evening max el	4435 Sep 30 13:39	6°♄17'07	27°22'55
min. Earth dist.	4434 Nov 10 21:29	23°♄34'19	0.65681 AU	retrograde	4435 Oct 14 02:54	13°♄35'35	
inferior conj	4434 Nov 12 19:33	21°♄20'55	-1°35'30	evening set	4435 Oct 21 04:24	10°♄56'02	
minimum elong	4434 Nov 12 22:14	21°♄13'08	1°34'23	min. Earth dist.	4435 Oct 24 22:17	7°♄32'14	0.64216 AU
asc. node	4434 Nov 17 12:34	16°♄36'50		inferior conj	4435 Oct 27 08:28	4°♄58'52	-2°37'47
morning rise	4434 Nov 18 23:28	15°♄42'04		minimum elong	4435 Oct 27 12:58	4°♄47'00	2°36'05
direct	4434 Nov 21 18:38	14°♄59'05			4435 Nov 02 02:09	30°♄	
morning max el	4434 Nov 28 07:14	18°♄30'17	18°15'45	morning rise	4435 Nov 02 22:50	29°♄34'50	
	4434 Dec 06 22:36	0°♄		asc. node	4435 Nov 04 09:38	29°♄08'28	
morning set	4434 Dec 17 07:02	16°♄36'21		direct	4435 Nov 05 11:27	29°♄02'33	
desc. node	4434 Dec 24 07:05	27°♄54'14			4435 Nov 08 20:23	0°♄	
	4434 Dec 25 14:34	0°♄		morning max el	4435 Nov 11 23:44	2°♄28'01	17°54'22
				morning set	4435 Nov 29 00:16	28°♄21'12	
superior conj	4435 Jan 01 09:55	10°♄47'01	-0°53'54		4435 Nov 29 23:31	0°♄	
minimum elong	4435 Jan 01 03:14	10°♄20'41	0°53'01	desc. node	4435 Dec 11 04:08	18°♄38'11	
max. Earth dist.	4435 Jan 03 11:48	14°♄03'01	1.45256 AU				
	4435 Jan 13 16:35	0°♄		superior conj	4435 Dec 12 02:47	20°♄10'03	-0°06'34
evening rise	4435 Jan 17 15:28	6°♄10'30		minimum elong	4435 Dec 12 02:01	20°♄06'57	0°06'26
greatest brilliancy	4435 Jan 29 04:12	24°♄04'38	-0.7m	behind sun begin	4435 Dec 11 16:40	19°♄29'02	
	4435 Feb 02 03:15	0°♄		behind sun end	4435 Dec 12 11:23	20°♄44'50	
evening max el	4435 Feb 10 10:16	10°♄41'23	19°21'18	max. Earth dist.	4435 Dec 17 06:19	28°♄24'40	1.44660 AU
asc. node	4435 Feb 13 11:51	13°♄19'37			4435 Dec 18 06:25	0°♄	
retrograde	4435 Feb 17 13:06	14°♄45'54		evening rise	4435 Dec 28 04:00	15°♄24'44	
evening set	4435 Feb 21 00:33	13°♄35'10			4436 Jan 06 18:12	0°♄	
inferior conj	4435 Feb 26 12:30	7°♄42'41	3°20'33	evening max el	4436 Jan 24 13:38	24°♄13'49	20°18'57
minimum elong	4435 Feb 26 10:43	7°♄48'28	3°20'18	asc. node	4436 Jan 31 08:54	28°♄45'21	
min. Earth dist.	4435 Feb 27 20:04	6°♄00'15	0.66423 AU	retrograde	4436 Feb 01 11:16	28°♄51'53	
morning rise	4435 Mar 03 20:36	1°♄28'26		evening set	4436 Feb 05 07:08	27°♄26'56	
	4435 Mar 05 19:05	30°♄		inferior conj	4436 Feb 10 16:15	21°♄21'12	2°55'55
direct	4435 Mar 10 02:52	28°♄41'52		minimum elong	4436 Feb 10 13:53	21°♄29'12	2°55'23
	4435 Mar 14 21:02	0°♄		min. Earth dist.	4436 Feb 11 10:01	20°♄20'52	0.67368 AU
desc. node	4435 Mar 22 06:18	5°♄45'23		morning rise	4436 Feb 15 20:25	15°♄07'05	
morning max el	4435 Mar 22 16:18	6°♄10'26	26°01'59	direct	4436 Feb 21 13:32	12°♄34'02	
	4435 Apr 10 01:55	0°♄		morning max el	4436 Mar 04 00:59	19°♄25'54	24°39'45
morning set	4435 Apr 27 20:22	29°♄45'46		desc. node	4436 Mar 08 03:20	23°♄55'34	
	4435 Apr 27 23:27	0°♄			4436 Mar 13 00:39	0°♄	
max. Earth dist.	4435 May 01 18:07	7°♄09'09	1.35391 AU		4436 Apr 02 05:10	0°♄	
				morning set	4436 Apr 09 01:20	11°♄39'24	
superior conj	4435 May 07 00:27	17°♄35'29	-0°53'54	max. Earth dist.	4436 Apr 12 16:21	18°♄09'46	1.37324 AU
minimum elong	4435 May 07 03:23	17°♄50'19	0°53'22		4436 Apr 18 23:14	0°♄	
asc. node	4435 May 12 11:09	28°♄47'43					
	4435 May 13 01:07	0°♄		superior conj	4436 Apr 19 09:15	0°♄48'34	-1°22'20
evening rise	4435 May 14 20:41	3°♄44'34		minimum elong	4436 Apr 19 13:36	1°♄09'42	1°21'42
	4435 May 29 23:47	0°♄		evening rise	4436 Apr 27 22:36	17°♄47'51	
evening max el	4435 Jun 02 02:40	3°♄27'54	20°22'36	asc. node	4436 Apr 28 08:12	18°♄35'40	
retrograde	4435 Jun 13 00:14	8°♄47'27			4436 May 04 06:39	0°♄	
evening set	4435 Jun 14 23:43	8°♄37'39		evening max el	4436 May 14 18:42	15°♄08'33	19°18'48
desc. node	4435 Jun 18 05:33	7°♄42'56		retrograde	4436 May 23 23:00	19°♄36'54	
inferior conj	4435 Jun 24 03:54	4°♄39'42	-1°45'20	evening set	4436 May 25 22:45	19°♄25'13	
minimum elong	4435 Jun 23 22:57	4°♄46'56	1°43'33	inferior conj	4436 Jun 03 10:34	15°♄17'05	0°11'45
min. Earth dist.	4435 Jun 25 14:08	3°♄49'41	0.55001 AU	minimum elong	4436 Jun 03 11:04	15°♄16'16	0°11'34
morning rise	4435 Jul 02 21:04	0°♄27'57		transit middle	4436 Jun 03 11:04	15°♄16'16	0°11'34
	4435 Jul 05 06:07	30°♄		transit begin	4436 Jun 03 08:24	15°♄20'40	
direct	4435 Jul 06 19:07	29°♄54'45		transit end	4436 Jun 03 13:43	15°♄11'52	
	4435 Jul 08 07:54	0°♄		desc. node	4436 Jun 04 02:34	14°♄50'36	
morning max el	4435 Jul 20 06:16	6°♄27'25	23°34'26	min. Earth dist.	4436 Jun 06 04:42	13°♄28'29	0.56054 AU
	4435 Aug 05 22:45	0°♄		morning rise	4436 Jun 11 20:23	10°♄31'44	
asc. node	4435 Aug 08 10:24	4°♄44'21		direct	4436 Jun 16 16:26	9°♄38'07	
morning set	4435 Aug 13 00:30	14°♄06'34		morning max el	4436 Jun 30 20:06	16°♄50'01	25°15'39

	4436 Jul 11 13:57	0°☿	morning max el	4437 Jun 12 12:45	27°☿25'22	26°40'19
asc. node	4436 Jul 25 07:28	24°☿24'32		4437 Jun 15 00:34	0°☿	
morning set	4436 Jul 27 12:11	28°☿59'40		4437 Jul 05 01:00	0°☿	
	4436 Jul 27 23:32	0°☿	morning set	4437 Jul 11 22:28	13°☿46'46	
			asc. node	4437 Jul 12 04:30	14°☿18'38	
superior conj	4436 Aug 03 10:43	14°☿04'39 1°22'43				
minimum elong	4436 Aug 03 08:27	13°☿52'14 1°22'25	superior conj	4437 Jul 18 22:22	28°☿59'40 1°05'28	
max. Earth dist.	4436 Aug 04 16:35	16°☿47'53 1.32525 AU	minimum elong	4437 Jul 18 20:06	28°☿47'08 1°05'05	
evening rise	4436 Aug 10 13:33	29°☿18'22	max. Earth dist.	4437 Jul 19 03:12	29°☿26'19 1.32066 AU	
	4436 Aug 10 21:39	0°☿		4437 Jul 19 09:18	0°☿	
	4436 Aug 27 15:48	0°☿	evening rise	4437 Jul 25 19:33	13°☿56'18	
desc. node	4436 Aug 31 01:55	5°☿00'57		4437 Aug 02 22:44	0°☿	
evening max el	4436 Sep 11 23:00	19°☿10'12 27°23'01	desc. node	4437 Aug 17 22:55	23°☿22'11	
retrograde	4436 Sep 25 17:54	26°☿25'08		4437 Aug 23 17:44	0°☿	
evening set	4436 Oct 02 22:13	23°☿57'30	evening max el	4437 Aug 25 03:02	1°☿21'37 26°49'53	
min. Earth dist.	4436 Oct 06 13:05	21°☿02'19 0.62442 AU	retrograde	4437 Sep 08 00:54	8°☿31'52	
inferior conj	4436 Oct 09 10:31	18°☿18'57 -3°38'18	evening set	4437 Sep 14 22:55	6°☿28'28	
minimum elong	4436 Oct 09 16:22	18°☿05'08 3°36'31	min. Earth dist.	4437 Sep 18 17:07	3°☿50'52 0.60441 AU	
morning rise	4436 Oct 16 12:12	13°☿12'54	inferior conj	4437 Sep 21 22:16	1°☿11'46 -4°31'12	
direct	4436 Oct 18 21:05	12°☿47'41	minimum elong	4437 Sep 22 04:06	0°☿59'42 4°30'00	
asc. node	4436 Oct 21 06:40	13°☿14'18		4437 Sep 23 09:31	30°☿	
morning max el	4436 Oct 25 15:57	16°☿15'33 17°50'46	morning rise	4437 Sep 29 11:14	26°☿27'01	
	4436 Nov 04 07:38	0°☿	direct	4437 Oct 01 19:35	26°☿05'53	
morning set	4436 Nov 10 15:48	11°☿10'10	asc. node	4437 Oct 08 03:42	28°☿47'39	
	4436 Nov 21 09:47	0°☿	morning max el	4437 Oct 09 04:40	29°☿44'19 18°06'15	
				4437 Oct 09 11:01	0°☿	
superior conj	4436 Nov 21 21:02	0°☿47'43 0°35'48	morning set	4437 Oct 24 23:25	24°☿44'40	
minimum elong	4436 Nov 22 00:13	1°☿01'13 0°35'20		4437 Oct 27 18:54	0°☿	
desc. node	4436 Nov 27 01:11	9°☿25'13				
max. Earth dist.	4436 Nov 28 21:47	12°☿26'59 1.43409 AU	superior conj	4437 Nov 03 17:01	12°☿40'18 1°08'00	
evening rise	4436 Dec 06 15:11	24°☿42'22	minimum elong	4437 Nov 03 21:05	12°☿58'27 1°07'30	
	4436 Dec 10 01:35	0°☿	max. Earth dist.	4437 Nov 11 08:40	25°☿56'03 1.41647 AU	
	4436 Dec 30 20:50	0°☿	desc. node	4437 Nov 13 22:13	0°☿11'47	
evening max el	4437 Jan 06 11:34	7°☿47'46 21°28'48		4437 Nov 13 19:21	0°☿	
retrograde	4437 Jan 15 08:52	13°☿04'14	evening rise	4437 Nov 16 16:15	4°☿40'23	
asc. node	4437 Jan 17 05:56	12°☿45'12		4437 Dec 03 08:50	0°☿	
evening set	4437 Jan 19 14:51	11°☿24'01	evening max el	4437 Dec 20 04:34	21°☿23'53 22°46'31	
inferior conj	4437 Jan 24 23:03	5°☿08'02 2°22'06	retrograde	4437 Dec 30 04:21	27°☿19'44	
minimum elong	4437 Jan 24 20:37	5°☿16'27 2°21'22	evening set	4438 Jan 03 22:06	25°☿23'27	
min. Earth dist.	4437 Jan 25 04:24	4°☿49'32 0.67903 AU	asc. node	4438 Jan 04 02:56	25°☿13'11	
	4437 Jan 28 23:45	30°☿	inferior conj	4438 Jan 09 06:58	19°☿00'35 1°40'32	
morning rise	4437 Jan 30 02:12	28°☿55'46	minimum elong	4438 Jan 09 04:56	19°☿07'39 1°39'47	
direct	4437 Feb 04 04:46	26°☿42'46	min. Earth dist.	4438 Jan 09 00:52	19°☿21'41 0.68050 AU	
	4437 Feb 11 09:18	0°☿	morning rise	4438 Jan 14 11:40	12°☿51'51	
morning max el	4437 Feb 14 10:00	2°☿46'46 23°10'46	direct	4438 Jan 18 23:36	11°☿01'43	
desc. node	4437 Feb 23 00:23	12°☿55'06	morning max el	4438 Jan 27 23:02	16°☿16'15 21°44'21	
	4437 Mar 07 03:05	0°☿		4438 Feb 08 02:18	0°☿	
morning set	4437 Mar 21 05:44	22°☿19'41	desc. node	4438 Feb 09 21:25	2°☿30'14	
max. Earth dist.	4437 Mar 25 11:24	29°☿32'34 1.39498 AU		4438 Feb 28 04:41	0°☿	
	4437 Mar 25 17:44	0°☿	morning set	4438 Mar 01 05:29	1°☿38'37	
			max. Earth dist.	4438 Mar 07 10:58	11°☿47'00 1.41631 AU	
superior conj	4437 Apr 02 03:28	13°☿16'42 -1°47'00				
minimum elong	4437 Apr 02 08:18	13°☿38'59 1°46'31	superior conj	4438 Mar 15 02:15	24°☿48'27 -2°03'49	
	4437 Apr 10 23:01	0°☿	minimum elong	4438 Mar 15 05:26	25°☿02'24 2°03'41	
evening rise	4437 Apr 11 16:02	1°☿21'51		4438 Mar 18 00:44	0°☿	
asc. node	4437 Apr 15 05:14	8°☿07'29	evening rise	4438 Mar 25 21:26	14°☿18'25	
evening max el	4437 Apr 27 20:50	27°☿27'14 18°35'07	asc. node	4438 Apr 02 02:16	27°☿17'39	
	4437 May 01 03:26	0°☿		4438 Apr 03 16:45	0°☿	
retrograde	4437 May 05 15:48	1°☿17'22	evening max el	4438 Apr 11 05:43	10°☿15'42 18°11'29	
evening set	4437 May 07 21:44	0°☿59'18	retrograde	4438 Apr 18 03:19	13°☿44'18	
	4437 May 10 10:12	30°☿	evening set	4438 Apr 20 15:54	13°☿17'04	
inferior conj	4437 May 15 13:32	26°☿32'21 1°46'26	inferior conj	4438 Apr 27 13:42	8°☿29'12 2°49'23	
minimum elong	4437 May 15 16:53	26°☿25'52 1°45'24	minimum elong	4438 Apr 27 17:01	8°☿21'44 2°48'39	
min. Earth dist.	4437 May 18 22:37	23°☿57'11 0.57823 AU	min. Earth dist.	4438 Apr 30 22:21	5°☿28'59 0.59961 AU	
desc. node	4437 May 21 23:35	21°☿56'37	morning rise	4438 May 04 15:41	2°☿43'33	
morning rise	4437 May 23 08:50	21°☿12'48	desc. node	4438 May 08 20:36	0°☿59'06	
direct	4437 May 29 03:45	19°☿48'21	direct	4438 May 11 03:36	0°☿44'21	

morning max el	4438 May 25 11:42	8°♄36'19	27°34'50		4439 May 15 21:03	0°♄	
	4438 Jun 10 19:31	0°♄			4439 Jun 03 19:14	0°♄	
morning set	4438 Jun 26 05:38	28°♄22'31		morning set	4439 Jun 10 07:43	12°♄40'32	
	4438 Jun 27 00:17	0°♄		asc. node	4439 Jun 15 22:35	24°♄28'56	
asc. node	4438 Jun 29 01:32	4°♄21'38		max. Earth dist.	4439 Jun 15 23:07	24°♄31'50	1.32375 AU
max. Earth dist.	4438 Jul 02 14:42	12°♄05'18	1.32015 AU				
				superior conj	4439 Jun 17 19:34	28°♄32'53	0°19'31
superior conj	4438 Jul 03 09:54	13°♄50'57	0°44'12	minimum elong	4439 Jun 17 18:40	28°♄27'59	0°19'20
minimum elong	4438 Jul 03 08:05	13°♄41'00	0°43'50		4439 Jun 18 11:32	0°♄	
evening rise	4438 Jul 10 05:22	28°♄42'53		evening rise	4439 Jun 24 17:00	13°♄31'33	
	4438 Jul 10 19:55	0°♄			4439 Jul 02 23:23	0°♄	
	4438 Jul 27 11:40	0°♄		evening max el	4439 Jul 19 13:28	23°♄23'36	24°16'17
desc. node	4438 Aug 04 19:54	10°♄33'27		desc. node	4439 Jul 22 16:54	26°♄07'15	
evening max el	4438 Aug 06 23:29	12°♄43'41	25°44'45		4439 Jul 30 07:13	0°♄	
retrograde	4438 Aug 20 22:34	19°♄50'14		retrograde	4439 Aug 02 09:21	0°♄21'55	
evening set	4438 Aug 27 01:43	18°♄21'30			4439 Aug 05 12:05	30°♄	
min. Earth dist.	4438 Aug 31 11:36	15°♄44'34	0.58379 AU	evening set	4439 Aug 07 04:22	29°♄30'47	
inferior conj	4438 Sep 03 16:14	13°♄27'31	-5°06'37	min. Earth dist.	4439 Aug 13 00:13	26°♄35'48	0.56530 AU
minimum elong	4438 Sep 03 19:23	13°♄21'51	5°06'21	inferior conj	4439 Aug 15 14:07	24°♄58'54	-5°09'53
morning rise	4438 Sep 11 15:20	9°♄06'08		minimum elong	4439 Aug 15 11:36	25°♄02'52	5°09'44
direct	4438 Sep 14 02:27	8°♄46'47		morning rise	4439 Aug 23 21:25	20°♄58'14	
morning max el	4438 Sep 22 10:37	12°♄45'32	18°42'13	direct	4439 Aug 26 14:03	20°♄38'59	
asc. node	4438 Sep 25 00:45	15°♄34'42		morning max el	4439 Sep 05 06:44	25°♄10'12	19°39'51
	4438 Oct 04 03:07	0°♄			4439 Sep 09 13:13	0°♄	
morning set	4438 Oct 08 18:15	8°♄50'55		asc. node	4439 Sep 11 21:48	3°♄20'32	
				morning set	4439 Sep 22 20:52	23°♄19'37	
superior conj	4438 Oct 17 10:00	25°♄34'22	1°29'19		4439 Sep 26 03:59	0°♄	
minimum elong	4438 Oct 17 13:05	25°♄48'57	1°29'03				
	4438 Oct 19 18:58	0°♄		superior conj	4439 Sep 30 18:39	9°♄15'04	1°40'48
max. Earth dist.	4438 Oct 24 14:45	8°♄41'45	1.39595 AU	minimum elong	4439 Sep 30 20:09	9°♄22'25	1°40'45
evening rise	4438 Oct 28 15:27	15°♄38'47		max. Earth dist.	4439 Oct 06 19:20	20°♄49'55	1.37512 AU
desc. node	4438 Oct 31 19:13	20°♄54'10		evening rise	4439 Oct 10 13:30	27°♄40'35	
	4438 Nov 06 12:00	0°♄			4439 Oct 11 21:02	0°♄	
	4438 Nov 28 03:01	0°♄		desc. node	4439 Oct 18 16:14	11°♄28'46	
evening max el	4438 Dec 02 18:12	5°♄02'40	24°06'24		4439 Oct 30 22:08	0°♄	
retrograde	4438 Dec 13 20:28	11°♄33'53		evening max el	4439 Nov 15 06:37	18°♄45'04	25°21'41
evening set	4438 Dec 19 03:16	9°♄21'46		retrograde	4439 Nov 27 08:22	25°♄42'40	
asc. node	4438 Dec 21 23:58	6°♄20'30		evening set	4439 Dec 03 04:48	23°♄16'26	
min. Earth dist.	4438 Dec 23 21:11	3°♄53'23	0.67835 AU	min. Earth dist.	4439 Dec 07 15:06	18°♄22'21	0.67274 AU
inferior conj	4438 Dec 24 14:11	2°♄55'57	0°52'15	inferior conj	4439 Dec 08 18:58	16°♄52'13	-0°01'44
minimum elong	4438 Dec 24 12:59	3°♄00'01	0°51'45	minimum elong	4439 Dec 08 19:01	16°♄52'05	0°01'43
	4438 Dec 26 20:07	30°♄		transit middle	4439 Dec 08 19:01	16°♄52'05	0°01'43
morning rise	4438 Dec 29 22:44	26°♄52'27		transit begin	4439 Dec 08 16:14	17°♄01'04	
direct	4439 Jan 02 20:56	25°♄24'56		transit end	4439 Dec 08 21:47	16°♄43'06	
	4439 Jan 10 20:22	0°♄		asc. node	4439 Dec 08 21:00	16°♄45'39	
morning max el	4439 Jan 10 19:06	29°♄56'49	20°27'13	morning rise	4439 Dec 14 09:31	10°♄56'02	
desc. node	4439 Jan 27 18:26	22°♄30'31		direct	4439 Dec 17 19:36	9°♄48'37	
	4439 Feb 01 18:18	0°♄		morning max el	4439 Dec 24 23:07	13°♄48'37	19°23'35
morning set	4439 Feb 08 05:56	9°♄56'15			4440 Jan 06 05:10	0°♄	
max. Earth dist.	4439 Feb 17 17:44	24°♄55'03	1.43436 AU	greatest brilliancy	4440 Jan 07 05:28	1°♄30'50	-0.7m
	4439 Feb 20 20:54	0°♄		desc. node	4440 Jan 14 15:29	12°♄49'24	
				morning set	4440 Jan 18 04:22	18°♄17'05	
superior conj	4439 Feb 24 00:42	5°♄12'21	-2°07'35		4440 Jan 25 17:12	0°♄	
minimum elong	4439 Feb 23 23:10	5°♄05'58	2°07'33	max. Earth dist.	4440 Jan 31 07:01	8°♄45'27	1.44695 AU
evening rise	4439 Mar 08 10:26	26°♄27'26					
	4439 Mar 10 10:56	0°♄		superior conj	4440 Feb 03 21:46	14°♄29'46	-1°53'08
asc. node	4439 Mar 19 23:17	15°♄58'26		minimum elong	4440 Feb 03 14:14	13°♄59'43	1°52'37
evening max el	4439 Mar 25 17:55	23°♄24'26	18°07'27		4440 Feb 13 11:26	0°♄	
retrograde	4439 Apr 01 05:27	26°♄46'55		evening rise	4440 Feb 18 02:46	7°♄41'16	
evening set	4439 Apr 04 00:08	26°♄08'50			4440 Mar 02 21:24	0°♄	
inferior conj	4439 Apr 10 07:51	21°♄00'58	3°23'33	asc. node	4440 Mar 05 20:18	4°♄00'55	
minimum elong	4439 Apr 10 09:42	20°♄56'12	3°23'20	evening max el	4440 Mar 08 06:33	6°♄46'14	18°22'18
min. Earth dist.	4439 Apr 13 06:21	18°♄00'17	0.62132 AU	retrograde	4440 Mar 14 17:37	10°♄15'54	
morning rise	4439 Apr 16 17:43	14°♄59'21		evening set	4440 Mar 17 18:19	9°♄25'50	
direct	4439 Apr 23 13:54	12°♄30'26		inferior conj	4440 Mar 23 15:51	3°♄59'24	3°35'09
desc. node	4439 Apr 25 17:37	12°♄44'05		minimum elong	4440 Mar 23 16:00	3°♄58'59	3°35'08
morning max el	4439 May 07 16:48	20°♄29'49	27°52'16	min. Earth dist.	4440 Mar 25 23:42	1°♄19'20	0.64091 AU

	4440 Mar 27 05:05	30° K		evening set	4441 Mar 01 19:14	23° K 00'49	
morning rise	4440 Mar 29 12:50	27° K 49'41		inferior conj	4441 Mar 07 09:53	17° K 17'25	3°29'44
direct	4440 Apr 05 08:44	25° K 03'00		minimum elong	4441 Mar 07 08:40	17° K 21'14	3°29'38
desc. node	4440 Apr 11 14:40	26° K 58'16		min. Earth dist.	4441 Mar 09 02:07	15° K 11'47	0.65692 AU
	4440 Apr 15 19:57	0° Y		morning rise	4441 Mar 12 21:41	11° K 04'14	
morning max el	4440 Apr 19 01:38	3° Y 00'19	27°32'51	direct	4441 Mar 19 10:26	8° K 13'55	
	4440 May 09 05:56	0° B		desc. node	4441 Mar 29 11:43	13° K 08'02	
morning set	4440 May 24 02:10	26° B 32'51		morning max el	4441 Apr 01 11:31	15° K 56'34	26°42'08
	4440 May 25 19:42	0° II			4441 Apr 13 01:50	0° Y	
max. Earth dist.	4440 May 29 00:23	6° II 33'22	1.33180 AU		4441 May 02 01:33	0° B	
				morning set	4441 May 07 09:44	9° B 49'40	
superior conj	4440 Jun 01 01:31	12° II 59'28	-0°07'52	max. Earth dist.	4441 May 11 15:19	18° B 04'01	1.34451 AU
minimum elong	4440 Jun 01 01:54	13° II 01'35	0°07'48				
behind sun begin	4440 May 31 21:09	12° II 36'14		superior conj	4441 May 16 01:32	27° B 04'11	-0°36'55
behind sun end	4440 Jun 01 06:39	13° II 26'57		minimum elong	4441 May 16 03:30	27° B 14'25	0°36'32
asc. node	4440 Jun 01 19:37	14° II 36'15			4441 May 17 11:19	0° II	
evening rise	4440 Jun 08 04:35	28° II 15'58		asc. node	4441 May 19 16:39	4° II 39'45	
	4440 Jun 09 00:21	0° E		evening rise	4441 May 23 14:11	12° II 50'13	
	4440 Jun 26 15:40	0° Q			4441 Jun 01 11:00	0° E	
evening max el	4440 Jun 30 03:01	3° Q 46'36	22°39'03	evening max el	4441 Jun 12 00:05	14° E 25'54	21°08'05
desc. node	4440 Jul 08 13:55	9° Q 28'51		retrograde	4441 Jun 23 20:32	20° E 15'15	
retrograde	4440 Jul 13 07:31	10° Q 20'18		desc. node	4441 Jun 25 10:56	20° E 09'14	
evening set	4440 Jul 16 14:05	9° Q 56'46		evening set	4441 Jun 26 02:25	20° E 03'30	
min. Earth dist.	4440 Jul 24 10:53	6° Q 29'40	0.55246 AU	inferior conj	4441 Jul 05 11:03	16° E 05'33	-2°52'47
inferior conj	4440 Jul 25 17:29	5° Q 46'00	-4°25'48	minimum elong	4441 Jul 05 03:22	16° E 16'20	2°50'17
minimum elong	4440 Jul 25 09:35	5° Q 57'18	4°24'08	min. Earth dist.	4441 Jul 05 21:52	15° E 50'19	0.54818 AU
morning rise	4440 Aug 03 07:11	1° Q 55'27		morning rise	4441 Jul 14 04:38	12° E 07'31	
direct	4440 Aug 06 07:49	1° Q 34'20		direct	4441 Jul 17 17:21	11° E 40'39	
morning max el	4440 Aug 17 14:56	6° Q 49'44	20°58'44	morning max el	4441 Jul 30 12:02	17° E 45'30	22°34'49
asc. node	4440 Aug 28 18:51	21° Q 50'55			4441 Aug 09 07:53	0° Q	
	4440 Sep 02 04:46	0° np		asc. node	4441 Aug 15 15:55	10° Q 55'12	
morning set	4440 Sep 06 04:30	8° np 02'21		morning set	4441 Aug 21 15:05	22° Q 53'21	
					4441 Aug 24 23:23	0° np	
superior conj	4440 Sep 13 14:23	23° np 27'55	1°44'00	superior conj	4441 Aug 28 17:41	8° np 02'42	1°40'13
minimum elong	4440 Sep 13 14:18	23° np 27'32	1°43'59	minimum elong	4441 Aug 28 16:24	7° np 55'50	1°40'08
	4440 Sep 16 19:36	0° Q		max. Earth dist.	4441 Aug 31 21:32	14° np 40'59	1.34105 AU
max. Earth dist.	4440 Sep 18 04:11	2° Q 41'44	1.35633 AU	evening rise	4441 Sep 05 14:56	24° np 13'02	
evening rise	4440 Sep 22 06:48	10° Q 35'53			4441 Sep 08 15:17	0° Q	
	4440 Oct 03 09:52	0° ml		desc. node	4441 Sep 21 10:17	21° Q 51'03	
desc. node	4440 Oct 04 13:16	1° ml 49'54			4441 Sep 26 23:10	0° ml	
	4440 Oct 25 09:19	0° Z		evening max el	4441 Oct 10 07:57	15° ml 59'51	27°09'05
evening max el	4440 Oct 27 19:13	2° Z 26'59	26°25'06	retrograde	4441 Oct 23 16:05	23° ml 17'16	
retrograde	4440 Nov 09 15:08	9° Z 39'29		evening set	4441 Oct 30 12:59	20° ml 36'28	
evening set	4440 Nov 16 00:47	7° Z 02'56		min. Earth dist.	4441 Nov 03 10:08	16° ml 53'11	0.65105 AU
min. Earth dist.	4440 Nov 20 04:14	2° Z 44'07	0.66364 AU	inferior conj	4441 Nov 05 13:14	14° ml 30'42	-2°01'52
inferior conj	4440 Nov 21 19:23	0° Z 45'20	-1°00'18	minimum elong	4441 Nov 05 16:42	14° ml 21'01	2°00'28
minimum elong	4440 Nov 21 21:02	0° Z 40'20	0°59'35	morning rise	4441 Nov 11 21:25	8° ml 57'26	
	4440 Nov 22 10:23	30° Rml		asc. node	4441 Nov 11 15:07	9° ml 05'10	
asc. node	4440 Nov 24 18:03	27° ml 23'40		direct	4441 Nov 14 13:33	8° ml 19'20	
morning rise	4440 Nov 27 17:54	24° ml 59'03		morning max el	4441 Nov 21 01:03	11° ml 46'58	18°04'26
direct	4440 Nov 30 17:52	24° ml 08'14			4441 Dec 03 18:14	0° Z	
morning max el	4440 Dec 07 09:52	27° ml 47'08	18°35'40	morning set	4441 Dec 09 01:47	8° Z 46'47	
	4440 Dec 09 10:24	0° Z		desc. node	4441 Dec 18 09:34	24° Z 01'57	
morning set	4440 Dec 28 00:14	27° Z 47'18			4441 Dec 22 02:54	0° Z	
	4440 Dec 29 09:42	0° Z		superior conj	4441 Dec 23 08:31	1° Z 57'50	-0°33'43
desc. node	4440 Dec 31 12:32	3° Z 21'17		minimum elong	4441 Dec 23 04:20	1° Z 41'11	0°33'08
superior conj	4441 Jan 13 01:59	23° Z 07'09	-1°19'29	max. Earth dist.	4441 Dec 26 20:33	7° Z 30'01	1.45096 AU
minimum elong	4441 Jan 12 17:00	22° Z 31'54	1°18'29	evening rise	4442 Jan 08 16:08	27° Z 27'58	
max. Earth dist.	4441 Jan 13 00:50	23° Z 02'40	1.45267 AU		4442 Jan 10 07:29	0° Z	
	4441 Jan 17 11:12	0° Z		greatest brilliancy	4442 Jan 22 01:28	17° Z 56'18	-0.7m
evening rise	4441 Jan 28 19:49	17° Z 57'52			4442 Jan 30 16:20	0° K	
	4441 Feb 05 09:09	0° K		evening max el	4442 Feb 02 23:27	3° K 46'59	19°44'11
greatest brilliancy	4441 Feb 06 09:49	1° K 37'28	-0.8m	asc. node	4442 Feb 07 14:22	7° K 22'52	
evening max el	4441 Feb 19 17:04	20° K 15'14	18°55'04	retrograde	4442 Feb 10 09:22	8° K 04'29	
asc. node	4441 Feb 20 17:20	21° K 13'45		evening set	4442 Feb 14 00:20	6° K 47'39	
retrograde	4441 Feb 26 11:56	24° K 03'48					

inferior conj	4442 Feb 19 10:48	0°  49'16	3°11'19		4443 Jan 03 15:59	0° 	
minimum elong	4442 Feb 19 08:43	0°  56'12	3°10'57	evening max el	4443 Jan 17 00:28	17°  20'13	20°47'20
	4442 Feb 20 01:38	30°  24'47		retrograde	4443 Jan 25 07:35	22°  14'15	
min. Earth dist.	4442 Feb 20 12:17	29°  24'47	0.66878 AU	asc. node	4443 Jan 25 11:24	22°  14'07	
morning rise	4442 Feb 24 16:52	24°  35'09		evening set	4443 Jan 29 07:37	20°  42'42	
direct	4442 Mar 02 17:53	21°  53'24		inferior conj	4443 Feb 03 16:06	14°  32'00	2°42'37
morning max el	4442 Mar 14 20:44	29°  07'16	25°28'33	minimum elong	4443 Feb 03 13:39	14°  40'24	2°41'58
	4442 Mar 15 17:12	0°  41'19		min. Earth dist.	4443 Feb 04 04:20	13°  49'59	0.67645 AU
desc. node	4442 Mar 16 08:46	0°  41'19		morning rise	4443 Feb 08 19:31	8°  18'35	
	4442 Apr 06 21:36	0°  41'19		direct	4443 Feb 14 06:26	5°  53'49	
morning set	4442 Apr 20 01:54	22°  17'16		morning max el	4443 Feb 25 05:24	12°  26'02	24°02'12
max. Earth dist.	4442 Apr 23 19:05	29°  09'57	1.36172 AU	desc. node	4443 Mar 03 05:48	19°  14'49	
	4442 Apr 24 05:40	0°  08'11			4443 Mar 11 08:14	0°  41'22	
					4443 Mar 30 17:13	0°  41'22	
superior conj	4442 Apr 29 16:47	10°  38'11	-1°06'13	morning set	4443 Apr 01 21:06	3°  55'29	
minimum elong	4442 Apr 29 20:22	10°  56'04	1°05'36	max. Earth dist.	4443 Apr 05 15:20	10°  17'06	1.38239 AU
asc. node	4442 May 06 13:41	24°  34'27					
evening rise	4442 May 07 19:35	27°  06'35		superior conj	4443 Apr 12 19:51	23°  32'59	-1°33'28
	4442 May 09 05:57	0°  06'35		minimum elong	4443 Apr 13 00:34	23°  55'29	1°32'52
evening max el	4442 May 25 08:58	25°  41'29	19°53'01		4443 Apr 16 04:12	0°  58'24	
	4442 May 31 20:05	0°  58'24		evening rise	4443 Apr 21 18:16	10°  58'24	
retrograde	4442 Jun 04 12:18	0°  58'24		asc. node	4443 Apr 23 10:42	14°  16'05	
evening set	4442 Jun 06 10:51	0°  58'24			4443 May 02 05:38	0°  58'24	
	4442 Jun 08 08:33	30°  38'11		evening max el	4443 May 08 05:30	7°  38'11	18°57'39
desc. node	4442 Jun 12 07:58	28°  14'12		retrograde	4443 May 16 18:31	11°  48'49	
inferior conj	4442 Jun 15 09:00	26°  27'09	-0°54'20	evening set	4443 May 18 20:26	11°  48'49	
minimum elong	4442 Jun 15 06:29	26°  30'59	0°53'23	inferior conj	4443 May 26 23:43	7°  19'04	0°55'39
min. Earth dist.	4442 Jun 17 10:27	25°  11'49	0.55348 AU	minimum elong	4443 May 27 01:50	7°  15'19	0°54'54
morning rise	4442 Jun 24 00:10	22°  02'33		min. Earth dist.	4443 May 30 02:10	5°  08'37	0.56735 AU
direct	4442 Jun 28 07:06	21°  12'13		desc. node	4443 May 30 04:59	5°  03'53	
morning max el	4442 Jul 12 02:39	28°  12'18	24°18'30	morning rise	4443 Jun 04 03:58	2°  18'19	
	4442 Jul 13 21:52	0°  12'52		direct	4443 Jun 09 09:47	1°  12'52	
	4442 Aug 02 08:08	0°  12'52		morning max el	4443 Jun 23 17:12	8°  37'08	25°54'45
asc. node	4442 Aug 02 12:58	0°  12'52			4443 Jul 09 17:37	0°  12'52	
morning set	4442 Aug 06 02:49	7°  07'07		asc. node	4443 Jul 20 09:59	20°  07'07	
				morning set	4443 Jul 21 14:05	22°  07'07	
					4443 Jul 25 00:06	0°  07'07	
superior conj	4442 Aug 13 01:53	22°  07'07	1°30'35	superior conj	4443 Jul 28 12:48	7°  07'07	1°15'55
minimum elong	4442 Aug 12 23:50	22°  07'07	1°30'22	minimum elong	4443 Jul 28 10:29	7°  07'07	1°15'35
max. Earth dist.	4442 Aug 14 23:36	26°  07'07	1.32981 AU	max. Earth dist.	4443 Jul 29 07:54	9°  07'07	1.32274 AU
	4442 Aug 16 09:38	0°  07'07		evening rise	4443 Aug 04 12:43	22°  07'07	
evening rise	4442 Aug 20 09:59	8°  07'07			4443 Aug 08 01:23	0°  07'07	
	4442 Sep 01 01:41	0°  07'07		desc. node	4443 Aug 25 23:36	0°  07'07	
desc. node	4442 Sep 08 07:18	11°  23'46		evening max el	4443 Aug 26 04:18	0°  07'07	
evening max el	4442 Sep 22 19:07	29°  10'59	27°26'48	retrograde	4443 Sep 05 02:15	11°  23'46	27°13'00
	4442 Sep 23 16:15	0°  07'07		retrograde	4443 Sep 18 22:35	19°  23'46	
retrograde	4442 Oct 06 10:45	6°  27'34		evening set	4443 Sep 26 01:42	16°  23'46	
evening set	4442 Oct 13 14:33	3°  51'35		min. Earth dist.	4443 Sep 29 16:42	13°  23'46	0.61610 AU
min. Earth dist.	4442 Oct 17 06:42	0°  41'06	0.63503 AU	inferior conj	4443 Oct 02 18:17	11°  23'46	-4°02'09
	4442 Oct 17 23:20	30°  27'34		minimum elong	4443 Oct 03 00:22	10°  23'46	4°00'32
inferior conj	4442 Oct 19 21:54	28°  02'11	-3°03'55	morning rise	4443 Oct 10 00:53	6°  23'46	
minimum elong	4442 Oct 20 03:04	27°  02'11	3°02'07	direct	4443 Oct 12 09:06	5°  23'46	
morning rise	4442 Oct 26 17:02	22°  02'11		asc. node	4443 Oct 16 09:13	7°  23'46	
direct	4442 Oct 29 03:49	22°  02'11		morning max el	4443 Oct 19 09:01	9°  23'46	17°55'00
asc. node	4442 Oct 29 12:10	22°  02'11			4443 Nov 01 20:54	0°  23'46	
morning max el	4442 Nov 04 17:49	25°  02'11	17°50'37	morning set	4443 Nov 04 04:23	4°  23'46	
	4442 Nov 08 08:46	0°  23'46					
morning set	4442 Nov 21 05:22	21°  01'59		superior conj	4443 Nov 14 17:13	23°  01'59	0°50'47
	4442 Nov 26 10:05	0°  23'46		minimum elong	4443 Nov 14 21:06	23°  01'59	0°50'17
superior conj	4442 Dec 03 11:35	11°  51'33	0°12'29		4443 Nov 18 18:56	0°  23'46	
minimum elong	4442 Dec 03 12:54	11°  51'33	0°12'18	max. Earth dist.	4443 Nov 22 04:04	5°  51'33	1.42706 AU
behind sun begin	4442 Dec 03 06:37	11°  51'33		desc. node	4443 Nov 22 03:36	5°  51'33	
behind sun end	4442 Dec 03 19:10	12°  51'33		evening rise	4443 Nov 28 17:35	16°  51'33	
desc. node	4442 Dec 05 06:36	14°  51'33			4443 Dec 07 17:56	0°  51'33	
max. Earth dist.	4442 Dec 09 14:39	21°  51'33	1.44203 AU		4443 Dec 29 23:05	0°  51'33	
	4442 Dec 14 19:09	0°  51'33		evening max el	4443 Dec 30 20:01	0°  51'33	
evening rise	4442 Dec 19 02:09	6°  51'33					

retrograde	4444 Jan 09 04:35	6° \approx 28'28		evening max el	4444 Dec 12 11:22	14° \approx 31'44	23°20'36
asc. node	4444 Jan 12 08:26	5° \approx 35'05		retrograde	4444 Dec 22 22:50	20° \approx 43'43	
evening set	4444 Jan 13 15:19	4° \approx 41'27		evening set	4444 Dec 27 21:52	18° \approx 40'52	
	4444 Jan 17 19:07	30° \approx 30'		asc. node	4444 Dec 29 05:29	17° \approx 25'59	
inferior conj	4444 Jan 18 23:37	28° \approx 21'49	2°05'22	inferior conj	4445 Jan 02 07:28	12° \approx 16'09	1°20'49
minimum elong	4444 Jan 18 21:17	28° \approx 29'53	2°04'35	minimum elong	4445 Jan 02 05:44	12° \approx 22'08	1°20'09
min. Earth dist.	4444 Jan 18 23:57	28° \approx 20'37	0.68010 AU	min. Earth dist.	4445 Jan 01 20:46	12° \approx 52'55	0.68004 AU
morning rise	4444 Jan 24 03:06	22° \approx 10'40		morning rise	4445 Jan 07 13:30	6° \approx 09'08	
direct	4444 Jan 28 23:16	20° \approx 07'24		direct	4445 Jan 11 19:27	4° \approx 28'40	
morning max el	4444 Feb 07 15:46	25° \approx 50'35	22°33'10	morning max el	4445 Jan 20 07:24	9° \approx 24'11	21°09'55
	4444 Feb 11 10:33	0° \approx		desc. node	4445 Feb 03 23:52	28° \approx 17'55	
desc. node	4444 Feb 18 02:50	8° \approx 31'00			4445 Feb 05 04:04	0° \approx	
	4444 Mar 03 21:07	0° \approx		morning set	4445 Feb 20 01:39	22° \approx 34'39	
morning set	4444 Mar 12 13:30	13° \approx 47'21			4445 Feb 24 17:38	0° \approx	
max. Earth dist.	4444 Mar 17 11:13	21° \approx 58'14	1.40426 AU	max. Earth dist.	4445 Feb 27 13:11	4° \approx 34'11	1.42455 AU
	4444 Mar 22 02:33	0° \approx					
superior conj	4444 Mar 25 06:21	5° \approx 38'15	-1°55'24	superior conj	4445 Mar 06 19:17	16° \approx 42'18	-2°07'21
minimum elong	4444 Mar 25 10:49	5° \approx 58'26	1°55'03	minimum elong	4445 Mar 06 20:51	16° \approx 48'58	2°07'20
evening rise	4444 Apr 04 07:03	24° \approx 17'31			4445 Mar 14 09:38	0° \approx	
	4444 Apr 07 07:59	0° \approx		evening rise	4445 Mar 18 05:59	6° \approx 54'42	
asc. node	4444 Apr 09 07:43	3° \approx 39'37		asc. node	4445 Mar 27 04:45	22° \approx 38'24	
evening max el	4444 Apr 20 10:55	20° \approx 10'43	18°22'39		4445 Apr 01 03:30	0° \approx	
retrograde	4444 Apr 27 19:30	23° \approx 49'48		evening max el	4445 Apr 03 21:41	3° \approx 09'24	18°07'29
evening set	4444 Apr 30 04:10	23° \approx 28'14		retrograde	4445 Apr 10 13:36	6° \approx 33'15	
inferior conj	4444 May 07 11:56	18° \approx 52'44	2°17'01	evening set	4445 Apr 13 04:54	6° \approx 01'31	
minimum elong	4444 May 07 15:33	18° \approx 45'16	2°16'01	inferior conj	4445 Apr 19 20:14	1° \approx 05'16	3°07'02
min. Earth dist.	4444 May 10 22:34	16° \approx 03'31	0.58702 AU	minimum elong	4445 Apr 19 23:00	0° \approx 58'37	3°06'32
morning rise	4444 May 14 23:52	13° \approx 20'29			4445 Apr 20 23:21	30° \approx 30'	
desc. node	4444 May 16 02:00	12° \approx 48'32		min. Earth dist.	4445 Apr 23 01:33	28° \approx 01'48	0.60900 AU
direct	4444 May 21 02:57	11° \approx 40'56		morning rise	4445 Apr 26 15:03	25° \approx 11'56	
morning max el	4444 Jun 04 12:26	19° \approx 26'25	27°07'50	desc. node	4445 May 02 23:03	22° \approx 59'02	
	4444 Jun 13 11:38	0° \approx		direct	4445 May 03 07:52	22° \approx 58'38	
	4444 Jul 01 08:51	0° \approx			4445 May 16 15:21	0° \approx	
morning set	4444 Jul 04 23:16	7° \approx 21'47		morning max el	4445 May 17 13:56	0° \approx 54'44	27°46'54
asc. node	4444 Jul 06 07:01	10° \approx 09'40			4445 Jun 07 15:25	0° \approx	
				morning set	4445 Jun 19 04:30	21° \approx 50'37	
superior conj	4444 Jul 12 00:38	22° \approx 40'11	0°56'55	asc. node	4445 Jun 23 04:02	0° \approx 14'57	
minimum elong	4444 Jul 11 22:31	22° \approx 28'26	0°56'31		4445 Jun 23 01:15	0° \approx	
max. Earth dist.	4444 Jul 11 19:12	22° \approx 10'09	1.31983 AU	max. Earth dist.	4445 Jun 25 05:43	4° \approx 44'42	1.32112 AU
	4444 Jul 15 08:31	0° \approx					
evening rise	4444 Jul 18 20:36	7° \approx 33'07		superior conj	4445 Jun 26 11:35	7° \approx 28'21	0°34'08
	4444 Jul 30 13:07	0° \approx		minimum elong	4445 Jun 26 10:07	7° \approx 20'15	0°33'49
desc. node	4444 Aug 12 01:17	18° \approx 11'04		evening rise	4445 Jul 03 07:25	22° \approx 21'29	
evening max el	4444 Aug 17 03:09	23° \approx 38'07	26°25'52		4445 Jul 06 23:44	0° \approx	
	4444 Aug 26 15:54	0° \approx		desc. node	4445 Jul 25 12:04	0° \approx	
retrograde	4444 Aug 31 02:17	0° \approx 47'39		evening max el	4445 Jul 29 20:40	4° \approx 41'01	25°09'21
	4444 Sep 04 10:49	30° \approx 30'		retrograde	4445 Aug 12 19:27	11° \approx 44'42	
evening set	4444 Sep 06 17:45	28° \approx 57'59		evening set	4445 Aug 18 10:06	10° \approx 32'40	
min. Earth dist.	4444 Sep 10 16:36	26° \approx 22'52	0.59550 AU	min. Earth dist.	4445 Aug 23 08:21	7° \approx 49'56	0.57545 AU
inferior conj	4444 Sep 13 22:55	23° \approx 50'35	-4°49'11	inferior conj	4445 Aug 26 08:28	5° \approx 48'17	-5°12'59
minimum elong	4444 Sep 14 04:00	23° \approx 40'38	4°48'22	minimum elong	4445 Aug 26 09:30	5° \approx 46'32	5°12'57
morning rise	4444 Sep 21 16:24	19° \approx 15'46		morning rise	4445 Sep 03 11:13	1° \approx 35'58	
direct	4444 Sep 24 01:20	18° \approx 55'48		direct	4445 Sep 06 00:23	1° \approx 16'49	
morning max el	4444 Oct 01 19:22	22° \approx 41'55	18°18'56	morning max el	4445 Sep 14 21:23	5° \approx 28'16	19°04'01
asc. node	4444 Oct 02 06:16	23° \approx 08'52		asc. node	4445 Sep 19 03:18	10° \approx 22'28	
	4444 Oct 07 13:57	0° \approx			4445 Sep 30 11:39	0° \approx	
morning set	4444 Oct 17 17:20	18° \approx 02'02		morning set	4445 Oct 01 15:53	2° \approx 19'00	
	4444 Oct 24 00:49	0° \approx					
superior conj	4444 Oct 26 22:52	5° \approx 23'58	1°18'18	superior conj	4445 Oct 09 23:07	18° \approx 39'24	1°35'18
minimum elong	4444 Oct 27 02:40	5° \approx 41'20	1°17'54	minimum elong	4445 Oct 10 01:34	18° \approx 51'08	1°35'07
max. Earth dist.	4444 Nov 03 12:15	18° \approx 46'36	1.40796 AU		4445 Oct 16 00:36	0° \approx	
evening rise	4444 Nov 08 03:39	26° \approx 33'18		max. Earth dist.	4445 Oct 16 17:12	1° \approx 15'04	1.38703 AU
desc. node	4444 Nov 08 00:37	26° \approx 20'50		evening rise	4445 Oct 20 12:54	7° \approx 59'41	
	4444 Nov 10 06:28	0° \approx		desc. node	4445 Oct 25 21:38	17° \approx 00'40	
	4444 Nov 30 11:03	0° \approx			4445 Nov 03 04:41	0° \approx	
				evening max el	4445 Nov 25 00:28	28° \approx 13'19	24°39'28

	4445 Nov 26 21:51	0°♄			4446 Oct 28 04:36	0°♄	
retrograde	4445 Dec 06 13:09	4°♄56'24		evening max el	4446 Nov 07 12:56	11°♄56'23	25°50'36
evening set	4445 Dec 12 01:43	2°♄38'13		retrograde	4446 Nov 19 22:47	19°♄01'04	
	4445 Dec 14 15:13	30°♄♂		evening set	4446 Nov 26 01:08	16°♄29'44	
asc. node	4445 Dec 16 02:31	28°♄09'46		min. Earth dist.	4446 Nov 30 08:26	11°♄50'51	0.66931 AU
min. Earth dist.	4445 Dec 16 16:24	27°♄24'14	0.67643 AU	inferior conj	4446 Dec 01 17:04	10°♄07'59	-0°26'06
inferior conj	4445 Dec 17 13:55	26°♄12'44	0°30'00	minimum elong	4446 Dec 01 17:46	10°♄05'49	0°25'47
minimum elong	4445 Dec 17 13:11	26°♄15'09	0°29'42	asc. node	4446 Dec 02 23:35	8°♄33'11	
morning rise	4445 Dec 23 00:45	20°♄11'57		morning rise	4446 Dec 07 10:48	4°♄15'54	
direct	4445 Dec 26 17:40	18°♄53'09		direct	4446 Dec 10 16:24	3°♄15'56	
morning max el	4446 Jan 03 06:49	23°♄09'44	19°58'16	morning max el	4446 Dec 17 14:00	7°♄05'15	19°01'16
	4446 Jan 09 01:47	0°♄			4447 Jan 03 01:03	0°♄	
desc. node	4446 Jan 21 20:54	18°♄27'13		desc. node	4447 Jan 08 17:56	8°♄52'17	
	4446 Jan 29 10:30	0°♄		morning set	4447 Jan 09 03:34	9°♄29'52	
morning set	4446 Jan 29 22:04	0°♄44'33			4447 Jan 22 06:20	0°♄	
max. Earth dist.	4446 Feb 09 23:19	18°♄03'54	1.44054 AU	max. Earth dist.	4447 Jan 23 15:31	2°♄10'22	1.45030 AU
superior conj	4446 Feb 15 06:46	26°♄37'34	-2°03'53	superior conj	4447 Jan 25 18:50	5°♄32'32	-1°40'59
minimum elong	4446 Feb 15 02:33	26°♄20'22	2°03'43	minimum elong	4447 Jan 25 09:48	4°♄56'53	1°40'10
	4446 Feb 17 08:14	0°♄		evening rise	4447 Feb 09 17:17	29°♄31'08	
evening rise	4446 Feb 28 10:42	18°♄41'24			4447 Feb 10 00:22	0°♄	
	4446 Mar 07 01:31	0°♄		asc. node	4447 Feb 28 22:52	28°♄47'36	
asc. node	4446 Mar 14 01:48	11°♄04'37		evening max el	4447 Mar 01 22:29	29°♄50'31	18°34'02
evening max el	4446 Mar 18 10:30	16°♄25'17	18°11'31		4447 Mar 02 02:15	0°♄	
retrograde	4446 Mar 24 20:33	19°♄49'00		retrograde	4447 Mar 08 11:54	3°♄27'03	
evening set	4446 Mar 27 17:54	19°♄05'45		evening set	4447 Mar 11 15:19	2°♄31'30	
inferior conj	4446 Apr 02 20:49	13°♄49'39	3°30'49		4447 Mar 14 17:00	30°♄♂	
minimum elong	4446 Apr 02 21:55	13°♄46'39	3°30'45	inferior conj	4447 Mar 17 09:31	26°♄57'19	3°34'37
min. Earth dist.	4446 Apr 05 13:17	10°♄55'54	0.63007 AU	minimum elong	4447 Mar 17 09:02	26°♄58'46	3°34'37
morning rise	4446 Apr 09 00:48	7°♄44'08		min. Earth dist.	4447 Mar 19 10:34	24°♄30'55	0.64822 AU
direct	4446 Apr 15 21:53	5°♄06'12		morning rise	4447 Mar 23 02:09	20°♄45'36	
desc. node	4446 Apr 19 20:05	5°♄51'40		direct	4447 Mar 29 19:33	17°♄56'04	
morning max el	4446 Apr 29 20:50	13°♄04'58	27°48'17	desc. node	4447 Apr 06 17:07	20°♄59'13	
	4446 May 13 09:42	0°♄		morning max el	4447 Apr 12 06:39	25°♄48'35	27°14'40
	4446 May 31 02:53	0°♄			4447 Apr 16 03:17	0°♄	
morning set	4446 Jun 03 03:40	5°♄58'34			4447 May 06 22:28	0°♄	
max. Earth dist.	4446 Jun 08 11:42	17°♄02'33	1.32669 AU	morning set	4447 May 17 17:56	19°♄36'58	
asc. node	4446 Jun 10 01:04	20°♄22'49		max. Earth dist.	4447 May 22 09:08	28°♄52'16	1.33668 AU
					4447 May 22 22:20	0°♄	
superior conj	4446 Jun 10 19:55	22°♄04'29	0°08'13	superior conj	4447 May 25 23:36	6°♄22'14	-0°20'04
minimum elong	4446 Jun 10 19:31	22°♄02'21	0°08'07	minimum elong	4447 May 26 00:39	6°♄27'44	0°19'51
behind sun begin	4446 Jun 10 14:58	21°♄37'45		asc. node	4447 May 27 22:08	10°♄28'59	
behind sun end	4446 Jun 11 00:04	22°♄26'59		evening rise	4447 Jun 02 06:16	21°♄50'09	
	4446 Jun 14 11:30	0°♄			4447 Jun 06 05:51	0°♄	
evening rise	4446 Jun 17 19:17	7°♄09'20		evening max el	4447 Jun 23 01:11	25°♄34'53	21°58'44
	4446 Jun 29 19:03	0°♄			4447 Jun 28 20:13	0°♄	
evening max el	4446 Jul 11 09:31	15°♄09'28	23°34'56	desc. node	4447 Jul 03 16:20	1°♄42'27	
desc. node	4446 Jul 16 19:20	19°♄26'47		retrograde	4447 Jul 05 17:55	1°♄52'23	
retrograde	4446 Jul 25 00:15	21°♄59'09		evening set	4447 Jul 08 11:54	1°♄35'29	
evening set	4446 Jul 29 03:42	21°♄21'31			4447 Jul 13 03:08	30°♄♂	
min. Earth dist.	4446 Aug 04 19:22	18°♄14'35	0.55902 AU	min. Earth dist.	4447 Jul 17 05:42	27°♄50'41	0.54946 AU
inferior conj	4446 Aug 06 21:50	16°♄59'22	-4°57'32	inferior conj	4447 Jul 17 19:28	27°♄31'22	-3°51'27
minimum elong	4446 Aug 06 16:38	17°♄07'09	4°56'53	minimum elong	4447 Jul 17 10:49	27°♄43'30	3°49'09
morning rise	4446 Aug 15 08:03	13°♄04'51		morning rise	4447 Jul 26 11:21	23°♄40'32	
direct	4446 Aug 18 04:05	12°♄44'56		direct	4447 Jul 29 16:23	23°♄17'46	
morning max el	4446 Aug 28 12:24	17°♄33'16	20°11'00	morning max el	4447 Aug 10 15:37	28°♄53'40	21°38'06
asc. node	4446 Sep 06 00:20	28°♄28'16			4447 Aug 11 19:00	0°♄	
	4446 Sep 06 22:40	0°♄		asc. node	4447 Aug 23 21:23	17°♄14'19	
morning set	4446 Sep 15 20:53	16°♄54'19			4447 Aug 30 10:25	0°♄	
	4446 Sep 22 06:19	0°♄		morning set	4447 Aug 31 06:00	1°♄41'34	
superior conj	4446 Sep 23 12:55	2°♄34'44	1°43'06	superior conj	4447 Sep 07 12:16	16°♄58'33	1°43'11
minimum elong	4446 Sep 23 13:43	2°♄38'44	1°43'04	minimum elong	4447 Sep 07 11:38	16°♄55'12	1°43'09
max. Earth dist.	4446 Sep 28 23:17	13°♄14'31	1.36678 AU	max. Earth dist.	4447 Sep 11 11:27	25°♄07'24	1.34927 AU
evening rise	4446 Oct 02 19:35	20°♄24'55			4447 Sep 13 22:20	0°♄	
	4446 Oct 08 06:03	0°♄		evening rise	4447 Sep 15 19:42	3°♄39'28	
desc. node	4446 Oct 12 18:40	7°♄30'09					

desc. node	4447 Sep 29 15:41	27° Ω 43'58		4448 Sep 04 22:38	0° Ω	
	4447 Oct 01 02:37	0° \mathbb{M}		4448 Sep 15 12:41	17° Ω 34'13	
evening max el	4447 Oct 21 01:29	25° \mathbb{M} 35'18	26°46'36	4448 Sep 24 11:29	0° \mathbb{M}	
	4447 Oct 26 09:23	0° \mathbb{J}		4448 Oct 02 13:37	8° \mathbb{M} 59'58	27°20'14
retrograde	4447 Nov 03 03:13	2° \mathbb{J} 51'29		4448 Oct 16 01:49	16° \mathbb{M} 18'28	
evening set	4447 Nov 09 18:08	0° \mathbb{J} 11'49		4448 Oct 23 02:12	13° \mathbb{M} 38'21	
	4447 Nov 09 23:52	30° \mathbb{R} \mathbb{M}		4448 Oct 26 20:53	10° \mathbb{M} 09'31	0.64457 AU
min. Earth dist.	4447 Nov 13 18:40	26° \mathbb{M} 08'32	0.65868 AU	4448 Oct 29 05:13	7° \mathbb{M} 38'41	-2°28'20
inferior conj	4447 Nov 15 14:58	23° \mathbb{M} 58'37	-1°26'10	4448 Oct 29 09:27	7° \mathbb{M} 27'20	2°26'44
minimum elong	4447 Nov 15 17:22	23° \mathbb{M} 51'33	1°25'09	4448 Nov 04 17:57	2° \mathbb{M} 12'05	
asc. node	4447 Nov 19 20:37	19° \mathbb{M} 33'28		4448 Nov 05 17:39	1° \mathbb{M} 51'14	
morning rise	4447 Nov 21 17:26	18° \mathbb{M} 17'48		4448 Nov 07 07:22	1° \mathbb{M} 38'26	
direct	4447 Nov 24 13:44	17° \mathbb{M} 32'59		4448 Nov 13 19:16	5° \mathbb{M} 04'20	17°56'23
morning max el	4447 Dec 01 03:04	21° \mathbb{M} 05'58	18°20'23	4448 Nov 30 08:13	0° \mathbb{J}	
	4447 Dec 08 01:55	0° \mathbb{J}		4448 Dec 01 01:19	1° \mathbb{J} 12'10	
morning set	4447 Dec 20 12:00	19° \mathbb{J} 38'37		4448 Dec 12 12:00	20° \mathbb{J} 11'52	
desc. node	4447 Dec 26 14:59	29° \mathbb{J} 28'43				
	4447 Dec 26 22:50	0° \mathbb{Z}		4448 Dec 14 11:08	23° \mathbb{J} 22'19	-0°13'34
superior conj	4448 Jan 04 21:28	14° \mathbb{Z} 09'00	-1°00'53	4448 Dec 14 09:31	23° \mathbb{J} 15'49	0°13'21
minimum elong	4448 Jan 04 14:01	13° \mathbb{Z} 39'42	0°59'57	4448 Dec 14 03:40	22° \mathbb{J} 52'12	
max. Earth dist.	4448 Jan 06 10:24	16° \mathbb{Z} 33'56	1.45283 AU	4448 Dec 14 15:23	23° \mathbb{J} 39'25	
	4448 Jan 15 00:21	0° \approx		4448 Dec 18 14:44	0° \mathbb{Z}	
evening rise	4448 Jan 21 00:53	9° \approx 26'17		4448 Dec 19 05:06	0° \mathbb{Z} 56'52	1.44795 AU
greatest brilliancy	4448 Jan 31 20:43	26° \approx 20'57	-0.8m	4448 Dec 30 14:57	18° \mathbb{Z} 43'27	
	4448 Feb 03 06:17	0° \mathbb{H}		4449 Jan 07 00:05	0° \approx	
evening max el	4448 Feb 13 07:22	13° \mathbb{H} 20'50	19°13'57	4449 Jan 14 06:42	10° \approx 52'55	-0.6m
asc. node	4448 Feb 15 19:54	15° \mathbb{H} 35'14		4449 Jan 26 11:33	26° \approx 53'33	20°09'33
retrograde	4448 Feb 20 07:59	17° \mathbb{H} 21'01		4449 Jan 30 02:52	0° \mathbb{H}	
evening set	4448 Feb 23 18:17	16° \mathbb{H} 12'23		4449 Feb 01 16:55	1° \mathbb{H} 13'07	
inferior conj	4448 Feb 29 06:51	10° \mathbb{H} 22'12	3°23'19	4449 Feb 03 05:59	1° \mathbb{H} 25'59	
minimum elong	4448 Feb 29 05:12	10° \mathbb{H} 27'31	3°23'07	4449 Feb 07 00:32	0° \mathbb{H} 03'13	
min. Earth dist.	4448 Mar 01 16:39	8° \mathbb{H} 33'29	0.66249 AU	4449 Feb 07 02:16	30° \mathbb{R} \approx	
morning rise	4448 Mar 05 15:48	4° \mathbb{H} 08'03		4449 Feb 12 09:56	23° \approx 59'26	3°00'19
direct	4448 Mar 11 23:51	1° \mathbb{H} 20'03		4449 Feb 12 07:38	24° \approx 07'12	2°59'48
desc. node	4448 Mar 23 14:11	7° \mathbb{H} 47'57		4449 Feb 13 05:41	22° \approx 52'43	0.67254 AU
morning max el	4448 Mar 24 16:35	8° \mathbb{H} 53'03	26°12'58	4449 Feb 17 14:30	17° \approx 45'17	
	4448 Apr 10 06:14	0° \mathbb{Y}		4449 Feb 23 09:46	15° \approx 09'37	
	4448 Apr 28 10:06	0° \mathbb{B}		4449 Mar 07 01:18	22° \approx 07'35	24°52'43
morning set	4448 Apr 29 19:35	2° \mathbb{B} 34'50		4449 Mar 10 11:14	25° \approx 49'31	
max. Earth dist.	4448 May 03 19:07	10° \mathbb{B} 10'04	1.35130 AU	4449 Mar 13 22:31	0° \mathbb{H}	
				4449 Apr 03 13:08	0° \mathbb{Y}	
superior conj	4448 May 08 20:15	20° \mathbb{B} 14'41	-0°49'27	4449 Apr 12 03:41	14° \mathbb{Y} 38'19	
minimum elong	4448 May 08 22:55	20° \mathbb{B} 28'20	0°48'57	4449 Apr 15 18:35	21° \mathbb{Y} 11'22	1.37016 AU
asc. node	4448 May 13 19:10	0° \mathbb{I} 29'10		4449 Apr 20 10:46	0° \mathbb{B}	
	4448 May 13 13:34	0° \mathbb{I}				
evening rise	4448 May 16 14:22	6° \mathbb{I} 17'25		4449 Apr 22 06:52	3° \mathbb{B} 34'04	-1°18'12
	4448 May 29 17:34	0° \mathbb{E}		4449 Apr 22 11:02	3° \mathbb{B} 54'28	1°17'33
evening max el	4448 Jun 04 03:00	6° \mathbb{E} 28'00	20°33'51	4449 Apr 30 17:17	20° \mathbb{B} 24'43	
retrograde	4448 Jun 15 06:48	11° \mathbb{E} 55'26		4449 Apr 30 16:12	20° \mathbb{B} 19'19	
evening set	4448 Jun 17 07:17	11° \mathbb{E} 45'25		4449 May 05 14:54	0° \mathbb{I}	
desc. node	4448 Jun 19 13:22	11° \mathbb{E} 12'16		4449 May 17 17:16	18° \mathbb{I} 02'40	19°27'01
inferior conj	4448 Jun 26 13:06	7° \mathbb{E} 48'06	-2°03'34	4449 May 27 03:15	22° \mathbb{I} 37'51	
minimum elong	4448 Jun 26 07:20	7° \mathbb{E} 56'25	2°01'29	4449 May 29 02:30	22° \mathbb{I} 26'42	
min. Earth dist.	4448 Jun 27 17:34	7° \mathbb{E} 07'01	0.54919 AU	4449 Jun 06 10:23	18° \mathbb{I} 31'46	
morning rise	4448 Jul 05 06:35	3° \mathbb{E} 40'22		4449 Jun 06 17:11	18° \mathbb{I} 20'49	-0°05'01
direct	4448 Jul 09 01:58	3° \mathbb{E} 09'06		4449 Jun 06 16:58	18° \mathbb{I} 21'11	0°04'56
morning max el	4448 Jul 22 09:22	9° \mathbb{E} 35'05	23°18'53	4449 Jun 06 16:58	18° \mathbb{I} 21'11	0°04'56
	4448 Aug 06 06:43	0° \mathbb{Q}		4449 Jun 06 13:16	18° \mathbb{I} 27'08	
asc. node	4448 Aug 09 18:25	6° \mathbb{Q} 29'58		4449 Jun 06 20:39	18° \mathbb{I} 15'12	
morning set	4448 Aug 14 17:15	16° \mathbb{Q} 34'15		4449 Jun 09 07:34	16° \mathbb{I} 40'34	0.55847 AU
	4448 Aug 20 23:19	0° \mathbb{P}		4449 Jun 15 04:39	13° \mathbb{I} 41'03	
superior conj	4448 Aug 21 17:57	1° \mathbb{P} 40'09	1°36'48	4449 Jun 19 21:18	12° \mathbb{I} 51'12	
minimum elong	4448 Aug 21 16:16	1° \mathbb{P} 31'11	1°36'40	4449 Jul 03 23:08	19° \mathbb{I} 57'46	25°01'12
max. Earth dist.	4448 Aug 24 08:19	7° \mathbb{P} 12'18	1.33567 AU	4449 Jul 02 12:13	0° \mathbb{E}	
evening rise	4448 Aug 29 08:53	17° \mathbb{P} 31'03		4449 Jul 27 15:28	26° \mathbb{E} 07'26	
				4449 Jul 29 12:22	0° \mathbb{Q}	
				4449 Jul 30 04:58	1° \mathbb{Q} 27'34	

superior conj	4449 Aug 06 03:33	16°♌32'02	1°24'56		4450 Jul 20 23:18	0°♌	
minimum elong	4449 Aug 06 01:20	16°♌19'51	1°24'40				
max. Earth dist.	4449 Aug 07 13:23	19°♌36'33	1.32633 AU	superior conj	4450 Jul 21 15:04	1°♌27'03	1°08'21
	4449 Aug 12 10:23	0°♍		minimum elong	4450 Jul 21 12:46	1°♌14'22	1°07'59
evening rise	4449 Aug 13 07:36	1°♍49'34		max. Earth dist.	4450 Jul 21 23:35	2°♌14'00	1.32109 AU
	4449 Aug 28 20:00	0°♎		evening rise	4450 Jul 28 12:50	16°♌25'31	
desc. node	4449 Sep 02 09:40	6°♎51'12			4450 Aug 04 08:17	0°♍	
evening max el	4449 Sep 14 23:35	21°♎58'14	27°25'03	desc. node	4450 Aug 20 06:41	25°♍21'19	
retrograde	4449 Sep 28 17:41	29°♎13'20			4450 Aug 24 02:14	0°♎	
evening set	4449 Oct 05 22:07	26°♎43'16		evening max el	4450 Aug 28 04:32	4°♎16'32	26°56'56
min. Earth dist.	4449 Oct 09 13:14	23°♎44'20	0.62728 AU	retrograde	4450 Sep 11 01:54	11°♎27'24	
inferior conj	4449 Oct 12 09:04	21°♏01'51	-3°29'27	evening set	4450 Sep 18 01:43	9°♎19'29	
minimum elong	4449 Oct 12 14:46	20°♏48'08	3°27'39	min. Earth dist.	4450 Sep 21 18:44	6°♏40'25	0.60748 AU
morning rise	4449 Oct 19 09:02	15°♏52'47		inferior conj	4450 Sep 24 23:12	3°♏59'34	-4°24'06
direct	4449 Oct 21 18:20	15°♏26'41		minimum elong	4450 Sep 25 05:11	3°♏46'56	4°22'45
asc. node	4449 Oct 23 14:41	15°♏42'46			4450 Sep 30 11:43	30°♏♍	
morning max el	4449 Oct 28 11:40	18°♏53'33	17°50'05	morning rise	4450 Oct 02 10:33	29°♍11'36	
	4449 Nov 05 13:54	0°♎		direct	4450 Oct 04 18:49	28°♍50'00	
morning set	4449 Nov 13 13:54	13°♎52'46			4450 Oct 08 21:41	0°♏	
	4449 Nov 22 19:28	0°♐		asc. node	4450 Oct 10 11:44	1°♏04'03	
				morning max el	4450 Oct 12 01:09	2°♏26'05	18°02'42
superior conj	4449 Nov 25 01:17	3°♐47'56	0°29'59	morning set	4450 Oct 27 19:30	27°♏21'53	
minimum elong	4449 Nov 25 04:05	3°♐59'44	0°29'36		4450 Oct 29 05:32	0°♎	
desc. node	4449 Nov 29 08:59	10°♐58'24		superior conj	4450 Nov 06 17:45	15°♎30'41	1°03'49
max. Earth dist.	4449 Dec 01 21:24	15°♐04'06	1.43633 AU	minimum elong	4450 Nov 06 21:50	15°♎48'46	1°03'19
evening rise	4449 Dec 10 01:14	27°♐57'58		max. Earth dist.	4450 Nov 14 09:11	28°♎39'42	1.41933 AU
	4449 Dec 11 08:49	0°♑			4450 Nov 15 04:29	0°♐	
	4449 Dec 31 20:11	0°♒		desc. node	4450 Nov 16 05:59	1°♐45'18	
evening max el	4450 Jan 09 10:17	10°♒27'19	21°17'49	evening rise	4450 Nov 19 23:32	7°♐48'25	
retrograde	4450 Jan 18 03:44	15°♒37'45			4450 Dec 04 13:12	0°♑	
asc. node	4450 Jan 19 13:56	15°♒26'45		evening max el	4450 Dec 23 03:54	24°♑02'52	22°34'37
evening set	4450 Jan 22 08:10	13°♒59'45		retrograde	4451 Jan 01 23:39	29°♑53'10	
inferior conj	4450 Jan 27 16:23	7°♒45'06	2°27'47	asc. node	4451 Jan 06 10:58	28°♑08'33	
minimum elong	4450 Jan 27 13:56	7°♒53'34	2°27'03	evening set	4451 Jan 06 15:35	27°♑59'12	
min. Earth dist.	4450 Jan 27 23:27	7°♒20'37	0.67847 AU	inferior conj	4451 Jan 12 00:15	21°♑37'01	1°47'17
morning rise	4450 Feb 01 19:31	1°♒32'36		minimum elong	4451 Jan 11 22:08	21°♑44'23	1°46'32
	4450 Feb 04 00:49	30°♒♑		min. Earth dist.	4451 Jan 11 19:46	21°♑52'32	0.68052 AU
direct	4450 Feb 07 00:17	29°♑16'26		morning rise	4451 Jan 17 04:34	15°♑27'40	
	4450 Feb 10 05:15	0°♒		direct	4451 Jan 21 18:35	13°♑34'12	
morning max el	4450 Feb 17 10:04	5°♒27'40	23°24'09	morning max el	4451 Jan 30 22:21	18°♑55'55	21°56'46
desc. node	4450 Feb 25 08:15	14°♒42'38			4451 Feb 09 03:19	0°♒	
	4450 Mar 08 08:08	0°♓		desc. node	4451 Feb 12 05:16	4°♒12'56	
morning set	4450 Mar 24 12:04	25°♓30'21			4451 Mar 01 12:20	0°♓	
	4450 Mar 27 03:19	0°♑		morning set	4451 Mar 04 16:03	5°♓01'00	
max. Earth dist.	4450 Mar 28 13:48	2°♑29'40	1.39172 AU	max. Earth dist.	4451 Mar 10 12:22	14°♓35'26	1.41328 AU
				superior conj	4451 Mar 18 05:28	27°♓50'04	-2°01'59
superior conj	4450 Apr 05 03:31	16°♑09'37	-1°43'40	minimum elong	4451 Mar 18 09:05	28°♓06'04	2°01'48
minimum elong	4450 Apr 05 08:22	16°♑32'15	1°43'08		4451 Mar 19 10:47	0°♑	
	4450 Apr 12 09:48	0°♒		evening rise	4451 Mar 28 19:37	17°♑06'22	
evening rise	4450 Apr 14 12:11	4°♒03'46		asc. node	4451 Apr 04 10:15	29°♑07'53	
asc. node	4450 Apr 17 13:13	9°♒54'03			4451 Apr 04 22:15	0°♒	
	4450 Apr 30 11:37	0°♓		evening max el	4451 Apr 14 02:07	13°♒00'13	18°13'44
evening max el	4450 Apr 30 18:04	0°♓15'58	18°40'17	retrograde	4451 Apr 21 02:16	16°♒31'11	
retrograde	4450 May 08 17:17	4°♓10'52		evening set	4451 Apr 23 13:48	16°♒05'31	
evening set	4450 May 10 22:10	3°♓53'58		inferior conj	4451 Apr 30 14:04	11°♒20'45	2°41'48
	4450 May 18 00:48	30°♒♒		minimum elong	4451 Apr 30 17:30	11°♒13'09	2°40'59
inferior conj	4450 May 18 16:54	29°♒29'51	1°34'07	min. Earth dist.	4451 May 03 23:32	8°♒22'35	0.59631 AU
minimum elong	4450 May 18 20:02	29°♒23'55	1°33'05	morning rise	4451 May 07 18:35	5°♒38'07	
min. Earth dist.	4450 May 22 00:43	27°♒00'35	0.57529 AU	desc. node	4451 May 11 04:29	4°♒08'54	
desc. node	4450 May 24 07:26	25°♒29'13		direct	4451 May 14 04:24	3°♒43'57	
morning rise	4450 May 26 14:40	24°♒15'00		morning max el	4451 May 28 13:09	11°♒34'35	27°29'01
direct	4450 Jun 01 06:20	22°♒55'47			4451 Jun 11 22:57	0°♓	
	4450 Jun 15 02:46	0°♓		morning set	4451 Jun 28 23:21	0°♓53'52	
morning max el	4450 Jun 15 15:05	0°♓29'30	26°29'23		4451 Jun 28 12:59	0°♓	
	4450 Jul 06 10:05	0°♔		asc. node	4451 Jul 01 09:32	6°♓01'36	
morning set	4450 Jul 14 15:34	16°♔15'55					
asc. node	4450 Jul 14 12:29	15°♔59'42					

max. Earth dist.	4451 Jul 05 11:11	14°☿53'35	1.31992 AU		4452 Jun 19 01:12	0°☿	
superior conj	4451 Jul 06 02:45	16°☿19'20	0°47'41	superior conj	4452 Jun 19 12:52	1°☿03'39	0°23'30
minimum elong	4451 Jul 06 00:51	16°☿08'50	0°47'18	minimum elong	4452 Jun 19 11:48	0°☿57'50	0°23'15
	4451 Jul 12 08:52	0°♌		evening rise	4452 Jun 26 09:46	16°☿00'25	
evening rise	4451 Jul 12 22:14	1°♌11'14			4452 Jul 03 08:00	0°♌	
	4451 Jul 28 12:32	0°♍		evening max el	4452 Jul 21 16:52	26°♌31'25	24°30'28
desc. node	4451 Aug 07 03:43	12°♍45'00		desc. node	4452 Jul 24 00:46	28°♌36'03	
evening max el	4451 Aug 10 02:05	15°♍45'49	25°56'15		4452 Jul 25 20:44	0°♍	
retrograde	4451 Aug 24 01:18	22°♍53'28		retrograde	4452 Aug 04 13:57	3°♍31'41	
evening set	4451 Aug 30 08:06	21°♍18'59		evening set	4452 Aug 09 14:16	2°♍35'22	
min. Earth dist.	4451 Sep 03 14:28	18°♍43'15	0.58675 AU		4452 Aug 14 17:32	30°♌♌	
inferior conj	4451 Sep 06 20:02	16°♍21'32	-5°03'02	min. Earth dist.	4452 Aug 15 03:57	29°♌43'57	0.56777 AU
minimum elong	4451 Sep 06 23:48	16°♍14'36	5°02'38	inferior conj	4452 Aug 17 21:00	28°♌00'09	-5°12'11
morning rise	4451 Sep 14 17:45	11°♍56'50		minimum elong	4452 Aug 17 19:27	28°♌02'39	5°12'08
direct	4451 Sep 17 04:11	11°♍37'25		morning rise	4452 Aug 26 03:10	23°♌56'39	
morning max el	4451 Sep 25 08:25	15°♍32'30	18°35'33	direct	4452 Aug 28 18:44	23°♌37'32	
asc. node	4451 Sep 27 08:47	17°♍41'08		morning max el	4452 Sep 07 06:12	28°♌03'22	19°29'51
	4451 Oct 05 11:33	0°♎			4452 Sep 09 03:36	0°♍	
morning set	4451 Oct 11 12:59	11°♎24'20		asc. node	4452 Sep 13 05:49	5°♍18'59	
				morning set	4452 Sep 24 14:39	25°♍50'14	
superior conj	4451 Oct 20 08:03	28°♎17'03	1°26'44		4452 Sep 26 16:17	0°♎	
minimum elong	4451 Oct 20 11:21	28°♎32'30	1°26'25				
	4451 Oct 21 06:09	0°♏		superior conj	4452 Oct 02 14:42	11°♎51'39	1°39'37
max. Earth dist.	4451 Oct 27 15:43	11°♏31'28	1.39907 AU	minimum elong	4452 Oct 02 16:27	12°♎00'11	1°39'31
evening rise	4451 Oct 31 19:19	18°♏37'40		max. Earth dist.	4452 Oct 08 20:04	23°♎43'36	1.37818 AU
desc. node	4451 Nov 03 03:00	22°♏28'38			4452 Oct 12 07:17	0°♏	
	4451 Nov 07 19:23	0°♐		evening rise	4452 Oct 12 14:12	0°♏30'39	
	4451 Nov 28 22:24	0°♑		desc. node	4452 Oct 20 00:02	13°♏04'42	
evening max el	4451 Dec 05 17:52	7°♑41'05	23°54'34		4452 Oct 31 01:35	0°♐	
retrograde	4451 Dec 16 16:27	14°♑07'48		evening max el	4452 Nov 17 06:25	21°♐23'12	25°11'03
evening set	4451 Dec 21 21:12	11°♑58'01		retrograde	4452 Nov 29 05:02	28°♐17'29	
asc. node	4451 Dec 24 08:02	9°♑26'21		evening set	4452 Dec 04 23:23	25°♐53'20	
min. Earth dist.	4451 Dec 26 16:20	6°♑24'31	0.67891 AU	min. Earth dist.	4452 Dec 09 10:50	20°♐53'56	0.67382 AU
inferior conj	4451 Dec 27 07:44	5°♑32'13	0°59'57	asc. node	4452 Dec 10 05:05	19°♐54'29	
minimum elong	4451 Dec 27 06:22	5°♑36'51	0°59'25	inferior conj	4452 Dec 10 13:01	19°♐28'33	0°06'46
	4451 Dec 31 23:49	30°♒♐		minimum elong	4452 Dec 10 12:50	19°♐29'07	0°06'43
morning rise	4452 Jan 01 15:33	29°♐27'44		transit middle	4452 Dec 10 12:50	19°♐29'07	0°06'43
direct	4452 Jan 05 15:40	27°♐56'58		transit begin	4452 Dec 10 10:19	19°♐37'22	
	4452 Jan 10 18:43	0°♑		transit end	4452 Dec 10 15:22	19°♐20'52	
morning max el	4452 Jan 13 17:17	2°♑34'48	20°37'50	morning rise	4452 Dec 16 02:32	13°♐30'59	
desc. node	4452 Jan 30 02:17	24°♑09'45		direct	4452 Dec 19 14:19	12°♐20'43	
	4452 Feb 03 00:26	0°♒		morning max el	4452 Dec 26 20:06	16°♐24'44	19°32'01
morning set	4452 Feb 11 18:58	13°♒24'25			4453 Jan 06 09:03	0°♑	
max. Earth dist.	4452 Feb 20 17:44	27°♒34'39	1.43196 AU	greatest brilliancy	4453 Jan 08 23:11	3°♑49'05	-0.7m
	4452 Feb 22 05:34	0°♒		desc. node	4453 Jan 15 23:18	14°♑25'56	
				morning set	4453 Jan 20 15:58	21°♑39'26	
superior conj	4452 Feb 27 07:45	8°♒24'18	-2°08'05		4453 Jan 26 01:01	0°♒	
minimum elong	4452 Feb 27 07:07	8°♒21'37	2°08'05	max. Earth dist.	4453 Feb 02 06:03	11°♒19'08	1.44550 AU
evening rise	4452 Mar 10 11:20	29°♒22'50					
	4452 Mar 10 19:45	0°♓		superior conj	4453 Feb 06 08:22	17°♒50'41	-1°56'37
asc. node	4452 Mar 21 07:19	17°♓53'48		minimum elong	4453 Feb 06 01:36	17°♒23'34	1°56'11
evening max el	4452 Mar 27 14:04	26°♓06'41	18°06'55		4453 Feb 13 19:58	0°♒	
retrograde	4452 Apr 03 02:28	29°♓29'08		evening rise	4453 Feb 20 06:56	10°♒44'48	
evening set	4452 Apr 05 20:15	28°♓52'47			4453 Mar 03 23:08	0°♓	
inferior conj	4452 Apr 12 05:50	23°♓48'01	3°19'54	asc. node	4453 Mar 08 04:22	6°♓02'42	
minimum elong	4452 Apr 12 07:56	23°♓42'42	3°19'38	evening max el	4453 Mar 11 02:50	9°♓26'55	18°19'00
min. Earth dist.	4452 Apr 15 06:19	20°♓45'46	0.61813 AU	retrograde	4453 Mar 17 13:21	12°♓54'34	
morning rise	4452 Apr 18 17:55	17°♓48'13		evening set	4453 Mar 20 13:11	12°♓06'18	
direct	4452 Apr 25 13:30	15°♓22'55		inferior conj	4453 Mar 26 12:00	6°♓42'36	3°34'33
desc. node	4452 Apr 27 01:31	15°♓29'31		minimum elong	4453 Mar 26 12:24	6°♓41'29	3°34'33
morning max el	4452 May 09 17:26	23°♓22'07	27°52'07	min. Earth dist.	4453 Mar 28 22:11	3°♓58'25	0.63818 AU
	4452 May 15 15:31	0°♔		morning rise	4453 Apr 01 10:42	0°♓33'54	
	4452 Jun 04 04:45	0°♕			4453 Apr 02 04:27	30°♒♒	
morning set	4452 Jun 12 02:22	15°♕15'28		direct	4453 Apr 08 07:12	27°♒48'56	
asc. node	4452 Jun 17 06:35	26°♕08'51		desc. node	4453 Apr 13 22:33	29°♒23'01	
max. Earth dist.	4452 Jun 17 20:17	27°♕22'55	1.32290 AU		4453 Apr 15 00:41	0°♓	

morning max el	4453 Apr 22 01:45	5° Υ 46'59	27°37'57	direct	4454 Mar 22 07:49	10° X 54'36	
	4453 May 10 11:23	0° B		desc. node	4454 Mar 31 19:34	15° X 17'16	
morning set	4453 May 26 22:07	29° B 11'50		morning max el	4454 Apr 04 11:37	18° X 39'56	26°51'21
	4453 May 27 07:48	0° Π			4454 Apr 14 01:33	0° Υ	
max. Earth dist.	4453 May 31 22:48	9° Π 28'27	1.33030 AU		4454 May 03 11:01	0° B	
				morning set	4454 May 10 07:29	12° B 33'52	
superior conj	4453 Jun 03 19:28	15° Π 32'44	-0°03'33	max. Earth dist.	4454 May 14 15:28	21° B 03'31	1.34234 AU
minimum elong	4453 Jun 03 19:39	15° Π 33'41	0°03'32				
behind sun begin	4453 Jun 03 14:24	15° Π 05'36		superior conj	4454 May 18 20:28	29° B 40'28	-0°32'28
behind sun end	4453 Jun 04 00:54	16° Π 01'49		minimum elong	4454 May 18 22:11	29° B 49'26	0°32'07
asc. node	4453 Jun 04 03:37	16° Π 16'23			4454 May 19 00:13	0° Π	
evening rise	4453 Jun 10 21:27	0° B 45'45		asc. node	4454 May 22 00:40	6° Π 20'25	
	4453 Jun 10 12:49	0° B		evening rise	4454 May 26 07:26	15° Π 21'20	
	4453 Jun 27 07:09	0° Ω			4454 Jun 02 17:36	0° B	
evening max el	4453 Jul 03 06:02	6° Ω 54'54	22°53'30	evening max el	4454 Jun 15 01:26	17° B 29'03	21°20'45
desc. node	4453 Jul 10 21:48	12° Ω 19'54		retrograde	4454 Jun 27 03:26	23° B 26'02	
retrograde	4453 Jul 16 13:41	13° Ω 33'10		desc. node	4454 Jun 27 18:48	23° B 25'04	
evening set	4453 Jul 20 01:26	13° Ω 06'33		evening set	4454 Jun 29 11:57	23° B 13'17	
min. Earth dist.	4453 Jul 27 14:40	9° Ω 45'05	0.55394 AU	inferior conj	4454 Jul 08 20:50	19° B 14'12	-3°09'20
inferior conj	4453 Jul 29 02:46	8° Ω 53'06	-4°35'51	minimum elong	4454 Jul 08 12:42	19° B 25'35	3°06'46
minimum elong	4453 Jul 28 19:25	9° Ω 03'43	4°34'29	min. Earth dist.	4454 Jul 09 01:12	19° B 08'05	0.54822 AU
morning rise	4453 Aug 06 15:35	5° Ω 01'56		morning rise	4454 Jul 17 14:09	15° B 18'50	
direct	4453 Aug 09 15:02	4° Ω 41'09		direct	4454 Jul 21 00:47	14° B 53'12	
morning max el	4453 Aug 20 16:08	9° Ω 49'19	20°45'41	morning max el	4454 Aug 02 14:35	20° B 50'21	22°19'47
asc. node	4453 Aug 31 02:52	23° Ω 43'04			4454 Aug 10 07:59	0° Ω	
	4453 Sep 03 14:40	0° P		asc. node	4454 Aug 17 23:53	12° Ω 42'27	
morning set	4453 Sep 08 21:40	10° P 31'00		morning set	4454 Aug 24 07:53	25° Ω 20'53	
					4454 Aug 26 12:42	0° P	
superior conj	4453 Sep 16 08:59	25° P 59'58	1°43'58				
minimum elong	4453 Sep 16 09:07	26° P 00'42	1°43'58	superior conj	4454 Aug 31 11:18	10° P 31'43	1°41'11
	4453 Sep 18 08:15	0° B		minimum elong	4454 Aug 31 10:10	10° P 25'44	1°41'08
max. Earth dist.	4453 Sep 21 04:03	5° B 36'26	1.35897 AU	max. Earth dist.	4454 Sep 03 20:07	17° P 33'53	1.34307 AU
evening rise	4453 Sep 25 04:52	13° B 18'21		evening rise	4454 Sep 08 11:00	26° P 49'32	
	4453 Oct 04 17:42	0° M			4454 Sep 10 02:34	0° B	
desc. node	4453 Oct 06 21:05	3° M 28'11		desc. node	4454 Sep 23 18:07	23° B 32'49	
	4453 Oct 25 23:49	0° X			4454 Sep 28 01:30	0° M	
evening max el	4453 Oct 30 19:05	5° X 05'58	26°16'44	evening max el	4454 Oct 13 07:48	18° M 40'31	27°04'03
retrograde	4453 Nov 12 12:32	12° X 16'31		retrograde	4454 Oct 26 14:18	25° M 57'37	
evening set	4453 Nov 18 20:20	9° X 41'16		evening set	4454 Nov 02 09:50	23° M 16'50	
min. Earth dist.	4453 Nov 23 00:48	5° X 17'12	0.66523 AU	min. Earth dist.	4454 Nov 06 07:50	19° M 28'28	0.65314 AU
inferior conj	4453 Nov 24 14:13	3° X 22'30	-0°51'09	inferior conj	4454 Nov 08 09:10	17° M 09'05	-1°52'24
minimum elong	4453 Nov 24 15:36	3° X 18'14	0°50'33	minimum elong	4454 Nov 08 12:21	17° M 00'03	1°51'07
asc. node	4453 Nov 27 02:06	0° X 27'05		asc. node	4454 Nov 13 23:08	11° M 56'22	
	4453 Nov 27 12:22	30° R M		morning rise	4454 Nov 14 15:49	11° M 33'49	
morning rise	4453 Nov 30 11:25	27° M 34'32		direct	4454 Nov 17 09:00	10° M 54'03	
direct	4453 Dec 03 12:49	26° M 41'24		morning max el	4454 Nov 23 20:41	14° M 22'39	18°08'03
	4453 Dec 09 20:45	0° X			4454 Dec 05 00:54	0° X	
morning max el	4453 Dec 10 05:59	0° X 22'36	18°41'45	morning set	4454 Dec 12 04:59	11° X 44'03	
	4453 Dec 30 17:15	0° B		desc. node	4454 Dec 20 17:22	25° X 35'45	
morning set	4453 Dec 31 07:48	0° B 57'27			4454 Dec 23 11:20	0° B	
desc. node	4454 Jan 02 20:21	4° B 56'14					
max. Earth dist.	4454 Jan 15 23:46	25° B 35'02	1.45232 AU	superior conj	4454 Dec 26 18:58	5° B 16'21	-0°40'57
				minimum elong	4454 Dec 26 13:50	4° B 56'05	0°40'15
superior conj	4454 Jan 16 14:06	26° B 31'19	-1°25'37	max. Earth dist.	4454 Dec 29 19:35	10° B 02'42	1.45168 AU
minimum elong	4454 Jan 16 04:52	25° B 55'02	1°24'38		4455 Jan 11 14:40	0° \approx	
	4454 Jan 18 19:15	0° \approx		evening rise	4455 Jan 12 02:31	0° \approx 45'59	
evening rise	4454 Feb 01 03:31	21° \approx 09'59		greatest brilliancy	4455 Jan 24 20:58	20° \approx 23'08	-0.7m
	4454 Feb 06 15:41	0° X			4455 Jan 31 13:07	0° X	
greatest brilliancy	4454 Feb 08 18:40	3° X 23'40	-0.9m	evening max el	4455 Feb 05 20:52	6° X 26'25	19°35'48
evening max el	4454 Feb 22 13:49	22° X 55'07	18°49'03	asc. node	4455 Feb 09 22:26	9° X 43'26	
asc. node	4454 Feb 23 01:24	23° X 23'49		retrograde	4455 Feb 13 04:09	10° X 39'10	
retrograde	4454 Mar 01 06:57	26° X 40'04		evening set	4455 Feb 16 17:52	9° X 24'26	
evening set	4454 Mar 04 13:16	25° X 38'57		inferior conj	4455 Feb 22 04:48	3° X 27'58	3°14'49
inferior conj	4454 Mar 10 04:44	19° X 57'52	3°31'26	minimum elong	4455 Feb 22 02:48	3° X 34'31	3°14'28
minimum elong	4454 Mar 10 03:42	20° X 01'05	3°31'22	min. Earth dist.	4455 Feb 23 08:21	1° X 57'14	0.66732 AU
min. Earth dist.	4454 Mar 11 23:13	17° X 46'41	0.65482 AU		4455 Feb 24 21:23	30° R \approx	
morning rise	4454 Mar 15 17:42	13° X 45'03		morning rise	4455 Feb 27 11:31	27° \approx 13'46	

direct	4455 Mar 05 14:25	24° \approx 30'13		inferior conj	4456 Feb 06 09:36	17° \approx 09'15	2°47'33
	4455 Mar 15 23:47	0° H		minimum elong	4456 Feb 06 07:10	17° \approx 17'33	2°46'56
morning max el	4455 Mar 17 21:05	1° H 49'24	25°40'31	min. Earth dist.	4456 Feb 06 23:44	16° \approx 20'51	0.67557 AU
desc. node	4455 Mar 18 16:35	2° H 39'34		morning rise	4456 Feb 11 13:13	10° \approx 55'28	
	4455 Apr 08 03:52	0° Y		direct	4456 Feb 17 02:17	8° \approx 27'44	
morning set	4455 Apr 23 02:15	25° Y 09'26		morning max el	4456 Feb 28 05:45	15° \approx 07'08	24°15'24
	4455 Apr 25 16:57	0° Z		desc. node	4456 Mar 04 13:38	21° \approx 05'05	
max. Earth dist.	4455 Apr 26 20:49	2° Z 11'47	1.35892 AU		4456 Mar 11 10:26	0° H	
					4456 Mar 31 02:09	0° Y	
superior conj	4455 May 02 13:12	13° Z 19'03	-1°01'52	morning set	4456 Apr 04 01:00	6° Y 44'15	
minimum elong	4455 May 02 16:33	13° Z 35'54	1°01'16	max. Earth dist.	4456 Apr 07 17:39	13° Y 16'01	1.37916 AU
asc. node	4455 May 08 21:42	26° Z 16'31					
evening rise	4455 May 10 13:35	29° Z 40'28		superior conj	4456 Apr 14 18:21	26° Y 20'20	-1°29'37
	4455 May 10 17:26	0° II		minimum elong	4456 Apr 14 22:58	26° Y 42'29	1°28'59
evening max el	4455 May 28 08:23	28° II 37'53	20°02'57		4456 Apr 16 15:51	0° Z	
	4455 May 29 20:33	0° E		evening rise	4456 Apr 23 13:29	13° Z 36'22	
retrograde	4455 Jun 07 18:08	3° E 42'44		asc. node	4456 Apr 24 18:44	16° Z 00'24	
evening set	4455 Jun 09 16:42	3° E 32'54			4456 May 02 08:34	0° II	
desc. node	4455 Jun 14 15:48	1° E 50'02		evening max el	4456 May 10 03:22	10° II 28'50	19°04'36
	4455 Jun 17 23:13	30° R II		retrograde	4456 May 18 21:36	14° II 45'26	
inferior conj	4455 Jun 18 17:10	29° II 33'09	-1°12'26	evening set	4456 May 20 22:36	14° II 32'27	
minimum elong	4455 Jun 18 13:47	29° II 38'14	1°11'10	inferior conj	4456 May 29 04:55	10° II 19'28	0°40'37
min. Earth dist.	4455 Jun 20 13:31	28° II 26'40	0.55202 AU	minimum elong	4456 May 29 06:32	10° II 16'42	0°40'01
morning rise	4455 Jun 27 09:11	25° II 13'22		desc. node	4456 May 31 12:50	8° II 43'07	
direct	4455 Jul 01 12:49	24° II 35'50		min. Earth dist.	4456 Jun 01 04:52	8° II 16'16	0.56480 AU
	4455 Jul 13 18:11	0° E		morning rise	4456 Jun 06 11:13	5° II 23'58	
morning max el	4455 Jul 15 05:49	1° E 20'03	24°03'17	direct	4456 Jun 11 13:36	4° II 22'52	
	4455 Aug 03 18:52	0° O		morning max el	4456 Jun 25 20:02	11° II 43'21	25°41'35
asc. node	4455 Aug 04 20:56	2° O 08'15			4456 Jul 09 22:19	0° E	
morning set	4455 Aug 08 19:33	10° O 14'43		asc. node	4456 Jul 21 17:58	21° E 52'29	
				morning set	4456 Jul 23 06:58	25° E 06'21	
superior conj	4455 Aug 15 18:55	25° O 18'37	1°32'23		4456 Jul 25 13:45	0° O	
minimum elong	4455 Aug 15 16:57	25° O 07'59	1°32'12				
	4455 Aug 17 23:10	0° M		superior conj	4456 Jul 30 05:34	10° O 12'30	1°18'28
max. Earth dist.	4455 Aug 17 20:54	29° O 47'54	1.33115 AU	minimum elong	4456 Jul 30 03:15	9° O 59'47	1°18'07
evening rise	4455 Aug 23 04:37	10° M 53'36		max. Earth dist.	4456 Jul 31 04:23	12° O 17'43	1.32347 AU
	4455 Sep 02 09:36	0° A		evening rise	4456 Aug 06 06:23	25° O 20'05	
desc. node	4455 Sep 10 15:06	13° A 10'40			4456 Aug 08 13:12	0° M	
	4455 Sep 23 20:39	0° M			4456 Aug 25 23:08	0° A	
evening max el	4455 Sep 25 19:12	1° M 55'28	27°26'03	desc. node	4456 Aug 27 12:07	2° A 09'50	
retrograde	4455 Oct 09 10:01	9° M 12'50		evening max el	4456 Sep 07 03:07	14° A 37'25	27°17'15
evening set	4455 Oct 16 13:12	6° M 35'16		retrograde	4456 Sep 20 23:06	21° A 51'38	
min. Earth dist.	4455 Oct 20 05:51	3° M 20'20	0.63762 AU	evening set	4456 Sep 28 02:48	19° A 29'08	
inferior conj	4455 Oct 22 19:22	0° M 43'04	-2°54'37	min. Earth dist.	4456 Oct 01 17:34	16° A 40'28	0.61905 AU
minimum elong	4455 Oct 23 00:19	0° M 30'24	2°52'52	inferior conj	4456 Oct 04 17:48	13° A 56'21	-3°53'53
	4455 Oct 23 12:17	30° R A		minimum elong	4456 Oct 04 23:51	13° A 42'35	3°52'11
morning rise	4455 Oct 29 12:50	25° A 23'47		morning rise	4456 Oct 11 22:43	8° A 56'11	
asc. node	4455 Oct 31 20:09	24° A 53'52		direct	4456 Oct 14 07:03	8° A 32'27	
direct	4455 Nov 01 00:12	24° A 53'43		asc. node	4456 Oct 17 17:12	9° A 24'42	
morning max el	4455 Nov 07 13:26	28° A 18'42	17°51'32	morning max el	4456 Oct 21 05:05	12° A 02'19	17°53'05
	4455 Nov 09 02:51	0° M			4456 Nov 02 06:02	0° M	
morning set	4455 Nov 24 05:03	23° M 48'54		morning set	4456 Nov 06 01:35	6° M 51'57	
	4455 Nov 27 19:29	0° X					
superior conj	4455 Dec 06 18:16	14° X 58'49	0°05'51	superior conj	4456 Nov 16 19:58	25° M 58'28	0°45'39
minimum elong	4455 Dec 06 18:54	15° X 01'27	0°05'46	minimum elong	4456 Nov 16 23:39	26° M 14'19	0°45'09
behind sun begin	4455 Dec 06 09:42	14° X 23'42			4456 Nov 19 04:37	0° X	
behind sun end	4455 Dec 07 04:07	15° X 39'06		desc. node	4456 Nov 23 11:24	7° X 08'12	
desc. node	4455 Dec 07 14:24	16° X 21'02		max. Earth dist.	4456 Nov 24 03:49	8° X 15'24	1.42964 AU
max. Earth dist.	4455 Dec 12 13:47	24° X 21'55	1.44378 AU	evening rise	4456 Dec 01 02:41	19° X 22'39	
	4455 Dec 16 03:16	0° Z			4456 Dec 08 00:29	0° Z	
evening rise	4455 Dec 22 13:04	9° Z 57'25			4456 Dec 29 13:38	0° \approx	
	4456 Jan 04 20:11	0° \approx		evening max el	4457 Jan 01 19:02	3° \approx 33'10	21°49'43
evening max el	4456 Jan 19 22:40	19° \approx 59'06	20°37'07	retrograde	4457 Jan 10 23:42	9° \approx 01'11	
asc. node	4456 Jan 27 19:26	24° \approx 47'06		asc. node	4457 Jan 13 16:28	8° \approx 22'05	
retrograde	4456 Jan 28 02:24	24° \approx 47'34		evening set	4457 Jan 15 08:43	7° \approx 16'37	
evening set	4456 Feb 01 00:56	23° \approx 18'20		inferior conj	4457 Jan 20 16:56	0° \approx 58'10	2°11'31
				minimum elong	4457 Jan 20 14:34	1° \approx 06'24	2°10'45

min. Earth dist.	4457 Jan 20 19:01	0°≈50'55	0.67979 AU	inferior conj	4458 Jan 05 00:52	14°351'54	1°28'00
	4457 Jan 21 09:43	30°R3		minimum elong	4458 Jan 04 23:01	14°358'17	1°27'18
morning rise	4457 Jan 25 20:15	24°346'33		morning rise	4458 Jan 10 06:23	8°344'13	
direct	4457 Jan 30 18:39	22°339'47		direct	4458 Jan 14 14:26	7°300'19	
morning max el	4457 Feb 09 15:36	28°330'26	22°46'13	morning max el	4458 Jan 23 06:14	12°302'11	21°21'42
	4457 Feb 11 01:54	0°≈		desc. node	4458 Feb 06 07:41	29°358'16	
desc. node	4457 Feb 19 10:40	10°≈15'38			4458 Feb 06 08:10	0°≈	
	4457 Mar 05 03:45	0°X		morning set	4458 Feb 23 13:43	26°≈00'06	
morning set	4457 Mar 15 21:44	17°X02'48			4458 Feb 26 02:03	0°X	
max. Earth dist.	4457 Mar 20 13:03	24°X50'19	1.40102 AU	max. Earth dist.	4458 Mar 02 14:05	7°X18'20	1.42176 AU
	4457 Mar 23 12:35	0°Y					
superior conj	4457 Mar 28 07:42	8°Y34'15	-1°52'35	superior conj	4458 Mar 10 00:10	19°X47'59	-2°06'24
minimum elong	4457 Mar 28 12:21	8°Y55'25	1°52'12	minimum elong	4458 Mar 10 02:22	19°X57'30	2°06'21
evening rise	4457 Apr 07 04:01	27°Y01'15			4458 Mar 15 19:35	0°Y	
	4457 Apr 08 17:43	0°8		evening rise	4458 Mar 21 05:17	9°Y45'05	
asc. node	4457 Apr 11 15:46	5°827'14		asc. node	4458 Mar 29 12:50	24°Y30'06	
evening max el	4457 Apr 23 07:48	22°857'17	18°26'36		4458 Apr 02 00:31	0°8	
retrograde	4457 Apr 30 19:45	26°839'47		evening max el	4458 Apr 06 18:00	5°852'29	18°08'30
evening set	4457 May 03 03:28	26°819'31		retrograde	4458 Apr 13 11:38	9°817'37	
inferior conj	4457 May 10 14:00	21°847'05	2°06'42	evening set	4458 Apr 16 02:02	8°847'27	
minimum elong	4457 May 10 17:34	21°839'52	2°05'41	inferior conj	4458 Apr 22 19:32	3°854'04	3°01'13
min. Earth dist.	4457 May 14 00:25	19°802'16	0.58391 AU	minimum elong	4458 Apr 22 22:32	3°847'04	3°00'39
morning rise	4457 May 18 04:33	16°819'04		min. Earth dist.	4458 Apr 26 02:11	0°851'19	0.60574 AU
desc. node	4457 May 18 09:53	16°812'20			4458 Apr 27 01:59	30°R9	
direct	4457 May 24 04:59	14°844'45		morning rise	4458 Apr 29 16:50	28°Y03'18	
morning max el	4457 Jun 07 14:20	22°827'29	26°58'51	desc. node	4458 May 05 06:55	25°Y57'59	
	4457 Jun 14 06:30	0°II		direct	4458 May 06 08:09	25°Y54'49	
	4457 Jul 02 20:03	0°6			4458 May 16 06:40	0°8	
morning set	4457 Jul 07 16:35	9°650'56		morning max el	4458 May 20 14:54	3°849'20	27°43'26
asc. node	4457 Jul 08 15:02	11°649'35			4458 Jun 08 22:18	0°II	
				morning set	4458 Jun 21 22:33	24°II22'09	
superior conj	4457 Jul 14 17:23	25°607'18	1°00'04		4458 Jun 24 14:48	0°6	
minimum elong	4457 Jul 14 15:12	24°655'13	0°59'40	asc. node	4458 Jun 25 12:05	1°654'05	
max. Earth dist.	4457 Jul 14 15:28	24°656'40	1.32004 AU	max. Earth dist.	4458 Jun 28 02:27	7°633'04	1.32072 AU
	4457 Jul 16 22:28	0°9					
evening rise	4457 Jul 21 13:41	10°901'11		superior conj	4458 Jun 29 04:36	9°656'35	0°37'49
	4457 Jul 31 20:23	0°n		minimum elong	4458 Jun 29 03:00	9°647'46	0°37'28
desc. node	4457 Aug 14 09:09	20°n14'22		evening rise	4458 Jul 06 00:13	24°649'03	
evening max el	4457 Aug 20 05:11	26°n35'29	26°34'57		4458 Jul 08 11:36	0°9	
	4457 Aug 24 07:00	0°u			4458 Jul 26 03:47	0°n	
retrograde	4457 Sep 03 03:58	3°u45'15		desc. node	4458 Aug 01 06:11	7°n02'04	
evening set	4457 Sep 09 21:58	1°u50'39		evening max el	4458 Aug 01 23:45	7°n44'55	25°22'10
	4457 Sep 12 18:44	30°Rn		retrograde	4458 Aug 15 22:41	14°n49'32	
min. Earth dist.	4457 Sep 13 18:57	29°n14'58	0.59860 AU	evening set	4458 Aug 21 18:00	13°n31'42	
inferior conj	4457 Sep 17 00:59	26°n39'59	-4°43'18	min. Earth dist.	4458 Aug 26 11:33	10°n51'23	0.57828 AU
minimum elong	4457 Sep 17 06:24	26°n29'10	4°42'20	inferior conj	4458 Aug 29 13:32	8°n44'05	-5°11'33
morning rise	4457 Sep 24 16:56	22°n01'36		minimum elong	4458 Aug 29 15:23	8°n40'54	5°11'28
direct	4457 Sep 27 01:34	21°n41'17		morning rise	4458 Sep 06 15:02	4°n28'39	
morning max el	4457 Oct 04 16:18	25°n24'36	18°14'04	direct	4458 Sep 09 03:29	4°n09'25	
asc. node	4457 Oct 04 14:15	25°n19'40		morning max el	4458 Sep 17 19:46	8°n16'13	18°56'00
	4457 Oct 08 13:45	0°u		asc. node	4458 Sep 21 11:18	12°n24'00	
morning set	4457 Oct 20 12:46	20°u36'32			4458 Oct 01 22:38	0°u	
	4457 Oct 25 12:10	0°m		morning set	4458 Oct 04 10:09	4°u50'13	
superior conj	4457 Oct 29 22:20	8°m09'41	1°14'51				
minimum elong	4457 Oct 30 02:16	8°m27'27	1°14'23	superior conj	4458 Oct 12 20:12	21°u18'08	1°33'20
max. Earth dist.	4457 Nov 06 12:55	21°m31'42	1.41100 AU	minimum elong	4458 Oct 12 22:53	21°u30'57	1°33'08
desc. node	4457 Nov 10 08:25	27°m54'03			4458 Oct 17 11:46	0°m	
evening rise	4457 Nov 11 09:30	29°m36'42		max. Earth dist.	4458 Oct 19 18:24	4°m06'54	1.39013 AU
	4457 Nov 11 15:14	0°x		evening rise	4458 Oct 23 15:19	10°m53'38	
	4457 Dec 01 13:19	0°3		desc. node	4458 Oct 28 05:28	18°m35'02	
evening max el	4457 Dec 15 10:59	17°310'08	23°08'42		4458 Nov 04 11:00	0°x	
retrograde	4457 Dec 25 18:22	23°316'29			4458 Nov 27 04:00	0°3	
evening set	4457 Dec 30 15:33	21°315'58		evening max el	4458 Nov 28 00:18	0°351'11	24°27'59
asc. node	4457 Dec 31 13:31	20°325'48		retrograde	4458 Dec 09 09:20	7°330'08	
min. Earth dist.	4458 Jan 04 15:48	15°323'10	0.68029 AU	evening set	4458 Dec 14 19:54	5°314'01	
				asc. node	4458 Dec 18 10:33	1°317'25	
					4458 Dec 19 10:12	30°Rx	

min. Earth dist.	4458 Dec 19 11:41	29°♄55'03	0.67721 AU	inferior conj	4459 Dec 04 11:23	12°♄43'52	-0°17'16
inferior conj	4458 Dec 20 07:38	28°♄48'20	0°38'06	minimum elong	4459 Dec 04 11:50	12°♄42'27	0°17'04
minimum elong	4458 Dec 20 06:44	28°♄51'23	0°37'44	asc. node	4459 Dec 05 07:34	11°♄40'05	
morning rise	4458 Dec 25 17:38	22°♄46'39		morning rise	4459 Dec 10 03:58	6°♄50'22	
direct	4458 Dec 29 12:24	21°♄24'49		direct	4459 Dec 13 11:04	5°♄47'55	
morning max el	4459 Jan 06 04:30	25°♄46'22	20°08'06	morning max el	4459 Dec 20 10:37	9°♄40'43	19°08'46
	4459 Jan 09 22:42	0°♄			4460 Jan 04 07:16	0°♄	
desc. node	4459 Jan 24 04:43	20°♄04'34		desc. node	4460 Jan 11 01:44	10°♄27'28	
	4459 Jan 30 17:42	0°♄		morning set	4460 Jan 12 13:40	12°♄47'04	
morning set	4459 Feb 02 11:05	4°♄11'25			4460 Jan 23 14:31	0°♄	
max. Earth dist.	4459 Feb 12 23:17	20°♄41'34	1.43855 AU	max. Earth dist.	4460 Jan 26 14:30	4°♄42'45	1.44930 AU
superior conj	4459 Feb 18 15:30	29°♄53'13	-2°05'37	superior conj	4460 Jan 29 06:30	8°♄55'24	-1°45'42
minimum elong	4459 Feb 18 12:15	29°♄39'52	2°05'31	minimum elong	4460 Jan 28 21:52	8°♄21'14	1°45'00
	4459 Feb 18 17:10	0°♄			4460 Feb 11 08:31	0°♄	
evening rise	4459 Mar 03 13:00	21°♄39'46		evening rise	4460 Feb 12 23:03	2°♄38'04	
	4459 Mar 08 08:56	0°♄			4460 Mar 01 13:37	0°♄	
asc. node	4459 Mar 16 09:52	13°♄01'31		asc. node	4460 Mar 02 06:53	0°♄51'43	
evening max el	4459 Mar 21 06:39	19°♄05'46	18°09'41	evening max el	4460 Mar 03 18:52	2°♄29'51	18°29'32
retrograde	4459 Mar 27 17:01	22°♄28'48		retrograde	4460 Mar 10 07:21	6°♄03'49	
evening set	4459 Mar 30 13:26	21°♄47'21		evening set	4460 Mar 13 09:46	5°♄10'15	
inferior conj	4459 Apr 05 17:57	16°♄34'00	3°28'37		4460 Mar 18 21:51	30°♄	
minimum elong	4459 Apr 05 19:19	16°♄30'21	3°28'29	inferior conj	4460 Mar 19 05:04	29°♄38'44	3°35'07
min. Earth dist.	4459 Apr 08 12:34	13°♄37'28	0.62707 AU	minimum elong	4460 Mar 19 04:48	29°♄39'31	3°35'06
morning rise	4459 Apr 11 23:55	10°♄29'41		min. Earth dist.	4460 Mar 21 08:31	27°♄07'14	0.64573 AU
direct	4459 Apr 18 20:49	7°♄54'44		morning rise	4460 Mar 24 23:09	23°♄27'32	
desc. node	4459 Apr 22 03:57	8°♄26'48		direct	4460 Mar 31 17:31	20°♄38'44	
morning max el	4459 May 02 21:17	15°♄53'50	27°50'27	desc. node	4460 Apr 08 00:58	23°♄16'04	
	4459 May 14 10:50	0°♄		morning max el	4460 Apr 14 06:52	28°♄33'26	27°21'41
	4459 Jun 01 13:59	0°♄			4460 Apr 15 16:17	0°♄	
morning set	4459 Jun 05 22:47	8°♄33'43			4460 May 07 06:09	0°♄	
max. Earth dist.	4459 Jun 11 09:26	19°♄54'26	1.32558 AU	morning set	4460 May 19 14:37	22°♄17'32	
asc. node	4459 Jun 12 09:08	22°♄01'46			4460 May 23 11:06	0°♄	
superior conj	4459 Jun 13 13:26	24°♄34'43	0°12'19	max. Earth dist.	4460 May 24 08:17	1°♄48'43	1.33484 AU
minimum elong	4459 Jun 13 12:50	24°♄31'33	0°12'10	superior conj	4460 May 27 17:57	8°♄55'56	-0°15'41
behind sun begin	4459 Jun 13 09:27	24°♄13'11		minimum elong	4460 May 27 18:45	9°♄00'12	0°15'30
behind sun end	4459 Jun 13 16:14	24°♄49'56		behind sun begin	4460 May 27 17:24	8°♄53'02	
	4459 Jun 16 01:12	0°♄		behind sun end	4460 May 27 20:06	9°♄07'22	
evening rise	4459 Jun 20 12:02	9°♄37'14		asc. node	4460 May 29 06:11	12°♄08'40	
	4459 Jun 30 23:52	0°♄		evening rise	4460 Jun 03 23:16	24°♄19'40	
evening max el	4459 Jul 14 12:49	18°♄16'33	23°49'28		4460 Jun 06 16:56	0°♄	
desc. node	4459 Jul 19 03:13	22°♄03'08		evening max el	4460 Jun 25 03:33	28°♄40'44	22°12'41
retrograde	4459 Jul 28 05:34	25°♄09'39			4460 Jun 26 13:50	0°♄	
evening set	4459 Aug 01 14:33	24°♄27'29		desc. node	4460 Jul 05 00:13	4°♄43'17	
min. Earth dist.	4459 Aug 07 22:58	21°♄25'02	0.56107 AU	retrograde	4460 Jul 08 00:49	5°♄04'30	
inferior conj	4459 Aug 10 05:48	20°♄01'59	-5°03'03	evening set	4460 Jul 10 22:53	4°♄45'35	
minimum elong	4459 Aug 10 01:31	20°♄08'30	5°02'37	min. Earth dist.	4460 Jul 19 09:26	1°♄07'16	0.55032 AU
morning rise	4459 Aug 18 15:01	16°♄05'40		inferior conj	4460 Jul 20 05:17	0°♄39'17	-4°04'46
direct	4459 Aug 21 09:50	15°♄46'01		minimum elong	4460 Jul 19 20:45	0°♄51'19	4°02'39
morning max el	4459 Aug 31 12:35	20°♄28'02	19°59'44		4460 Jul 21 09:18	30°♄	
asc. node	4459 Sep 08 08:21	0°♄		morning rise	4460 Jul 28 20:27	26°♄48'56	
	4459 Sep 08 02:32	0°♄		direct	4460 Jul 31 23:47	26°♄26'53	
morning set	4459 Sep 18 14:21	19°♄23'08			4460 Aug 10 10:31	0°♄	
	4459 Sep 23 19:09	0°♄		morning max el	4460 Aug 12 17:34	1°♄55'33	21°23'58
superior conj	4459 Sep 26 08:16	5°♄08'25	1°42'25	asc. node	4460 Aug 25 05:23	19°♄03'35	
minimum elong	4459 Sep 26 09:18	5°♄13'37	1°42'24		4460 Aug 30 22:29	0°♄	
max. Earth dist.	4459 Oct 01 23:49	16°♄08'43	1.36961 AU	morning set	4460 Sep 01 22:57	4°♄08'52	
evening rise	4459 Oct 05 19:01	23°♄10'31		superior conj	4460 Sep 09 06:23	19°♄28'36	1°43'35
	4459 Oct 09 15:42	0°♄		minimum elong	4460 Sep 09 05:56	19°♄26'17	1°43'35
desc. node	4459 Oct 15 02:29	9°♄06'19		max. Earth dist.	4460 Sep 13 10:36	28°♄00'10	1.35166 AU
	4459 Oct 29 04:57	0°♄			4460 Sep 14 10:42	0°♄	
evening max el	4459 Nov 10 12:38	14°♄33'44	25°40'45	evening rise	4460 Sep 17 16:48	6°♄18'28	
retrograde	4459 Nov 22 19:46	21°♄36'18		desc. node	4460 Sep 30 23:31	29°♄22'50	
evening set	4459 Nov 28 20:05	19°♄06'37			4460 Oct 01 08:57	0°♄	
min. Earth dist.	4459 Dec 03 04:24	14°♄22'28	0.67059 AU	evening max el	4460 Oct 23 01:09	28°♄13'30	26°39'31

	4460 Oct 24 23:33	0°♊		evening max el	4461 Oct 05 13:34	11°♎41'23	27°16'57
retrograde	4460 Nov 05 01:03	5°♊28'48		retrograde	4461 Oct 19 00:30	18°♎59'37	
evening set	4460 Nov 11 14:09	2°♊50'04		evening set	4461 Oct 25 23:43	16°♎19'09	
	4460 Nov 14 12:04	30°♎		min. Earth dist.	4461 Oct 29 19:15	12°♎45'14	0.64688 AU
min. Earth dist.	4460 Nov 15 15:40	28°♎41'21	0.66047 AU	inferior conj	4461 Nov 01 01:44	10°♎17'13	-2°18'55
inferior conj	4460 Nov 17 10:10	26°♎35'08	-1°16'51	minimum elong	4461 Nov 01 05:42	10°♎06'25	2°17'23
minimum elong	4460 Nov 17 12:18	26°♎28'48	1°15'58	morning rise	4461 Nov 07 12:50	4°♎48'08	
asc. node	4460 Nov 21 04:35	22°♎31'01		asc. node	4461 Nov 08 01:37	4°♎35'18	
morning rise	4460 Nov 23 11:13	20°♎52'21		direct	4461 Nov 10 03:08	4°♎13'01	
direct	4460 Nov 26 08:43	20°♎05'33		morning max el	4461 Nov 16 14:46	7°♎39'25	17°58'49
morning max el	4460 Dec 02 22:53	23°♎40'30	18°25'21		4461 Dec 01 16:41	0°♊	
	4460 Dec 08 03:11	0°♊		morning set	4461 Dec 04 02:51	4°♊03'50	
morning set	4460 Dec 22 17:32	22°♊41'43		desc. node	4461 Dec 14 19:47	21°♊44'32	
	4460 Dec 27 07:09	0°♋					
desc. node	4460 Dec 27 22:45	1°♋02'06		superior conj	4461 Dec 17 20:02	26°♊35'26	-0°20'43
				minimum elong	4461 Dec 17 17:31	26°♊25'22	0°20'20
superior conj	4461 Jan 07 09:11	17°♋30'48	-1°07'43		4461 Dec 19 23:18	0°♋	
minimum elong	4461 Jan 07 01:04	16°♋58'55	1°06'43	max. Earth dist.	4461 Dec 22 03:59	3°♋28'40	1.44912 AU
max. Earth dist.	4461 Jan 08 08:52	19°♋03'38	1.45292 AU	evening rise	4462 Jan 03 01:49	22°♋01'25	
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evening rise	4461 Jan 23 09:48	12°♌40'12		greatest brilliancy	4462 Jan 17 10:39	13°♌49'08	-0.6m
greatest brilliancy	4461 Feb 02 12:02	28°♌32'08	-0.8m	evening max el	4462 Jan 29 09:22	29°♌32'37	20°00'23
	4461 Feb 03 10:47	0°♍			4462 Jan 29 20:14	0°♍	
evening max el	4461 Feb 15 04:20	15°♍59'44	19°07'00	asc. node	4462 Feb 04 00:55	3°♍38'17	
asc. node	4461 Feb 17 03:54	17°♍48'37		retrograde	4462 Feb 06 00:40	3°♍59'34	
retrograde	4461 Feb 22 02:50	19°♍55'42		evening set	4462 Feb 09 17:56	2°♍38'54	
evening set	4461 Feb 25 12:02	18°♍49'05			4462 Feb 12 12:08	30°♎	
inferior conj	4461 Mar 03 01:17	13°♍01'18	3°25'51	inferior conj	4462 Feb 15 03:40	26°♎37'01	3°04'25
minimum elong	4461 Mar 02 23:46	13°♍06'06	3°25'40	minimum elong	4462 Feb 15 01:25	26°♎44'31	3°03'57
min. Earth dist.	4461 Mar 04 13:21	11°♍06'27	0.66064 AU	min. Earth dist.	4462 Feb 16 01:24	25°♎24'03	0.67133 AU
morning rise	4461 Mar 08 11:09	6°♍47'25		morning rise	4462 Feb 20 08:42	20°♎22'53	
direct	4461 Mar 14 20:57	3°♍58'16		direct	4462 Feb 26 06:04	17°♎44'53	
desc. node	4461 Mar 25 21:59	9°♍51'25		morning max el	4462 Mar 10 01:35	24°♎48'34	25°05'27
morning max el	4461 Mar 27 16:46	11°♍35'07	26°23'34	desc. node	4462 Mar 12 19:00	27°♎43'29	
	4461 Apr 11 09:40	0°♎			4462 Mar 14 18:11	0°♎	
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morning set	4461 May 02 18:23	5°♏22'07		morning set	4462 Apr 15 05:24	17°♎34'28	
max. Earth dist.	4461 May 06 19:53	13°♏10'13	1.34882 AU	max. Earth dist.	4462 Apr 18 20:43	24°♎12'31	1.36719 AU
					4462 Apr 21 22:23	0°♏	
superior conj	4461 May 11 15:47	22°♏52'38	-0°44'59	superior conj	4462 Apr 25 04:07	6°♏17'32	-1°13'58
minimum elong	4461 May 11 18:13	23°♏05'05	0°44'31	minimum elong	4462 Apr 25 08:05	6°♏37'07	1°13'20
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asc. node	4461 May 16 03:12	2°♐10'01		asc. node	4462 May 03 00:14	22°♏01'59	
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desc. node	4461 Jun 21 21:14	14°♑37'36		inferior conj	4462 Jun 10 00:11	21°♐24'08	-0°22'12
inferior conj	4461 Jun 29 22:32	10°♑56'10	-2°21'28	minimum elong	4462 Jun 09 23:11	21°♐25'43	0°21'50
minimum elong	4461 Jun 29 16:00	11°♑05'29	2°19'11	min. Earth dist.	4462 Jun 12 10:23	19°♐52'28	0.55659 AU
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morning max el	4461 Jul 25 12:21	12°♑41'28	23°03'20		4462 Jul 13 07:00	0°♑	
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asc. node	4461 Aug 12 02:26	8°♒15'16			4462 Jul 31 00:56	0°♒	
morning set	4461 Aug 17 09:58	19°♒00'55		morning set	4462 Aug 01 21:44	3°♒54'25	
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superior conj	4461 Aug 24 11:16	4°♓07'52	1°38'08	superior conj	4462 Aug 08 20:26	18°♒58'30	1°27'04
minimum elong	4461 Aug 24 09:43	3°♓59'37	1°38'01	minimum elong	4462 Aug 08 18:15	18°♒46'39	1°26'48
max. Earth dist.	4461 Aug 27 06:13	10°♓02'47	1.33748 AU	max. Earth dist.	4462 Aug 10 10:20	22°♒24'40	1.32747 AU
evening rise	4461 Sep 01 04:18	20°♓05'13			4462 Aug 13 23:35	0°♓	
	4461 Sep 06 08:58	0°♔		evening rise	4462 Aug 16 01:48	4°♓20'13	
desc. node	4461 Sep 17 20:33	19°♔17'11			4462 Aug 30 01:38	0°♔	
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






























































































































evening max el	4462 Sep 18 00:03	24° Ω 44'37	27°26'22	desc. node	4463 Aug 22 14:35	27° Π 18'47	
	4462 Sep 24 21:26	0° Π			4463 Aug 24 17:03	0° Ω	
retrograde	4462 Oct 01 17:17	2° Π 00'03		evening max el	4463 Aug 31 05:52	7° Ω 09'47	27°03'15
	4462 Oct 08 02:16	30° \mathbb{R} Ω		retrograde	4463 Sep 14 02:48	14° Ω 21'30	
evening set	4462 Oct 08 21:41	29° Ω 27'44		evening set	4463 Sep 21 04:05	12° Ω 09'18	
min. Earth dist.	4462 Oct 12 13:06	26° Ω 24'55	0.63004 AU	min. Earth dist.	4463 Sep 24 20:09	9° Ω 28'22	0.61053 AU
inferior conj	4462 Oct 15 07:20	23° Ω 43'31	-3°20'31	inferior conj	4463 Sep 27 23:47	6° Ω 46'04	-4°16'36
minimum elong	4462 Oct 15 12:53	23° Ω 29'59	3°18'41	minimum elong	4463 Sep 28 05:51	6° Ω 33'00	4°15'08
morning rise	4462 Oct 22 05:37	18° Ω 31'39		morning rise	4463 Oct 05 09:30	1° Ω 54'58	
direct	4462 Oct 24 15:23	18° Ω 04'34		direct	4463 Oct 07 17:43	1° Ω 32'53	
asc. node	4462 Oct 25 22:41	18° Ω 12'42		asc. node	4463 Oct 12 19:45	3° Ω 21'42	
morning max el	4462 Oct 31 07:22	21° Ω 30'36	17°49'53	morning max el	4463 Oct 14 21:35	5° Ω 06'56	17°59'35
	4462 Nov 06 18:36	0° Π		morning set	4463 Oct 30 15:55	29° Ω 59'15	
morning set	4462 Nov 16 12:27	16° Π 35'59			4463 Oct 30 16:04	0° Π	
	4462 Nov 24 05:17	0° \mathbb{X}					
superior conj	4462 Nov 28 06:12	6° \mathbb{X} 49'29	0°23'57	superior conj	4463 Nov 09 19:03	18° Π 21'59	0°59'24
minimum elong	4462 Nov 28 08:33	6° \mathbb{X} 59'16	0°23'37	minimum elong	4463 Nov 09 23:06	18° Π 39'48	0°58'52
desc. node	4462 Dec 01 16:49	12° \mathbb{X} 30'56			4463 Nov 16 13:58	0° \mathbb{X}	
max. Earth dist.	4462 Dec 04 21:03	17° \mathbb{X} 40'12	1.43844 AU	max. Earth dist.	4463 Nov 17 09:33	1° \mathbb{X} 21'27	1.42213 AU
	4462 Dec 12 16:32	0° \mathbb{Z}		desc. node	4463 Nov 18 13:52	3° \mathbb{X} 18'22	
evening rise	4462 Dec 13 11:38	1° \mathbb{Z} 13'52		evening rise	4463 Nov 23 07:21	10° \mathbb{X} 57'07	
	4463 Jan 01 21:34	0° \approx			4463 Dec 05 18:28	0° \mathbb{Z}	
evening max el	4463 Jan 12 08:54	13° \approx 06'06	21°06'59	evening max el	4463 Dec 26 03:09	26° \mathbb{Z} 41'03	22°22'49
retrograde	4463 Jan 20 22:36	18° \approx 10'41			4463 Dec 29 20:43	0° \approx	
asc. node	4463 Jan 21 21:57	18° \approx 05'32		retrograde	4464 Jan 04 18:59	2° \approx 25'46	
evening set	4463 Jan 25 01:30	16° \approx 34'52		asc. node	4464 Jan 08 19:00	1° \approx 01'18	
inferior conj	4463 Jan 30 09:46	10° \approx 21'34	2°33'13	evening set	4464 Jan 09 09:05	0° \approx 34'10	
minimum elong	4463 Jan 30 07:19	10° \approx 30'03	2°32'32		4464 Jan 10 00:37	30° \mathbb{R} \mathbb{Z}	
min. Earth dist.	4463 Jan 30 18:36	9° \approx 51'03	0.67785 AU	inferior conj	4464 Jan 14 17:35	24° \mathbb{Z} 12'42	1°53'53
morning rise	4463 Feb 04 12:57	4° \approx 08'48		minimum elong	4464 Jan 14 15:22	24° \mathbb{Z} 20'21	1°53'08
direct	4463 Feb 09 19:53	1° \approx 49'33		min. Earth dist.	4464 Jan 14 14:45	24° \mathbb{Z} 22'33	0.68045 AU
morning max el	4463 Feb 20 10:16	8° \approx 08'05	23°37'29	morning rise	4464 Jan 19 21:33	18° \mathbb{Z} 02'43	
desc. node	4463 Feb 27 16:01	16° \approx 29'46		direct	4464 Jan 24 13:41	16° \mathbb{Z} 05'54	
	4463 Mar 09 12:46	0° \mathbb{X}		morning max el	4464 Feb 02 21:52	21° \mathbb{Z} 35'04	22°09'19
morning set	4463 Mar 27 17:44	28° \mathbb{X} 38'09			4464 Feb 10 02:53	0° \approx	
	4463 Mar 28 12:56	0° \mathbb{Y}		desc. node	4464 Feb 14 13:04	5° \approx 55'08	
max. Earth dist.	4463 Mar 31 16:17	5° \mathbb{Y} 26'56	1.38846 AU		4464 Mar 01 19:56	0° \mathbb{X}	
				morning set	4464 Mar 07 02:03	8° \mathbb{X} 21'00	
superior conj	4463 Apr 08 03:08	19° \mathbb{Y} 00'14	-1°40'09	max. Earth dist.	4464 Mar 12 13:51	17° \mathbb{X} 23'52	1.41014 AU
minimum elong	4463 Apr 08 07:59	19° \mathbb{Y} 23'00	1°39'36		4464 Mar 19 21:02	0° \mathbb{Y}	
	4463 Apr 13 21:04	0° \mathbb{Z}		superior conj	4464 Mar 20 08:10	0° \mathbb{Y} 49'27	-1°59'53
evening rise	4463 Apr 17 08:04	6° \mathbb{Z} 43'55		minimum elong	4464 Mar 20 12:09	1° \mathbb{Y} 07'12	1°59'39
asc. node	4463 Apr 19 21:16	11° \mathbb{Z} 39'29		evening rise	4464 Mar 30 17:28	19° \mathbb{Y} 52'34	
	4463 Apr 30 21:47	0° Π			4464 Apr 05 05:30	0° \mathbb{Z}	
evening max el	4463 May 03 15:25	3° Π 04'13	18°45'53	asc. node	4464 Apr 05 18:19	0° \mathbb{Z} 57'02	
retrograde	4463 May 11 19:13	7° Π 04'23		evening max el	4464 Apr 15 22:38	15° \mathbb{Z} 44'46	18°16'29
evening set	4463 May 13 23:02	6° Π 48'36		retrograde	4464 Apr 23 01:34	19° \mathbb{Z} 18'21	
inferior conj	4463 May 21 20:44	2° Π 27'20	1°21'00	evening set	4464 Apr 25 12:04	18° \mathbb{Z} 54'12	
minimum elong	4463 May 21 23:34	2° Π 22'06	1°20'04	inferior conj	4464 May 02 14:53	14° \mathbb{Z} 12'41	2°33'31
min. Earth dist.	4463 May 25 02:59	0° Π 04'18	0.57242 AU	minimum elong	4464 May 02 18:25	14° \mathbb{Z} 05'02	2°32'38
	4463 May 25 05:27	30° \mathbb{R} \mathbb{Z}		min. Earth dist.	4464 May 06 00:59	11° \mathbb{Z} 17'06	0.59300 AU
desc. node	4463 May 26 15:15	29° \mathbb{Z} 03'19		morning rise	4464 May 09 21:59	8° \mathbb{Z} 33'22	
morning rise	4463 May 29 20:52	27° \mathbb{Z} 17'18		desc. node	4464 May 12 12:17	7° \mathbb{Z} 22'15	
direct	4463 Jun 04 09:06	26° \mathbb{Z} 03'08		direct	4464 May 16 05:34	6° \mathbb{Z} 44'18	
	4463 Jun 14 13:38	0° Π		morning max el	4464 May 30 14:46	14° \mathbb{Z} 33'32	27°22'22
morning max el	4463 Jun 18 17:36	3° Π 33'39	26°17'53		4464 Jun 12 00:47	0° Π	
	4463 Jul 07 18:21	0° \mathbb{Z}			4464 Jun 29 01:22	0° \mathbb{Z}	
asc. node	4463 Jul 16 20:33	17° \mathbb{Z} 40'38		morning set	4464 Jun 30 16:59	3° \mathbb{Z} 24'36	
morning set	4463 Jul 17 08:40	18° \mathbb{Z} 44'22		asc. node	4464 Jul 02 17:35	7° \mathbb{Z} 41'44	
	4463 Jul 22 13:24	0° Ω					
superior conj	4463 Jul 24 07:50	3° Ω 53'53	1°11'10	superior conj	4464 Jul 07 19:36	18° \mathbb{Z} 47'22	0°51'05
minimum elong	4463 Jul 24 05:31	3° Ω 41'06	1°10'47	minimum elong	4464 Jul 07 17:36	18° \mathbb{Z} 36'21	0°50'41
max. Earth dist.	4463 Jul 24 20:03	5° Ω 01'14	1.32156 AU	max. Earth dist.	4464 Jul 07 07:38	17° \mathbb{Z} 41'19	1.31979 AU
evening rise	4463 Jul 31 06:16	18° Ω 54'25			4464 Jul 12 22:13	0° Ω	
	4463 Aug 05 18:43	0° Π		evening rise	4464 Jul 14 15:11	3° Ω 39'21	
					4464 Jul 28 15:43	0° Π	

desc. node	4464 Aug 08 11:37	14° \mathbb{M} 54'18		4465 Jul 25 05:31	0° \mathbb{M}	
evening max el	4464 Aug 12 04:33	18° \mathbb{M} 46'37	26°07'11	desc. node	4465 Jul 26 08:37	1° \mathbb{M} 01'13
retrograde	4464 Aug 26 03:52	25° \mathbb{M} 55'10		retrograde	4465 Aug 07 18:07	6° \mathbb{M} 39'34
evening set	4464 Sep 01 13:58	24° \mathbb{M} 15'10		evening set	4465 Aug 12 23:37	5° \mathbb{M} 37'54
min. Earth dist.	4464 Sep 05 17:19	21° \mathbb{M} 40'03	0.58979 AU	min. Earth dist.	4465 Aug 18 07:33	2° \mathbb{M} 49'46 0.57040 AU
inferior conj	4464 Sep 08 23:25	19° \mathbb{M} 14'12	-4°58'42	inferior conj	4465 Aug 21 03:21	0° \mathbb{M} 59'27 -5°13'26
minimum elong	4464 Sep 09 03:44	19° \mathbb{M} 06'06	4°58'10	minimum elong	4465 Aug 21 02:45	1° \mathbb{M} 00'26 5°13'26
morning rise	4464 Sep 16 19:43	14° \mathbb{M} 46'03			4465 Aug 22 16:16	30° \mathbb{R} \mathbb{L}
direct	4464 Sep 19 05:30	14° \mathbb{M} 26'31		morning rise	4465 Aug 29 08:22	26° \mathbb{L} 52'56
morning max el	4464 Sep 27 06:02	18° \mathbb{M} 18'16	18°29'18	direct	4465 Aug 31 23:01	26° \mathbb{L} 33'51
asc. node	4464 Sep 28 16:49	19° \mathbb{M} 48'29			4465 Sep 09 04:48	0° \mathbb{M}
	4464 Oct 05 18:37	0° \mathbb{L}		morning max el	4465 Sep 10 05:19	0° \mathbb{M} 54'31 19°20'20
morning set	4464 Oct 13 07:54	13° \mathbb{L} 57'38		asc. node	4465 Sep 15 13:51	7° \mathbb{M} 17'54
	4464 Oct 21 17:32	0° \mathbb{M}		morning set	4465 Sep 27 08:29	28° \mathbb{M} 20'19
					4465 Sep 28 04:26	0° \mathbb{L}
superior conj	4464 Oct 22 06:27	1° \mathbb{M} 00'08	1°23'55	superior conj	4465 Oct 05 10:55	14° \mathbb{L} 28'01 1°38'14
minimum elong	4464 Oct 22 09:57	1° \mathbb{M} 16'21	1°23'34	minimum elong	4465 Oct 05 12:55	14° \mathbb{L} 37'44 1°38'07
max. Earth dist.	4464 Oct 29 16:31	14° \mathbb{M} 19'11	1.40222 AU	max. Earth dist.	4465 Oct 11 20:50	26° \mathbb{L} 36'03 1.38127 AU
evening rise	4464 Nov 02 23:43	21° \mathbb{M} 37'22			4465 Oct 13 17:53	0° \mathbb{M}
desc. node	4464 Nov 04 10:54	24° \mathbb{M} 02'49		evening rise	4465 Oct 15 15:15	3° \mathbb{M} 21'06
	4464 Nov 08 03:20	0° \mathbb{X}		desc. node	4465 Oct 22 07:56	14° \mathbb{M} 40'18
	4464 Nov 28 20:28	0° \mathbb{Z}			4465 Nov 01 06:06	0° \mathbb{X}
evening max el	4464 Dec 07 17:32	10° \mathbb{Z} 18'59	23°42'44	evening max el	4465 Nov 20 06:15	24° \mathbb{X} 01'06 25°00'12
retrograde	4464 Dec 18 12:21	16° \mathbb{Z} 40'55			4465 Nov 28 07:15	0° \mathbb{Z}
evening set	4464 Dec 23 15:04	14° \mathbb{Z} 33'33		retrograde	4465 Dec 02 01:33	0° \mathbb{Z} 51'41
asc. node	4464 Dec 25 16:02	12° \mathbb{Z} 30'42			4465 Dec 05 12:48	30° \mathbb{R} \mathbb{X}
min. Earth dist.	4464 Dec 28 11:29	8° \mathbb{Z} 54'54	0.67937 AU	evening set	4465 Dec 07 17:50	28° \mathbb{X} 29'40
inferior conj	4464 Dec 29 01:14	8° \mathbb{Z} 07'58	1°07'34	min. Earth dist.	4465 Dec 12 06:25	23° \mathbb{X} 25'04 0.67481 AU
minimum elong	4464 Dec 28 23:44	8° \mathbb{Z} 13'06	1°06'58	asc. node	4465 Dec 12 13:03	23° \mathbb{X} 03'20
morning rise	4465 Jan 03 08:23	2° \mathbb{Z} 02'29		inferior conj	4465 Dec 13 06:57	22° \mathbb{X} 04'30 0°15'14
direct	4465 Jan 07 10:29	0° \mathbb{Z} 28'23		minimum elong	4465 Dec 13 06:34	22° \mathbb{X} 05'45 0°15'04
morning max el	4465 Jan 15 15:38	5° \mathbb{Z} 12'20	20°48'46	transit middle	4465 Dec 13 06:34	22° \mathbb{X} 05'45 0°15'04
desc. node	4465 Jan 31 10:07	25° \mathbb{Z} 48'48		transit begin	4465 Dec 13 05:33	22° \mathbb{X} 09'06
	4465 Feb 03 06:15	0° \approx		transit end	4465 Dec 13 07:35	22° \mathbb{X} 02'25
morning set	4465 Feb 14 07:53	16° \approx 51'55		morning rise	4465 Dec 18 19:28	16° \mathbb{X} 05'43
max. Earth dist.	4465 Feb 22 17:50	0° \mathbb{X} 14'36	1.42943 AU	direct	4465 Dec 22 09:02	14° \mathbb{X} 52'30
	4465 Feb 22 14:14	0° \mathbb{X}		morning max el	4465 Dec 29 17:13	19° \mathbb{X} 00'40 19°40'50
superior conj	4465 Mar 01 14:15	11° \mathbb{X} 34'25	-2°08'12		4466 Jan 07 11:44	0° \mathbb{Z}
minimum elong	4465 Mar 01 14:27	11° \mathbb{X} 35'16	2°08'11	greatest brilliancy	4466 Jan 11 19:50	6° \mathbb{Z} 17'54 -0.7m
	4465 Mar 12 05:04	0° \mathbb{Y}		desc. node	4466 Jan 18 07:09	16° \mathbb{Z} 02'48
evening rise	4465 Mar 13 11:49	2° \mathbb{Y} 16'37		morning set	4466 Jan 24 04:04	25° \mathbb{Z} 03'19
asc. node	4465 Mar 23 15:21	19° \mathbb{Y} 47'53			4466 Jan 27 08:43	0° \approx
evening max el	4465 Mar 30 10:16	28° \mathbb{Y} 48'57	18°06'46	max. Earth dist.	4466 Feb 05 05:22	13° \approx 54'01 1.44392 AU
	4465 Mar 31 17:45	0° \mathbb{Z}				
retrograde	4465 Apr 05 23:43	2° \mathbb{Z} 11'37		superior conj	4466 Feb 09 18:34	21° \approx 10'32 -1°59'38
evening set	4465 Apr 08 16:37	1° \mathbb{Z} 36'56		minimum elong	4466 Feb 09 12:39	20° \approx 46'42 1°59'19
	4465 Apr 11 09:24	30° \mathbb{R} \mathbb{Y}			4466 Feb 15 04:37	0° \mathbb{X}
inferior conj	4465 Apr 15 04:08	26° \mathbb{Y} 35'13	3°15'46	evening rise	4466 Feb 23 10:38	13° \mathbb{X} 47'01
minimum elong	4465 Apr 15 06:29	26° \mathbb{Y} 29'22	3°15'24		4466 Mar 05 03:09	0° \mathbb{Y}
min. Earth dist.	4465 Apr 18 06:28	23° \mathbb{Y} 32'00	0.61493 AU	asc. node	4466 Mar 10 12:22	8° \mathbb{Y} 02'55
morning rise	4465 Apr 21 18:31	20° \mathbb{Y} 37'29		evening max el	4466 Mar 13 23:04	12° \mathbb{Y} 07'32 18°16'01
direct	4465 Apr 28 13:19	18° \mathbb{Y} 16'06		retrograde	4466 Mar 20 09:12	15° \mathbb{Y} 33'26
desc. node	4465 Apr 29 09:18	18° \mathbb{Y} 18'07		evening set	4466 Mar 23 08:11	14° \mathbb{Y} 46'54
morning max el	4465 May 12 18:05	26° \mathbb{Y} 14'33	27°51'04	inferior conj	4466 Mar 29 08:21	9° \mathbb{Y} 25'53 3°33'34
	4465 May 16 06:14	0° \mathbb{Z}		minimum elong	4466 Mar 29 09:00	9° \mathbb{Y} 24'05 3°33'32
	4465 Jun 05 13:42	0° \mathbb{I}		min. Earth dist.	4466 Mar 31 20:48	6° \mathbb{Y} 37'59 0.63541 AU
morning set	4465 Jun 14 20:49	17° \mathbb{I} 49'03		morning rise	4466 Apr 04 08:50	3° \mathbb{Y} 18'14
asc. node	4465 Jun 19 14:38	27° \mathbb{I} 48'37		direct	4466 Apr 11 05:44	0° \mathbb{Y} 35'27
max. Earth dist.	4465 Jun 20 17:14	0° \mathbb{L} 12'38	1.32219 AU	desc. node	4466 Apr 16 06:20	1° \mathbb{Y} 50'08
	4465 Jun 20 14:55	0° \mathbb{L}		morning max el	4466 Apr 25 01:51	8° \mathbb{Y} 33'52 27°42'18
					4466 May 11 15:53	0° \mathbb{Z}
superior conj	4465 Jun 22 06:02	3° \mathbb{L} 33'21	0°27'22		4466 May 28 19:42	0° \mathbb{I}
minimum elong	4465 Jun 22 04:49	3° \mathbb{L} 26'40	0°27'07	morning set	4466 May 29 17:46	1° \mathbb{I} 49'23
evening rise	4465 Jun 29 02:29	18° \mathbb{L} 28'31		max. Earth dist.	4466 Jun 03 20:59	12° \mathbb{I} 22'21 1.32892 AU
	4465 Jul 04 17:47	0° \mathbb{L}		asc. node	4466 Jun 06 11:39	17° \mathbb{I} 56'14
evening max el	4465 Jul 24 20:11	29° \mathbb{L} 37'53	24°44'21			
































































































































superior conj	4466 Jun 06 13:16	18° Π 04'54	0°00'42	superior conj	4467 May 21 15:13	2° Π 16'00	-0°28'01
minimum elong	4466 Jun 06 13:13	18° Π 04'41	0°00'42	minimum elong	4467 May 21 16:42	2° Π 23'45	0°27'43
behind sun begin	4466 Jun 06 07:55	17° Π 36'10		asc. node	4467 May 24 08:41	8° Π 00'55	
behind sun end	4466 Jun 06 18:32	18° Π 33'14		evening rise	4467 May 29 00:34	17° Π 52'04	
	4466 Jun 12 01:44	0° \mathfrak{D}			4467 Jun 04 01:47	0° \mathfrak{D}	
evening rise	4466 Jun 13 14:13	3° \mathfrak{D} 14'41		evening max el	4467 Jun 18 03:01	20° \mathfrak{D} 32'53	21°33'46
	4466 Jun 28 04:06	0° Ω		retrograde	4467 Jun 30 10:25	26° \mathfrak{D} 37'26	
evening max el	4466 Jul 06 09:06	10° Ω 02'40	23°07'59	desc. node	4467 Jun 30 02:36	26° \mathfrak{D} 37'11	
desc. node	4466 Jul 13 05:36	15° Ω 06'35		evening set	4467 Jul 02 21:54	26° \mathfrak{D} 23'27	
retrograde	4466 Jul 19 19:31	16° Ω 45'10		inferior conj	4467 Jul 12 06:40	22° \mathfrak{D} 22'53	-3°25'08
evening set	4466 Jul 23 12:40	16° Ω 15'02		minimum elong	4467 Jul 11 22:12	22° \mathfrak{D} 34'43	3°22'36
min. Earth dist.	4466 Jul 30 18:15	12° Ω 58'59	0.55557 AU	min. Earth dist.	4467 Jul 12 04:35	22° \mathfrak{D} 25'48	0.54842 AU
inferior conj	4466 Aug 01 11:39	11° Ω 58'45	-4°44'47	morning rise	4467 Jul 20 23:34	18° \mathfrak{D} 29'41	
minimum elong	4466 Aug 01 04:59	12° Ω 08'30	4°43'40	direct	4467 Jul 24 08:08	18° \mathfrak{D} 05'12	
morning rise	4466 Aug 09 23:35	8° Ω 06'42		morning max el	4467 Aug 05 17:00	23° \mathfrak{D} 54'46	22°05'00
direct	4466 Aug 12 21:51	7° Ω 46'13			4467 Aug 11 03:53	0° Ω	
morning max el	4466 Aug 23 16:58	12° Ω 47'17	20°33'07	asc. node	4467 Aug 20 07:56	14° Ω 30'57	
asc. node	4466 Sep 02 10:53	25° Ω 36'00		morning set	4467 Aug 27 00:42	27° Ω 48'52	
	4466 Sep 04 23:22	0° \mathfrak{M}			4467 Aug 28 01:41	0° \mathfrak{M}	
morning set	4466 Sep 11 14:50	12° \mathfrak{M} 59'36					
				superior conj	4467 Sep 03 05:01	13° \mathfrak{M} 01'28	1°42'01
superior conj	4466 Sep 19 03:42	28° \mathfrak{M} 32'15	1°43'48	minimum elong	4467 Sep 03 04:03	12° \mathfrak{M} 56'23	1°41'59
minimum elong	4466 Sep 19 04:04	28° \mathfrak{M} 34'09	1°43'48	max. Earth dist.	4467 Sep 06 18:53	20° \mathfrak{M} 27'28	1.34514 AU
	4466 Sep 19 20:59	0° \mathfrak{A}		evening rise	4467 Sep 11 07:18	29° \mathfrak{M} 27'04	
max. Earth dist.	4466 Sep 24 04:10	8° \mathfrak{A} 31'33	1.36166 AU		4467 Sep 11 14:07	0° \mathfrak{A}	
evening rise	4466 Sep 28 03:13	16° \mathfrak{A} 01'29		desc. node	4467 Sep 26 01:56	25° \mathfrak{A} 14'24	
	4466 Oct 06 02:04	0° \mathfrak{M}			4467 Sep 29 04:59	0° \mathfrak{M}	
desc. node	4466 Oct 09 04:56	5° \mathfrak{M} 06'14		evening max el	4467 Oct 16 07:31	21° \mathfrak{M} 20'50	26°58'24
	4466 Oct 26 18:08	0° \mathfrak{J}		retrograde	4467 Oct 29 12:24	28° \mathfrak{M} 37'42	
evening max el	4466 Nov 02 18:54	7° \mathfrak{J} 44'37	26°07'56	evening set	4467 Nov 05 06:26	25° \mathfrak{M} 57'07	
retrograde	4466 Nov 15 09:45	14° \mathfrak{J} 53'07		min. Earth dist.	4467 Nov 09 05:18	22° \mathfrak{M} 03'38	0.65518 AU
evening set	4466 Nov 21 15:40	12° \mathfrak{J} 19'12		inferior conj	4467 Nov 11 04:53	19° \mathfrak{M} 47'23	-1°43'01
min. Earth dist.	4466 Nov 25 21:09	7° \mathfrak{J} 49'56	0.66675 AU	minimum elong	4467 Nov 11 07:47	19° \mathfrak{M} 39'02	1°41'48
inferior conj	4466 Nov 27 08:52	5° \mathfrak{J} 59'21	-0°42'05	asc. node	4467 Nov 16 07:08	14° \mathfrak{M} 49'49	
minimum elong	4466 Nov 27 09:59	5° \mathfrak{J} 55'51	0°41'36	morning rise	4467 Nov 17 10:03	14° \mathfrak{M} 10'12	
asc. node	4466 Nov 29 10:05	3° \mathfrak{J} 31'47		direct	4467 Nov 20 04:17	13° \mathfrak{M} 28'45	
morning rise	4466 Dec 03 04:48	0° \mathfrak{J} 09'52		morning max el	4467 Nov 26 16:22	16° \mathfrak{M} 58'34	18°12'00
	4466 Dec 03 11:49	30° \mathfrak{R} \mathfrak{M}			4467 Dec 06 06:32	0° \mathfrak{J}	
direct	4466 Dec 06 07:39	29° \mathfrak{M} 14'23		morning set	4467 Dec 15 08:45	14° \mathfrak{J} 43'05	
	4466 Dec 09 05:39	0° \mathfrak{J}		desc. node	4467 Dec 23 01:12	27° \mathfrak{J} 10'06	
morning max el	4466 Dec 13 02:11	2° \mathfrak{J} 58'07	18°48'15		4467 Dec 24 19:39	0° \mathfrak{Z}	
	4467 Jan 01 00:28	0° \mathfrak{Z}					
morning set	4467 Jan 03 16:03	4° \mathfrak{Z} 09'42		superior conj	4467 Dec 30 05:47	8° \mathfrak{Z} 36'16	-0°48'09
desc. node	4467 Jan 05 04:11	6° \mathfrak{Z} 31'39		minimum elong	4467 Dec 29 23:47	8° \mathfrak{Z} 12'34	0°47'20
max. Earth dist.	4467 Jan 18 22:49	28° \mathfrak{Z} 08'00	1.45181 AU	max. Earth dist.	4468 Jan 01 18:22	12° \mathfrak{Z} 34'38	1.45225 AU
					4468 Jan 12 22:03	0° \mathfrak{A}	
superior conj	4467 Jan 20 02:12	29° \mathfrak{Z} 55'36	-1°31'25	evening rise	4468 Jan 15 12:34	4° \mathfrak{A} 03'21	
minimum elong	4467 Jan 19 16:52	29° \mathfrak{Z} 18'55	1°30'29	greatest brilliancy	4468 Jan 27 15:21	22° \mathfrak{A} 46'25	-0.7m
	4467 Jan 20 03:20	0° \mathfrak{A}			4468 Feb 01 12:58	0° \mathfrak{H}	
evening rise	4467 Feb 04 10:45	24° \mathfrak{A} 21'08		evening max el	4468 Feb 08 18:09	9° \mathfrak{H} 05'59	19°27'50
	4467 Feb 07 22:43	0° \mathfrak{H}		asc. node	4468 Feb 12 06:24	12° \mathfrak{H} 02'17	
asc. node	4467 Feb 25 09:22	25° \mathfrak{H} 32'11		retrograde	4468 Feb 15 22:59	13° \mathfrak{H} 14'15	
evening max el	4467 Feb 25 10:27	25° \mathfrak{H} 34'56	18°43'24	evening set	4468 Feb 19 11:29	12° \mathfrak{H} 01'39	
retrograde	4467 Mar 04 02:04	29° \mathfrak{H} 16'37		inferior conj	4468 Feb 24 22:55	6° \mathfrak{H} 07'16	3°18'03
evening set	4467 Mar 07 07:22	28° \mathfrak{H} 17'25		minimum elong	4468 Feb 24 21:03	6° \mathfrak{H} 13'24	3°17'46
inferior conj	4467 Mar 12 23:44	22° \mathfrak{H} 38'38	3°32'50	min. Earth dist.	4468 Feb 26 04:37	4° \mathfrak{H} 30'12	0.66572 AU
minimum elong	4467 Mar 12 22:53	22° \mathfrak{H} 41'14	3°32'46	morning rise	4468 Mar 01 06:21	29° \mathfrak{A} 52'59	
min. Earth dist.	4467 Mar 14 20:29	20° \mathfrak{H} 22'01	0.65263 AU		4468 Mar 01 03:16	30° \mathfrak{R} \mathfrak{A}	
morning rise	4467 Mar 18 13:55	16° \mathfrak{H} 26'09		direct	4468 Mar 07 11:04	27° \mathfrak{A} 07'45	
direct	4467 Mar 25 05:17	13° \mathfrak{H} 35'51			4468 Mar 14 17:09	0° \mathfrak{H}	
desc. node	4467 Apr 03 03:22	17° \mathfrak{H} 28'30		morning max el	4468 Mar 19 21:28	4° \mathfrak{H} 32'09	25°52'13
morning max el	4467 Apr 07 11:45	21° \mathfrak{H} 23'46	27°00'03	desc. node	4468 Mar 20 00:24	4° \mathfrak{H} 39'35	
	4467 Apr 14 23:18	0° \mathfrak{Y}			4468 Apr 08 09:23	0° \mathfrak{Y}	
	4467 May 04 20:00	0° \mathfrak{B}		morning set	4468 Apr 25 02:14	28° \mathfrak{Y} 01'08	
morning set	4467 May 13 04:54	15° \mathfrak{B} 17'04			4468 Apr 26 03:54	0° \mathfrak{B}	
max. Earth dist.	4467 May 17 15:21	24° \mathfrak{B} 02'19	1.34026 AU	max. Earth dist.	4468 Apr 28 22:25	5° \mathfrak{B} 14'22	1.35615 AU
	4467 May 20 13:08	0° \mathfrak{I}					

superior conj	4468 May 04 09:25	15°♄59'54	-0°57'27	morning set	4469 Apr 07 04:23	9°♃46'21	
minimum elong	4468 May 04 12:32	16°♄15'40	0°56'53	max. Earth dist.	4469 Apr 10 19:57	16°♃16'30	1.37595 AU
asc. node	4468 May 10 05:43	27°♄58'44					
	4468 May 11 05:16	0°♂		superior conj	4469 Apr 17 16:34	29°♃07'42	-1°25'37
evening rise	4468 May 12 07:30	2°♂14'37		minimum elong	4469 Apr 17 21:03	29°♃29'21	1°25'00
	4468 May 28 19:19	0°♄			4469 Apr 18 03:23	0°♄	
evening max el	4468 May 30 08:09	1°♄36'14	20°13'23	evening rise	4469 Apr 26 08:33	16°♄14'38	
retrograde	4468 Jun 10 00:19	6°♄49'10		asc. node	4469 Apr 27 02:46	17°♄44'54	
evening set	4468 Jun 11 23:14	6°♄39'24			4469 May 03 13:58	0°♂	
desc. node	4468 Jun 15 23:37	5°♄24'41		evening max el	4469 May 13 01:34	13°♂21'35	19°12'02
inferior conj	4468 Jun 21 01:48	2°♄40'46	-1°30'41	retrograde	4469 May 22 01:08	17°♂44'23	
minimum elong	4468 Jun 20 21:32	2°♄47'03	1°29'07	evening set	4469 May 24 01:24	17°♂32'09	
min. Earth dist.	4468 Jun 22 16:47	1°♄43'09	0.55080 AU	inferior conj	4469 Jun 01 10:43	13°♂21'53	0°24'50
	4468 Jun 25 19:52	30°♄		minimum elong	4469 Jun 01 11:44	13°♂20'10	0°24'27
morning rise	4468 Jun 29 18:29	28°♂25'28		desc. node	4469 Jun 02 20:40	12°♂24'31	
direct	4468 Jul 03 19:01	27°♂50'24		min. Earth dist.	4469 Jun 04 07:42	11°♂26'24	0.56243 AU
	4468 Jul 11 10:28	0°♄		morning rise	4469 Jun 09 18:56	8°♂31'49	
morning max el	4468 Jul 17 09:04	4°♄28'32	23°47'49	direct	4469 Jun 14 17:58	7°♂34'48	
	4468 Aug 04 04:39	0°♂		morning max el	4469 Jun 28 23:01	14°♂50'53	25°27'52
asc. node	4468 Aug 06 04:59	3°♂53'22			4469 Jul 11 00:55	0°♄	
morning set	4468 Aug 10 12:17	12°♂42'38		asc. node	4469 Jul 24 02:02	23°♄35'06	
				morning set	4469 Jul 25 23:52	27°♄34'48	
superior conj	4468 Aug 17 12:03	27°♂46'59	1°34'05		4469 Jul 27 03:07	0°♂	
minimum elong	4468 Aug 17 10:11	27°♂36'54	1°33'55				
	4468 Aug 18 12:44	0°♂		superior conj	4469 Aug 01 22:24	12°♂40'13	1°20'53
max. Earth dist.	4468 Aug 19 18:20	2°♂38'16	1.33263 AU	minimum elong	4469 Aug 01 20:07	12°♂27'38	1°20'34
evening rise	4468 Aug 24 23:28	13°♂27'08		max. Earth dist.	4469 Aug 03 00:58	15°♂05'46	1.32437 AU
	4468 Sep 02 18:12	0°♂		evening rise	4469 Aug 09 00:15	27°♂50'55	
desc. node	4468 Sep 11 22:58	14°♂57'02			4469 Aug 10 01:24	0°♂	
	4468 Sep 23 08:14	0°♂			4469 Aug 27 00:43	0°♂	
evening max el	4468 Sep 27 19:12	4°♂39'25	27°24'35	desc. node	4469 Aug 29 20:00	4°♂02'45	
retrograde	4468 Oct 11 09:13	11°♂57'25		evening max el	4469 Sep 10 03:55	17°♂27'19	27°20'41
evening set	4468 Oct 18 11:33	9°♂18'39		retrograde	4469 Sep 23 23:22	24°♂41'59	
min. Earth dist.	4468 Oct 22 04:49	5°♂59'01	0.64015 AU	evening set	4469 Oct 01 03:28	22°♂16'38	
inferior conj	4468 Oct 24 16:35	3°♂23'41	-2°45'19	min. Earth dist.	4469 Oct 04 18:15	19°♂24'31	0.62195 AU
minimum elong	4468 Oct 24 21:17	3°♂11'27	2°43'35	inferior conj	4469 Oct 07 17:00	16°♂40'41	-3°45'23
	4468 Oct 28 05:27	30°♄		minimum elong	4469 Oct 07 22:57	16°♂26'51	3°43'38
morning rise	4468 Oct 31 08:23	28°♂01'50		morning rise	4469 Oct 14 20:11	11°♂37'19	
asc. node	4468 Nov 02 04:11	27°♂32'56		direct	4469 Oct 17 04:45	11°♂12'51	
direct	4468 Nov 02 20:23	27°♂30'38		asc. node	4469 Oct 20 01:14	11°♂49'54	
	4468 Nov 08 09:04	0°♂		morning max el	4469 Oct 24 01:02	14°♂41'36	17°51'39
morning max el	4468 Nov 09 09:02	0°♂55'46	17°52'48		4469 Nov 03 14:13	0°♂	
morning set	4468 Nov 26 05:10	26°♂37'13		morning set	4469 Nov 08 23:08	9°♂33'10	
	4468 Nov 28 04:39	0°♄					
desc. node	4468 Dec 08 22:14	17°♄54'35		superior conj	4469 Nov 19 23:16	28°♂56'09	0°40'16
				minimum elong	4469 Nov 20 02:42	29°♂10'48	0°39'47
superior conj	4468 Dec 09 01:31	18°♄07'58	-0°00'58		4469 Nov 20 14:16	0°♄	
minimum elong	4468 Dec 09 01:24	18°♄07'29	0°00'56	desc. node	4469 Nov 25 19:18	8°♄41'58	
behind sun begin	4468 Dec 08 15:27	17°♄26'59		max. Earth dist.	4469 Nov 27 03:32	10°♄53'39	1.43209 AU
behind sun end	4468 Dec 09 11:21	18°♄47'54		evening rise	4469 Dec 04 12:12	22°♄36'55	
max. Earth dist.	4468 Dec 14 12:42	26°♄55'03	1.44539 AU		4469 Dec 09 07:13	0°♄	
	4468 Dec 16 11:26	0°♄			4469 Dec 30 08:32	0°♄	
evening rise	4468 Dec 24 23:59	13°♄15'39		evening max el	4470 Jan 04 18:01	6°♄12'48	21°38'24
	4469 Jan 05 01:05	0°♄		retrograde	4470 Jan 13 18:43	11°♄34'38	
evening max el	4469 Jan 21 20:47	22°♄38'30	20°27'15	asc. node	4470 Jan 16 00:29	11°♄07'36	
asc. node	4469 Jan 29 03:27	27°♄18'24		evening set	4470 Jan 18 02:05	9°♄52'25	
retrograde	4469 Jan 29 21:14	27°♄21'23		inferior conj	4470 Jan 23 10:17	3°♄35'17	2°17'29
evening set	4469 Feb 02 18:19	25°♄54'28		minimum elong	4470 Jan 23 07:52	3°♄43'38	2°16'44
inferior conj	4469 Feb 08 03:11	19°♄47'10	2°52'15	min. Earth dist.	4470 Jan 23 14:07	3°♄21'58	0.67943 AU
minimum elong	4469 Feb 08 00:48	19°♄55'19	2°51'42		4470 Jan 26 02:43	30°♄	
min. Earth dist.	4469 Feb 08 19:16	18°♄52'19	0.67458 AU	morning rise	4470 Jan 28 13:28	27°♄23'18	
morning rise	4469 Feb 13 07:04	13°♄33'09		direct	4470 Feb 02 14:08	25°♄13'06	
direct	4469 Feb 18 22:18	11°♄02'30			4470 Feb 11 10:21	0°♄	
morning max el	4469 Mar 02 06:09	17°♄48'50	24°28'32	morning max el	4470 Feb 12 15:31	1°♄10'58	22°59'22
desc. node	4469 Mar 06 21:27	22°♄56'52		desc. node	4470 Feb 21 18:30	12°♄01'34	
	4469 Mar 12 11:09	0°♄			4470 Mar 06 09:46	0°♄	
	4469 Apr 01 10:38	0°♄		morning set	4470 Mar 19 05:17	20°♄16'47	

max. Earth dist.	4470 Mar 23 15:02	27° ✕ 44'11	1.39780 AU	max. Earth dist.	4471 Mar 05 15:15	10° ✕ 04'44	1.41891 AU
	4470 Mar 24 22:24	0° Y					
superior conj	4470 Mar 31 08:35	11° Y 29'27	-1°49'36	superior conj	4471 Mar 13 04:26	22° ✕ 52'34	-2°05'09
minimum elong	4470 Mar 31 13:21	11° Y 51'21	1°49'09	minimum elong	4471 Mar 13 07:13	23° ✕ 04'40	2°05'02
evening rise	4470 Apr 10 00:41	29° Y 44'33		evening rise	4471 Mar 17 05:30	0° Y	
	4470 Apr 10 03:55	0° 8		evening rise	4471 Mar 24 04:09	12° Y 34'55	
asc. node	4470 Apr 13 23:49	7° 8 14'38		asc. node	4471 Mar 31 20:50	26° Y 21'23	
evening max el	4470 Apr 26 04:49	25° 8 44'55	18°30'58	evening max el	4471 Apr 03 01:55	0° 8	
retrograde	4470 May 03 20:25	29° 8 31'17		evening max el	4471 Apr 09 14:19	8° 8 36'15	18°09'56
evening set	4470 May 06 03:09	29° 8 12'14		retrograde	4471 Apr 16 09:57	12° 8 03'07	
inferior conj	4470 May 13 16:30	24° 8 42'44	1°55'42	evening set	4471 Apr 18 23:23	11° 8 34'31	
minimum elong	4470 May 13 19:59	24° 8 35'53	1°54'39	inferior conj	4471 Apr 25 19:10	6° 8 44'05	2°54'50
min. Earth dist.	4470 May 17 02:21	22° 8 02'55	0.58085 AU	minimum elong	4471 Apr 25 22:21	6° 8 36'47	2°54'10
desc. node	4470 May 20 17:41	19° 8 39'54		min. Earth dist.	4471 Apr 29 02:58	3° 8 42'27	0.60244 AU
morning rise	4470 May 21 09:38	19° 8 19'13		morning rise	4471 May 02 18:59	0° 8 55'57	
direct	4470 May 27 07:12	17° 8 50'11		direct	4471 May 04 12:07	30° R Y	
morning max el	4470 Jun 10 16:21	25° 8 29'49	26°49'12	desc. node	4471 May 07 14:42	29° Y 01'04	
	4470 Jun 14 20:54	0° II		direct	4471 May 09 08:32	28° Y 52'28	
	4470 Jul 04 06:28	0° 6			4471 May 14 10:04	0° 8	
morning set	4470 Jul 10 09:51	12° 6 20'28		morning max el	4471 May 23 16:03	6° 8 45'38	27°39'14
asc. node	4470 Jul 10 23:05	13° 6 30'23			4471 Jun 10 03:54	0° II	
				morning set	4471 Jun 24 16:29	26° II 54'17	
superior conj	4470 Jul 17 10:09	27° 6 34'58	1°03'08		4471 Jun 26 03:57	0° 6	
minimum elong	4470 Jul 17 07:55	27° 6 22'36	1°02'44	asc. node	4471 Jun 27 20:08	3° 6 34'10	
max. Earth dist.	4470 Jul 17 11:47	27° 6 44'01	1.32032 AU	max. Earth dist.	4471 Jun 30 23:09	10° 6 22'19	1.32033 AU
	4470 Jul 18 12:25	0° 9					
evening rise	4470 Jul 24 06:52	12° 9 30'10		superior conj	4471 Jul 01 21:32	12° 6 25'28	0°41'25
	4470 Aug 02 04:35	0° 9		minimum elong	4471 Jul 01 19:49	12° 6 15'59	0°41'04
desc. node	4470 Aug 16 17:01	22° 9 16'36		evening rise	4471 Jul 08 17:02	27° 6 17'34	
evening max el	4470 Aug 23 07:05	29° 9 32'37	26°43'20		4471 Jul 09 23:49	0° 9	
	4470 Aug 23 18:49	0° 9			4471 Jul 26 23:41	0° 9	
retrograde	4470 Sep 06 05:25	6° 9 42'35		desc. node	4471 Aug 03 14:00	9° 9 17'50	
evening set	4470 Sep 13 01:41	4° 9 43'12		evening max el	4471 Aug 05 02:44	10° 9 49'14	25°34'38
min. Earth dist.	4470 Sep 16 21:03	2° 9 06'39	0.60168 AU	retrograde	4471 Aug 19 01:44	17° 9 54'52	
	4470 Sep 19 11:42	30° R 9		evening set	4471 Aug 25 01:27	16° 9 31'05	
inferior conj	4470 Sep 20 02:41	29° 9 29'20	-4°36'53	min. Earth dist.	4471 Aug 29 14:39	13° 9 52'51	0.58119 AU
minimum elong	4470 Sep 20 08:21	29° 9 17'46	4°35'48	inferior conj	4471 Sep 01 18:13	11° 9 40'09	-5°09'18
morning rise	4470 Sep 27 17:02	24° 9 47'28		minimum elong	4471 Sep 01 20:49	11° 9 35'33	5°09'07
direct	4470 Sep 30 01:28	24° 9 26'44		morning rise	4471 Sep 09 18:26	7° 9 21'32	
asc. node	4470 Oct 06 22:18	27° 9 32'56		direct	4471 Sep 12 06:08	7° 9 02'15	
morning max el	4470 Oct 07 13:06	28° 9 07'25	18°09'41	morning max el	4471 Sep 20 17:57	11° 9 04'36	18°48'24
	4470 Oct 09 07:12	0° 9		asc. node	4471 Sep 23 19:20	14° 9 28'01	
morning set	4470 Oct 23 08:29	23° 9 12'38			4471 Oct 03 08:41	0° 9	
	4470 Oct 26 23:13	0° 9		morning set	4471 Oct 07 04:33	7° 9 22'46	
superior conj	4470 Nov 01 22:16	10° 9 57'35	1°11'06	superior conj	4471 Oct 15 17:35	23° 9 58'48	1°31'09
minimum elong	4470 Nov 02 02:17	11° 9 15'37	1°10'38	minimum elong	4471 Oct 15 20:30	24° 9 12'37	1°30'55
max. Earth dist.	4470 Nov 09 13:39	24° 9 17'12	1.41397 AU		4471 Oct 18 22:52	0° 9	
desc. node	4470 Nov 12 16:19	29° 9 28'15		max. Earth dist.	4471 Oct 22 19:34	6° 9 58'48	1.39327 AU
	4470 Nov 13 00:03	0° ✕		evening rise	4471 Oct 26 18:13	13° 9 49'46	
evening rise	4470 Nov 14 15:54	2° ✕ 42'24		desc. node	4471 Oct 30 13:20	20° 9 10'13	
	4470 Dec 02 16:24	0° 3			4471 Nov 05 17:39	0° ✕	
evening max el	4470 Dec 18 10:32	19° 3 49'25	22°56'43		4471 Nov 27 17:05	0° 3	
retrograde	4470 Dec 28 13:48	25° 3 50'03		evening max el	4471 Dec 01 00:02	3° 3 29'29	24°16'20
evening set	4471 Jan 02 09:08	23° 3 51'50		retrograde	4471 Dec 12 05:25	10° 3 04'16	
asc. node	4471 Jan 02 21:32	23° 3 24'38		evening set	4471 Dec 17 13:58	7° 3 50'15	
inferior conj	4471 Jan 07 18:13	17° 3 28'23	1°35'04	asc. node	4471 Dec 20 18:33	4° 3 24'51	
minimum elong	4471 Jan 07 16:16	17° 3 35'10	1°34'20	min. Earth dist.	4471 Dec 22 06:52	2° 3 26'15	0.67792 AU
min. Earth dist.	4471 Jan 07 10:44	17° 3 54'13	0.68049 AU	inferior conj	4471 Dec 23 01:15	1° 3 24'26	0°46'04
morning rise	4471 Jan 12 23:16	11° 3 20'08		minimum elong	4471 Dec 23 00:10	1° 3 28'04	0°45'37
direct	4471 Jan 17 09:25	9° 3 32'52			4471 Dec 24 02:36	30° R ✕	
morning max el	4471 Jan 26 05:14	14° 3 41'20	21°33'43	morning rise	4471 Dec 28 10:27	25° ✕ 21'48	
	4471 Feb 07 11:09	0° ≈		direct	4472 Jan 01 07:04	23° ✕ 56'54	
desc. node	4471 Feb 08 15:31	1° ≈ 39'59		morning max el	4472 Jan 09 02:20	28° ✕ 23'49	20°18'11
morning set	4471 Feb 27 01:18	29° ≈ 25'04			4472 Jan 10 14:50	0° 3	
	4471 Feb 27 10:06	0° ✕		desc. node	4472 Jan 26 12:34	21° 3 43'07	
					4472 Feb 01 00:25	0° ≈	

morning set	4472 Feb 06 00:07	7°  39'13		desc. node	4473 Jan 12 09:37	12°  03'49	
max. Earth dist.	4472 Feb 15 23:12	23°  20'05	1.43640 AU	morning set	4473 Jan 15 00:19	16°  06'33	
	4472 Feb 20 01:54	0°  ✕			4473 Jan 23 22:26	0°  ✕	
				max. Earth dist.	4473 Jan 28 13:23	7°  15'38	1.44810 AU
superior conj	4472 Feb 21 23:35	3°  07'46	-2°06'54	superior conj	4473 Jan 31 17:50	12°  18'15	-1°50'00
minimum elong	4472 Feb 21 21:17	2°  58'17	2°06'51	minimum elong	4473 Jan 31 09:44	11°  46'07	1°49'24
evening rise	4472 Mar 05 14:44	24°  37'20			4473 Feb 11 16:44	0°  ✕	
	4472 Mar 08 16:52	0°  Y		evening rise	4473 Feb 15 04:14	5°  ✕44'23	
asc. node	4472 Mar 17 17:50	14°  Y57'58			4473 Mar 02 09:00	0°  Y	
evening max el	4472 Mar 23 02:43	21°  Y47'01	18°08'18	asc. node	4473 Mar 04 14:51	2°  Y55'19	
retrograde	4472 Mar 29 13:39	25°  Y09'38		evening max el	4473 Mar 06 15:12	5°  Y10'10	18°25'26
evening set	4472 Apr 01 09:07	24°  Y30'01		retrograde	4473 Mar 13 02:51	8°  Y41'44	
inferior conj	4472 Apr 07 15:18	19°  Y19'35	3°25'55	evening set	4473 Mar 16 04:20	7°  Y50'05	
minimum elong	4472 Apr 07 16:56	19°  Y15'18	3°25'45	inferior conj	4473 Mar 22 00:47	2°  Y21'19	3°35'12
min. Earth dist.	4472 Apr 10 12:02	16°  Y20'38	0.62398 AU	minimum elong	4473 Mar 22 00:45	2°  Y21'25	3°35'12
morning rise	4472 Apr 13 23:21	13°  Y16'37			4473 Mar 24 01:21	30°  R✕	
direct	4472 Apr 20 19:55	10°  Y44'51		min. Earth dist.	4473 Mar 24 06:38	29°  ✕44'59	0.64317 AU
desc. node	4472 Apr 23 11:44	11°  Y05'40		morning rise	4473 Mar 27 20:25	26°  ✕10'48	
morning max el	4472 May 04 21:46	18°  Y44'16	27°51'50	direct	4473 Apr 03 15:38	23°  ✕23'00	
	4472 May 14 09:47	0°  8		desc. node	4473 Apr 10 08:46	25°  ✕36'04	
	4472 Jun 02 00:22	0°  II			4473 Apr 15 22:27	0°  Y	
morning set	4472 Jun 07 17:42	11°  II09'17		morning max el	4473 Apr 17 07:00	1°  Y19'20	27°28'00
max. Earth dist.	4472 Jun 13 06:55	22°  II46'31	1.32452 AU		4473 May 08 12:57	0°  8	
asc. node	4472 Jun 13 17:08	23°  II41'33		morning set	4473 May 22 10:58	24°  857'45	
					4473 May 24 23:33	0°  II	
superior conj	4472 Jun 15 06:48	27°  II05'34	0°16'22	max. Earth dist.	4473 May 27 07:06	4°  II44'46	1.33315 AU
minimum elong	4472 Jun 15 06:03	27°  II01'25	0°16'12				
	4472 Jun 16 14:49	0°  ☿		superior conj	4473 May 30 12:06	11°  II29'40	-0°11'18
evening rise	4472 Jun 22 04:45	12°  ☿05'56		minimum elong	4473 May 30 12:41	11°  II32'43	0°11'11
	4472 Jul 01 06:15	0°  Ω		behind sun begin	4473 May 30 08:46	11°  II11'53	
evening max el	4472 Jul 16 16:09	21°  Ω24'40	24°04'01	behind sun end	4473 May 30 16:36	11°  II53'35	
desc. node	4472 Jul 20 11:00	24°  Ω37'14		asc. node	4473 May 31 14:09	13°  II48'39	
retrograde	4472 Jul 30 10:41	28°  Ω20'49		evening rise	4473 Jun 06 16:10	26°  II49'23	
evening set	4472 Aug 04 01:10	27°  Ω33'52			4473 Jun 08 04:36	0°  ☿	
min. Earth dist.	4472 Aug 10 02:38	24°  Ω35'35	0.56328 AU		4473 Jun 26 12:27	0°  Ω	
inferior conj	4472 Aug 12 13:26	23°  Ω04'57	-5°07'27	evening max el	4473 Jun 28 06:07	1°  Ω47'35	22°26'48
minimum elong	4472 Aug 12 10:07	23°  Ω10'06	5°07'11	desc. node	4473 Jul 07 07:59	7°  Ω40'25	
morning rise	4472 Aug 20 21:38	19°  Ω06'26		retrograde	4473 Jul 11 07:28	8°  Ω16'56	
direct	4472 Aug 23 15:15	18°  Ω47'01		evening set	4473 Jul 14 09:59	7°  Ω55'41	
morning max el	4472 Sep 02 12:32	23°  Ω23'04	19°48'49	min. Earth dist.	4473 Jul 22 13:10	4°  Ω23'31	0.55140 AU
	4472 Sep 08 02:45	0°  ♍		inferior conj	4473 Jul 23 14:53	3°  Ω47'02	-4°16'55
asc. node	4472 Sep 09 16:23	2°  ♍19'23		minimum elong	4473 Jul 23 06:38	3°  Ω58'45	4°15'03
morning set	4472 Sep 20 07:52	21°  ♍53'03			4473 Jul 31 23:44	30°  R☿	
	4472 Sep 24 07:42	0°  ♌		morning rise	4473 Aug 01 05:15	29°  ☿56'44	
				direct	4473 Aug 04 07:08	29°  ☿35'13	
superior conj	4472 Sep 28 03:49	7°  ♌43'37	1°41'35		4473 Aug 07 12:14	0°  Ω	
minimum elong	4472 Sep 28 05:06	7°  ♌50'01	1°41'31	morning max el	4473 Aug 15 19:13	4°  Ω56'44	21°10'12
max. Earth dist.	4472 Oct 04 00:22	19°  ♌03'02	1.37256 AU	asc. node	4473 Aug 27 13:26	20°  Ω54'15	
evening rise	4472 Oct 07 18:52	25°  ♌58'08			4473 Sep 01 09:49	0°  ♍	
	4472 Oct 10 01:31	0°  ♍		morning set	4473 Sep 04 15:57	6°  ♍36'46	
desc. node	4472 Oct 16 10:21	10°  ♍43'01					
	4472 Oct 29 06:32	0°  ♌		superior conj	4473 Sep 12 00:39	21°  ♍59'30	1°43'52
evening max el	4472 Nov 12 12:21	17°  ♌11'34	25°30'35	minimum elong	4473 Sep 12 00:24	21°  ♍58'16	1°43'51
retrograde	4472 Nov 24 16:38	24°  ♌11'41			4473 Sep 15 23:10	0°  ♌	
evening set	4472 Nov 30 14:52	21°  ♌43'48		max. Earth dist.	4473 Sep 16 09:58	0°  ♌53'41	1.35415 AU
min. Earth dist.	4472 Dec 05 00:15	16°  ♌54'18	0.67179 AU	evening rise	4473 Sep 20 14:14	8°  ♌58'54	
inferior conj	4472 Dec 06 05:34	15°  ♌20'09	-0°08'33		4473 Oct 02 15:52	0°  ♍	
minimum elong	4472 Dec 06 05:47	15°  ♌19'27	0°08'27	desc. node	4473 Oct 03 07:20	1°  ♍01'40	
transit middle	4472 Dec 06 05:47	15°  ♌19'27	0°08'27		4473 Oct 25 03:38	0°  ♌	
transit begin	4472 Dec 06 03:24	15°  ♌27'08		evening max el	4473 Oct 26 00:54	0°  ♌52'16	26°31'59
transit end	4472 Dec 06 08:10	15°  ♌11'47		retrograde	4473 Nov 07 22:46	8°  ♌06'14	
asc. node	4472 Dec 06 15:34	14°  ♌48'05		evening set	4473 Nov 14 09:59	5°  ♌28'38	
morning rise	4472 Dec 11 21:02	9°  ♌25'13		min. Earth dist.	4473 Nov 18 12:32	1°  ♌14'29	0.66218 AU
direct	4472 Dec 15 05:42	8°  ♌20'09			4473 Nov 19 13:24	30°  R♍	
morning max el	4472 Dec 22 07:20	12°  ♌16'42	19°16'35	inferior conj	4473 Nov 20 05:14	29°  ♍12'11	-1°07'38
	4473 Jan 04 12:38	0°  ♌		minimum elong	4473 Nov 20 07:06	29°  ♍06'35	1°06'50
greatest brilliancy	4473 Jan 04 19:28	0°  ♌25'45	-0.7m				

asc. node	4473 Nov 23 12:38	25° \mathbb{M} 30'57		asc. node	4474 Nov 10 09:42	7° \mathbb{M} 22'31	
morning rise	4473 Nov 26 04:54	23° \mathbb{M} 27'29		direct	4474 Nov 12 22:52	6° \mathbb{M} 48'12	
direct	4473 Nov 29 03:42	22° \mathbb{M} 38'33		morning max el	4474 Nov 19 10:21	10° \mathbb{M} 15'11	18°01'41
morning max el	4473 Dec 05 18:48	26° \mathbb{M} 15'36	18°30'45		4474 Dec 03 00:32	0° \mathbb{M}	
	4473 Dec 09 00:58	0° \mathbb{M}		morning set	4474 Dec 07 05:02	6° \mathbb{M} 57'55	
morning set	4473 Dec 25 23:49	25° \mathbb{M} 47'42		desc. node	4474 Dec 17 03:39	23° \mathbb{M} 18'06	
	4473 Dec 28 15:11	0° \mathbb{M}					
desc. node	4473 Dec 30 06:38	2° \mathbb{M} 36'43		superior conj	4474 Dec 21 05:32	29° \mathbb{M} 50'50	-0°27'54
				minimum elong	4474 Dec 21 02:06	29° \mathbb{M} 37'08	0°27'25
superior conj	4474 Jan 10 21:09	20° \mathbb{M} 54'06	-1°14'20		4474 Dec 21 07:50	0° \mathbb{M}	
minimum elong	4474 Jan 10 12:29	20° \mathbb{M} 20'08	1°13'19	max. Earth dist.	4474 Dec 25 02:58	6° \mathbb{M} 01'07	1.45018 AU
max. Earth dist.	4474 Jan 11 07:30	21° \mathbb{M} 34'40	1.45284 AU	evening rise	4475 Jan 06 12:35	25° \mathbb{M} 19'49	
	4474 Jan 16 16:22	0° \mathbb{M}			4475 Jan 09 13:20	0° \mathbb{M}	
evening rise	4474 Jan 26 18:21	15° \mathbb{M} 54'02		greatest brilliancy	4475 Jan 20 09:46	16° \mathbb{M} 28'25	-0.7m
	4474 Feb 04 16:07	0° \mathbb{M}			4475 Jan 30 07:10	0° \mathbb{M}	
greatest brilliancy	4474 Feb 05 01:52	0° \mathbb{M} 38'10	-0.8m	evening max el	4475 Feb 01 07:05	2° \mathbb{M} 12'02	19°51'30
evening max el	4474 Feb 18 01:17	18° \mathbb{M} 39'37	19°00'23	asc. node	4475 Feb 06 08:57	6° \mathbb{M} 01'59	
asc. node	4474 Feb 19 11:53	20° \mathbb{M} 01'13		retrograde	4475 Feb 08 19:24	6° \mathbb{M} 33'46	
retrograde	4474 Feb 24 21:44	22° \mathbb{M} 31'25		evening set	4475 Feb 12 11:26	5° \mathbb{M} 15'07	
evening set	4474 Feb 28 05:54	21° \mathbb{M} 26'47			4475 Feb 17 08:02	30° \mathbb{M}	
inferior conj	4474 Mar 05 19:52	15° \mathbb{M} 41'22	3°28'03	inferior conj	4475 Feb 17 21:32	29° \mathbb{M} 15'07	3°08'20
minimum elong	4474 Mar 05 18:31	15° \mathbb{M} 45'38	3°27'56	minimum elong	4475 Feb 17 19:23	29° \mathbb{M} 22'18	3°07'54
min. Earth dist.	4474 Mar 07 10:11	13° \mathbb{M} 40'37	0.65870 AU	min. Earth dist.	4475 Feb 18 21:16	27° \mathbb{M} 55'57	0.67003 AU
morning rise	4474 Mar 11 06:46	9° \mathbb{M} 27'49		morning rise	4475 Feb 23 03:06	23° \mathbb{M} 00'59	
direct	4474 Mar 17 18:12	6° \mathbb{M} 37'55		direct	4475 Mar 01 02:28	20° \mathbb{M} 20'53	
desc. node	4474 Mar 28 05:50	11° \mathbb{M} 57'21		morning max el	4475 Mar 13 01:56	27° \mathbb{M} 30'02	25°17'57
morning max el	4474 Mar 30 16:54	14° \mathbb{M} 18'02	26°33'43	desc. node	4475 Mar 15 02:53	29° \mathbb{M} 39'12	
	4474 Apr 12 11:44	0° \mathbb{M}			4475 Mar 15 10:26	0° \mathbb{M}	
	4474 May 01 06:36	0° \mathbb{M}			4475 Apr 06 04:03	0° \mathbb{M}	
morning set	4474 May 05 16:48	8° \mathbb{M} 08'38		morning set	4475 Apr 18 06:40	20° \mathbb{M} 29'20	
max. Earth dist.	4474 May 09 20:25	16° \mathbb{M} 10'24	1.34648 AU	max. Earth dist.	4475 Apr 21 22:48	27° \mathbb{M} 14'22	1.36425 AU
					4475 Apr 23 09:54	0° \mathbb{M}	
superior conj	4474 May 14 11:08	25° \mathbb{M} 30'23	-0°40'30				
minimum elong	4474 May 14 13:18	25° \mathbb{M} 41'36	0°40'05	superior conj	4475 Apr 28 01:06	9° \mathbb{M} 00'17	-1°09'41
	4474 May 16 15:04	0° \mathbb{M}		minimum elong	4475 Apr 28 04:52	9° \mathbb{M} 18'58	1°09'04
asc. node	4474 May 18 11:11	3° \mathbb{M} 50'51		asc. node	4475 May 05 08:14	23° \mathbb{M} 44'17	
evening rise	4474 May 22 01:20	11° \mathbb{M} 21'05		evening rise	4475 May 06 06:05	25° \mathbb{M} 34'59	
	4474 May 31 19:43	0° \mathbb{M}			4475 May 08 10:59	0° \mathbb{M}	
evening max el	4474 Jun 10 04:30	12° \mathbb{M} 30'09	20°57'27	evening max el	4475 May 23 15:04	23° \mathbb{M} 51'20	19°44'44
retrograde	4474 Jun 21 20:07	18° \mathbb{M} 12'55		retrograde	4475 Jun 02 13:01	28° \mathbb{M} 41'21	
evening set	4474 Jun 24 00:00	18° \mathbb{M} 01'53		evening set	4475 Jun 04 11:37	28° \mathbb{M} 31'03	
desc. node	4474 Jun 24 05:01	17° \mathbb{M} 59'42		desc. node	4475 Jun 11 02:04	25° \mathbb{M} 49'43	
inferior conj	4474 Jul 03 08:06	14° \mathbb{M} 04'33	-2°39'00	inferior conj	4475 Jun 13 07:40	24° \mathbb{M} 28'42	-0°39'51
minimum elong	4474 Jul 03 00:54	14° \mathbb{M} 14'44	2°36'33	minimum elong	4475 Jun 13 05:50	24° \mathbb{M} 31'32	0°39'10
min. Earth dist.	4474 Jul 04 00:22	13° \mathbb{M} 41'32	0.54829 AU	min. Earth dist.	4475 Jun 15 13:19	23° \mathbb{M} 05'46	0.55484 AU
morning rise	4474 Jul 12 01:44	10° \mathbb{M} 03'58		morning rise	4475 Jun 21 21:51	19° \mathbb{M} 59'47	
direct	4474 Jul 15 16:26	9° \mathbb{M} 35'52		direct	4475 Jun 26 07:43	19° \mathbb{M} 16'45	
morning max el	4474 Jul 28 15:09	15° \mathbb{M} 47'18	22°48'00	morning max el	4475 Jul 10 05:19	26° \mathbb{M} 11'53	24°31'38
	4474 Aug 08 17:53	0° \mathbb{M}			4475 Jul 13 20:20	0° \mathbb{M}	
asc. node	4474 Aug 14 10:29	10° \mathbb{M} 01'40		asc. node	4475 Aug 01 07:31	29° \mathbb{M} 33'03	
morning set	4474 Aug 20 02:45	21° \mathbb{M} 028'12			4475 Aug 01 12:51	0° \mathbb{M}	
	4474 Aug 24 02:45	0° \mathbb{M}		morning set	4475 Aug 04 14:32	6° \mathbb{M} 21'51	
superior conj	4474 Aug 27 04:43	6° \mathbb{M} 36'21	1°39'20	superior conj	4475 Aug 11 13:23	21° \mathbb{M} 25'40	1°29'04
minimum elong	4474 Aug 27 03:19	6° \mathbb{M} 28'52	1°39'15	minimum elong	4475 Aug 11 11:17	21° \mathbb{M} 14'12	1°28'50
max. Earth dist.	4474 Aug 30 04:25	12° \mathbb{M} 54'34	1.33934 AU	max. Earth dist.	4475 Aug 13 07:28	25° \mathbb{M} 13'52	1.32866 AU
evening rise	4474 Sep 03 23:58	22° \mathbb{M} 40'35			4475 Aug 15 12:58	0° \mathbb{M}	
	4474 Sep 07 19:39	0° \mathbb{M}		evening rise	4475 Aug 18 20:11	6° \mathbb{M} 51'49	
desc. node	4474 Sep 20 04:21	20° \mathbb{M} 59'50			4475 Aug 31 08:12	0° \mathbb{M}	
	4474 Sep 26 08:53	0° \mathbb{M}		desc. node	4475 Sep 07 01:22	10° \mathbb{M} 28'14	
evening max el	4474 Oct 08 13:33	14° \mathbb{M} 23'10	27°13'03	evening max el	4475 Sep 21 00:26	27° \mathbb{M} 30'45	27°26'56
retrograde	4474 Oct 21 23:02	21° \mathbb{M} 41'00			4475 Sep 23 20:28	0° \mathbb{M}	
evening set	4474 Oct 28 21:02	19° \mathbb{M} 00'21		retrograde	4475 Oct 04 16:50	4° \mathbb{M} 46'45	
min. Earth dist.	4474 Nov 01 17:27	15° \mathbb{M} 21'23	0.64913 AU	evening set	4475 Oct 11 20:59	2° \mathbb{M} 12'23	
inferior conj	4474 Nov 03 22:05	12° \mathbb{M} 56'17	-2°09'28		4475 Oct 14 13:33	30° \mathbb{M}	
minimum elong	4474 Nov 04 01:47	12° \mathbb{M} 46'05	2°08'00	min. Earth dist.	4475 Oct 15 12:45	29° \mathbb{M} 05'32	0.63276 AU
morning rise	4474 Nov 10 07:36	7° \mathbb{M} 24'53		inferior conj	4475 Oct 18 05:24	26° \mathbb{M} 25'21	-3°11'22

minimum elong	4475 Oct 18 10:44	26°  12'04	3°09'33	minimum elong	4476 Sep 30 06:04	9°  18'12	4°07'13
morning rise	4475 Oct 25 01:59	21°  10'51		morning rise	4476 Oct 07 08:02	4°  37'21	
direct	4475 Oct 27 12:17	20°  42'45		direct	4476 Oct 09 16:12	4°  14'46	
asc. node	4475 Oct 28 06:47	20°  45'38		asc. node	4476 Oct 14 03:48	5°  41'07	
morning max el	4475 Nov 03 03:05	24°  08'10	17°50'04	morning max el	4476 Oct 16 17:52	7°  47'06	17°56'54
	4475 Nov 07 20:36	0°  ♁			4476 Oct 31 02:14	0°  ♁	
morning set	4475 Nov 19 11:25	19°  ♁20'50		morning set	4476 Nov 01 12:33	2°  ♁37'06	
	4475 Nov 25 14:57	0°  ♁					
superior conj	4475 Dec 01 11:48	9°  ♁53'26	0°17'40	superior conj	4476 Nov 11 20:50	21°  ♁14'35	0°54'41
minimum elong	4475 Dec 01 13:37	10°  ♁00'54	0°17'25	minimum elong	4476 Nov 12 00:48	21°  ♁31'54	0°54'11
desc. node	4475 Dec 04 00:40	14°  ♁03'56		max. Earth dist.	4476 Nov 16 23:36	0°  ♁	
max. Earth dist.	4475 Dec 07 20:39	20°  ♁16'07	1.44046 AU	desc. node	4476 Nov 19 21:42	4°  ♁01'37	1.42486 AU
	4475 Dec 14 00:26	0°  ♁		evening rise	4476 Nov 25 15:38	14°  ♁07'00	
evening rise	4475 Dec 16 22:19	4°  ♁30'55			4476 Dec 06 00:20	0°  ♁	
	4476 Jan 03 00:14	0°  ♁		evening max el	4476 Dec 28 02:18	29°  ♁19'05	22°11'06
evening max el	4476 Jan 15 07:24	15°  ♁44'57	20°56'19		4476 Dec 28 18:46	0°  ♁	
retrograde	4476 Jan 23 17:31	20°  ♁43'48		retrograde	4477 Jan 06 14:14	4°  ♁58'09	
asc. node	4476 Jan 24 06:01	20°  ♁42'19		asc. node	4477 Jan 10 03:03	3°  ♁51'46	
evening set	4476 Jan 27 18:52	19°  ♁10'14		evening set	4477 Jan 11 02:31	3°  ♁09'00	
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minimum elong	4476 Feb 02 00:47	13°  ♁06'43	2°37'51	inferior conj	4477 Jan 16 10:53	26°  ♁48'26	2°00'21
min. Earth dist.	4476 Feb 02 13:52	12°  ♁21'37	0.67714 AU	minimum elong	4477 Jan 16 08:37	26°  ♁56'20	1°59'34
morning rise	4476 Feb 07 06:31	6°  ♁45'09		min. Earth dist.	4477 Jan 16 09:44	26°  ♁52'25	0.68030 AU
direct	4476 Feb 12 15:35	4°  ♁22'56		morning rise	4477 Jan 21 14:34	20°  ♁37'48	
morning max el	4476 Feb 23 10:36	10°  ♁48'52	23°50'48	direct	4477 Jan 26 08:51	18°  ♁37'31	
desc. node	4476 Feb 29 23:55	18°  ♁18'08		morning max el	4477 Feb 04 21:30	24°  ♁14'16	22°22'03
	4476 Mar 09 16:39	0°  ♁			4477 Feb 10 00:12	0°  ♁	
	4476 Mar 28 22:20	0°  ♁		desc. node	4477 Feb 15 20:57	7°  ♁38'12	
morning set	4476 Mar 29 22:48	1°  ♁44'17			4477 Mar 03 03:15	0°  ♁	
max. Earth dist.	4476 Apr 02 18:49	8°  ♁25'08	1.38516 AU	morning set	4477 Mar 10 11:27	11°  ♁39'13	
				max. Earth dist.	4477 Mar 15 15:20	20°  ♁12'52	1.40696 AU
					4477 Mar 21 07:17	0°  ♁	
superior conj	4476 Apr 10 02:23	21°  ♁49'48	-1°36'31	superior conj	4477 Mar 23 10:22	3°  ♁47'18	-1°57'31
minimum elong	4476 Apr 10 07:10	22°  ♁12'30	1°35'56	minimum elong	4477 Mar 23 14:39	4°  ♁06'32	1°57'13
	4476 Apr 14 08:31	0°  ♁		evening rise	4477 Apr 02 14:59	22°  ♁37'34	
evening rise	4476 Apr 19 03:45	9°  ♁23'32			4477 Apr 06 13:58	0°  ♁	
asc. node	4476 Apr 21 05:17	13°  ♁24'24		asc. node	4477 Apr 08 02:19	2°  ♁45'10	
	4476 Apr 30 17:20	0°  ♁		evening max el	4477 Apr 18 19:16	18°  ♁29'42	18°19'39
evening max el	4476 May 05 13:00	5°  ♁53'41	18°52'02	retrograde	4477 Apr 26 01:10	22°  ♁06'09	
retrograde	4476 May 13 21:40	9°  ♁59'27		evening set	4477 Apr 28 10:39	21°  ♁43'27	
evening set	4476 May 16 00:26	9°  ♁44'44		inferior conj	4477 May 05 16:06	17°  ♁05'12	2°24'34
inferior conj	4476 May 24 01:08	5°  ♁26'23	1°07'11	minimum elong	4477 May 05 19:42	16°  ♁57'37	2°23'37
minimum elong	4476 May 24 03:36	5°  ♁21'55	1°06'19	min. Earth dist.	4477 May 09 02:35	14°  ♁12'49	0.58973 AU
min. Earth dist.	4476 May 27 05:28	3°  ♁10'00	0.56961 AU	morning rise	4477 May 13 01:48	11°  ♁29'33	
desc. node	4476 May 27 23:06	2°  ♁40'15		desc. node	4477 May 14 20:08	10°  ♁39'11	
morning rise	4476 Jun 01 03:31	0°  ♁21'16		direct	4477 May 19 07:02	9°  ♁45'35	
	4476 Jun 02 01:22	30°  ♁		morning max el	4477 Jun 02 16:26	17°  ♁32'59	27°14'54
direct	4476 Jun 06 12:18	29°  ♁11'56			4477 Jun 13 00:31	0°  ♁	
	4476 Jun 11 00:12	0°  ♁			4477 Jun 30 13:23	0°  ♁	
morning max el	4476 Jun 20 20:20	6°  ♁39'10	26°05'42	morning set	4477 Jul 03 10:28	5°  ♁54'32	
	4476 Jul 08 01:25	0°  ♁		asc. node	4477 Jul 05 01:34	9°  ♁21'18	
asc. node	4476 Jul 18 04:33	19°  ♁21'43		max. Earth dist.	4477 Jul 10 03:56	20°  ♁28'10	1.31978 AU
morning set	4476 Jul 19 01:41	21°  ♁12'51					
	4476 Jul 23 03:22	0°  ♁		superior conj	4477 Jul 10 12:23	21°  ♁14'50	0°54'23
superior conj	4476 Jul 26 00:35	6°  ♁20'54	1°13'52	minimum elong	4477 Jul 10 10:19	21°  ♁03'23	0°53'59
minimum elong	4476 Jul 25 22:16	6°  ♁08'05	1°13'31		4477 Jul 14 11:52	0°  ♁	
max. Earth dist.	4476 Jul 26 16:32	7°  ♁48'41	1.32216 AU	evening rise	4477 Jul 17 08:08	6°  ♁07'09	
evening rise	4476 Aug 01 23:46	21°  ♁23'39			4477 Jul 29 20:45	0°  ♁	
	4476 Aug 06 05:47	0°  ♁		desc. node	4477 Aug 10 19:24	17°  ♁00'49	
desc. node	4476 Aug 23 22:24	29°  ♁14'34		evening max el	4477 Aug 15 06:48	21°  ♁45'42	26°17'27
	4476 Aug 24 12:03	0°  ♁		retrograde	4477 Aug 29 06:03	28°  ♁54'50	
evening max el	4476 Sep 02 06:59	10°  ♁01'44	27°08'47	evening set	4477 Sep 04 19:11	27°  ♁09'32	
retrograde	4476 Sep 16 03:34	17°  ♁14'23		min. Earth dist.	4477 Sep 08 19:58	24°  ♁34'33	0.59286 AU
evening set	4476 Sep 23 05:58	14°  ♁58'12		inferior conj	4477 Sep 12 02:15	22°  ♁05'04	-4°53'48
min. Earth dist.	4476 Sep 26 21:22	12°  ♁14'55	0.61357 AU	minimum elong	4477 Sep 12 07:02	21°  ♁55'54	4°53'06
inferior conj	4476 Sep 29 23:58	9°  ♁31'37	-4°08'46				


































































































































morning rise	4477 Sep 19 21:05	17° \mathbb{M} 33'22			4478 Aug 31 18:47	30° \mathbb{R} \mathcal{O}	
direct	4477 Sep 22 06:22	17° \mathbb{M} 13'38		morning rise	4478 Sep 01 13:03	29° \mathcal{O} 47'27	
morning max el	4477 Sep 30 03:20	21° \mathbb{M} 02'19	18°23'32	direct	4478 Sep 04 02:52	29° \mathcal{O} 28'20	
asc. node	4477 Oct 01 00:48	21° \mathbb{M} 56'36			4478 Sep 07 08:00	0° \mathbb{M}	
	4477 Oct 06 23:45	0° \mathcal{O}		morning max el	4478 Sep 13 04:07	3° \mathbb{M} 44'02	19°11'19
morning set	4477 Oct 16 02:55	16° \mathcal{O} 30'43		asc. node	4478 Sep 17 21:50	9° \mathbb{M} 17'18	
	4477 Oct 23 05:00	0° \mathbb{M}			4478 Sep 29 16:16	0° \mathcal{O}	
				morning set	4478 Sep 30 02:25	0° \mathcal{O} 50'17	
superior conj	4477 Oct 25 05:10	3° \mathbb{M} 43'30	1°20'52	superior conj	4478 Oct 08 07:22	17° \mathcal{O} 04'37	1°36'40
minimum elong	4477 Oct 25 08:50	4° \mathbb{M} 00'24	1°20'29	minimum elong	4478 Oct 08 09:37	17° \mathcal{O} 15'28	1°36'30
max. Earth dist.	4477 Nov 01 17:08	17° \mathbb{M} 05'06	1.40531 AU	max. Earth dist.	4478 Oct 14 21:46	29° \mathcal{O} 28'05	1.38435 AU
evening rise	4477 Nov 06 04:34	24° \mathbb{M} 37'53			4478 Oct 15 04:49	0° \mathbb{M}	
desc. node	4477 Nov 06 18:43	25° \mathbb{M} 36'12		evening rise	4478 Oct 18 16:43	6° \mathbb{M} 12'13	
	4477 Nov 09 11:41	0° \mathcal{X}		desc. node	4478 Oct 24 15:43	16° \mathbb{M} 14'52	
	4477 Nov 29 20:30	0° \mathcal{Z}			4478 Nov 02 11:27	0° \mathcal{X}	
evening max el	4477 Dec 10 17:10	12° \mathcal{Z} 56'50	23°30'51	evening max el	4478 Nov 23 06:05	26° \mathcal{X} 38'39	24°49'09
retrograde	4477 Dec 21 08:05	19° \mathcal{Z} 13'35			4478 Nov 27 00:55	0° \mathcal{Z}	
evening set	4477 Dec 26 08:48	17° \mathcal{Z} 08'40		retrograde	4478 Dec 04 21:53	3° \mathcal{Z} 25'16	
asc. node	4477 Dec 28 00:03	15° \mathcal{Z} 33'09		evening set	4478 Dec 10 12:09	1° \mathcal{Z} 05'21	
inferior conj	4477 Dec 31 18:40	10° \mathcal{Z} 43'29	1°15'02		4478 Dec 11 16:06	30° \mathbb{R} \mathcal{X}	
minimum elong	4477 Dec 31 17:01	10° \mathcal{Z} 49'06	1°14'23	asc. node	4478 Dec 14 21:05	26° \mathcal{X} 11'19	
min. Earth dist.	4477 Dec 31 06:33	11° \mathcal{Z} 24'58	0.67977 AU	min. Earth dist.	4478 Dec 15 01:51	25° \mathcal{X} 55'42	0.67572 AU
morning rise	4478 Jan 06 01:11	4° \mathcal{Z} 37'08		inferior conj	4478 Dec 16 00:45	24° \mathcal{X} 39'58	0°23'30
direct	4478 Jan 10 05:20	2° \mathcal{Z} 59'36		minimum elong	4478 Dec 16 00:11	24° \mathcal{X} 41'52	0°23'16
morning max el	4478 Jan 18 14:06	7° \mathcal{Z} 49'42	21°00'00	morning rise	4478 Dec 21 12:21	18° \mathcal{X} 40'05	
desc. node	4478 Feb 02 17:59	27° \mathcal{Z} 28'17		direct	4478 Dec 25 03:43	17° \mathcal{X} 23'51	
	4478 Feb 04 11:33	0° \approx		morning max el	4479 Jan 01 14:29	21° \mathcal{X} 36'25	19°50'03
morning set	4478 Feb 17 20:32	20° \approx 18'29			4479 Jan 08 12:52	0° \mathcal{Z}	
	4478 Feb 23 22:54	0° \mathcal{X}		greatest brilliancy	4479 Jan 15 10:53	9° \mathcal{Z} 54'07	-0.6m
max. Earth dist.	4478 Feb 25 18:09	2° \mathcal{X} 55'21	1.42686 AU	desc. node	4479 Jan 20 14:59	17° \mathcal{Z} 39'37	
				morning set	4479 Jan 27 16:33	28° \mathcal{Z} 28'13	
superior conj	4478 Mar 04 20:09	14° \mathcal{X} 42'29	-2°07'54		4479 Jan 28 16:19	0° \approx	
minimum elong	4478 Mar 04 21:08	14° \mathcal{X} 46'39	2°07'54	max. Earth dist.	4479 Feb 08 05:01	16° \approx 29'57	1.44221 AU
	4478 Mar 13 14:46	0° \mathcal{Y}					
evening rise	4478 Mar 16 11:49	5° \mathcal{Y} 08'32		superior conj	4479 Feb 13 04:17	24° \approx 28'44	-2°02'12
asc. node	4478 Mar 25 23:21	21° \mathcal{Y} 40'22		minimum elong	4479 Feb 12 23:16	24° \approx 08'28	2°01'58
	4478 Mar 31 20:34	0° \mathcal{Z}			4479 Feb 16 13:27	0° \mathcal{X}	
evening max el	4478 Apr 02 06:26	1° \mathcal{Z} 30'40	18°06'59	evening rise	4479 Feb 26 13:49	16° \mathcal{X} 47'35	
retrograde	4478 Apr 08 21:06	4° \mathcal{Z} 53'49			4479 Mar 06 08:51	0° \mathcal{Y}	
evening set	4478 Apr 11 13:09	4° \mathcal{Z} 20'44		asc. node	4479 Mar 12 20:23	10° \mathcal{Y} 01'30	
	4478 Apr 17 10:56	30° \mathbb{R} \mathcal{Y}		evening max el	4479 Mar 16 19:15	14° \mathcal{Y} 47'39	18°13'24
inferior conj	4478 Apr 18 02:41	29° \mathcal{Y} 21'59	3°11'02	retrograde	4479 Mar 23 05:13	18° \mathcal{Y} 12'10	
minimum elong	4478 Apr 18 05:16	29° \mathcal{Y} 15'40	3°10'37	evening set	4479 Mar 26 03:20	17° \mathcal{Y} 27'23	
min. Earth dist.	4478 Apr 21 06:43	26° \mathcal{Y} 18'22	0.61174 AU	inferior conj	4479 Apr 01 04:57	12° \mathcal{Y} 09'00	3°32'07
morning rise	4478 Apr 24 19:27	23° \mathcal{Y} 26'32		minimum elong	4479 Apr 01 05:51	12° \mathcal{Y} 06'31	3°32'04
direct	4478 May 01 13:15	21° \mathcal{Y} 09'23		min. Earth dist.	4479 Apr 03 19:35	9° \mathcal{Y} 17'47	0.63260 AU
desc. node	4478 May 01 17:09	21° \mathcal{Y} 09'27		morning rise	4479 Apr 07 07:18	6° \mathcal{Y} 02'25	
morning max el	4478 May 15 18:45	29° \mathcal{Y} 06'39	27°49'12	direct	4479 Apr 14 04:22	3° \mathcal{Y} 22'10	
	4478 May 16 15:47	0° \mathcal{Z}		desc. node	4479 Apr 18 14:12	4° \mathcal{Y} 19'37	
	4478 Jun 06 22:07	0° \mathbb{I}		morning max el	4479 Apr 28 02:03	11° \mathcal{Y} 20'49	27°45'52
morning set	4478 Jun 17 15:03	20° \mathbb{I} 21'04			4479 May 12 19:25	0° \mathcal{Z}	
asc. node	4478 Jun 21 22:36	29° \mathbb{I} 27'11			4479 May 30 07:27	0° \mathbb{I}	
	4478 Jun 22 04:41	0° \mathcal{O}		morning set	4479 Jun 01 13:13	4° \mathbb{I} 25'21	
max. Earth dist.	4478 Jun 23 14:01	3° \mathcal{O} 00'55	1.32156 AU	max. Earth dist.	4479 Jun 06 18:58	15° \mathbb{I} 14'48	1.32763 AU
				asc. node	4479 Jun 08 19:39	19° \mathbb{I} 34'58	
superior conj	4478 Jun 24 23:06	6° \mathcal{O} 01'44	0°31'11	superior conj	4479 Jun 09 06:56	20° \mathbb{I} 35'43	0°04'56
minimum elong	4478 Jun 24 21:44	5° \mathcal{O} 54'15	0°30'53	minimum elong	4479 Jun 09 06:41	20° \mathbb{I} 34'26	0°04'52
evening rise	4478 Jul 01 19:10	20° \mathcal{O} 55'38		behind sun begin	4479 Jun 09 01:38	20° \mathbb{I} 07'11	
	4478 Jul 06 04:35	0° \mathcal{O}		behind sun end	4479 Jun 09 11:45	21° \mathbb{I} 01'43	
	4478 Jul 25 08:09	0° \mathbb{M}			4479 Jun 13 15:05	0° \mathcal{O}	
evening max el	4478 Jul 27 23:26	2° \mathbb{M} 43'08	24°57'58	evening rise	4479 Jun 16 06:59	5° \mathcal{O} 42'43	
desc. node	4478 Jul 28 16:24	3° \mathbb{M} 22'54			4479 Jun 29 04:55	0° \mathcal{O}	
retrograde	4478 Aug 10 21:56	9° \mathbb{M} 45'54		evening max el	4479 Jul 09 12:18	13° \mathcal{O} 10'00	23°22'37
evening set	4478 Aug 16 08:27	8° \mathbb{M} 38'42		desc. node	4479 Jul 15 13:24	17° \mathcal{O} 49'12	
min. Earth dist.	4478 Aug 21 10:59	5° \mathbb{M} 53'37	0.57307 AU	retrograde	4479 Jul 23 01:10	19° \mathcal{O} 56'33	
inferior conj	4478 Aug 24 09:14	3° \mathbb{M} 57'05	-5°13'43				
minimum elong	4478 Aug 24 09:33	3° \mathbb{M} 56'33	5°13'43				

evening set	4479 Jul 26 23:54	19°Ω22'29		inferior conj	4480 Jul 14 16:33	25°☿30'59	-3°40'09
min. Earth dist.	4479 Aug 02 21:52	16°Ω11'34	0.55732 AU	minimum elong	4480 Jul 14 07:55	25°☿43'03	3°37'43
inferior conj	4479 Aug 04 20:18	15°Ω03'10	-4°52'28	min. Earth dist.	4480 Jul 14 08:07	25°☿42'46	0.54886 AU
minimum elong	4479 Aug 04 14:24	15°Ω11'54	4°51'37	morning rise	4480 Jul 23 08:55	21°☿39'20	
morning rise	4479 Aug 13 07:17	11°Ω09'58		direct	4480 Jul 26 15:33	21°☿15'50	
direct	4479 Aug 16 04:21	10°Ω49'47		morning max el	4480 Aug 07 19:19	26°☿58'00	21°50'26
morning max el	4479 Aug 26 17:36	15°Ω43'52	20°21'00		4480 Aug 10 17:49	0°Ω	
asc. node	4479 Sep 04 18:54	27°Ω29'07		asc. node	4480 Aug 21 15:57	16°Ω19'01	
	4479 Sep 06 06:41	0°♊		morning set	4480 Aug 28 17:38	0°♊16'18	
morning set	4479 Sep 14 08:07	15°♊28'07			4480 Aug 28 14:30	0°♊	
	4479 Sep 21 09:52	0°♊					
superior conj	4479 Sep 21 22:38	1°♊04'43	1°43'27	superior conj	4480 Sep 04 22:56	15°♊31'03	1°42'42
minimum elong	4479 Sep 21 23:14	1°♊07'48	1°43'26	minimum elong	4480 Sep 04 22:09	15°♊26'56	1°42'41
max. Earth dist.	4479 Sep 27 04:33	11°♊26'33	1.36441 AU	max. Earth dist.	4480 Sep 08 17:50	23°♊20'24	1.34732 AU
evening rise	4479 Oct 01 01:57	18°♊45'09			4480 Sep 12 02:10	0°♊	
	4479 Oct 07 11:03	0°♊		evening rise	4480 Sep 13 03:56	2°♊04'44	
desc. node	4479 Oct 11 12:44	6°♊43'04		desc. node	4480 Sep 27 09:45	26°♊54'22	
	4479 Oct 27 15:25	0°♊			4480 Sep 29 09:49	0°♊	
evening max el	4479 Nov 05 18:40	10°♊22'14	25°58'42	evening max el	4480 Oct 18 07:15	23°♊59'53	26°52'13
retrograde	4479 Nov 18 06:50	17°♊28'41		retrograde	4480 Oct 26 09:18	0°♊	
evening set	4479 Nov 24 10:51	14°♊56'07			4480 Oct 31 10:28	1°♊16'26	
min. Earth dist.	4479 Nov 28 17:20	10°♊21'40	0.66821 AU		4480 Nov 05 01:58	30°♊	
inferior conj	4479 Nov 30 03:23	8°♊35'12	-0°33'08	evening set	4480 Nov 07 02:52	28°♊36'15	
minimum elong	4479 Nov 30 04:15	8°♊32'27	0°32'45	min. Earth dist.	4480 Nov 11 02:36	24°♊37'32	0.65714 AU
asc. node	4479 Dec 01 18:07	6°♊36'38		inferior conj	4480 Nov 13 00:27	22°♊24'34	-1°33'37
morning rise	4479 Dec 05 22:07	2°♊44'18		minimum elong	4480 Nov 13 03:04	22°♊16'55	1°32'31
direct	4479 Dec 09 02:26	1°♊46'25		asc. node	4480 Nov 17 15:11	17°♊44'18	
morning max el	4479 Dec 15 22:30	5°♊32'57	18°55'03	morning rise	4480 Nov 19 04:09	16°♊45'27	
	4480 Jan 02 07:31	0°♊		direct	4480 Nov 21 23:29	16°♊02'13	
morning set	4480 Jan 07 00:54	7°♊22'53		morning max el	4480 Nov 28 12:08	19°♊33'35	18°16'17
desc. node	4480 Jan 07 12:02	8°♊06'26			4480 Dec 06 11:05	0°♊	
	4480 Jan 21 11:37	0°♊		morning set	4480 Dec 17 13:08	17°♊42'54	
max. Earth dist.	4480 Jan 21 21:49	0°♊40'03	1.45111 AU	desc. node	4480 Dec 24 09:04	28°♊43'39	
					4480 Dec 25 04:10	0°♊	
superior conj	4480 Jan 23 14:09	3°♊18'43	-1°36'52	superior conj	4481 Jan 01 17:00	11°♊56'26	-0°55'13
minimum elong	4480 Jan 23 04:54	2°♊42'19	1°35'59	minimum elong	4481 Jan 01 10:09	11°♊29'31	0°54'21
evening rise	4480 Feb 07 17:25	27°♊30'07		max. Earth dist.	4481 Jan 03 17:01	15°♊05'04	1.45263 AU
	4480 Feb 09 06:20	0°♊			4481 Jan 13 05:52	0°♊	
asc. node	4480 Feb 27 17:25	27°♊38'35		evening rise	4481 Jan 17 22:15	7°♊19'01	
evening max el	4480 Feb 28 06:59	28°♊14'01	18°38'10	greatest brilliancy	4481 Jan 29 08:54	25°♊05'55	-0.7m
	4480 Mar 01 06:12	0°♊			4481 Feb 01 15:08	0°♊	
retrograde	4480 Mar 05 21:21	1°♊52'49		evening max el	4481 Feb 10 15:21	11°♊44'55	19°20'15
evening set	4480 Mar 09 01:38	0°♊55'34		asc. node	4481 Feb 13 14:27	14°♊18'48	
	4480 Mar 10 09:09	30°♊		retrograde	4481 Feb 17 17:52	15°♊48'49	
inferior conj	4480 Mar 14 18:56	25°♊19'11	3°33'54	evening set	4481 Feb 21 05:10	14°♊38'20	
minimum elong	4480 Mar 14 18:17	25°♊21'10	3°33'52	inferior conj	4481 Feb 26 17:11	8°♊46'12	3°21'04
min. Earth dist.	4480 Mar 16 17:59	22°♊57'15	0.65032 AU	minimum elong	4481 Feb 26 15:26	8°♊51'54	3°20'49
morning rise	4480 Mar 20 10:25	19°♊07'05		min. Earth dist.	4481 Feb 28 01:05	7°♊02'48	0.66399 AU
direct	4480 Mar 27 02:54	16°♊17'07		morning rise	4481 Mar 04 01:24	2°♊31'56	
desc. node	4480 Apr 04 11:15	19°♊41'24			4481 Mar 08 09:46	30°♊	
morning max el	4480 Apr 09 11:56	24°♊07'35	27°08'11	direct	4481 Mar 10 07:54	29°♊45'09	
	4480 Apr 14 18:40	0°♊			4481 Mar 12 08:03	0°♊	
	4480 May 05 04:38	0°♊		desc. node	4481 Mar 22 08:18	6°♊40'40	
morning set	4480 May 15 02:05	17°♊58'56		morning max el	4481 Mar 22 21:51	7°♊14'28	26°03'35
max. Earth dist.	4480 May 19 15:04	27°♊00'11	1.33827 AU		4481 Apr 09 14:18	0°♊	
	4480 May 21 02:07	0°♊			4481 Apr 27 14:47	0°♊	
superior conj	4480 May 23 09:51	4°♊50'27	-0°23'35	morning set	4481 Apr 28 01:49	0°♊51'00	
minimum elong	4480 May 23 11:05	4°♊56'57	0°23'20	max. Earth dist.	4481 May 01 23:47	8°♊15'57	1.35351 AU
asc. node	4480 May 25 16:42	9°♊40'27					
evening rise	4480 May 30 17:43	20°♊22'04		superior conj	4481 May 07 05:26	18°♊39'25	-0°53'01
	4480 Jun 04 11:23	0°♊		minimum elong	4481 May 07 08:18	18°♊54'02	0°52'28
evening max el	4480 Jun 20 04:53	23°♊36'58	21°47'06	asc. node	4481 May 12 13:45	29°♊39'55	
desc. node	4480 Jul 01 10:27	29°♊44'52			4481 May 12 17:38	0°♊	
retrograde	4480 Jul 02 17:27	29°♊48'46		evening rise	4481 May 15 01:20	4°♊47'34	
evening set	4480 Jul 05 08:18	29°♊33'19			4481 May 29 08:22	0°♊	
				evening max el	4481 Jun 02 08:13	4°♊34'47	20°24'10

retrograde	4481 Jun 13 06:43	9°☿55'33		evening set	4482 May 27 04:41	20°♊32'01	
evening set	4481 Jun 15 06:17	9°☿45'45		inferior conj	4482 Jun 04 16:57	16°♊24'12	0°08'32
desc. node	4481 Jun 18 07:29	8°☿55'35		minimum elong	4482 Jun 04 17:18	16°♊23'36	0°08'23
inferior conj	4481 Jun 24 10:44	5°☿47'57	-1°48'58	transit middle	4482 Jun 04 17:18	16°♊23'36	0°08'23
minimum elong	4481 Jun 24 05:37	5°☿55'24	1°47'06	transit begin	4482 Jun 04 14:01	16°♊29'00	
min. Earth dist.	4481 Jun 25 20:09	4°☿59'14	0.54985 AU	transit end	4482 Jun 04 20:35	16°♊18'11	
morning rise	4481 Jul 03 03:53	1°☿36'51		desc. node	4482 Jun 05 04:32	16°♊05'04	
direct	4481 Jul 07 01:37	1°☿03'54		min. Earth dist.	4482 Jun 07 10:33	14°♊36'46	0.56026 AU
morning max el	4481 Jul 20 12:16	7°☿35'39	23°32'17	morning rise	4482 Jun 13 02:57	11°♊39'40	
	4481 Aug 05 13:36	0°♊		direct	4482 Jun 17 22:36	10°♊46'32	
asc. node	4481 Aug 08 13:01	5°♊37'38		morning max el	4482 Jul 02 01:59	17°♊57'39	25°13'43
morning set	4481 Aug 13 05:03	15°♊09'21			4482 Jul 12 01:18	0°☿	
				asc. node	4482 Jul 26 10:03	25°☿16'57	
superior conj	4481 Aug 20 05:16	0°♊14'25	1°35'38	morning set	4482 Jul 28 16:42	0°♊02'04	
minimum elong	4481 Aug 20 03:30	0°♊04'57	1°35'30		4482 Jul 28 16:19	0°♊	
	4481 Aug 20 02:35	0°♊					
max. Earth dist.	4481 Aug 22 15:52	5°♊27'36	1.33421 AU	superior conj	4482 Aug 04 15:14	15°♊06'55	1°23'11
evening rise	4481 Aug 27 18:32	16°♊00'09		minimum elong	4482 Aug 04 12:58	14°♊54'33	1°22'54
	4481 Sep 04 03:44	0°♊		max. Earth dist.	4482 Aug 05 21:38	17°♊53'04	1.32535 AU
desc. node	4481 Sep 14 06:46	16°♊41'12		evening rise	4482 Aug 11 18:12	0°♊21'10	
	4481 Sep 24 00:53	0°♊			4482 Aug 11 14:06	0°♊	
evening max el	4481 Sep 30 19:11	7°♊21'49	27°22'33		4482 Aug 28 04:13	0°♊	
retrograde	4481 Oct 14 08:18	14°♊40'14		desc. node	4482 Sep 01 03:48	5°♊53'30	
evening set	4481 Oct 21 09:37	12°♊00'38		evening max el	4482 Sep 13 04:37	20°♊15'45	27°23'27
min. Earth dist.	4481 Oct 25 03:37	8°♊36'05	0.64254 AU	retrograde	4482 Sep 26 23:26	27°♊30'45	
inferior conj	4481 Oct 27 13:34	6°♊03'04	-2°35'55	evening set	4482 Oct 04 03:46	25°♊02'49	
minimum elong	4481 Oct 27 18:01	5°♊51'17	2°34'15	min. Earth dist.	4482 Oct 07 18:40	22°♊07'07	0.62479 AU
morning rise	4481 Nov 03 03:43	0°♊38'38		inferior conj	4482 Oct 10 15:52	19°♊23'52	-3°36'41
asc. node	4481 Nov 04 12:14	0°♊13'15		minimum elong	4482 Oct 10 21:43	19°♊10'04	3°34'54
direct	4481 Nov 05 16:25	0°♊06'11		morning rise	4482 Oct 17 17:20	14°♊17'25	
morning max el	4481 Nov 12 04:37	3°♊31'41	17°54'32	direct	4482 Oct 20 02:15	13°♊52'06	
morning set	4481 Nov 29 05:49	29°♊26'23		asc. node	4482 Oct 22 09:16	14°♊16'28	
	4481 Nov 29 13:45	0°♊		morning max el	4482 Oct 26 20:53	17°♊19'50	17°50'38
desc. node	4481 Dec 11 06:04	19°♊27'30			4482 Nov 04 21:26	0°♊	
				morning set	4482 Nov 11 21:01	12°♊14'55	
superior conj	4481 Dec 12 09:23	21°♊18'13	-0°07'54		4482 Nov 22 00:04	0°♊	
minimum elong	4481 Dec 12 08:28	21°♊14'31	0°07'46				
behind sun begin	4481 Dec 11 23:29	20°♊38'10		superior conj	4482 Nov 23 03:08	1°♊54'59	0°34'37
behind sun end	4481 Dec 12 17:27	21°♊50'48		minimum elong	4482 Nov 23 06:14	2°♊08'09	0°34'12
max. Earth dist.	4481 Dec 17 11:35	29°♊27'11	1.44683 AU	desc. node	4482 Nov 28 03:05	10°♊14'45	
	4481 Dec 17 19:52	0°♊		max. Earth dist.	4482 Nov 30 03:16	13°♊31'08	1.43443 AU
evening rise	4481 Dec 28 10:58	16°♊33'42		evening rise	4482 Dec 07 22:05	25°♊51'47	
	4482 Jan 06 06:45	0°♊			4482 Dec 10 14:24	0°♊	
evening max el	4482 Jan 24 18:49	25°♊17'32	20°17'38		4482 Dec 31 06:37	0°♊	
asc. node	4482 Jan 31 11:30	29°♊47'10		evening max el	4483 Jan 07 16:53	8°♊52'01	21°27'12
retrograde	4482 Feb 01 16:01	29°♊54'48		retrograde	4483 Jan 16 13:38	14°♊07'36	
evening set	4482 Feb 05 11:42	28°♊30'08		asc. node	4483 Jan 18 08:32	13°♊50'20	
inferior conj	4482 Feb 10 20:50	22°♊24'42	2°56'49	evening set	4483 Jan 20 19:25	12°♊27'40	
minimum elong	4482 Feb 10 18:30	22°♊32'39	2°56'16	inferior conj	4483 Jan 26 03:37	6°♊11'52	2°23'17
min. Earth dist.	4482 Feb 11 14:54	21°♊23'26	0.67352 AU	minimum elong	4483 Jan 26 01:11	6°♊20'18	2°22'32
morning rise	4482 Feb 16 01:03	16°♊10'34		min. Earth dist.	4483 Jan 26 09:12	5°♊52'31	0.67901 AU
direct	4482 Feb 21 18:29	13°♊37'07		morning rise	4483 Jan 31 06:45	29°♊59'34	
morning max el	4482 Mar 05 06:31	20°♊29'56	24°41'35		4483 Jan 31 06:34	30°♊	
desc. node	4482 Mar 09 05:20	24°♊49'16		direct	4483 Feb 05 09:39	27°♊46'06	
	4482 Mar 13 10:24	0°♊			4483 Feb 11 05:00	0°♊	
	4482 Apr 02 18:58	0°♊		morning max el	4483 Feb 15 15:29	3°♊51'02	23°12'35
morning set	4482 Apr 10 07:10	12°♊46'00		desc. node	4483 Feb 24 02:20	13°♊47'45	
max. Earth dist.	4482 Apr 13 22:10	19°♊16'44	1.37282 AU		4483 Mar 07 15:23	0°♊	
	4482 Apr 19 15:02	0°♊		morning set	4483 Mar 22 12:06	23°♊27'59	
					4483 Mar 26 08:13	0°♊	
superior conj	4482 Apr 20 14:26	1°♊53'18	-1°21'33	max. Earth dist.	4483 Mar 26 17:11	0°♊38'49	1.39456 AU
minimum elong	4482 Apr 20 18:45	2°♊14'20	1°20'54				
evening rise	4482 Apr 29 03:23	18°♊51'23		superior conj	4483 Apr 03 08:57	14°♊22'28	-1°46'24
asc. node	4482 Apr 29 10:47	19°♊28'18		minimum elong	4483 Apr 03 13:48	14°♊44'53	1°45'55
	4482 May 04 21:28	0°♊			4483 Apr 11 14:38	0°♊	
evening max el	4482 May 15 23:58	16°♊14'18	19°19'53	evening rise	4483 Apr 12 21:00	2°♊26'07	
retrograde	4482 May 25 05:03	20°♊43'36		asc. node	4483 Apr 16 07:49	9°♊00'50	

evening max el	4483 Apr 29 01:54	28°♄32'14	18°35'47	asc. node	4484 Apr 02 04:50	28°♄11'52	
	4483 Apr 30 17:58	0°♄			4484 Apr 03 06:13	0°♄	
retrograde	4483 May 06 21:27	2°♄23'02		evening max el	4484 Apr 11 10:39	11°♄20'11	18°11'49
evening set	4483 May 09 03:12	2°♄05'10		retrograde	4484 Apr 18 08:37	14°♄49'09	
	4483 May 13 13:06	30°♄		evening set	4484 Apr 20 21:01	14°♄22'09	
inferior conj	4483 May 16 19:26	27°♄38'33	1°44'00	inferior conj	4484 Apr 27 19:11	9°♄34'45	2°47'47
minimum elong	4483 May 16 22:44	27°♄32'11	1°42'57	minimum elong	4484 Apr 27 22:31	9°♄27'14	2°47'03
min. Earth dist.	4483 May 20 04:20	25°♄04'13	0.57782 AU	min. Earth dist.	4484 May 01 03:57	6°♄34'47	0.59909 AU
desc. node	4483 May 23 01:33	23°♄09'25		morning rise	4484 May 04 21:31	3°♄49'29	
morning rise	4483 May 24 15:04	22°♄19'39		desc. node	4484 May 08 22:34	2°♄07'44	
direct	4483 May 30 09:33	20°♄55'56		direct	4484 May 11 09:06	1°♄51'03	
morning max el	4483 Jun 13 18:30	28°♄32'25	26°38'53	morning max el	4484 May 25 17:21	9°♄42'57	27°34'11
	4483 Jun 15 05:14	0°♄			4484 Jun 10 08:13	0°♄	
	4483 Jul 05 16:11	0°♄		morning set	4484 Jun 26 10:16	29°♄25'55	
morning set	4483 Jul 13 03:00	14°♄49'16			4484 Jun 26 16:49	0°♄	
asc. node	4483 Jul 13 07:04	15°♄10'42		asc. node	4484 Jun 29 04:05	5°♄13'56	
				max. Earth dist.	4484 Jul 02 19:44	13°♄11'10	1.32005 AU
superior conj	4483 Jul 20 02:51	0°♄01'56	1°06'06	superior conj	4484 Jul 03 14:24	14°♄53'58	0°44'58
minimum elong	4483 Jul 20 00:34	29°♄49'22	1°05'42	minimum elong	4484 Jul 03 12:35	14°♄43'53	0°44'35
	4483 Jul 20 02:30	0°♄		evening rise	4484 Jul 10 09:52	29°♄45'53	
max. Earth dist.	4483 Jul 20 08:10	0°♄31'17	1.32067 AU		4484 Jul 10 12:31	0°♄	
evening rise	4483 Jul 27 00:05	14°♄58'48			4484 Jul 26 22:56	0°♄	
	4483 Aug 03 13:45	0°♄		desc. node	4484 Aug 04 21:50	11°♄30'59	
desc. node	4483 Aug 19 00:49	24°♄16'40		evening max el	4484 Aug 07 05:27	13°♄51'57	25°46'30
	4483 Aug 23 21:53	0°♄		retrograde	4484 Aug 21 04:31	20°♄58'39	
evening max el	4483 Aug 26 08:48	2°♄28'17	26°51'01	evening set	4484 Aug 27 08:16	19°♄28'59	
retrograde	4483 Sep 09 06:37	9°♄38'38		min. Earth dist.	4484 Aug 31 17:35	16°♄52'18	0.58419 AU
evening set	4483 Sep 16 04:54	7°♄34'34		inferior conj	4484 Sep 03 22:22	14°♄34'36	-5°06'14
min. Earth dist.	4483 Sep 19 22:53	4°♄56'51	0.60479 AU	minimum elong	4484 Sep 04 01:39	14°♄28'40	5°05'57
inferior conj	4483 Sep 23 03:58	2°♄17'30	-4°30'05	morning rise	4484 Sep 11 21:17	10°♄12'43	
minimum elong	4483 Sep 23 09:50	2°♄05'18	4°28'50	direct	4484 Sep 14 08:16	9°♄53'24	
	4483 Sep 26 01:36	30°♄		morning max el	4484 Sep 22 15:53	13°♄51'39	18°41'15
morning rise	4483 Sep 30 16:43	27°♄32'18		asc. node	4484 Sep 25 03:19	16°♄32'44	
direct	4483 Oct 03 01:01	27°♄11'07			4484 Oct 03 17:55	0°♄	
asc. node	4483 Oct 09 06:18	29°♄47'28		morning set	4484 Oct 08 23:04	9°♄55'03	
	4483 Oct 09 12:13	0°♄		superior conj	4484 Oct 17 15:17	26°♄39'49	1°28'46
morning max el	4483 Oct 10 09:43	0°♄49'18	18°05'45	minimum elong	4484 Oct 17 18:25	26°♄54'34	1°28'28
morning set	4483 Oct 26 04:23	25°♄48'58			4484 Oct 19 10:09	0°♄	
	4483 Oct 28 10:08	0°♄		max. Earth dist.	4484 Oct 24 20:30	9°♄48'26	1.39643 AU
superior conj	4483 Nov 04 22:38	13°♄46'28	1°07'08	evening rise	4484 Oct 28 21:35	16°♄46'36	
minimum elong	4483 Nov 05 02:42	14°♄04'36	1°06'38	desc. node	4484 Oct 31 21:07	21°♄44'15	
max. Earth dist.	4483 Nov 12 14:21	27°♄01'37	1.41690 AU		4484 Nov 06 00:57	0°♄	
	4483 Nov 14 09:12	0°♄			4484 Nov 27 10:45	0°♄	
desc. node	4483 Nov 15 00:06	1°♄01'27		evening max el	4484 Dec 02 23:40	6°♄07'08	24°04'38
evening rise	4483 Nov 17 22:48	5°♄49'04		retrograde	4484 Dec 14 01:25	12°♄37'44	
	4483 Dec 03 20:26	0°♄		evening set	4484 Dec 19 07:56	10°♄25'57	
evening max el	4483 Dec 21 09:59	22°♄28'10	22°44'45	asc. node	4484 Dec 22 02:35	7°♄30'53	
retrograde	4483 Dec 31 09:10	28°♄23'10		min. Earth dist.	4484 Dec 24 02:01	4°♄56'50	0.67850 AU
evening set	4484 Jan 05 02:40	26°♄27'12		inferior conj	4484 Dec 24 18:48	4°♄00'04	0°53'52
asc. node	4484 Jan 05 05:33	26°♄21'08		minimum elong	4484 Dec 24 17:34	4°♄04'16	0°53'22
inferior conj	4484 Jan 10 11:31	20°♄04'23	1°41'56		4484 Dec 27 22:37	30°♄	
minimum elong	4484 Jan 10 09:28	20°♄11'30	1°41'12	morning rise	4484 Dec 30 03:14	27°♄56'27	
min. Earth dist.	4484 Jan 10 05:38	20°♄24'45	0.68060 AU	direct	4485 Jan 03 01:43	26°♄28'26	
morning rise	4484 Jan 15 16:09	13°♄55'34			4485 Jan 09 22:50	0°♄	
direct	4484 Jan 20 04:24	12°♄04'57		morning max el	4485 Jan 11 00:21	1°♄01'06	20°28'37
morning max el	4484 Jan 29 04:24	17°♄20'23	21°45'58	desc. node	4485 Jan 27 20:22	23°♄21'33	
	4484 Feb 08 13:07	0°♄			4485 Feb 01 06:52	0°♄	
desc. node	4484 Feb 10 23:21	3°♄21'46		morning set	4485 Feb 08 13:15	11°♄07'18	
	4484 Feb 28 18:00	0°♄		max. Earth dist.	4485 Feb 17 23:09	25°♄59'00	1.43406 AU
morning set	4484 Mar 01 12:24	2°♄48'23			4485 Feb 20 10:38	0°♄	
max. Earth dist.	4484 Mar 07 16:34	12°♄51'51	1.41592 AU	superior conj	4485 Feb 24 07:10	6°♄20'58	-2°07'45
superior conj	4484 Mar 15 08:08	25°♄55'14	-2°03'32	minimum elong	4485 Feb 24 05:48	6°♄15'16	2°07'44
minimum elong	4484 Mar 15 11:25	26°♄09'38	2°03'24	evening rise	4485 Mar 08 16:04	27°♄33'48	
	4484 Mar 17 15:33	0°♄			4485 Mar 10 01:23	0°♄	
evening rise	4484 Mar 26 02:38	15°♄23'25					

asc. node	4485 Mar 20 01:52	16°♊53'54		minimum elong	4486 Feb 03 21:26	15°♊10'50	1°53'22
evening max el	4485 Mar 25 22:50	24°♊28'46	18°07'21		4486 Feb 13 01:08	0°♋	
retrograde	4485 Apr 01 10:30	27°♊51'12		evening rise	4486 Feb 18 08:56	8°♋49'26	
evening set	4485 Apr 04 05:01	27°♊13'23			4486 Mar 03 08:50	0°♌	
inferior conj	4485 Apr 10 13:00	22°♊05'59	3°22'42	asc. node	4486 Mar 06 22:56	4°♌58'11	
minimum elong	4485 Apr 10 14:54	22°♊01'06	3°22'29	evening max el	4486 Mar 09 11:33	7°♌50'54	18°21'45
min. Earth dist.	4485 Apr 13 11:48	19°♊05'00	0.62084 AU	retrograde	4486 Mar 15 22:30	11°♌20'12	
morning rise	4485 Apr 16 23:12	16°♊04'35		evening set	4486 Mar 18 23:05	10°♌30'23	
direct	4485 Apr 23 19:16	13°♊36'11		inferior conj	4486 Mar 24 20:47	5°♌04'22	3°34'54
desc. node	4485 Apr 25 19:36	13°♊48'07		minimum elong	4486 Mar 24 20:59	5°♌03'48	3°34'54
morning max el	4485 May 07 22:20	21°♊35'40	27°52'23	min. Earth dist.	4486 Mar 27 05:00	2°♌23'37	0.64055 AU
	4485 May 15 06:15	0°♋			4486 Mar 29 12:24	30°♌♋	
	4485 Jun 03 10:14	0°♌		morning rise	4486 Mar 30 18:03	28°♌54'44	
morning set	4485 Jun 10 12:28	13°♌44'19		direct	4486 Apr 06 14:00	26°♌08'19	
max. Earth dist.	4485 Jun 16 04:13	25°♌37'54	1.32359 AU	desc. node	4486 Apr 12 16:38	27°♌58'43	
asc. node	4485 Jun 16 01:07	25°♌21'14			4486 Apr 15 17:02	0°♍	
				morning max el	4486 Apr 20 07:09	4°♍05'45	27°33'36
superior conj	4485 Jun 18 00:07	29°♌36'07	0°20'23		4486 May 09 18:59	0°♎	
minimum elong	4485 Jun 17 23:11	29°♌31'01	0°20'10	morning set	4486 May 25 07:06	27°♎37'09	
	4485 Jun 18 04:30	0°♏			4486 May 26 11:49	0°♐	
evening rise	4485 Jun 24 21:27	14°♏34'27		max. Earth dist.	4486 May 30 05:39	7°♐39'52	1.33158 AU
	4485 Jul 02 14:08	0°♑					
evening max el	4485 Jul 19 19:27	24°♑32'12	24°18'20	superior conj	4486 Jun 02 06:10	14°♐03'00	-0°06'58
desc. node	4485 Jul 22 18:52	27°♑08'03		minimum elong	4486 Jun 02 06:31	14°♐04'53	0°06'54
	4485 Jul 27 08:01	0°♒		behind sun begin	4486 Jun 02 01:37	13°♐38'43	
retrograde	4485 Aug 02 15:30	1°♒30'47		behind sun end	4486 Jun 02 11:25	14°♐31'03	
evening set	4485 Aug 07 11:22	0°♒38'52		asc. node	4486 Jun 02 22:11	15°♐28'43	
	4485 Aug 09 02:16	30°♒♑		evening rise	4486 Jun 09 09:03	29°♐18'55	
min. Earth dist.	4485 Aug 13 06:17	27°♑44'24	0.56566 AU		4486 Jun 09 16:50	0°♓	
inferior conj	4485 Aug 15 20:37	26°♑06'32	-5°10'37		4486 Jun 26 23:15	0°♑	
minimum elong	4485 Aug 15 18:16	26°♑10'14	5°10'30	evening max el	4486 Jul 01 08:56	4°♑55'05	22°41'06
morning rise	4485 Aug 24 03:45	22°♑05'27		desc. node	4486 Jul 09 15:54	10°♑33'57	
direct	4485 Aug 26 20:15	21°♑46'14		retrograde	4486 Jul 14 13:54	11°♑29'25	
morning max el	4485 Sep 05 12:12	26°♑16'41	19°38'24	evening set	4486 Jul 17 21:14	11°♑05'27	
	4485 Sep 08 21:54	0°♒		min. Earth dist.	4486 Jul 25 16:55	7°♑39'11	0.55267 AU
asc. node	4485 Sep 12 00:22	4°♒16'31		inferior conj	4486 Jul 27 00:18	6°♑54'20	-4°27'58
morning set	4485 Sep 23 01:30	24°♒22'50		minimum elong	4486 Jul 26 16:29	7°♑05'31	4°26'21
	4485 Sep 25 20:11	0°♓		morning rise	4486 Aug 04 13:50	3°♑03'43	
				direct	4486 Aug 07 14:22	2°♑42'36	
superior conj	4485 Sep 30 23:36	10°♓19'05	1°40'33	morning max el	4486 Aug 18 20:37	7°♑56'59	20°56'52
minimum elong	4485 Oct 01 01:08	10°♓26'40	1°40'28	asc. node	4486 Aug 29 21:25	22°♑45'38	
max. Earth dist.	4485 Oct 07 00:55	21°♓56'15	1.37556 AU		4486 Sep 02 20:18	0°♔	
evening rise	4485 Oct 10 19:07	28°♓46'33		morning set	4486 Sep 07 09:02	9°♔05'12	
	4485 Oct 11 11:41	0°♕					
desc. node	4485 Oct 18 18:09	12°♕18'57		superior conj	4486 Sep 14 19:05	24°♔31'10	1°43'58
	4485 Oct 30 09:24	0°♖		minimum elong	4486 Sep 14 19:03	24°♔31'01	1°43'58
evening max el	4485 Nov 15 12:06	19°♖49'25	25°20'14		4486 Sep 17 11:45	0°♗	
retrograde	4485 Nov 27 13:27	26°♖46'39		max. Earth dist.	4486 Sep 19 09:39	3°♗48'17	1.35670 AU
evening set	4485 Dec 03 09:34	24°♖20'46		evening rise	4486 Sep 23 12:00	11°♗40'38	
min. Earth dist.	4485 Dec 07 20:01	19°♖25'57	0.67288 AU		4486 Oct 03 23:21	0°♘	
inferior conj	4485 Dec 08 23:40	17°♖56'25	0°00'03	desc. node	4486 Oct 05 15:11	2°♘40'30	
minimum elong	4485 Dec 08 23:40	17°♖56'26	0°00'03		4486 Oct 25 15:00	0°♙	
transit middle	4485 Dec 08 23:40	17°♖56'26	0°00'03	evening max el	4486 Oct 29 00:44	3°♙31'26	26°24'01
transit begin	4485 Dec 08 20:53	18°♖05'29		retrograde	4486 Nov 10 20:19	10°♙43'44	
transit end	4485 Dec 09 02:28	17°♖47'24		evening set	4486 Nov 17 05:41	8°♙07'24	
asc. node	4485 Dec 08 23:37	17°♖56'37		min. Earth dist.	4486 Nov 21 09:17	3°♙47'52	0.66384 AU
morning rise	4485 Dec 14 14:04	12°♙00'04		inferior conj	4486 Nov 23 00:12	1°♙49'37	-0°58'25
direct	4485 Dec 18 00:23	10°♙52'15		minimum elong	4486 Nov 23 01:48	1°♙44'45	0°57'44
morning max el	4485 Dec 25 04:12	14°♙52'46	19°24'45		4486 Nov 24 13:00	30°♙♘	
	4486 Jan 05 17:10	0°♚		asc. node	4486 Nov 25 20:41	28°♘33'16	
greatest brilliancy	4486 Jan 07 09:34	2°♚30'27	-0.7m	morning rise	4486 Nov 28 22:31	26°♘03'06	
desc. node	4486 Jan 14 17:24	13°♚40'03		direct	4486 Dec 01 22:41	25°♘11'57	
morning set	4486 Jan 18 11:32	19°♚27'50		morning max el	4486 Dec 08 14:50	28°♘51'09	18°36'29
	4486 Jan 25 06:16	0°♛			4486 Dec 09 16:59	0°♜	
max. Earth dist.	4486 Jan 31 12:24	9°♛49'16	1.44676 AU	morning set	4486 Dec 29 06:47	28°♜56'07	
					4486 Dec 29 22:54	0°♞	
superior conj	4486 Feb 04 04:50	15°♛40'23	-1°53'52	desc. node	4487 Jan 01 14:25	4°♞11'27	

superior conj	4487 Jan 14 09:14	24°  18'07	-1°20'41	minimum elong	4487 Dec 24 11:09	2°  50'41	0°34'31
minimum elong	4487 Jan 14 00:10	23°  42'36	1°19'41	max. Earth dist.	4487 Dec 28 01:57	8°  33'45	1.45110 AU
max. Earth dist.	4487 Jan 14 06:16	24°  06'31	1.45264 AU	evening rise	4488 Jan 09 23:08	28°  38'04	
	4487 Jan 18 00:21	0° 			4488 Jan 10 20:20	0° 	
evening rise	4487 Jan 30 02:28	19°  07'11		greatest brilliancy	4488 Jan 23 06:37	19°  00'00	-0.7m
	4487 Feb 05 22:12	0° 			4488 Jan 31 01:15	0° 	
greatest brilliancy	4487 Feb 07 13:33	2°  35'56	-0.8m	evening max el	4488 Feb 04 04:38	4°  51'32	19°42'55
evening max el	4487 Feb 20 22:09	21°  19'48	18°54'07	asc. node	4488 Feb 08 17:01	8°  24'03	
asc. node	4487 Feb 21 19:59	22°  12'46		retrograde	4488 Feb 11 14:09	9°  08'19	
retrograde	4487 Feb 27 16:44	25°  07'45		evening set	4488 Feb 15 04:57	7°  51'44	
evening set	4487 Mar 02 23:54	24°  05'01		inferior conj	4488 Feb 20 15:28	1°  53'37	3°11'59
inferior conj	4487 Mar 08 14:39	18°  21'56	3°30'00	minimum elong	4488 Feb 20 13:24	2°  00'28	3°11'37
minimum elong	4487 Mar 08 13:28	18°  25'37	3°29'53	min. Earth dist.	4488 Feb 21 17:15	0°  28'13	0.66863 AU
min. Earth dist.	4487 Mar 10 07:12	16°  15'29	0.65669 AU		4488 Feb 22 01:52	30° 	
morning rise	4487 Mar 14 02:38	12°  08'45		morning rise	4488 Feb 25 21:38	25°  39'27	
direct	4487 Mar 20 15:35	9°  18'26		direct	4488 Mar 02 22:54	22°  57'27	
desc. node	4487 Mar 30 13:40	14°  05'17			4488 Mar 14 21:30	0° 	
morning max el	4487 Apr 02 17:02	17°  01'26	26°43'23	morning max el	4488 Mar 15 02:17	0°  12'03	25°30'13
	4487 Apr 13 12:22	0° 		desc. node	4488 Mar 16 10:42	1°  36'22	
	4487 May 02 16:14	0° 			4488 Apr 06 10:34	0° 	
morning set	4487 May 08 14:54	10°  54'20		morning set	4488 Apr 20 07:28	23°  09'23	
max. Earth dist.	4487 May 12 20:45	19°  10'29	1.34421 AU		4488 Apr 23 21:10	0° 	
				max. Earth dist.	4488 Apr 24 00:49	0°  17'15	1.36134 AU
superior conj	4487 May 17 06:19	28°  07'50	-0°36'02				
minimum elong	4487 May 17 08:14	28°  17'48	0°35'38	superior conj	4488 Apr 29 21:49	11°  42'45	-1°05'22
	4487 May 18 03:53	0° 		minimum elong	4488 Apr 30 01:21	12°  00'27	1°04'45
asc. node	4487 May 20 19:16	5°  32'13		asc. node	4488 May 06 16:18	25°  02'24	
evening rise	4487 May 24 18:43	13°  15'04		evening rise	4488 May 08 00:16	28°  10'08	
	4487 Jun 02 01:02	0° 			4488 May 08 21:59	0° 	
evening max el	4487 Jun 13 05:43	15°  33'15	21°09'50	evening max el	4488 May 25 14:20	26°  14'58	19°54'20
retrograde	4487 Jun 25 02:59	21°  23'45			4488 May 29 16:24	0° 	
desc. node	4487 Jun 26 12:54	21°  19'03		retrograde	4488 Jun 04 18:35	1°  45'59	
evening set	4487 Jun 27 09:12	21°  11'52		evening set	4488 Jun 06 17:05	1°  35'58	
inferior conj	4487 Jul 06 17:53	17°  13'50	-2°56'05		4488 Jun 11 09:07	30° 	
minimum elong	4487 Jul 06 10:06	17°  24'45	2°53'32	desc. node	4488 Jun 12 09:56	29°  12'08	
min. Earth dist.	4487 Jul 07 03:48	16°  25'53	0.54812 AU	inferior conj	4488 Jun 15 15:35	27°  13'50	-0°57'48
morning rise	4487 Jul 15 11:21	13°  16'18		minimum elong	4488 Jun 15 12:55	27°  13'50	0°56'48
direct	4487 Jul 18 23:50	12°  49'34		min. Earth dist.	4488 Jun 17 16:21	26°  21'01	0.55323 AU
morning max el	4487 Jul 31 17:52	18°  53'22	22°32'48	morning rise	4488 Jun 24 06:49	23°  11'15	
	4487 Aug 09 19:46	0° 		direct	4488 Jun 28 13:19	22°  13'17	
asc. node	4487 Aug 16 18:29	11°  09'07		morning max el	4488 Jul 12 08:33	29°  12'34	24°16'29
morning set	4487 Aug 22 19:36	23°  05'27			4488 Jul 13 00:55	0° 	
	4487 Aug 25 16:07	0° 			4488 Aug 01 23:57	0° 	
				asc. node	4488 Aug 02 15:31	1°  17'25	
superior conj	4487 Aug 29 22:17	9°  05'55	1°40'25	morning set	4488 Aug 06 07:19	8°  15'10	
minimum elong	4487 Aug 29 21:02	8°  59'15	1°40'21				
max. Earth dist.	4487 Sep 02 02:53	15°  47'56	1.34128 AU	superior conj	4488 Aug 13 06:24	23°  05'52	1°30'59
evening rise	4487 Sep 06 19:53	25°  17'23		minimum elong	4488 Aug 13 04:23	23°  05'51	1°30'45
	4487 Sep 09 06:37	0° 		max. Earth dist.	4488 Aug 15 04:45	28°  04'18	1.32995 AU
desc. node	4487 Sep 22 12:13	22°  04'24			4488 Aug 16 02:21	0° 	
	4487 Sep 27 10:10	0° 		evening rise	4488 Aug 20 14:43	9°  24'40	
evening max el	4487 Oct 11 13:29	17°  05'00	27°08'26		4488 Aug 31 15:31	0° 	
retrograde	4487 Oct 24 21:23	24°  22'23		desc. node	4488 Sep 08 09:14	12°  06'27	
evening set	4487 Oct 31 18:06	21°  41'38			4488 Sep 22 17:45	0° 	
min. Earth dist.	4487 Nov 04 15:22	17°  57'37	0.65136 AU	evening max el	4488 Sep 23 00:39	0°  16'30	27°26'44
inferior conj	4487 Nov 06 18:14	15°  35'31	-1°59'57	retrograde	4488 Oct 06 16:11	7°  33'10	
minimum elong	4487 Nov 06 21:38	15°  25'58	1°58'35	evening set	4488 Oct 13 19:53	4°  56'57	
asc. node	4487 Nov 12 17:42	10°  12'37		min. Earth dist.	4488 Oct 17 12:06	1°  45'52	0.63542 AU
morning rise	4487 Nov 13 02:12	10°  01'59			4488 Oct 19 06:17	30° 	
direct	4487 Nov 15 18:29	9°  23'39		inferior conj	4488 Oct 20 03:05	29°  07'08	-3°02'08
morning max el	4487 Nov 22 05:58	12°  51'21	18°04'53	minimum elong	4488 Oct 20 08:14	28°  05'41	3°00'21
	4487 Dec 04 07:38	0° 		morning rise	4488 Oct 26 22:00	23°  05'00	
morning set	4487 Dec 10 07:43	9°  53'54		direct	4488 Oct 29 08:51	23°  05'00	
desc. node	4487 Dec 19 11:28	24°  51'57		asc. node	4488 Oct 29 14:43	23°  05'12	
	4487 Dec 22 16:16	0° 		morning max el	4488 Nov 04 22:44	26°  05'57	17°50'40
					4488 Nov 07 18:17	0° 	
superior conj	4487 Dec 24 15:31	3°  08'02	-0°35'08	morning set	4488 Nov 21 10:45	22°  07'15	

	4488 Nov 26 00:21	0°♊		superior conj	4489 Nov 14 23:04	24°♎09'16	0°49'46
				minimum elong	4489 Nov 15 02:54	24°♎25'52	0°49'15
superior conj	4488 Dec 03 17:59	12°♊59'40	0°11'11		4489 Nov 18 09:07	0°♊	
minimum elong	4488 Dec 03 19:10	13°♊04'33	0°11'02	desc. node	4489 Nov 22 05:30	6°♊24'45	
behind sun begin	4488 Dec 03 12:04	12°♊35'20		max. Earth dist.	4489 Nov 22 09:29	6°♊41'06	1.42746 AU
behind sun end	4488 Dec 04 02:15	13°♊33'44		evening rise	4489 Nov 29 00:19	17°♊18'53	
desc. node	4488 Dec 05 08:30	15°♊37'32			4489 Dec 07 06:27	0°♊	
max. Earth dist.	4488 Dec 09 19:59	22°♊51'25	1.44233 AU		4489 Dec 29 04:57	0°♊	
	4488 Dec 14 08:21	0°♊		evening max el	4489 Dec 31 01:20	1°♊58'16	21°59'32
evening rise	4488 Dec 19 09:07	7°♊48'55		retrograde	4490 Jan 09 09:22	7°♊31'31	
	4489 Jan 03 03:45	0°♊		asc. node	4490 Jan 12 11:01	6°♊41'11	
evening max el	4489 Jan 17 05:43	18°♊24'18	20°45'55	evening set	4490 Jan 13 19:53	5°♊44'49	
retrograde	4489 Jan 25 12:22	23°♊17'33			4490 Jan 18 18:10	30°♊♊	
asc. node	4489 Jan 25 14:01	23°♊17'31		inferior conj	4490 Jan 19 04:10	29°♊25'20	2°06'38
evening set	4489 Jan 29 12:12	21°♊46'18		minimum elong	4490 Jan 19 01:50	29°♊33'26	2°05'52
inferior conj	4489 Feb 03 20:41	15°♊35'49	2°43'36	min. Earth dist.	4490 Jan 19 04:45	29°♊23'17	0.68007 AU
minimum elong	4489 Feb 03 18:15	15°♊44'12	2°42'58	morning rise	4490 Jan 24 07:37	23°♊14'07	
min. Earth dist.	4489 Feb 04 09:11	14°♊52'54	0.67632 AU	direct	4490 Jan 29 04:06	21°♊10'19	
morning rise	4489 Feb 09 00:07	9°♊22'21		morning max el	4490 Feb 07 21:13	26°♊54'34	22°34'58
direct	4489 Feb 14 11:20	6°♊57'09			4490 Feb 10 17:59	0°♊	
morning max el	4489 Feb 25 10:58	13°♊30'30	24°04'05	desc. node	4490 Feb 18 04:44	9°♊22'47	
desc. node	4489 Mar 03 07:43	20°♊08'02			4490 Mar 04 09:59	0°♊	
	4489 Mar 10 19:23	0°♊		morning set	4490 Mar 13 20:10	14°♊56'30	
	4489 Mar 30 07:16	0°♊		max. Earth dist.	4490 Mar 18 16:55	23°♊03'52	1.40379 AU
morning set	4489 Apr 02 03:14	4°♊49'21			4490 Mar 22 17:14	0°♊	
max. Earth dist.	4489 Apr 05 21:14	11°♊24'29	1.38188 AU				
				superior conj	4490 Mar 26 12:03	6°♊44'36	-1°54'54
superior conj	4489 Apr 13 01:12	24°♊38'47	-1°32'44	minimum elong	4490 Mar 26 16:34	7°♊05'02	1°54'34
minimum elong	4489 Apr 13 05:55	25°♊01'17	1°32'08	evening rise	4490 Apr 05 12:08	25°♊22'16	
	4489 Apr 15 19:56	0°♊			4490 Apr 07 23:08	0°♊	
evening rise	4489 Apr 21 23:09	12°♊02'56		asc. node	4490 Apr 10 10:21	4°♊33'35	
asc. node	4489 Apr 23 13:20	15°♊09'49		evening max el	4490 Apr 21 15:59	21°♊15'50	18°23'13
	4489 May 01 17:55	0°♊		retrograde	4490 Apr 29 01:02	24°♊55'25	
evening max el	4489 May 08 10:44	8°♊44'28	18°58'38	evening set	4490 May 01 09:33	24°♊34'04	
retrograde	4489 May 17 00:29	12°♊55'59		inferior conj	4490 May 08 17:43	19°♊58'59	2°14'52
evening set	4489 May 19 02:14	12°♊42'16		minimum elong	4490 May 08 21:19	19°♊51'34	2°13'52
inferior conj	4489 May 27 05:59	8°♊26'50	0°52'38	min. Earth dist.	4490 May 12 04:19	17°♊10'25	0.58657 AU
minimum elong	4489 May 27 08:00	8°♊23'16	0°51'55	morning rise	4490 May 16 06:02	14°♊27'20	
desc. node	4489 May 30 06:56	6°♊19'21		desc. node	4490 May 17 03:58	14°♊00'17	
min. Earth dist.	4489 May 30 08:03	6°♊17'28	0.56696 AU	direct	4490 May 22 08:45	12°♊48'32	
morning rise	4489 Jun 04 10:31	3°♊26'51		morning max el	4490 Jun 05 18:11	20°♊33'35	27°06'36
direct	4489 Jun 09 15:52	2°♊22'02			4490 Jun 13 21:23	0°♊	
morning max el	4489 Jun 23 23:08	9°♊45'44	25°52'54		4490 Jul 02 00:47	0°♊	
	4489 Jul 09 06:58	0°♊		morning set	4490 Jul 06 03:50	8°♊24'28	
asc. node	4489 Jul 20 12:34	21°♊03'47		asc. node	4490 Jul 07 09:37	11°♊01'53	
morning set	4489 Jul 21 18:37	23°♊41'28					
	4489 Jul 24 17:03	0°♊		superior conj	4490 Jul 13 05:08	23°♊42'35	0°57'36
				minimum elong	4490 Jul 13 02:59	23°♊30'46	0°57'12
superior conj	4489 Jul 28 17:19	8°♊48'20	1°16'29	max. Earth dist.	4490 Jul 13 00:09	23°♊15'09	1.31986 AU
minimum elong	4489 Jul 28 14:59	8°♊35'34	1°16'08		4490 Jul 16 01:37	0°♊	
max. Earth dist.	4489 Jul 29 12:57	10°♊36'16	1.32285 AU	evening rise	4490 Jul 20 01:07	8°♊35'34	
evening rise	4489 Aug 04 17:20	23°♊53'32			4490 Jul 31 03:07	0°♊	
	4489 Aug 07 17:17	0°♊		desc. node	4490 Aug 13 03:15	19°♊06'24	
	4489 Aug 25 09:58	0°♊		evening max el	4490 Aug 18 08:58	24°♊44'48	26°27'12
desc. node	4489 Aug 26 06:14	1°♊09'45			4490 Aug 25 09:26	0°♊	
evening max el	4489 Sep 05 07:54	12°♊53'00	27°13'37	retrograde	4490 Sep 01 08:03	1°♊54'19	
retrograde	4489 Sep 19 04:10	20°♊06'33		evening set	4490 Sep 07 23:54	0°♊03'56	
evening set	4489 Sep 26 07:23	17°♊46'50			4490 Sep 08 02:48	30°♊♊	
min. Earth dist.	4489 Sep 29 22:21	15°♊00'46	0.61653 AU	min. Earth dist.	4490 Sep 11 22:28	27°♊28'44	0.59592 AU
inferior conj	4489 Oct 02 23:44	12°♊16'53	-4°00'44	inferior conj	4490 Sep 15 04:43	24°♊56'07	-4°48'20
minimum elong	4489 Oct 03 05:49	12°♊03'13	3°59'04	minimum elong	4490 Sep 15 09:54	24°♊45'59	4°47'29
morning rise	4489 Oct 10 06:08	7°♊19'27		morning rise	4490 Sep 22 22:02	20°♊20'47	
direct	4489 Oct 12 14:20	6°♊56'19		direct	4490 Sep 25 06:53	20°♊00'47	
asc. node	4489 Oct 16 11:45	8°♊02'44		morning max el	4490 Oct 03 00:27	23°♊46'35	18°18'14
morning max el	4489 Oct 19 13:59	10°♊27'13	17°54'40	asc. node	4490 Oct 03 08:48	24°♊07'06	
	4489 Nov 01 11:41	0°♊			4490 Oct 08 01:44	0°♊	
morning set	4489 Nov 04 09:27	5°♊16'23		morning set	4490 Oct 18 22:10	19°♊05'29	

































































































































	4490 Oct 24 16:15	0°♍		superior conj	4491 Oct 11 04:12	19°♌43'23	1°34'51
				minimum elong	4491 Oct 11 06:42	19°♌55'20	1°34'41
superior conj	4490 Oct 28 04:17	6°♍29'01	1°17'36		4491 Oct 16 15:46	0°♍	
minimum elong	4490 Oct 28 08:06	6°♍46'27	1°17'10	max. Earth dist.	4491 Oct 17 22:58	2°♍21'17	1.38748 AU
max. Earth dist.	4490 Nov 04 17:51	19°♍51'41	1.40838 AU	evening rise	4491 Oct 21 18:45	9°♍05'53	
evening rise	4490 Nov 09 09:59	27°♍40'56		desc. node	4491 Oct 26 23:34	17°♍50'13	
desc. node	4490 Nov 09 02:32	27°♍10'23			4491 Nov 03 17:16	0°♌	
	4490 Nov 10 20:06	0°♌		evening max el	4491 Nov 26 05:57	29°♌17'06	24°37'49
	4490 Nov 30 21:45	0°♍			4491 Nov 26 23:39	0°♍	
evening max el	4490 Dec 13 16:49	15°♍35'56	23°18'54	retrograde	4491 Dec 07 18:07	5°♍59'37	
retrograde	4490 Dec 24 03:43	21°♍47'07		evening set	4491 Dec 13 06:24	3°♍41'43	
evening set	4490 Dec 29 02:29	19°♍44'37			4491 Dec 16 16:35	30°♌♌	
asc. node	4490 Dec 30 08:02	18°♍35'08		asc. node	4491 Dec 17 05:06	29°♌19'58	
min. Earth dist.	4491 Jan 03 01:34	13°♍55'59	0.68011 AU	min. Earth dist.	4491 Dec 17 21:14	28°♌27'03	0.67659 AU
inferior conj	4491 Jan 03 12:03	13°♍19'58	1°22'20	inferior conj	4491 Dec 18 18:33	27°♌16'10	0°31'43
minimum elong	4491 Jan 03 10:17	13°♍26'02	1°21'40	minimum elong	4491 Dec 18 17:47	27°♌18'43	0°31'24
morning rise	4491 Jan 08 18:00	7°♍12'51		morning rise	4491 Dec 24 05:15	21°♌15'17	
direct	4491 Jan 13 00:16	5°♍31'52		direct	4491 Dec 27 22:27	19°♌56'01	
morning max el	4491 Jan 21 12:44	10°♍28'11	21°11'32	morning max el	4492 Jan 04 11:59	24°♌13'14	19°59'35
desc. node	4491 Feb 05 01:46	29°♍08'57			4492 Jan 09 11:31	0°♍	
	4491 Feb 05 15:56	0°♌		desc. node	4492 Jan 22 22:48	19°♍17'16	
morning set	4491 Feb 21 08:53	23°♌45'15			4492 Jan 29 23:33	0°♌	
	4491 Feb 25 07:14	0°♌		morning set	4492 Jan 31 05:23	1°♌54'55	
max. Earth dist.	4491 Feb 28 18:48	5°♌38'47	1.42421 AU	max. Earth dist.	4492 Feb 11 04:48	19°♌07'17	1.44031 AU
superior conj	4491 Mar 08 01:29	17°♌49'55	-2°07'15	superior conj	4492 Feb 16 13:29	27°♌46'15	-2°04'18
minimum elong	4491 Mar 08 03:10	17°♌57'09	2°07'13	minimum elong	4492 Feb 16 09:27	27°♌29'45	2°04'08
	4491 Mar 15 00:29	0°♌			4492 Feb 17 22:11	0°♌	
evening rise	4491 Mar 19 11:25	8°♌00'11		evening rise	4492 Feb 29 16:32	19°♌47'41	
asc. node	4491 Mar 28 07:22	23°♌32'52			4492 Mar 06 15:32	0°♌	
	4491 Apr 01 13:08	0°♌		asc. node	4492 Mar 14 04:24	11°♌59'51	
evening max el	4491 Apr 05 02:39	4°♌13'35	18°07'35	evening max el	4492 Mar 18 15:26	17°♌28'49	18°11'13
retrograde	4491 Apr 11 18:47	7°♌37'35		retrograde	4492 Mar 25 01:31	20°♌52'22	
evening set	4491 Apr 14 09:57	7°♌06'04		evening set	4492 Mar 27 22:43	20°♌09'23	
inferior conj	4491 Apr 21 01:36	2°♌10'13	3°05'45	inferior conj	4492 Apr 03 01:51	14°♌53'40	3°30'18
minimum elong	4491 Apr 21 04:25	2°♌03'29	3°05'15	minimum elong	4492 Apr 03 03:01	14°♌50'31	3°30'12
	4491 Apr 23 08:05	30°♌♌		min. Earth dist.	4492 Apr 05 18:39	11°♌59'26	0.62964 AU
min. Earth dist.	4491 Apr 24 07:07	29°♌06'47	0.60854 AU	morning rise	4492 Apr 09 06:08	8°♌48'15	
morning rise	4491 Apr 27 20:47	26°♌17'11		direct	4492 Apr 16 03:10	6°♌10'46	
desc. node	4491 May 04 01:00	24°♌05'23		desc. node	4492 Apr 19 22:02	6°♌53'06	
direct	4491 May 04 13:22	24°♌04'37		morning max el	4492 Apr 30 02:23	14°♌09'42	27°48'45
	4491 May 16 16:17	0°♌			4492 May 12 21:20	0°♌	
morning max el	4491 May 18 19:33	2°♌00'29	27°46'30		4492 May 30 18:38	0°♌	
	4491 Jun 08 05:30	0°♌		morning set	4492 Jun 03 08:32	7°♌01'53	
morning set	4491 Jun 20 09:11	22°♌53'23		max. Earth dist.	4492 Jun 08 16:54	18°♌08'07	1.32645 AU
	4491 Jun 23 18:13	0°♌		asc. node	4492 Jun 10 03:43	21°♌14'42	
asc. node	4491 Jun 24 06:40	1°♌06'52					
max. Earth dist.	4491 Jun 26 10:46	5°♌49'47	1.32102 AU	superior conj	4492 Jun 11 00:33	23°♌07'12	0°09'05
				minimum elong	4492 Jun 11 00:07	23°♌04'51	0°08'59
superior conj	4491 Jun 27 16:08	8°♌30'41	0°34'55	behind sun begin	4492 Jun 10 19:45	22°♌41'14	
minimum elong	4491 Jun 27 14:38	8°♌22'26	0°34'36	behind sun end	4492 Jun 11 04:29	23°♌28'28	
evening rise	4491 Jul 04 11:54	23°♌23'40			4492 Jun 14 04:33	0°♌	
	4491 Jul 07 15:57	0°♌		evening rise	4492 Jun 17 23:47	8°♌11'40	
	4491 Jul 25 19:40	0°♌			4492 Jun 29 08:15	0°♌	
evening max el	4491 Jul 31 02:40	5°♌48'44	25°11'15	evening max el	4492 Jul 11 15:35	16°♌17'55	23°37'08
desc. node	4491 Jul 31 00:17	5°♌42'59		desc. node	4492 Jul 16 21:18	20°♌29'02	
retrograde	4491 Aug 14 01:28	12°♌52'29		retrograde	4492 Jul 25 06:37	23°♌08'10	
evening set	4491 Aug 19 16:51	11°♌39'33		evening set	4492 Jul 29 10:57	22°♌29'50	
min. Earth dist.	4491 Aug 24 14:21	8°♌57'15	0.57583 AU	min. Earth dist.	4492 Aug 05 01:29	19°♌23'39	0.55928 AU
inferior conj	4491 Aug 27 14:45	6°♌54'48	-5°13'01	inferior conj	4492 Aug 07 04:36	18°♌07'17	-4°58'57
minimum elong	4491 Aug 27 15:56	6°♌52'47	5°13'00	minimum elong	4492 Aug 06 23:34	18°♌14'50	4°58'21
morning rise	4491 Sep 04 17:20	2°♌42'02		morning rise	4492 Aug 15 14:40	14°♌12'33	
direct	4491 Sep 07 06:22	2°♌22'53		direct	4492 Aug 18 10:31	13°♌52'40	
morning max el	4491 Sep 16 02:43	6°♌33'42	19°02'50	morning max el	4492 Aug 28 18:02	18°♌40'05	20°09'19
asc. node	4491 Sep 20 05:52	11°♌18'53		asc. node	4492 Sep 06 02:57	29°♌23'34	
	4491 Oct 01 03:28	0°♌			4492 Sep 06 11:57	0°♌	
morning set	4491 Oct 02 20:35	3°♌21'59		morning set	4492 Sep 16 01:32	17°♌57'19	

	4492 Sep 21 22:40	0°♎				4493 Aug 30 02:52	0°♏	
				morning set		4493 Aug 31 10:33	2°♏43'43	
superior conj	4492 Sep 23 17:49	3°♎38'19	1°42'55					
minimum elong	4492 Sep 23 18:40	3°♎42'34	1°42'54	superior conj	4493 Sep 07 16:57	18°♏01'00	1°43'15	
max. Earth dist.	4492 Sep 29 04:59	14°♎21'21	1.36722 AU	minimum elong	4493 Sep 07 16:21	17°♏57'52	1°43'14	
evening rise	4492 Oct 03 01:05	21°♎30'15		max. Earth dist.	4493 Sep 11 16:52	26°♏13'11	1.34961 AU	
	4492 Oct 07 20:24	0°♎			4493 Sep 13 14:25	0°♎		
desc. node	4492 Oct 12 20:36	8°♎20'06		evening rise	4493 Sep 16 00:48	4°♎43'11		
	4492 Oct 27 14:39	0°♏		desc. node	4493 Sep 29 17:39	28°♎34'08		
evening max el	4492 Nov 07 18:24	13°♏00'00	25°49'08		4493 Sep 30 15:35	0°♎		
retrograde	4492 Nov 20 03:53	20°♏04'22		evening max el	4493 Oct 21 06:57	26°♎38'45	26°45'37	
evening set	4492 Nov 26 05:56	17°♏33'18			4493 Oct 25 03:41	0°♏		
min. Earth dist.	4492 Nov 30 13:23	12°♏53'39	0.66957 AU	retrograde	4493 Nov 03 08:27	3°♏54'48		
inferior conj	4492 Dec 01 21:48	11°♏11'19	-0°24'15	evening set	4493 Nov 09 23:06	1°♏15'19		
minimum elong	4492 Dec 01 22:27	11°♏09'19	0°23'58		4493 Nov 11 08:53	30°♎		
asc. node	4492 Dec 03 02:09	9°♏42'58		min. Earth dist.	4493 Nov 13 23:46	27°♎11'16	0.65896 AU	
morning rise	4492 Dec 07 15:22	5°♏19'03		inferior conj	4493 Nov 15 19:50	25°♎01'48	-1°24'16	
direct	4492 Dec 10 21:11	4°♏18'45		minimum elong	4493 Nov 15 22:11	24°♎54'53	1°23'17	
morning max el	4492 Dec 17 19:00	8°♏08'26	19°02'12	asc. node	4493 Nov 19 23:11	20°♎40'58		
	4493 Jan 02 14:03	0°♏		morning rise	4493 Nov 21 22:06	19°♎20'43		
desc. node	4493 Jan 08 19:49	9°♏41'39		direct	4493 Nov 24 18:33	18°♎35'38		
morning set	4493 Jan 09 10:24	10°♏38'27		morning max el	4493 Dec 01 07:58	22°♎08'51	18°20'59	
	4493 Jan 21 19:46	0°♏			4493 Dec 07 13:43	0°♏		
max. Earth dist.	4493 Jan 23 20:48	3°♏12'34	1.45019 AU	morning set	4493 Dec 20 18:11	20°♏45'03		
				desc. node	4493 Dec 26 16:52	0°♏17'32		
superior conj	4493 Jan 26 01:56	6°♏41'59	-1°41'55		4493 Dec 26 12:28	0°♏		
minimum elong	4493 Jan 25 16:57	6°♏06'32	1°41'08					
evening rise	4493 Feb 09 23:36	0°♏38'24		superior conj	4494 Jan 05 04:33	15°♏18'10	-1°02'12	
	4493 Feb 09 14:11	0°♏		minimum elong	4494 Jan 04 20:58	14°♏48'21	1°01'15	
asc. node	4493 Mar 01 01:27	29°♏44'12		max. Earth dist.	4494 Jan 06 15:38	17°♏35'50	1.45285 AU	
	4493 Mar 01 07:07	0°♏			4494 Jan 14 13:45	0°♏		
evening max el	4493 Mar 02 03:27	0°♏53'49	18°33'22	evening rise	4494 Jan 21 07:35	10°♏34'21		
retrograde	4493 Mar 08 16:44	4°♏29'57		greatest brilliancy	4494 Feb 01 01:16	27°♏21'28	-0.8m	
evening set	4493 Mar 11 20:01	3°♏34'40			4494 Feb 02 18:45	0°♏		
	4493 Mar 15 21:24	30°♏		evening max el	4494 Feb 13 12:26	14°♏24'11	19°12'58	
inferior conj	4493 Mar 17 14:21	28°♏00'52	3°34'39	asc. node	4494 Feb 15 22:29	16°♏33'50		
minimum elong	4493 Mar 17 13:54	28°♏02'11	3°34'38	retrograde	4494 Feb 20 12:45	18°♏23'44		
min. Earth dist.	4493 Mar 19 15:46	25°♏33'39	0.64786 AU	evening set	4494 Feb 23 22:54	17°♏15'22		
morning rise	4493 Mar 23 07:12	21°♏49'09		inferior conj	4494 Mar 01 11:32	11°♏25'33	3°23'45	
direct	4493 Mar 30 00:42	18°♏59'44		minimum elong	4494 Mar 01 09:55	11°♏30'45	3°23'34	
desc. node	4493 Apr 06 19:04	21°♏57'00		min. Earth dist.	4494 Mar 02 21:40	9°♏35'54	0.66223 AU	
morning max el	4493 Apr 12 12:10	26°♏52'39	27°15'45	morning rise	4494 Mar 06 20:37	5°♏11'24		
	4493 Apr 15 10:20	0°♏		direct	4494 Mar 13 04:55	2°♏23'14		
	4493 May 06 12:33	0°♏		desc. node	4494 Mar 24 16:04	8°♏43'05		
morning set	4493 May 17 22:59	20°♏40'42		morning max el	4494 Mar 25 22:07	9°♏56'53	26°14'29	
max. Earth dist.	4493 May 22 14:32	29°♏58'12	1.33638 AU		4494 Apr 10 18:18	0°♏		
	4493 May 22 14:53	0°♏			4494 Apr 29 01:20	0°♏		
superior conj	4493 May 26 04:20	7°♏25'03	-0°19'09	morning set	4494 May 01 00:55	3°♏39'25		
minimum elong	4493 May 26 05:20	7°♏30'18	0°18'57	max. Earth dist.	4494 May 05 00:44	11°♏16'28	1.35096 AU	
asc. node	4493 May 28 00:45	11°♏20'38						
evening rise	4493 Jun 02 10:47	22°♏52'20		superior conj	4494 May 10 01:08	21°♏18'00	-0°48'33	
	4493 Jun 05 21:53	0°♏		minimum elong	4494 May 10 03:46	21°♏31'26	0°48'03	
evening max el	4493 Jun 23 07:01	26°♏42'20	22°00'43		4494 May 14 06:13	0°♏		
	4493 Jun 27 06:03	0°♏		asc. node	4494 May 14 21:47	1°♏21'00		
desc. node	4493 Jul 03 18:21	2°♏48'59		evening rise	4494 May 17 18:57	7°♏19'49		
retrograde	4493 Jul 06 00:26	3°♏00'49			4494 May 30 04:38	0°♏		
evening set	4493 Jul 08 19:01	2°♏43'38		evening max el	4494 Jun 05 08:33	7°♏34'18	20°35'26	
	4493 Jul 15 16:02	30°♏		retrograde	4494 Jun 16 13:12	13°♏02'48		
min. Earth dist.	4493 Jul 17 11:44	28°♏59'48	0.54956 AU	evening set	4494 Jun 18 13:52	12°♏52'45		
inferior conj	4493 Jul 18 02:24	28°♏39'14	-3°54'13	desc. node	4494 Jun 20 15:20	12°♏23'16		
minimum elong	4493 Jul 17 17:45	28°♏51'22	3°51'56	inferior conj	4494 Jun 27 19:54	8°♏55'28	-2°07'00	
morning rise	4493 Jul 26 18:08	24°♏48'32		minimum elong	4494 Jun 27 13:58	9°♏03'59	2°04'54	
direct	4493 Jul 29 22:58	24°♏25'51		min. Earth dist.	4494 Jun 28 23:31	8°♏15'41	0.54911 AU	
	4493 Aug 10 21:08	0°♏		morning rise	4494 Jul 06 13:20	4°♏48'19		
morning max el	4493 Aug 10 21:27	0°♏00'44	21°36'05	direct	4494 Jul 10 08:29	4°♏17'12		
asc. node	4493 Aug 23 23:59	18°♏07'59		morning max el	4494 Jul 23 15:16	10°♏42'10	23°16'45	
					4494 Aug 06 21:11	0°♏		

asc. node	4494 Aug 10 21:01	7°Ω22'29		min. Earth dist.	4495 Jun 10 13:23	17°Π47'57	0.55818 AU
morning set	4494 Aug 15 21:45	17°Ω35'58		morning rise	4495 Jun 16 11:11	14°Π48'05	
	4494 Aug 21 16:24	0°Π		direct	4495 Jun 21 03:25	13°Π58'40	
				morning max el	4495 Jul 05 04:57	21°Π04'26	24°59'19
superior conj	4494 Aug 22 22:30	2°Π41'57	1°37'05		4495 Jul 12 22:29	0°Ω	
minimum elong	4494 Aug 22 20:52	2°Π33'09	1°36'57	asc. node	4495 Jul 28 18:04	26°Ω59'21	
max. Earth dist.	4494 Aug 25 13:32	8°Π17'20	1.33590 AU		4495 Jul 30 05:05	0°Ω	
evening rise	4494 Aug 30 13:45	18°Π33'46		morning set	4495 Jul 31 09:29	2°Ω29'16	
	4494 Sep 05 13:46	0°Ω					
desc. node	4494 Sep 16 14:40	18°Ω25'04		superior conj	4495 Aug 07 08:03	17°Ω33'41	1°25'24
	4494 Sep 24 20:51	0°Π		minimum elong	4495 Aug 07 05:51	17°Ω21'36	1°25'07
evening max el	4494 Oct 03 19:08	10°Π03'49	27°19'51	max. Earth dist.	4495 Aug 08 18:27	20°Ω41'15	1.32642 AU
retrograde	4494 Oct 17 07:10	17°Π22'19			4495 Aug 13 03:05	0°Π	
evening set	4494 Oct 24 07:23	14°Π42'13		evening rise	4495 Aug 14 12:16	2°Π51'51	
min. Earth dist.	4494 Oct 28 02:12	11°Π12'39	0.64488 AU		4495 Aug 29 09:04	0°Ω	
inferior conj	4494 Oct 30 10:17	8°Π42'11	-2°26'31	desc. node	4495 Sep 03 11:40	7°Ω43'26	
minimum elong	4494 Oct 30 14:28	8°Π30'56	2°24'55	evening max el	4495 Sep 16 05:13	23°Ω03'15	27°25'22
morning rise	4494 Nov 05 22:47	3°Π15'15			4495 Sep 27 08:43	0°Π	
asc. node	4494 Nov 06 20:13	2°Π55'52		retrograde	4495 Sep 29 23:12	0°Π18'25	
direct	4494 Nov 08 12:18	2°Π41'25			4495 Oct 02 11:58	30°RΩ	
morning max el	4494 Nov 15 00:09	6°Π07'20	17°56'40	evening set	4495 Oct 07 03:37	27°Ω48'03	
	4494 Nov 30 22:27	0°Ω		min. Earth dist.	4495 Oct 10 18:47	24°Ω48'35	0.62764 AU
morning set	4494 Dec 02 06:58	2°Ω17'11		inferior conj	4495 Oct 13 14:24	22°Ω06'14	-3°27'49
desc. node	4494 Dec 13 13:54	21°Ω00'32		minimum elong	4495 Oct 13 20:05	21°Ω52'32	3°26'00
				morning rise	4495 Oct 20 14:08	16°Ω56'46	
superior conj	4494 Dec 15 17:51	24°Ω30'23	-0°14'58	direct	4495 Oct 22 23:29	16°Ω30'32	
minimum elong	4494 Dec 15 16:04	24°Ω23'13	0°14'41	asc. node	4495 Oct 24 17:15	16°Ω44'50	
behind sun begin	4494 Dec 15 11:44	24°Ω05'44		morning max el	4495 Oct 29 16:37	19°Ω57'19	17°50'03
behind sun end	4494 Dec 15 20:24	24°Ω40'40			4495 Nov 06 03:14	0°Π	
	4494 Dec 19 04:21	0°Ω		morning set	4495 Nov 14 19:14	14°Π57'15	
max. Earth dist.	4494 Dec 20 10:26	1°Ω59'13	1.44815 AU		4495 Nov 23 09:56	0°Ω	
evening rise	4494 Dec 31 21:56	19°Ω52'05					
	4495 Jan 07 12:56	0°Ω		superior conj	4495 Nov 26 07:32	4°Ω55'03	0°28'47
greatest brilliancy	4495 Jan 15 13:14	12°Ω00'18	-0.6m	minimum elong	4495 Nov 26 10:15	5°Ω06'27	0°28'23
evening max el	4495 Jan 27 16:44	27°Ω56'39	20°08'12	desc. node	4495 Nov 30 10:57	11°Ω47'28	
	4495 Jan 29 21:56	0°Ω		max. Earth dist.	4495 Dec 03 02:57	16°Ω07'41	1.43669 AU
asc. node	4495 Feb 02 19:30	2°Ω13'54		evening rise	4495 Dec 11 08:16	29°Ω07'00	
retrograde	4495 Feb 04 10:42	2°Ω28'16			4495 Dec 11 21:58	0°Ω	
evening set	4495 Feb 08 05:05	1°Ω05'46			4496 Jan 01 06:59	0°Ω	
	4495 Feb 09 12:03	30°RΩ		evening max el	4496 Jan 10 15:36	11°Ω30'39	21°16'11
inferior conj	4495 Feb 13 14:31	25°Ω02'15	3°01'04	retrograde	4496 Jan 19 08:29	16°Ω40'09	
minimum elong	4495 Feb 13 12:14	25°Ω09'57	3°00'35	asc. node	4496 Jan 20 16:30	16°Ω30'31	
min. Earth dist.	4495 Feb 14 10:34	23°Ω54'37	0.67243 AU	evening set	4496 Jan 23 12:43	15°Ω02'26	
morning rise	4495 Feb 18 19:09	18°Ω48'05		inferior conj	4496 Jan 28 20:57	8°Ω47'57	2°28'52
direct	4495 Feb 24 14:43	16°Ω12'05		minimum elong	4496 Jan 28 18:30	8°Ω56'25	2°28'10
morning max el	4495 Mar 08 06:48	23°Ω10'49	24°54'25	min. Earth dist.	4496 Jan 29 04:16	8°Ω22'37	0.67848 AU
desc. node	4495 Mar 11 13:05	26°Ω42'18		morning rise	4496 Feb 03 00:06	2°Ω35'24	
	4495 Mar 14 07:39	0°Ω		direct	4496 Feb 08 05:10	0°Ω18'47	
	4495 Apr 04 02:56	0°Ω		morning max el	4496 Feb 18 15:35	6°Ω30'57	23°25'54
morning set	4495 Apr 13 09:21	15°Ω43'28		desc. node	4496 Feb 26 10:08	15°Ω34'05	
max. Earth dist.	4495 Apr 17 00:15	22°Ω16'57	1.36976 AU		4496 Mar 07 20:29	0°Ω	
	4495 Apr 21 02:41	0°Ω		morning set	4496 Mar 24 18:18	26°Ω37'08	
					4496 Mar 26 17:58	0°Ω	
superior conj	4495 Apr 23 11:56	4°Ω37'31	-1°17'23	max. Earth dist.	4496 Mar 28 19:33	3°Ω34'46	1.39129 AU
minimum elong	4495 Apr 23 16:04	4°Ω57'48	1°16'45				
evening rise	4495 May 01 21:58	21°Ω27'02		superior conj	4496 Apr 05 08:55	17°Ω14'00	-1°43'02
asc. node	4495 May 01 18:48	21°Ω11'11		minimum elong	4496 Apr 05 13:47	17°Ω36'43	1°42'30
	4495 May 06 06:23	0°Π			4496 Apr 12 01:44	0°Ω	
evening max el	4495 May 18 22:31	19°Π07'28	19°28'11	evening rise	4496 Apr 14 17:04	5°Ω06'45	
retrograde	4495 May 28 09:19	23°Π43'42		asc. node	4496 Apr 17 15:50	10°Ω46'25	
evening set	4495 May 30 08:28	23°Π32'38			4496 Apr 29 16:33	0°Π	
inferior conj	4495 Jun 07 23:33	19°Π27'00	-0°08'19	evening max el	4496 Apr 30 23:08	1°Π20'00	18°41'03
minimum elong	4495 Jun 07 23:12	19°Π27'36	0°08'11	retrograde	4496 May 08 22:59	5°Π15'43	
transit middle	4495 Jun 07 23:12	19°Π27'36	0°08'11	evening set	4496 May 11 03:41	4°Π59'00	
transit begin	4495 Jun 07 19:51	19°Π32'58		inferior conj	4496 May 18 22:51	0°Π35'17	1°31'29
transit end	4495 Jun 08 02:32	19°Π22'13		minimum elong	4496 May 19 01:56	0°Π29'29	1°30'30
desc. node	4495 Jun 07 12:18	19°Π45'04			4496 May 19 17:32	30°RΩ	

min. Earth dist.	4496 May 22 06:27	28°♄06'53	0.57483 AU	inferior conj	4497 Apr 30 19:39	12°♄25'57	2°40'04
desc. node	4496 May 24 09:20	26°♄41'40		minimum elong	4497 Apr 30 23:07	12°♄18'19	2°39'14
morning rise	4496 May 26 20:56	25°♄21'07		min. Earth dist.	4497 May 04 05:13	9°♄28'07	0.59579 AU
direct	4496 Jun 01 12:07	24°♄02'38		morning rise	4497 May 08 00:33	6°♄43'46	
	4496 Jun 14 03:22	0°♄		desc. node	4497 May 11 06:22	5°♄17'57	
morning max el	4496 Jun 15 20:52	1°♄35'57	26°27'56	direct	4497 May 14 10:02	4°♄50'22	
	4496 Jul 06 01:01	0°♄		morning max el	4497 May 28 18:52	12°♄40'54	27°28'12
morning set	4496 Jul 14 20:06	17°♄17'54			4497 Jun 11 11:15	0°♄	
asc. node	4496 Jul 14 15:06	16°♄51'28			4497 Jun 28 05:30	0°♄	
	4496 Jul 20 16:35	0°♄		morning set	4497 Jun 29 03:58	1°♄56'27	
				asc. node	4497 Jul 01 12:09	6°♄53'34	
superior conj	4496 Jul 21 19:33	2°♄28'46	1°08'58	max. Earth dist.	4497 Jul 05 16:13	15°♄58'38	1.31987 AU
minimum elong	4496 Jul 21 17:15	2°♄16'04	1°08'35				
max. Earth dist.	4496 Jul 22 04:36	3°♄18'45	1.32110 AU	superior conj	4497 Jul 06 07:16	17°♄21'32	0°48'24
evening rise	4496 Jul 28 17:23	17°♄27'32		minimum elong	4497 Jul 06 05:20	17°♄10'55	0°48'02
	4496 Aug 03 23:44	0°♄			4497 Jul 12 01:47	0°♄	
desc. node	4496 Aug 20 08:40	26°♄15'07		evening rise	4497 Jul 13 02:44	2°♄13'22	
	4496 Aug 23 09:13	0°♄			4497 Jul 28 00:58	0°♄	
evening max el	4496 Aug 28 10:16	5°♄22'23	26°57'56	desc. node	4497 Aug 07 05:40	13°♄41'05	
retrograde	4496 Sep 11 07:33	12°♄33'20		evening max el	4497 Aug 10 07:59	16°♄52'44	25°57'52
evening set	4496 Sep 18 07:37	10°♄24'46		retrograde	4497 Aug 24 07:11	24°♄00'28	
min. Earth dist.	4496 Sep 22 00:29	7°♄45'27	0.60791 AU	evening set	4497 Aug 30 14:32	22°♄25'07	
inferior conj	4496 Sep 25 04:50	5°♄04'25	-4°22'50	min. Earth dist.	4497 Sep 03 20:26	19°♄49'28	0.58720 AU
minimum elong	4496 Sep 25 10:51	4°♄51'40	4°21'28	inferior conj	4497 Sep 07 02:03	17°♄27'11	-5°02'28
morning rise	4496 Oct 02 15:59	0°♄15'59		minimum elong	4497 Sep 07 05:57	17°♄20'01	5°02'02
	4496 Oct 03 19:41	30°♄		morning rise	4497 Sep 14 23:37	13°♄01'59	
direct	4496 Oct 05 00:12	29°♄54'21		direct	4497 Sep 17 09:55	12°♄42'34	
	4496 Oct 06 04:25	0°♄		morning max el	4497 Sep 25 13:37	16°♄37'11	18°34'36
asc. node	4496 Oct 10 14:18	2°♄03'19		asc. node	4497 Sep 27 11:22	18°♄38'16	
morning max el	4496 Oct 12 06:12	3°♄30'10	18°02'14		4497 Oct 05 02:04	0°♄	
morning set	4496 Oct 28 00:31	28°♄25'19		morning set	4497 Oct 11 17:45	12°♄27'02	
	4496 Oct 28 20:55	0°♄					
superior conj	4496 Nov 06 23:28	16°♄36'06	1°02'55	superior conj	4497 Oct 20 13:19	29°♄21'07	1°26'08
minimum elong	4496 Nov 07 03:33	16°♄54'07	1°02'24	minimum elong	4497 Oct 20 16:39	29°♄36'43	1°25'49
max. Earth dist.	4496 Nov 14 14:48	29°♄43'54	1.41977 AU		4497 Oct 20 21:39	0°♄	
	4496 Nov 14 18:40	0°♄		max. Earth dist.	4497 Oct 27 21:18	12°♄36'07	1.39954 AU
desc. node	4496 Nov 16 07:59	2°♄34'24		evening rise	4497 Nov 01 01:27	19°♄44'07	
evening rise	4496 Nov 20 06:10	8°♄56'15		desc. node	4497 Nov 03 05:00	23°♄17'57	
	4496 Dec 04 01:22	0°♄			4497 Nov 07 08:49	0°♄	
evening max el	4496 Dec 23 09:18	25°♄06'11	22°32'54		4497 Nov 28 07:34	0°♄	
	4496 Dec 29 15:11	0°♄		evening max el	4497 Dec 05 23:20	8°♄44'27	23°52'55
retrograde	4497 Jan 02 04:31	0°♄55'43		retrograde	4497 Dec 16 21:25	15°♄10'36	
	4497 Jan 05 11:15	30°♄		evening set	4497 Dec 22 01:52	13°♄01'09	
evening set	4497 Jan 06 20:11	29°♄02'03		asc. node	4497 Dec 24 10:36	10°♄35'44	
asc. node	4497 Jan 06 13:32	29°♄15'25		min. Earth dist.	4497 Dec 26 21:10	7°♄26'56	0.67899 AU
inferior conj	4497 Jan 12 04:50	22°♄39'56	1°48'42	inferior conj	4497 Dec 27 12:21	6°♄35'21	1°01'36
minimum elong	4497 Jan 12 02:42	22°♄47'22	1°47'56	minimum elong	4497 Dec 27 10:57	6°♄40'05	1°01'02
min. Earth dist.	4497 Jan 12 00:35	22°♄54'42	0.68056 AU	morning rise	4498 Jan 01 20:04	0°♄30'43	
morning rise	4497 Jan 17 09:05	16°♄30'31			4498 Jan 02 13:47	30°♄	
direct	4497 Jan 21 23:25	14°♄36'33		direct	4498 Jan 05 20:28	28°♄59'29	
morning max el	4497 Jan 31 03:48	19°♄59'19	21°58'28		4498 Jan 09 08:47	0°♄	
	4497 Feb 08 13:47	0°♄		morning max el	4498 Jan 13 22:34	3°♄38'08	20°39'20
desc. node	4497 Feb 12 07:12	5°♄03'40		desc. node	4498 Jan 30 04:14	25°♄00'03	
	4497 Mar 01 01:45	0°♄			4498 Feb 02 13:04	0°♄	
morning set	4497 Mar 04 23:00	6°♄10'09		morning set	4498 Feb 12 02:21	14°♄34'53	
max. Earth dist.	4497 Mar 10 18:03	15°♄39'53	1.41284 AU	max. Earth dist.	4498 Feb 20 23:16	28°♄38'17	1.43163 AU
					4498 Feb 21 19:26	0°♄	
superior conj	4497 Mar 18 11:21	28°♄56'13	-2°01'39	superior conj	4498 Feb 27 14:13	9°♄32'13	-2°08'11
minimum elong	4497 Mar 18 15:04	29°♄12'36	2°01'27	minimum elong	4498 Feb 27 13:44	9°♄30'13	2°08'11
	4497 Mar 19 01:46	0°♄			4498 Mar 11 10:31	0°♄	
evening rise	4497 Mar 29 00:50	18°♄10'46		evening rise	4498 Mar 11 16:58	0°♄28'32	
asc. node	4497 Apr 04 12:51	0°♄01'19		asc. node	4498 Mar 22 09:54	18°♄48'15	
	4497 Apr 04 12:33	0°♄		evening max el	4498 Mar 28 19:02	27°♄10'23	18°06'48
evening max el	4497 Apr 14 07:07	14°♄04'17	18°14'07		4498 Apr 01 17:38	0°♄	
retrograde	4497 Apr 21 07:41	17°♄35'38		retrograde	4498 Apr 04 07:33	0°♄32'49	
evening set	4497 Apr 23 19:01	17°♄10'14			4498 Apr 06 22:05	30°♄	

evening set	4498 Apr 07 01:12	29° Υ 56'43			4499 Mar 04 11:44	0° Υ	
inferior conj	4498 Apr 13 11:03	24° Υ 52'23	3°18'58	asc. node	4499 Mar 09 06:56	6° Υ 58'49	
minimum elong	4498 Apr 13 13:12	24° Υ 46'57	3°18'40	evening max el	4499 Mar 12 07:51	10° Υ 30'56	18°18'28
min. Earth dist.	4498 Apr 16 11:49	21° Υ 49'55	0.61770 AU	retrograde	4499 Mar 18 18:16	13° Υ 58'13	
morning rise	4498 Apr 19 23:29	18° Υ 52'48		evening set	4499 Mar 21 17:59	13° Υ 10'11	
direct	4498 Apr 26 18:56	16° Υ 28'05		inferior conj	4499 Mar 27 16:59	7° Υ 46'52	3°34'13
desc. node	4498 Apr 28 03:24	16° Υ 33'27		minimum elong	4499 Mar 27 17:25	7° Υ 45'37	3°34'12
morning max el	4498 May 10 23:00	24° Υ 27'11	27°52'00	min. Earth dist.	4499 Mar 30 03:29	5° Υ 02'06	0.63785 AU
	4498 May 15 23:43	0° ♄		morning rise	4499 Apr 02 15:57	1° Υ 38'14	
	4498 Jun 04 19:44	0° ♂			4499 Apr 05 03:23	30° ♄	
morning set	4498 Jun 13 07:05	16° ♂ 17'54		direct	4499 Apr 09 12:31	28° ♄ 53'37	
asc. node	4498 Jun 18 09:12	27° ♂ 00'24			4499 Apr 14 05:16	0° Υ	
max. Earth dist.	4498 Jun 19 01:19	28° ♂ 27'29	1.32278 AU	desc. node	4499 Apr 15 00:27	0° Υ 23'07	
	4498 Jun 19 18:22	0° ♄		morning max el	4499 Apr 23 07:16	6° Υ 51'43	27°38'33
					4499 May 11 00:16	0° ♄	
superior conj	4498 Jun 20 17:24	2° ♄ 05'34	0°24'18		4499 May 27 23:59	0° ♂	
minimum elong	4498 Jun 20 16:18	1° ♄ 59'33	0°24'04	morning set	4499 May 28 03:01	0° ♂ 15'01	
evening rise	4498 Jun 27 14:12	17° ♄ 02'01		max. Earth dist.	4499 Jun 02 04:00	10° ♂ 33'37	1.33010 AU
	4498 Jul 03 23:27	0° ♂					
evening max el	4498 Jul 22 22:50	27° ♂ 38'40	24°32'28	superior conj	4499 Jun 05 00:07	16° ♂ 35'14	-0°02'41
desc. node	4498 Jul 25 02:41	29° ♂ 34'56		minimum elong	4499 Jun 05 00:15	16° ♂ 35'57	0°02'39
	4498 Jul 25 14:59	0° ♄		behind sun begin	4499 Jun 04 18:58	16° ♂ 07'36	
retrograde	4498 Aug 05 20:03	4° ♄ 39'07		behind sun end	4499 Jun 05 05:33	17° ♂ 04'20	
evening set	4498 Aug 10 21:09	3° ♄ 42'01		asc. node	4499 Jun 05 06:16	17° ♂ 08'12	
min. Earth dist.	4498 Aug 16 09:57	0° ♄ 51'08	0.56812 AU		4499 Jun 11 05:39	0° ♄	
	4498 Aug 17 18:11	30° ♄		evening rise	4499 Jun 12 01:55	1° ♄ 47'40	
inferior conj	4498 Aug 19 03:24	29° ♂ 06'26	-5°12'47		4499 Jun 27 17:16	0° ♂	
minimum elong	4498 Aug 19 02:01	29° ♂ 08'39	5°12'44	evening max el	4499 Jul 04 11:56	8° ♂ 02'23	22°55'31
morning rise	4498 Aug 27 09:24	25° ♂ 02'32		desc. node	4499 Jul 11 23:42	13° ♂ 23'12	
direct	4498 Aug 30 00:50	24° ♂ 43'25		retrograde	4499 Jul 17 20:00	14° ♂ 41'17	
morning max el	4498 Sep 08 11:36	29° ♂ 08'36	19°28'30	evening set	4499 Jul 21 08:32	14° ♂ 14'10	
	4498 Sep 09 08:34	0° ♄		min. Earth dist.	4499 Jul 28 20:39	10° ♂ 53'33	0.55412 AU
asc. node	4498 Sep 14 08:26	6° ♄ 14'27		inferior conj	4499 Jul 30 09:30	10° ♂ 00'25	-4°37'52
morning set	4498 Sep 25 19:16	26° ♄ 52'31		minimum elong	4499 Jul 30 02:15	10° ♂ 10'54	4°36'31
	4498 Sep 27 08:35	0° ♄		morning rise	4499 Aug 07 22:09	6° ♂ 09'12	
				direct	4499 Aug 10 21:27	5° ♂ 48'27	
superior conj	4498 Oct 03 19:38	12° ♄ 54'46	1°39'18	morning max el	4499 Aug 21 21:45	10° ♂ 55'40	20°43'56
minimum elong	4498 Oct 03 21:26	13° ♄ 03'33	1°39'13	asc. node	4499 Sep 01 05:29	24° ♂ 37'40	
max. Earth dist.	4498 Oct 10 01:41	24° ♄ 49'11	1.37859 AU		4499 Sep 04 05:51	0° ♄	
	4498 Oct 12 22:14	0° ♄		morning set	4499 Sep 10 02:12	11° ♄ 33'26	
evening rise	4498 Oct 13 19:50	1° ♄ 35'51					
desc. node	4498 Oct 21 02:01	13° ♄ 54'22		superior conj	4499 Sep 17 13:43	27° ♄ 02'50	1°43'55
	4498 Oct 31 13:28	0° ♄		minimum elong	4499 Sep 17 13:54	27° ♄ 03'49	1°43'55
evening max el	4498 Nov 18 11:56	22° ♄ 26'57	25°09'35		4499 Sep 19 00:33	0° ♄	
retrograde	4498 Nov 30 10:07	29° ♄ 20'49		max. Earth dist.	4499 Sep 22 09:37	6° ♄ 42'56	1.35932 AU
evening set	4498 Dec 06 04:08	26° ♄ 56'59		evening rise	4499 Sep 26 10:07	14° ♄ 22'50	
min. Earth dist.	4498 Dec 10 15:44	21° ♄ 56'53	0.67394 AU		4499 Oct 05 07:32	0° ♄	
asc. node	4498 Dec 11 07:39	21° ♄ 05'01		desc. node	4499 Oct 07 23:02	4° ♄ 18'25	
inferior conj	4498 Dec 11 17:42	20° ♄ 32'07	0°08'35		4499 Oct 26 07:19	0° ♄	
minimum elong	4498 Dec 11 17:29	20° ♄ 32'49	0°08'29	evening max el	4499 Nov 01 00:34	6° ♄ 09'51	26°15'31
transit middle	4498 Dec 11 17:29	20° ♄ 32'49	0°08'29	retrograde	4499 Nov 13 17:39	13° ♄ 20'09	
transit begin	4498 Dec 11 15:07	20° ♄ 40'33		evening set	4499 Nov 20 01:11	10° ♄ 45'08	
transit end	4498 Dec 11 19:51	20° ♄ 25'06		min. Earth dist.	4499 Nov 24 05:48	6° ♄ 20'20	0.66547 AU
morning rise	4498 Dec 17 07:04	14° ♄ 34'24		inferior conj	4499 Nov 25 18:59	4° ♄ 26'09	-0°49'18
direct	4498 Dec 20 19:07	13° ♄ 23'41		minimum elong	4499 Nov 25 20:19	4° ♄ 22'03	0°48'43
morning max el	4498 Dec 28 01:13	17° ♄ 28'16	19°33'15	asc. node	4499 Nov 28 04:41	1° ♄ 36'25	
	4499 Jan 06 20:48	0° ♄			4499 Nov 29 19:30	30° ♄	
greatest brilliancy	4499 Jan 10 03:34	4° ♄ 09'07	-0.7m	morning rise	4499 Dec 01 16:01	28° ♄ 37'59	
desc. node	4499 Jan 17 01:17	15° ♄ 16'12		direct	4499 Dec 04 17:37	27° ♄ 44'31	
morning set	4499 Jan 21 23:15	22° ♄ 49'56			4499 Dec 09 21:15	0° ♄	
	4499 Jan 26 14:12	0° ♄		morning max el	4499 Dec 11 10:56	1° ♄ 25'59	18°42'36
max. Earth dist.	4499 Feb 03 11:34	12° ♄ 22'48	1.44531 AU		4499 Dec 31 06:32	0° ♄	
				morning set	4500 Jan 01 14:24	2° ♄ 05'45	
superior conj	4499 Feb 07 15:26	19° ♄ 00'41	-1°57'15	desc. node	4500 Jan 03 22:17	5° ♄ 46'02	
minimum elong	4499 Feb 07 08:48	18° ♄ 34'08	1°56'52	max. Earth dist.	4500 Jan 17 05:05	26° ♄ 37'48	1.45228 AU
	4499 Feb 14 09:51	0° ♄					
evening rise	4499 Feb 21 13:05	11° ♄ 52'18		superior conj	4500 Jan 17 21:18	27° ♄ 41'24	-1°26'46

minimum elong	4500 Jan 17 12:01	27°  04'58	1°25'46		4501 Jan 12 03:45	0° 	
	4500 Jan 19 08:35	0° 		evening rise	4501 Jan 13 09:21	1°  54'51	
evening rise	4500 Feb 02 10:02	22°  18'15		greatest brilliancy	4501 Jan 26 01:48	21°  25'14	-0.7m
	4500 Feb 07 05:05	0° 			4501 Jan 31 23:36	0° 	
greatest brilliancy	4500 Feb 09 21:44	4°  18'46	-0.9m	evening max el	4501 Feb 07 01:58	7°  30'12	19°34'42
evening max el	4500 Feb 23 18:52	23°  59'00	18°48'14	asc. node	4501 Feb 11 00:58	10°  43'27	
asc. node	4500 Feb 24 03:58	24°  21'40		retrograde	4501 Feb 14 08:54	11°  42'19	
retrograde	4500 Mar 02 11:46	27°  43'27		evening set	4501 Feb 17 22:28	10°  42'50	
evening set	4500 Mar 05 17:57	26°  42'35		inferior conj	4501 Feb 23 09:27	4°  31'41	3°15'25
inferior conj	4500 Mar 11 09:31	21°  01'50	3°31'37	minimum elong	4501 Feb 23 07:29	4°  38'08	3°15'06
minimum elong	4500 Mar 11 08:31	21°  04'55	3°31'33	min. Earth dist.	4501 Feb 24 13:19	3°  00'00	0.66707 AU
min. Earth dist.	4500 Mar 13 04:20	18°  49'50	0.65452 AU		4501 Feb 26 23:54	30° 	
morning rise	4500 Mar 16 22:40	14°  49'02		morning rise	4501 Feb 28 16:16	28°  17'26	
direct	4500 Mar 23 12:57	11°  58'38		direct	4501 Mar 06 19:24	25°  33'40	
desc. node	4500 Apr 01 21:29	16°  14'21			4501 Mar 16 00:17	0° 	
morning max el	4500 Apr 05 17:09	19°  44'23	26°52'39	morning max el	4501 Mar 19 02:39	2°  53'44	25°42'14
	4500 Apr 14 11:29	0° 		desc. node	4501 Mar 19 18:30	3°  34'25	
	4500 May 04 01:34	0° 			4501 Apr 08 16:38	0° 	
morning set	4500 May 11 12:40	13°  38'29		morning set	4501 Apr 24 07:47	26°  15'27	
max. Earth dist.	4500 May 15 20:59	22°  10'12	1.34202 AU		4501 Apr 26 08:20	0° 	
	4500 May 19 16:49	0° 		max. Earth dist.	4501 Apr 28 02:37	3°  19'31	1.35849 AU
superior conj	4500 May 20 01:17	0°  44'05	-0°31'32	superior conj	4501 May 03 18:12	14°  23'38	-1°00'58
minimum elong	4500 May 20 02:58	0°  52'49	0°31'12	minimum elong	4501 May 03 21:31	14°  40'18	1°00'24
asc. node	4500 May 23 03:15	7°  12'35		asc. node	4501 May 10 00:16	27°  09'11	
evening rise	4500 May 27 12:00	16°  24'13			4501 May 11 09:37	0° 	
	4500 Jun 03 08:20	0° 		evening rise	4501 May 11 18:16	0°  44'07	
evening max el	4500 Jun 16 07:10	18°  36'40	21°22'35	evening max el	4501 May 29 13:52	29°  45'00	20°04'26
retrograde	4500 Jun 28 09:57	24°  34'50			4501 May 29 20:05	0° 	
desc. node	4500 Jun 28 20:43	24°  34'22		retrograde	4501 Jun 09 00:33	4°  51'06	
evening set	4500 Jun 30 18:54	24°  32'55		evening set	4501 Jun 10 23:09	4°  41'17	
inferior conj	4500 Jul 10 03:46	20°  32'41	-3°12'30	desc. node	4501 Jun 15 17:44	3°  50'14	
minimum elong	4500 Jul 09 19:33	20°  34'11	3°09'57	inferior conj	4501 Jun 19 23:56	0°  41'41	-1°16'01
min. Earth dist.	4500 Jul 10 07:13	20°  37'52	0.54821 AU	minimum elong	4501 Jun 19 20:23	0°  47'00	1°14'42
morning rise	4500 Jul 18 20:58	16°  32'43			4501 Jun 21 03:43	30°  00'00	
direct	4500 Jul 22 07:21	16°  32'14		min. Earth dist.	4501 Jun 21 19:29	29°  43'32	0.55184 AU
morning max el	4500 Aug 03 20:28	21°  38'18	22°17'42	morning rise	4501 Jun 28 16:00	26°  42'36	
	4500 Aug 10 18:29	0° 		direct	4501 Jul 02 19:15	25°  45'23	
asc. node	4500 Aug 19 02:31	13°  36'37			4501 Jul 13 14:12	0° 	
morning set	4500 Aug 25 12:25	26°  23'50		morning max el	4501 Jul 16 11:49	2°  58'40	24°01'04
	4500 Aug 27 05:24	0° 			4501 Aug 04 10:22	0° 	
				asc. node	4501 Aug 05 23:32	3°  01'35	
superior conj	4500 Sep 01 15:56	11°  34'50	1°41'22	morning set	4501 Aug 10 00:03	11°  01'29	
minimum elong	4500 Sep 01 14:50	11°  29'03	1°41'18				
max. Earth dist.	4500 Sep 05 01:31	18°  40'39	1.34335 AU	superior conj	4501 Aug 16 23:28	26°  02'21	1°32'45
evening rise	4500 Sep 09 16:00	27°  53'48		minimum elong	4501 Aug 16 21:31	26°  01'51	1°32'34
	4500 Sep 10 18:09	0° 			4501 Aug 18 16:01	0° 	
desc. node	4500 Sep 24 20:03	24°  24'04		max. Earth dist.	4501 Aug 19 02:04	0°  53'51	1.33138 AU
	4500 Sep 28 13:09	0° 		evening rise	4501 Aug 24 09:25	11°  57'05	
evening max el	4500 Oct 14 13:17	19°  45'02	27°03'13		4501 Sep 02 23:52	0° 	
retrograde	4500 Oct 27 19:33	27°  02'04		desc. node	4501 Sep 11 17:04	14°  02'43	
evening set	4500 Nov 03 14:51	24°  21'21			4501 Sep 24 01:37	0° 	
min. Earth dist.	4500 Nov 07 12:59	20°  32'16	0.65349 AU	evening max el	4501 Sep 27 00:42	3°  00'16	27°25'51
inferior conj	4500 Nov 09 14:05	18°  13'15	-1°50'32	retrograde	4501 Oct 10 15:25	10°  17'45	
minimum elong	4500 Nov 09 17:14	18°  04'21	1°49'15	evening set	4501 Oct 17 18:28	7°  40'03	
asc. node	4500 Nov 15 01:43	13°  03'36		min. Earth dist.	4501 Oct 21 11:14	4°  12'26	0.63798 AU
morning rise	4500 Nov 15 20:33	12°  37'43		inferior conj	4501 Oct 24 00:30	1°  47'26	-2°52'51
direct	4500 Nov 18 13:52	11°  57'44		minimum elong	4501 Oct 24 05:24	1°  34'50	2°51'06
morning max el	4500 Nov 25 01:34	15°  26'24	18°08'30		4501 Oct 25 19:27	30°  00'00	
	4500 Dec 05 14:06	0° 		morning rise	4501 Oct 30 17:44	26°  02'48	
morning set	4500 Dec 13 10:55	12°  50'29		asc. node	4501 Nov 01 22:44	25°  05'59	
desc. node	4500 Dec 21 19:18	26°  52'25		direct	4501 Nov 02 05:10	25°  05'37	
	4500 Dec 24 00:51	0° 		morning max el	4501 Nov 08 18:19	29°  22'37	17°51'40
					4501 Nov 09 08:51	0° 	
superior conj	4500 Dec 28 01:54	6°  25'42	-0°42'20	morning set	4501 Nov 25 10:30	24°  15'07	
minimum elong	4500 Dec 27 20:37	6°  04'47	0°41'36		4501 Nov 28 09:45	0° 	
max. Earth dist.	4500 Dec 31 00:49	11°  05'15	1.45181 AU				

superior conj	4501 Dec 08 00:45	16° ♄ 07'03	0°04'33	minimum elong	4502 Nov 19 05:33	27° ♄ 20'54	0°44'05
minimum elong	4501 Dec 08 01:14	16° ♄ 09'05	0°04'28		4502 Nov 20 18:50	0° ♄	
behind sun begin	4501 Dec 07 15:45	15° ♄ 30'14		desc. node	4502 Nov 25 13:23	7° ♄ 58'07	
behind sun end	4501 Dec 08 10:44	16° ♄ 47'50		max. Earth dist.	4502 Nov 26 09:15	9° ♄ 19'29	1.42999 AU
desc. node	4501 Dec 08 16:21	17° ♄ 10'46		evening rise	4502 Dec 03 09:30	20° ♄ 31'49	
max. Earth dist.	4501 Dec 13 19:06	25° ♄ 25'07	1.44403 AU		4502 Dec 09 13:05	0° ♄	
	4501 Dec 16 16:33	0° ♄			4502 Dec 30 21:28	0° ♄	
evening rise	4501 Dec 23 20:03	11° ♄ 06'48		evening max el	4503 Jan 04 00:23	4° ♄ 37'26	21°48'04
	4502 Jan 05 08:15	0° ♄		retrograde	4503 Jan 13 04:28	10° ♄ 04'33	
evening max el	4502 Jan 21 03:53	21° ♄ 03'08	20°35'43	asc. node	4503 Jan 15 19:03	9° ♄ 28'04	
asc. node	4502 Jan 28 21:59	25° ♄ 50'02		evening set	4503 Jan 17 13:16	8° ♄ 20'19	
retrograde	4502 Jan 29 07:10	25° ♄ 50'50		inferior conj	4503 Jan 22 21:29	2° ♄ 02'03	2°12'45
evening set	4502 Feb 02 05:30	24° ♄ 21'54		minimum elong	4503 Jan 22 19:06	2° ♄ 10'18	2°11'59
inferior conj	4502 Feb 07 14:10	18° ♄ 13'05	2°48'30	min. Earth dist.	4503 Jan 22 23:49	1° ♄ 53'56	0.67980 AU
minimum elong	4502 Feb 07 11:45	18° ♄ 21'20	2°47'54		4503 Jan 24 09:01	30° ♄	
min. Earth dist.	4502 Feb 08 04:35	17° ♄ 23'44	0.67544 AU	morning rise	4503 Jan 28 00:46	25° ♄ 50'22	
morning rise	4502 Feb 12 17:49	11° ♄ 59'15		direct	4503 Feb 01 23:30	23° ♄ 43'05	
direct	4502 Feb 18 07:12	9° ♄ 31'04		morning max el	4503 Feb 11 21:03	29° ♄ 34'40	22°47'59
morning max el	4502 Mar 01 11:19	16° ♄ 11'34	24°17'16		4503 Feb 12 07:00	0° ♄	
desc. node	4502 Mar 06 15:33	21° ♄ 58'30		desc. node	4503 Feb 21 12:36	11° ♄ 07'56	
	4502 Mar 12 21:06	0° ♄			4503 Mar 06 16:24	0° ♄	
	4502 Apr 01 16:04	0° ♄		morning set	4503 Mar 18 04:16	18° ♄ 11'33	
morning set	4502 Apr 06 07:01	7° ♄ 51'49		max. Earth dist.	4503 Mar 22 18:43	25° ♄ 55'55	1.40061 AU
max. Earth dist.	4502 Apr 09 23:28	14° ♄ 23'15	1.37868 AU		4503 Mar 25 03:11	0° ♄	
superior conj	4502 Apr 16 23:37	27° ♄ 25'51	-1°28'52	superior conj	4503 Mar 30 13:17	9° ♄ 40'17	-1°52'05
minimum elong	4502 Apr 17 04:13	27° ♄ 47'56	1°28'14	minimum elong	4503 Mar 30 17:58	10° ♄ 01'38	1°51'40
	4502 Apr 18 07:35	0° ♄		evening rise	4503 Apr 09 09:01	28° ♄ 05'39	
evening rise	4502 Apr 25 18:19	14° ♄ 40'40			4503 Apr 10 09:06	0° ♄	
asc. node	4502 Apr 26 21:18	16° ♄ 53'41		asc. node	4503 Apr 13 18:21	6° ♄ 20'46	
	4502 May 03 22:02	0° ♄		evening max el	4503 Apr 25 12:50	24° ♄ 02'12	18°27'12
evening max el	4502 May 12 08:38	11° ♄ 35'13	19°05'40	retrograde	4503 May 03 01:17	27° ♄ 45'16	
retrograde	4502 May 21 03:39	15° ♄ 52'44		evening set	4503 May 05 08:50	27° ♄ 25'11	
evening set	4502 May 23 04:30	15° ♄ 39'53		inferior conj	4503 May 12 19:46	22° ♄ 53'11	2°04'30
inferior conj	4502 May 31 11:16	11° ♄ 27'18	0°37'27	minimum elong	4503 May 12 23:19	22° ♄ 46'02	2°03'28
minimum elong	4502 May 31 12:46	11° ♄ 24'43	0°36'55	min. Earth dist.	4503 May 16 06:09	20° ♄ 09'02	0.58342 AU
desc. node	4502 Jun 02 14:44	9° ♄ 58'48		morning rise	4503 May 20 10:40	17° ♄ 25'49	
min. Earth dist.	4502 Jun 03 10:46	9° ♄ 25'15	0.56444 AU	desc. node	4503 May 20 11:46	17° ♄ 24'26	
morning rise	4502 Jun 08 17:49	6° ♄ 32'36		direct	4503 May 26 10:43	15° ♄ 52'16	
direct	4502 Jun 13 19:46	5° ♄ 32'03		morning max el	4503 Jun 09 20:04	23° ♄ 34'39	26°57'42
morning max el	4502 Jun 28 01:58	12° ♄ 51'51	25°39'40		4503 Jun 15 14:49	0° ♄	
	4502 Jul 11 11:00	0° ♄			4503 Jul 04 11:40	0° ♄	
asc. node	4502 Jul 23 20:35	22° ♄ 45'29		morning set	4503 Jul 09 21:11	10° ♄ 54'12	
morning set	4502 Jul 25 11:31	26° ♄ 09'20		asc. node	4503 Jul 10 17:39	12° ♄ 42'21	
	4502 Jul 27 06:39	0° ♄					
superior conj	4502 Aug 01 10:05	11° ♄ 15'20	1°18'59	superior conj	4503 Jul 16 21:55	26° ♄ 10'19	1°00'44
minimum elong	4502 Aug 01 07:47	11° ♄ 02'39	1°18'39	minimum elong	4503 Jul 16 19:43	25° ♄ 58'10	1°00'21
max. Earth dist.	4502 Aug 02 09:25	13° ♄ 23'23	1.32361 AU	max. Earth dist.	4503 Jul 16 20:29	26° ♄ 02'29	1.31999 AU
evening rise	4502 Aug 08 11:03	26° ♄ 23'19		evening rise	4503 Jul 23 18:14	11° ♄ 04'21	
	4502 Aug 10 05:20	0° ♄			4503 Aug 02 10:41	0° ♄	
	4502 Aug 27 10:25	0° ♄		desc. node	4503 Aug 16 11:04	21° ♄ 10'05	
desc. node	4502 Aug 29 14:04	3° ♄ 03'11		evening max el	4503 Aug 22 11:04	27° ♄ 43'15	26°36'18
evening max el	4502 Sep 09 08:45	15° ♄ 43'12	27°17'45		4503 Aug 25 01:24	0° ♄	
retrograde	4502 Sep 23 04:40	22° ♄ 57'27		retrograde	4503 Sep 05 09:48	4° ♄ 53'00	
evening set	4502 Sep 30 08:25	20° ♄ 34'35		evening set	4503 Sep 12 04:09	2° ♄ 57'40	
min. Earth dist.	4502 Oct 03 23:12	17° ♄ 45'23	0.61946 AU	min. Earth dist.	4503 Sep 16 00:51	0° ♄ 21'55	0.59903 AU
inferior conj	4502 Oct 06 23:12	15° ♄ 01'21	-3°52'22		4503 Sep 16 12:12	30° ♄	
minimum elong	4502 Oct 07 05:15	14° ♄ 47'32	3°50'40	inferior conj	4503 Sep 19 06:51	27° ♄ 46'35	-4°42'17
morning rise	4502 Oct 14 03:54	10° ♄ 00'43		minimum elong	4503 Sep 19 12:20	27° ♄ 35'36	4°41'17
direct	4502 Oct 16 12:14	9° ♄ 36'55		morning rise	4503 Sep 26 22:36	23° ♄ 07'40	
asc. node	4502 Oct 19 19:48	10° ♄ 26'05		direct	4503 Sep 29 07:09	22° ♄ 47'19	
morning max el	4502 Oct 23 10:02	13° ♄ 06'38	17°52'51	asc. node	4503 Oct 06 16:53	26° ♄ 19'23	
	4502 Nov 03 20:31	0° ♄		morning max el	4503 Oct 06 21:27	26° ♄ 30'18	18°13'22
morning set	4502 Nov 08 06:43	7° ♄ 56'24			4503 Oct 09 23:12	0° ♄	
				morning set	4503 Oct 22 17:42	21° ♄ 41'02	
superior conj	4502 Nov 19 01:54	27° ♄ 05'17	0°44'34		4503 Oct 27 03:26	0° ♄	






























































































































superior conj	4503 Nov 01 03:52	9°♍15'50	1°14'03	minimum elong	4504 Oct 14 04:05	22°♊36'13	1°32'38
minimum elong	4503 Nov 01 07:48	9°♍33'39	1°13'36		4504 Oct 18 02:51	0°♍	
max. Earth dist.	4503 Nov 08 18:38	22°♍37'44	1.41147 AU	max. Earth dist.	4504 Oct 21 00:10	5°♍13'50	1.39064 AU
desc. node	4503 Nov 12 10:25	28°♍44'26		evening rise	4504 Oct 24 21:17	12°♍00'55	
	4503 Nov 13 04:51	0°♊		desc. node	4504 Oct 29 07:25	19°♍25'27	
evening rise	4503 Nov 13 15:58	0°♊45'24			4504 Nov 04 23:38	0°♊	
	4503 Dec 03 00:19	0°♊			4504 Nov 27 08:57	0°♊	
evening max el	4503 Dec 17 16:27	18°♊14'47	23°06'55	evening max el	4504 Nov 29 05:46	1°♊55'30	24°26'18
retrograde	4503 Dec 27 23:15	24°♊20'16		retrograde	4504 Dec 10 14:18	8°♊33'52	
evening set	4504 Jan 01 20:09	22°♊20'05		evening set	4504 Dec 16 00:35	6°♊18'02	
asc. node	4504 Jan 02 16:06	21°♊34'53		asc. node	4504 Dec 19 13:09	2°♊27'58	
inferior conj	4504 Jan 07 05:27	15°♊56'03	1°29'31	min. Earth dist.	4504 Dec 20 16:31	0°♊58'22	0.67738 AU
minimum elong	4504 Jan 07 03:34	16°♊02'32	1°28'48		4504 Dec 21 09:58	30°♊	
min. Earth dist.	4504 Jan 06 20:35	16°♊26'37	0.68040 AU	inferior conj	4504 Dec 21 12:16	29°♊52'19	0°39'47
morning rise	4504 Jan 12 10:53	9°♊48'19		minimum elong	4504 Dec 21 11:19	29°♊55'28	0°39'23
direct	4504 Jan 16 19:15	8°♊03'55		morning rise	4504 Dec 26 22:08	23°♊50'30	
morning max el	4504 Jan 25 11:35	13°♊06'38	21°23'17	direct	4504 Dec 30 17:10	22°♊28'14	
	4504 Feb 07 19:36	0°♊		morning max el	4505 Jan 07 09:41	26°♊50'26	20°09'24
desc. node	4504 Feb 08 09:39	0°♊50'03			4505 Jan 10 06:41	0°♊	
morning set	4504 Feb 25 20:51	27°♊10'45		desc. node	4505 Jan 25 06:42	20°♊55'40	
	4504 Feb 27 15:28	0°♊			4505 Jan 31 06:27	0°♊	
max. Earth dist.	4504 Mar 03 19:43	8°♊23'22	1.42142 AU	morning set	4505 Feb 03 18:23	5°♊22'27	
				max. Earth dist.	4505 Feb 14 04:42	21°♊45'32	1.43826 AU
					4505 Feb 19 06:54	0°♊	
superior conj	4504 Mar 11 06:15	20°♊55'36	-2°06'15				
minimum elong	4504 Mar 11 08:34	21°♊05'40	2°06'11				
	4504 Mar 16 10:22	0°♊		superior conj	4505 Feb 19 22:08	1°♊02'25	-2°05'56
evening rise	4504 Mar 22 10:37	10°♊50'41		minimum elong	4505 Feb 19 19:03	0°♊49'46	2°05'51
asc. node	4504 Mar 30 15:23	25°♊24'31		evening rise	4505 Mar 04 18:46	22°♊46'45	
	4504 Apr 02 12:08	0°♊			4505 Mar 08 23:00	0°♊	
evening max el	4504 Apr 07 22:56	6°♊56'58	18°08'39	asc. node	4505 Mar 17 12:25	13°♊57'22	
retrograde	4504 Apr 14 16:50	10°♊22'17		evening max el	4505 Mar 22 11:35	20°♊10'18	18°09'27
evening set	4504 Apr 17 07:04	9°♊52'22		retrograde	4505 Mar 28 22:01	23°♊33'16	
inferior conj	4504 Apr 24 00:54	4°♊59'24	2°59'52	evening set	4505 Mar 31 18:17	22°♊52'05	
minimum elong	4504 Apr 24 03:55	4°♊52'19	2°59'17	inferior conj	4505 Apr 06 23:01	17°♊39'10	3°27'56
min. Earth dist.	4504 Apr 27 07:44	1°♊56'43	0.60525 AU	minimum elong	4505 Apr 07 00:27	17°♊35'22	3°27'49
	4504 Apr 29 16:52	30°♊		min. Earth dist.	4505 Apr 09 17:57	14°♊42'13	0.62662 AU
morning rise	4504 Apr 30 22:34	29°♊08'56		morning rise	4505 Apr 13 05:18	11°♊34'58	
desc. node	4504 May 06 08:49	27°♊05'18		direct	4505 Apr 20 02:07	9°♊00'30	
direct	4504 May 07 13:38	27°♊01'11		desc. node	4505 Apr 23 05:51	9°♊29'54	
	4504 May 15 23:07	0°♊		morning max el	4505 May 04 02:49	16°♊59'44	27°50'46
morning max el	4504 May 21 20:31	4°♊55'38	27°43'03		4505 May 14 21:29	0°♊	
	4504 Jun 09 11:49	0°♊			4505 Jun 02 05:18	0°♊	
morning set	4504 Jun 23 03:14	25°♊25'42		morning set	4505 Jun 07 03:36	9°♊37'52	
	4504 Jun 25 07:31	0°♊		max. Earth dist.	4505 Jun 12 14:35	21°♊00'52	1.32538 AU
asc. node	4504 Jun 26 14:41	2°♊46'36		asc. node	4505 Jun 13 11:42	22°♊54'18	
max. Earth dist.	4504 Jun 29 07:30	8°♊39'00	1.32057 AU				
				superior conj	4505 Jun 14 18:01	25°♊38'14	0°13'11
superior conj	4504 Jun 30 09:08	10°♊59'44	0°38'35	minimum elong	4505 Jun 14 17:24	25°♊34'51	0°13'02
minimum elong	4504 Jun 30 07:30	10°♊50'46	0°38'15	behind sun begin	4505 Jun 14 14:23	25°♊18'30	
evening rise	4504 Jul 07 04:42	25°♊52'06		behind sun end	4505 Jun 14 20:25	25°♊51'13	
	4504 Jul 09 03:52	0°♊			4505 Jun 16 18:07	0°♊	
	4504 Jul 26 12:57	0°♊		evening rise	4505 Jun 21 16:31	10°♊40'24	
desc. node	4504 Aug 02 08:06	8°♊00'38			4505 Jul 01 13:38	0°♊	
evening max el	4504 Aug 03 05:47	8°♊53'47	25°24'07	evening max el	4505 Jul 15 18:50	19°♊25'37	23°51'36
retrograde	4504 Aug 17 04:43	15°♊58'32		desc. node	4505 Jul 20 05:05	23°♊05'15	
evening set	4504 Aug 23 00:46	14°♊39'45		retrograde	4505 Jul 29 11:51	26°♊19'12	
min. Earth dist.	4504 Aug 27 17:36	11°♊59'51	0.57868 AU	evening set	4505 Aug 02 21:43	25°♊36'18	
inferior conj	4504 Aug 30 19:50	9°♊51'46	-5°11'27	min. Earth dist.	4505 Aug 09 05:02	22°♊34'31	0.56137 AU
minimum elong	4504 Aug 30 21:50	9°♊48'17	5°11'21	inferior conj	4505 Aug 11 12:27	21°♊10'22	-5°04'14
morning rise	4504 Sep 07 21:11	5°♊35'52		minimum elong	4505 Aug 11 08:21	21°♊16'38	5°03'50
direct	4504 Sep 10 09:29	5°♊16'39		morning rise	4505 Aug 19 21:32	17°♊13'46	
morning max el	4504 Sep 19 01:07	9°♊22'48	18°54'49	direct	4505 Aug 22 16:12	16°♊54'09	
asc. node	4504 Sep 22 13:56	13°♊21'55		morning max el	4505 Sep 01 18:09	21°♊35'19	19°58'08
	4504 Oct 02 14:00	0°♊			4505 Sep 08 14:26	0°♊	
morning set	4504 Oct 05 14:53	5°♊54'15		asc. node	4505 Sep 09 10:58	1°♊19'01	
				morning set	4505 Sep 19 18:58	20°♊26'45	
superior conj	4504 Oct 14 01:21	22°♊23'13	1°32'51		4505 Sep 24 11:21	0°♊	






















































































































































































































superior conj	4505 Sep 27 13:10	6°♄12'41	1°42'14	direct	4506 Aug 03 06:15	27°♄35'02	
minimum elong	4505 Sep 27 14:15	6°♄18'08	1°42'11		4506 Aug 11 01:03	0°♄	
max. Earth dist.	4505 Oct 03 05:27	17°♄15'50	1.37006 AU	morning max el	4506 Aug 14 23:16	3°♄02'47	21°22'07
evening rise	4505 Oct 07 00:32	24°♄16'34		asc. node	4506 Aug 27 07:59	19°♄58'06	
	4505 Oct 10 06:04	0°♄			4506 Sep 01 14:32	0°♄	
desc. node	4505 Oct 16 04:26	9°♄56'57		morning set	4506 Sep 04 03:29	5°♄11'50	
	4505 Oct 29 15:23	0°♄					
evening max el	4505 Nov 11 18:07	15°♄38'05	25°39'18	superior conj	4506 Sep 11 11:04	20°♄31'56	1°43'38
retrograde	4505 Nov 24 00:51	22°♄40'18		minimum elong	4506 Sep 11 10:40	20°♄29'51	1°43'38
evening set	4505 Nov 30 00:52	20°♄10'53		max. Earth dist.	4506 Sep 15 16:02	29°♄06'53	1.35196 AU
min. Earth dist.	4505 Dec 04 09:19	15°♄25'59	0.67081 AU		4506 Sep 16 02:42	0°♄	
inferior conj	4505 Dec 05 16:06	13°♄47'56	-0°15'28	evening rise	4506 Sep 19 21:57	7°♄23'14	
minimum elong	4505 Dec 05 16:30	13°♄46'39	0°15'17		4506 Oct 02 21:57	0°♄	
transit middle	4505 Dec 05 16:30	13°♄46'39	0°15'17	desc. node	4506 Oct 03 01:25	0°♄13'46	
transit begin	4505 Dec 05 15:35	13°♄49'34		evening max el	4506 Oct 25 06:39	29°♄18'16	26°38'31
transit end	4505 Dec 05 17:25	13°♄43'45			4506 Oct 26 00:17	0°♄	
asc. node	4505 Dec 06 10:11	12°♄50'38		retrograde	4506 Nov 07 06:18	6°♄33'28	
morning rise	4505 Dec 11 08:31	7°♄54'15		evening set	4506 Nov 13 19:06	3°♄54'56	
direct	4505 Dec 14 15:51	6°♄51'26			4506 Nov 17 15:47	30°♄	
morning max el	4505 Dec 21 15:38	10°♄44'40	19°09'45	min. Earth dist.	4506 Nov 17 20:46	29°♄45'28	0.66071 AU
greatest brilliancy	4506 Jan 04 15:25	29°♄43'13	-0.8m	inferior conj	4506 Nov 19 15:02	27°♄39'44	-1°14'59
	4506 Jan 04 19:49	0°♄		minimum elong	4506 Nov 19 17:07	27°♄33'33	1°14'05
desc. node	4506 Jan 12 03:42	11°♄18'03		asc. node	4506 Nov 23 07:13	23°♄40'15	
morning set	4506 Jan 13 20:34	13°♄56'42		morning rise	4506 Nov 25 15:53	21°♄56'41	
	4506 Jan 24 03:41	0°♄		direct	4506 Nov 28 13:34	21°♄09'35	
max. Earth dist.	4506 Jan 27 19:48	5°♄45'59	1.44915 AU	morning max el	4506 Dec 05 03:50	24°♄44'48	18°26'05
					4506 Dec 09 13:28	0°♄	
superior conj	4506 Jan 30 13:33	10°♄05'37	-1°46'35	morning set	4506 Dec 24 23:55	23°♄50'06	
minimum elong	4506 Jan 30 04:59	9°♄31'44	1°45'53		4506 Dec 28 20:28	0°♄	
	4506 Feb 11 22:11	0°♄		desc. node	4506 Dec 30 00:44	1°♄52'34	
evening rise	4506 Feb 14 05:16	3°♄46'05					
	4506 Mar 02 22:14	0°♄		superior conj	4507 Jan 09 16:25	18°♄41'41	-1°09'00
asc. node	4506 Mar 04 09:27	1°♄49'00		minimum elong	4507 Jan 09 08:11	18°♄09'23	1°08'01
evening max el	4506 Mar 05 23:51	3°♄34'09	18°28'55	max. Earth dist.	4507 Jan 10 14:13	20°♄07'10	1.45295 AU
retrograde	4506 Mar 12 12:10	7°♄07'44			4507 Jan 16 21:32	0°♄	
evening set	4506 Mar 15 14:28	6°♄14'25		evening rise	4507 Jan 25 16:33	13°♄49'37	
inferior conj	4506 Mar 21 09:55	0°♄43'19	3°35'00	greatest brilliancy	4507 Feb 04 16:12	29°♄32'14	-0.8m
minimum elong	4506 Mar 21 09:42	0°♄43'57	3°35'00		4507 Feb 04 23:22	0°♄	
	4506 Mar 22 00:33	30°♄		evening max el	4507 Feb 17 09:25	17°♄04'08	19°06'00
min. Earth dist.	4506 Mar 23 13:43	28°♄11'03	0.64539 AU	asc. node	4507 Feb 19 06:28	18°♄47'53	
morning rise	4506 Mar 27 04:14	24°♄32'08		retrograde	4507 Feb 24 07:36	20°♄59'25	
direct	4506 Apr 02 22:41	21°♄43'30		evening set	4507 Feb 27 16:40	19°♄53'04	
desc. node	4506 Apr 10 02:54	24°♄15'19		inferior conj	4507 Mar 05 06:00	14°♄05'37	3°26'12
morning max el	4506 Apr 16 12:21	29°♄38'31	27°22'35	minimum elong	4507 Mar 05 04:32	14°♄10'18	3°26'02
	4506 Apr 16 20:49	0°♄		min. Earth dist.	4507 Mar 06 18:24	12°♄09'53	0.66042 AU
	4506 May 08 19:44	0°♄		morning rise	4507 Mar 10 16:02	7°♄51'44	
morning set	4506 May 21 19:34	23°♄21'44		direct	4507 Mar 17 02:03	5°♄02'29	
	4506 May 25 03:24	0°♄		desc. node	4507 Mar 27 23:56	10°♄47'55	
max. Earth dist.	4506 May 26 13:35	2°♄55'03	1.33461 AU	morning max el	4507 Mar 29 22:16	12°♄39'48	26°24'57
					4507 Apr 12 21:05	0°♄	
superior conj	4506 May 29 22:36	9°♄59'17	-0°14'46		4507 May 01 11:30	0°♄	
minimum elong	4506 May 29 23:22	10°♄03'18	0°14'37	morning set	4507 May 04 23:37	6°♄27'03	
behind sun begin	4506 May 29 21:08	9°♄51'26		max. Earth dist.	4507 May 09 01:22	14°♄16'48	1.34850 AU
behind sun end	4506 May 30 01:36	10°♄15'11					
asc. node	4506 May 31 08:43	13°♄00'48		superior conj	4507 May 13 20:37	23°♄56'25	-0°44'05
evening rise	4506 Jun 06 03:44	25°♄22'22		minimum elong	4507 May 13 23:00	24°♄08'38	0°43'38
	4506 Jun 08 09:06	0°♄			4507 May 16 18:50	0°♄	
evening max el	4506 Jun 27 09:20	29°♄48'34	22°14'36	asc. node	4507 May 18 05:45	3°♄02'12	
	4506 Jun 27 14:04	0°♄		evening rise	4507 May 21 12:27	9°♄52'08	
desc. node	4506 Jul 07 02:06	5°♄49'13			4507 Jun 01 05:19	0°♄	
retrograde	4506 Jul 10 07:13	6°♄13'09		evening max el	4507 Jun 09 09:10	10°♄35'28	20°47'07
evening set	4506 Jul 13 05:54	5°♄53'55		retrograde	4507 Jun 20 19:47	16°♄11'42	
min. Earth dist.	4506 Jul 21 15:24	2°♄16'28	0.55044 AU	evening set	4507 Jun 22 22:00	16°♄01'12	
inferior conj	4506 Jul 22 12:04	1°♄47'21	-4°07'15	desc. node	4507 Jun 23 23:08	15°♄48'27	
minimum elong	4506 Jul 22 03:34	1°♄59'20	4°05'11	inferior conj	4507 Jul 02 05:18	12°♄04'06	-2°24'53
	4506 Jul 25 18:57	30°♄		minimum elong	4507 Jul 01 22:38	12°♄13'36	2°22'34
morning rise	4506 Jul 31 03:03	27°♄57'03		min. Earth dist.	4507 Jul 03 02:55	11°♄33'18	0.54855 AU

morning rise	4507 Jul 10 22:51	8°♄00'39		morning rise	4508 Jun 19 19:47	17°♄58'32	
direct	4507 Jul 14 15:35	7°♄31'13		direct	4508 Jun 24 08:37	17°♄12'40	
morning max el	4507 Jul 27 18:10	13°♄49'03	23°01'18	morning max el	4508 Jul 08 08:06	24°♄12'45	24°44'31
	4507 Aug 09 02:51	0°♄			4508 Jul 13 15:08	0°♄	
asc. node	4507 Aug 14 05:01	9°♄08'47		asc. node	4508 Jul 31 02:03	28°♄42'51	
morning set	4507 Aug 19 14:28	20°♄03'35			4508 Jul 31 17:12	0°♄	
	4507 Aug 24 05:59	0°♄		morning set	4508 Aug 03 02:16	4°♄57'22	
superior conj	4507 Aug 26 15:50	5°♄10'40	1°38'23	superior conj	4508 Aug 10 00:57	20°♄01'21	1°27'29
minimum elong	4507 Aug 26 14:19	5°♄02'35	1°38'17	minimum elong	4508 Aug 09 22:48	19°♄49'36	1°27'15
max. Earth dist.	4507 Aug 29 11:28	11°♄08'57	1.33768 AU	max. Earth dist.	4508 Aug 11 15:29	23°♄30'53	1.32760 AU
evening rise	4507 Sep 03 09:10	21°♄09'03			4508 Aug 14 16:13	0°♄	
	4507 Sep 08 00:04	0°♄		evening rise	4508 Aug 17 06:31	5°♄23'44	
desc. node	4507 Sep 19 22:26	20°♄08'42			4508 Aug 30 14:54	0°♄	
	4507 Sep 26 19:06	0°♄		desc. node	4508 Sep 05 19:27	9°♄32'42	
evening max el	4507 Oct 07 19:06	12°♄46'31	27°16'30	evening max el	4508 Sep 19 05:41	25°♄50'23	27°26'30
retrograde	4507 Oct 21 05:52	20°♄04'44			4508 Sep 24 08:12	0°♄	
evening set	4507 Oct 28 04:53	17°♄24'19		retrograde	4508 Oct 02 22:47	3°♄05'51	
min. Earth dist.	4507 Nov 01 00:33	13°♄49'41	0.64718 AU	evening set	4508 Oct 10 03:08	0°♄33'15	
inferior conj	4507 Nov 03 06:47	11°♄22'01	-2°17'03		4508 Oct 10 21:14	30°♄	
minimum elong	4507 Nov 03 10:42	11°♄11'20	2°15'31	min. Earth dist.	4508 Oct 13 18:37	27°♄29'50	0.63044 AU
morning rise	4507 Nov 09 17:40	5°♄52'37		inferior conj	4508 Oct 16 12:38	24°♄48'37	-3°18'46
asc. node	4507 Nov 10 04:15	5°♄41'44		minimum elong	4508 Oct 16 18:08	24°♄35'07	3°16'57
direct	4507 Nov 12 08:06	5°♄17'17		morning rise	4508 Oct 23 10:40	19°♄36'20	
morning max el	4507 Nov 18 19:41	8°♄43'44	17°59'12	direct	4508 Oct 25 20:30	19°♄09'08	
	4507 Dec 03 06:30	0°♄		asc. node	4508 Oct 27 01:18	19°♄16'03	
morning set	4507 Dec 06 08:40	5°♄10'30		morning max el	4508 Nov 01 12:18	22°♄35'04	17°49'52
desc. node	4507 Dec 16 21:44	22°♄34'32			4508 Nov 07 06:49	0°♄	
				morning set	4508 Nov 17 17:48	17°♄41'12	
superior conj	4507 Dec 20 02:54	27°♄45'05	-0°22'06		4508 Nov 24 19:36	0°♄	
minimum elong	4507 Dec 20 00:13	27°♄34'20	0°21'43	superior conj	4508 Nov 29 12:32	7°♄57'28	0°22'41
	4507 Dec 21 12:42	0°♄		minimum elong	4508 Nov 29 14:46	8°♄06'48	0°22'23
max. Earth dist.	4507 Dec 24 09:22	4°♄32'14	1.44934 AU	desc. node	4508 Dec 02 18:46	13°♄20'38	
evening rise	4508 Jan 05 08:51	23°♄11'17		max. Earth dist.	4508 Dec 06 02:34	18°♄44'16	1.43878 AU
	4508 Jan 09 19:18	0°♄			4508 Dec 13 05:37	0°♄	
greatest brilliancy	4508 Jan 19 16:02	14°♄53'22	-0.6m	evening rise	4508 Dec 14 18:40	2°♄23'34	
	4508 Jan 31 00:33	0°♄			4509 Jan 02 08:42	0°♄	
evening max el	4508 Jan 31 14:33	0°♄36'42	19°59'04	evening max el	4509 Jan 13 14:13	14°♄10'10	21°05'25
asc. node	4508 Feb 06 03:31	4°♄39'38		retrograde	4509 Jan 22 03:24	19°♄13'53	
retrograde	4508 Feb 08 05:24	5°♄02'49		asc. node	4509 Jan 23 00:34	19°♄09'39	
evening set	4508 Feb 11 22:31	3°♄42'24		evening set	4509 Jan 26 06:05	17°♄38'21	
	4508 Feb 15 13:46	30°♄		inferior conj	4509 Jan 31 14:21	11°♄25'12	2°34'19
inferior conj	4508 Feb 17 08:18	27°♄40'48	3°05'11	minimum elong	4509 Jan 31 11:54	11°♄33'40	2°33'38
minimum elong	4508 Feb 17 06:05	27°♄48'14	3°04'43	min. Earth dist.	4509 Jan 31 23:27	10°♄53'50	0.67781 AU
min. Earth dist.	4508 Feb 18 06:20	26°♄26'54	0.67121 AU	morning rise	4509 Feb 05 17:33	5°♄12'23	
morning rise	4508 Feb 22 13:25	21°♄26'37		direct	4509 Feb 11 00:48	2°♄52'42	
direct	4508 Feb 28 11:03	18°♄48'20		morning max el	4509 Feb 21 15:50	9°♄12'15	23°39'18
morning max el	4508 Mar 11 07:08	25°♄52'45	25°07'08	desc. node	4509 Feb 28 18:01	17°♄22'31	
desc. node	4508 Mar 13 20:59	28°♄37'42			4509 Mar 10 00:37	0°♄	
	4508 Mar 15 01:52	0°♄		morning set	4509 Mar 28 23:57	29°♄45'45	
	4508 Apr 05 10:16	0°♄			4509 Mar 29 03:18	0°♄	
morning set	4508 Apr 16 11:04	18°♄40'29		max. Earth dist.	4509 Apr 01 22:07	6°♄33'15	1.38800 AU
max. Earth dist.	4508 Apr 20 02:27	25°♄19'18	1.36675 AU				
	4508 Apr 22 14:03	0°♄		superior conj	4509 Apr 09 08:32	20°♄05'31	-1°39'30
superior conj	4508 Apr 26 09:11	7°♄21'57	-1°13'09	minimum elong	4509 Apr 09 13:23	20°♄28'19	1°38'56
minimum elong	4508 Apr 26 13:08	7°♄41'24	1°12'31		4509 Apr 14 12:53	0°♄	
asc. node	4508 May 04 02:47	22°♄54'30		evening rise	4509 Apr 18 12:59	7°♄47'52	
evening rise	4508 May 04 16:27	24°♄03'20		asc. node	4509 Apr 20 23:51	12°♄32'26	
	4508 May 07 16:09	0°♄			4509 May 01 06:54	0°♄	
evening max el	4508 May 21 21:23	22°♄02'42	19°36'56	evening max el	4509 May 04 20:34	4°♄09'29	18°46'45
retrograde	4508 May 31 14:07	26°♄46'17		retrograde	4509 May 13 01:04	8°♄10'29	
evening set	4508 Jun 02 12:54	26°♄35'40		evening set	4509 May 15 04:41	7°♄54'53	
desc. node	4508 Jun 09 20:10	23°♄25'42		inferior conj	4509 May 23 02:50	3°♄34'01	1°18'17
inferior conj	4508 Jun 11 06:44	22°♄31'56	-0°25'40	minimum elong	4509 May 23 05:36	3°♄28'56	1°17'21
minimum elong	4508 Jun 11 05:35	22°♄33'45	0°25'14	min. Earth dist.	4509 May 26 08:48	1°♄11'58	0.57198 AU
min. Earth dist.	4508 Jun 13 16:17	21°♄01'34	0.55628 AU	desc. node	4509 May 27 17:13	0°♄17'19	

	4509 May 28 04:08	30°♿		morning rise	4510 May 12 04:00	9°♿	39'26"	
morning rise	4509 May 31 03:15	28°♿24'43"		desc. node	4510 May 14 14:16	8°♿	32'11"	
direct	4509 Jun 05 15:02	27°♿11'14"		direct	4510 May 18 11:15	7°♿	51'05"	
	4509 Jun 14 03:52	0°♿		morning max el	4510 Jun 01 20:29	15°♿	40'02"	27°21'23"
morning max el	4509 Jun 19 23:28	4°♿41'17"	26°16'16"		4510 Jun 13 12:18	0°♿		
	4509 Jul 08 08:42	0°♿			4510 Jun 30 17:43	0°♿		
asc. node	4509 Jul 17 23:06	18°♿32'49"		morning set	4510 Jul 02 21:35	4°♿	27'01"	
morning set	4509 Jul 18 13:12	19°♿46'58"		asc. node	4510 Jul 04 20:09	8°♿	33'21"	
	4509 Jul 23 06:33	0°♿		max. Earth dist.	4510 Jul 09 12:36	18°♿	45'58"	1.31977 AU
superior conj	4509 Jul 25 12:18	4°♿56'13"	1°11'45"	superior conj	4510 Jul 10 00:05	19°♿	49'24"	0°51'47"
minimum elong	4509 Jul 25 09:59	4°♿43'26"	1°11'23"	minimum elong	4510 Jul 09 22:05	19°♿	38'18"	0°51'23"
max. Earth dist.	4509 Jul 26 01:04	6°♿06'33"	1.32164 AU		4510 Jul 14 15:15	0°♿		
evening rise	4509 Aug 01 10:50	19°♿57'01"		evening rise	4510 Jul 16 19:40	4°♿	41'21"	
	4509 Aug 06 10:22	0°♿			4510 Jul 30 04:53	0°♿		
desc. node	4509 Aug 23 16:29	28°♿12'22"		desc. node	4510 Aug 10 13:30	15°♿	49'42"	
	4509 Aug 25 01:40	0°♿		evening max el	4510 Aug 14 10:22	19°♿	53'07"	26°08'41"
evening max el	4509 Sep 01 11:32	8°♿15'34"	27°04'03"	retrograde	4510 Aug 28 09:40	27°♿	01'41"	
retrograde	4509 Sep 15 08:24	15°♿27'22"		evening set	4510 Sep 03 20:15	25°♿	20'53"	
evening set	4509 Sep 22 09:52	13°♿14'36"		min. Earth dist.	4510 Sep 07 23:11	22°♿	45'49"	0.59021 AU
min. Earth dist.	4509 Sep 26 01:51	10°♿33'18"	0.61097 AU	inferior conj	4510 Sep 11 05:19	20°♿	19'28"	-4°58'04"
inferior conj	4509 Sep 29 05:19	7°♿50'54"	-4°15'16"	minimum elong	4510 Sep 11 09:44	20°♿	11'09"	4°57'30"
minimum elong	4509 Sep 29 11:25	7°♿37'44"	4°13'47"	morning rise	4510 Sep 19 01:27	15°♿	50'48"	
morning rise	4509 Oct 06 14:51	2°♿59'21"		direct	4510 Sep 21 11:07	15°♿	31'16"	
direct	4509 Oct 08 23:00	2°♿37'14"		morning max el	4510 Sep 29 11:09	19°♿	22'38"	18°28'26"
asc. node	4509 Oct 13 22:21	4°♿21'35"		asc. node	4510 Sep 30 19:24	20°♿	45'52"	
morning max el	4509 Oct 16 02:34	6°♿11'02"	17°59'11"		4510 Oct 07 08:24	0°♿		
	4509 Oct 31 07:15	0°♿		morning set	4510 Oct 15 12:38	15°♿	00'16"	
morning set	4509 Oct 31 20:54	1°♿02'54"			4510 Oct 23 09:02	0°♿		
superior conj	4509 Nov 11 00:47	19°♿27'46"	0°58'26"	superior conj	4510 Oct 24 11:42	2°♿	04'11"	1°23'17"
minimum elong	4509 Nov 11 04:49	19°♿45'29"	0°57'55"	minimum elong	4510 Oct 24 15:14	2°♿	20'31"	1°22'55"
	4509 Nov 17 04:08	0°♿		max. Earth dist.	4510 Oct 31 22:03	15°♿	23'41"	1.40264 AU
max. Earth dist.	4509 Nov 18 15:03	2°♿25'31"	1.42251 AU	evening rise	4510 Nov 05 05:50	22°♿	43'51"	
desc. node	4509 Nov 19 15:47	4°♿07'38"		desc. node	4510 Nov 06 12:47	24°♿	51'47"	
evening rise	4509 Nov 24 14:00	12°♿27'05'22"			4510 Nov 09 16:52	0°♿		
	4509 Dec 06 06:43	0°♿			4510 Nov 30 06:22	0°♿		
evening max el	4509 Dec 27 08:32	27°♿45'00"	22°21'09"	evening max el	4510 Dec 09 22:58	11°♿	22'32"	23°41'06"
	4509 Dec 29 18:10	0°♿		retrograde	4510 Dec 20 17:16	17°♿	43'49"	
retrograde	4510 Jan 05 23:50	3°♿29'00"		evening set	4510 Dec 25 19:41	15°♿	36'47"	
asc. node	4510 Jan 09 21:37	2°♿28'08'21"		asc. node	4510 Dec 27 18:40	13°♿	39'38"	
evening set	4510 Jan 10 13:41	1°♿37'44"		min. Earth dist.	4510 Dec 30 16:16	9°♿	57'28"	0.67944 AU
	4510 Jan 12 06:10	30°♿		inferior conj	4510 Dec 31 05:49	9°♿	11'14"	1°09'07"
inferior conj	4510 Jan 15 22:09	25°♿16'23"	1°55'16"	minimum elong	4510 Dec 31 04:17	9°♿	16'28"	1°08'32"
minimum elong	4510 Jan 15 19:56	25°♿24'05"	1°54'30"	morning rise	4511 Jan 05 12:51	3°♿	05'39"	
min. Earth dist.	4510 Jan 15 19:33	25°♿25'25"	0.68044 AU	direct	4511 Jan 09 15:16	1°♿	31'01"	
morning rise	4510 Jan 21 02:04	19°♿06'18"		morning max el	4511 Jan 17 20:54	6°♿	15'49"	20°50'19"
direct	4510 Jan 25 18:31	17°♿08'58"		desc. node	4511 Feb 02 12:03	26°♿	39'26"	
morning max el	4510 Feb 04 03:21	22°♿39'13"	22°11'08"		4511 Feb 04 18:37	0°♿		
	4510 Feb 10 12:20	0°♿		morning set	4511 Feb 16 15:12	18°♿	02'27"	
desc. node	4510 Feb 15 15:03	6°♿22'46'56"			4511 Feb 24 04:00	0°♿		
	4510 Mar 03 09:03	0°♿		max. Earth dist.	4511 Feb 24 23:25	1°♿	18'38"	1.42911 AU
morning set	4510 Mar 09 08:59	9°♿30'51"		superior conj	4511 Mar 03 20:36	12°♿	42'12"	-2°08'13"
max. Earth dist.	4510 Mar 14 19:36	18°♿29'21"	1.40972 AU	minimum elong	4511 Mar 03 20:58	12°♿	43'41"	2°08'13"
	4510 Mar 21 11:51	0°♿			4511 Mar 13 19:53	0°♿		
superior conj	4510 Mar 22 14:03	1°♿56'14"	-1°59'29"	evening rise	4511 Mar 15 17:21	3°♿	22'10"	
minimum elong	4510 Mar 22 18:06	2°♿14'20"	1°59'14"	asc. node	4511 Mar 25 17:57	20°♿	42'16"	
evening rise	4510 Apr 01 22:42	20°♿57'34"		evening max el	4511 Apr 01 15:12	29°♿	52'39"	18°06'43"
	4510 Apr 06 20:11	0°♿			4511 Apr 01 18:12	0°♿		
asc. node	4510 Apr 07 20:55	1°♿50'46"		retrograde	4511 Apr 08 04:47	3°♿	15'18"	
evening max el	4510 Apr 18 03:40	16°♿49'18"	18°16'50"	evening set	4511 Apr 10 21:34	2°♿	40'51"	
retrograde	4510 Apr 25 06:59	20°♿23'15"			4511 Apr 14 21:50	30°♿		
evening set	4510 Apr 27 17:18	19°♿59'21"		inferior conj	4511 Apr 17 09:22	27°♿	39'33"	3°14'40"
inferior conj	4510 May 04 20:31	15°♿18'17"	2°31'39"	minimum elong	4511 Apr 17 11:46	27°♿	33'36"	3°14'19"
minimum elong	4510 May 05 00:04	15°♿10'38"	2°30'45"	min. Earth dist.	4511 Apr 20 11:58	24°♿	36'12"	0.61451 AU
min. Earth dist.	4510 May 08 06:42	12°♿23'06"	0.59255 AU	morning rise	4511 Apr 24 00:06	21°♿	42'04"	

direct	4511 Apr 30 18:46	19° Υ 21'16		minimum elong	4512 Mar 30 14:02	10° Υ 27'54	3°33'07
desc. node	4511 May 01 11:17	19° Υ 22'39		min. Earth dist.	4512 Apr 02 02:06	7° Υ 41'26	0.63502 AU
morning max el	4511 May 14 23:39	27° Υ 19'36	27°50'53	morning rise	4512 Apr 05 14:06	4° Υ 22'18	
	4511 May 17 12:41	0° \mathcal{B}		direct	4512 Apr 12 11:01	1° Υ 39'53	
	4511 Jun 07 04:26	0° Π		desc. node	4512 Apr 17 08:18	2° Υ 50'35	
morning set	4511 Jun 17 01:31	18° Π 51'27		morning max el	4512 Apr 26 07:21	9° Υ 38'21	27°42'52
asc. node	4511 Jun 21 17:12	28° Π 39'49			4512 May 12 04:22	0° \mathcal{B}	
	4511 Jun 22 08:03	0° \mathcal{E}			4512 May 29 11:45	0° Π	
max. Earth dist.	4511 Jun 22 22:15	1° \mathcal{E} 17'04	1.32205 AU	morning set	4512 May 30 22:39	2° Π 52'27	
				max. Earth dist.	4512 Jun 05 02:11	13° Π 27'35	1.32871 AU
superior conj	4511 Jun 24 10:34	4° \mathcal{E} 35'17	0°28'12	superior conj	4512 Jun 07 17:54	19° Π 07'20	0°01'37
minimum elong	4511 Jun 24 09:19	4° \mathcal{E} 28'25	0°27'55	minimum elong	4512 Jun 07 17:49	19° Π 06'54	0°01'35
evening rise	4511 Jul 01 06:56	19° \mathcal{E} 30'11		behind sun begin	4512 Jun 07 12:32	18° Π 38'28	
	4511 Jul 06 09:36	0° Ω		behind sun end	4512 Jun 07 23:07	19° Π 35'22	
	4511 Jul 26 07:39	0° \mathcal{M}		asc. node	4512 Jun 07 14:13	18° Π 47'30	
evening max el	4511 Jul 27 02:12	0° \mathcal{M} 45'29	24°46'24		4512 Jun 12 18:42	0° \mathcal{E}	
desc. node	4511 Jul 28 10:31	1° \mathcal{M} 59'50		evening rise	4512 Jun 14 18:43	4° \mathcal{E} 16'40	
retrograde	4511 Aug 10 00:14	7° \mathcal{M} 47'20			4512 Jun 28 15:45	0° Ω	
evening set	4511 Aug 15 06:30	6° \mathcal{M} 44'50		evening max el	4512 Jul 07 15:05	11° Ω 10'25	23°10'05
min. Earth dist.	4511 Aug 20 13:35	3° \mathcal{M} 57'15	0.57072 AU	desc. node	4512 Jul 14 07:33	16° Ω 09'26	
inferior conj	4511 Aug 23 09:45	2° \mathcal{M} 06'04	-5°13'51	retrograde	4512 Jul 21 01:50	17° Ω 53'31	
minimum elong	4511 Aug 23 09:20	2° \mathcal{M} 06'46	5°13'51	evening set	4512 Jul 24 19:52	17° Ω 22'47	
	4511 Aug 26 18:54	30° \mathcal{R} Ω		min. Earth dist.	4512 Aug 01 00:19	14° Ω 07'32	0.55579 AU
morning rise	4511 Aug 31 14:36	27° Ω 59'07		inferior conj	4512 Aug 02 18:26	13° Ω 06'09	-4°46'30
direct	4511 Sep 03 05:05	27° Ω 40'04		minimum elong	4512 Aug 02 11:53	13° Ω 15'44	4°45'28
	4511 Sep 09 23:58	0° \mathcal{M}		morning rise	4512 Aug 11 06:11	9° Ω 14'00	
morning max el	4511 Sep 12 10:42	2° \mathcal{M} 00'05	19°19'01	direct	4512 Aug 14 04:19	8° Ω 53'33	
asc. node	4511 Sep 17 16:26	8° \mathcal{M} 13'48		morning max el	4512 Aug 24 22:37	13° Ω 53'37	20°31'23
morning set	4511 Sep 29 13:09	29° \mathcal{M} 23'05		asc. node	4512 Sep 03 13:27	26° Ω 30'19	
	4511 Sep 29 20:33	0° \mathcal{L}			4512 Sep 05 14:03	0° \mathcal{M}	
superior conj	4511 Oct 07 15:55	15° \mathcal{L} 31'38	1°37'53	morning set	4512 Sep 12 19:25	14° \mathcal{M} 02'02	
minimum elong	4511 Oct 07 17:57	15° \mathcal{L} 41'35	1°37'45	superior conj	4512 Sep 20 08:30	29° \mathcal{M} 35'08	1°43'42
max. Earth dist.	4511 Oct 14 02:33	27° \mathcal{L} 42'17	1.38171 AU	minimum elong	4512 Sep 20 08:55	29° \mathcal{M} 37'17	1°43'42
	4511 Oct 15 08:55	0° \mathcal{M}			4512 Sep 20 13:23	0° \mathcal{L}	
evening rise	4511 Oct 17 20:58	4° \mathcal{M} 26'51		max. Earth dist.	4512 Sep 25 09:48	9° \mathcal{L} 37'55	1.36206 AU
desc. node	4511 Oct 24 09:48	15° \mathcal{M} 29'41		evening rise	4512 Sep 29 08:34	17° \mathcal{L} 06'01	
	4511 Nov 02 18:15	0° \mathcal{X}			4512 Oct 06 16:11	0° \mathcal{M}	
evening max el	4511 Nov 22 11:44	25° \mathcal{X} 04'44	24°58'37	desc. node	4512 Oct 10 06:50	5° \mathcal{M} 55'53	
	4511 Nov 28 12:29	0° \mathcal{Z}			4512 Oct 27 02:58	0° \mathcal{X}	
retrograde	4511 Dec 04 06:33	1° \mathcal{Z} 54'46		evening max el	4512 Nov 04 00:22	8° \mathcal{X} 47'57	26°06'35
	4511 Dec 09 09:12	30° \mathcal{R} \mathcal{X}		retrograde	4512 Nov 16 14:50	15° \mathcal{X} 56'08	
evening set	4511 Dec 09 22:32	29° \mathcal{X} 33'04		evening set	4512 Nov 22 20:28	13° \mathcal{X} 22'26	
min. Earth dist.	4511 Dec 14 11:17	24° \mathcal{X} 27'45	0.67498 AU	min. Earth dist.	4512 Nov 27 02:06	8° \mathcal{X} 52'26	0.66701 AU
asc. node	4511 Dec 14 15:40	24° \mathcal{X} 13'23		inferior conj	4512 Nov 28 13:36	7° \mathcal{X} 02'22	-0°40'14
inferior conj	4511 Dec 15 11:35	23° \mathcal{X} 07'50	0°16'57	minimum elong	4512 Nov 28 14:41	6° \mathcal{X} 59'01	0°39'46
minimum elong	4511 Dec 15 11:10	23° \mathcal{X} 09'13	0°16'47	asc. node	4512 Nov 30 12:41	4° \mathcal{X} 40'43	
morning rise	4511 Dec 20 23:59	17° \mathcal{X} 08'53		morning rise	4512 Dec 04 09:23	1° \mathcal{X} 12'42	
direct	4511 Dec 24 13:48	15° \mathcal{X} 55'13		direct	4512 Dec 07 12:26	0° \mathcal{X} 16'52	
morning max el	4511 Dec 31 22:19	20° \mathcal{X} 03'55	19°42'03	morning max el	4512 Dec 14 07:08	4° \mathcal{X} 00'53	18°49'05
	4512 Jan 08 22:57	0° \mathcal{Z}			4513 Jan 01 13:47	0° \mathcal{Z}	
greatest brilliancy	4512 Jan 14 01:10	7° \mathcal{Z} 21'13	-0.7m	morning set	4513 Jan 04 22:40	5° \mathcal{Z} 17'23	
desc. node	4512 Jan 20 09:04	16° \mathcal{Z} 52'42		desc. node	4513 Jan 06 06:06	7° \mathcal{Z} 20'47	
morning set	4512 Jan 26 11:17	26° \mathcal{Z} 13'17		max. Earth dist.	4513 Jan 20 04:04	29° \mathcal{Z} 09'52	1.45173 AU
	4512 Jan 28 21:54	0° \approx			4513 Jan 20 16:50	0° \approx	
max. Earth dist.	4512 Feb 07 10:47	14° \approx 57'01	1.44371 AU				
superior conj	4512 Feb 12 01:26	22° \approx 19'34	-2°00'12	superior conj	4513 Jan 21 09:18	1° \approx 04'44	-1°32'29
minimum elong	4512 Feb 11 19:40	21° \approx 56'21	1°59'53	minimum elong	4513 Jan 20 23:58	0° \approx 28'02	1°31'33
	4512 Feb 16 18:35	0° \mathcal{H}		evening rise	4513 Feb 05 17:07	25° \approx 28'21	
evening rise	4512 Feb 25 16:36	14° \mathcal{H} 53'38			4513 Feb 08 12:23	0° \mathcal{H}	
	4512 Mar 05 16:28	0° Υ		asc. node	4513 Feb 26 11:58	26° \mathcal{H} 29'18	
asc. node	4512 Mar 11 14:58	8° Υ 58'35		evening max el	4513 Feb 26 15:27	26° \mathcal{H} 38'12	18°42'41
evening max el	4512 Mar 15 04:02	13° Υ 11'08	18°15'37		4513 Mar 03 09:54	0° Υ	
retrograde	4512 Mar 21 14:07	16° Υ 36'47		retrograde	4513 Mar 05 06:53	0° Υ 19'28	
evening set	4512 Mar 24 12:59	15° Υ 50'29			4513 Mar 07 03:09	30° \mathcal{R} \mathcal{H}	
inferior conj	4512 Mar 30 13:20	10° Υ 29'51	3°33'08	evening set	4513 Mar 08 12:03	29° \mathcal{H} 20'31	

inferior conj	4513 Mar 14 04:31	23°  42'06	3°32'58	minimum elong	4514 Feb 26 01:43	7°  16'19	3°18'20
minimum elong	4513 Mar 14 03:43	23°  44'35	3°32'55	min. Earth dist.	4514 Feb 27 09:35	5°  32'17	0.66548 AU
min. Earth dist.	4513 Mar 16 01:37	21°  24'40	0.65226 AU	morning rise	4514 Mar 03 11:07	0°  55'59	
morning rise	4513 Mar 19 18:54	17°  29'39			4514 Mar 04 14:24	30°  R \approx	
direct	4513 Mar 26 10:24	14°  39'25		direct	4514 Mar 09 16:05	28° \approx 10'32	
desc. node	4513 Apr 04 05:19	18°  25'38			4514 Mar 15 08:11	0°  H	
morning max el	4513 Apr 08 17:16	22°  27'51	27°01'19	morning max el	4514 Mar 22 03:01	5°  H35'45	25°53'51
	4513 Apr 15 08:27	0°  Y		desc. node	4514 Mar 22 02:22	5°  H34'07	
	4513 May 05 10:25	0°  8			4514 Apr 09 22:04	0°  Y	
morning set	4513 May 14 10:03	16°  821'17		morning set	4514 Apr 27 07:40	29°  Y05'55	
max. Earth dist.	4513 May 18 20:54	25°  809'01	1.33995 AU		4514 Apr 27 19:22	0°  8	
	4513 May 21 05:44	0°  II		max. Earth dist.	4514 May 01 04:06	6°  820'47	1.35576 AU
superior conj	4513 May 22 20:01	3°  II19'16	-0°27'06	superior conj	4514 May 06 14:21	17°  803'17	-0°56'35
minimum elong	4513 May 22 21:27	3°  II26'45	0°26'48	minimum elong	4514 May 06 17:26	17°  818'50	0°56'00
asc. node	4513 May 25 11:15	8°  II52'38		asc. node	4514 May 12 08:18	28°  850'28	
evening rise	4513 May 30 05:09	18°  II54'41			4514 May 12 21:47	0°  II	
	4513 Jun 04 17:08	0°  6		evening rise	4514 May 14 12:08	3°  II17'03	
evening max el	4513 Jun 19 08:49	21°  640'22	21°35'40		4514 May 30 01:52	0°  6	
desc. node	4513 Jul 01 04:33	27°  645'22		evening max el	4514 Jun 01 13:38	2°  642'18	20°14'54
retrograde	4513 Jul 01 16:57	27°  645'59		retrograde	4514 Jun 12 06:44	7°  656'24	
evening set	4513 Jul 04 04:58	27°  631'47		evening set	4514 Jun 14 05:42	7°  646'39	
inferior conj	4513 Jul 13 13:38	23°  630'57	-3°28'13	desc. node	4514 Jun 18 01:35	6°  636'59	
minimum elong	4513 Jul 13 05:07	23°  642'51	3°25'41	inferior conj	4514 Jun 23 08:34	3°  648'07	-1°34'16
min. Earth dist.	4513 Jul 13 10:36	23°  635'10	0.54850 AU	minimum elong	4514 Jun 23 04:08	3°  654'39	1°32'38
morning rise	4513 Jul 22 06:24	19°  638'00		min. Earth dist.	4514 Jun 24 22:44	2°  651'49	0.55066 AU
direct	4513 Jul 25 14:47	19°  613'37			4514 Jun 30 16:43	30°  R  II	
morning max el	4513 Aug 06 22:53	25°  602'03	22°02'54	morning rise	4514 Jul 02 01:15	29°  II33'29	
	4513 Aug 11 12:33	0°  O		direct	4514 Jul 06 01:26	28°  II58'40	
asc. node	4513 Aug 21 10:30	15°  O24'08			4514 Jul 11 07:12	0°  6	
morning set	4513 Aug 28 05:15	28°  O51'00		morning max el	4514 Jul 19 15:01	5°  635'51	23°45'40
	4513 Aug 28 18:26	0°  P			4514 Aug 05 19:58	0°  O	
				asc. node	4514 Aug 08 07:34	4°  O45'38	
superior conj	4513 Sep 04 09:41	14°  P03'49	1°42'09	morning set	4514 Aug 12 16:48	13°  O44'25	
minimum elong	4513 Sep 04 08:46	13°  P58'57	1°42'07				
max. Earth dist.	4513 Sep 08 00:17	21°  P33'12	1.34547 AU	superior conj	4514 Aug 19 16:37	28°  O48'48	1°34'24
	4513 Sep 12 06:03	0°  A		minimum elong	4514 Aug 19 14:46	28°  O38'51	1°34'15
evening rise	4513 Sep 12 12:22	0°  A30'34			4514 Aug 20 05:49	0°  P	
desc. node	4513 Sep 27 03:51	26°  A04'28		max. Earth dist.	4514 Aug 21 23:30	3°  P43'11	1.33283 AU
	4513 Sep 29 17:22	0°  M		evening rise	4514 Aug 27 04:18	14°  P29'45	
evening max el	4513 Oct 17 13:01	22°  M24'20	26°57'31		4514 Sep 04 08:59	0°  A	
retrograde	4513 Oct 30 17:39	29°  M41'09		desc. node	4514 Sep 14 00:52	15°  A47'53	
evening set	4513 Nov 06 11:26	27°  M00'39			4514 Sep 24 15:30	0°  M	
min. Earth dist.	4513 Nov 10 10:26	23°  M06'26	0.65547 AU	evening max el	4514 Sep 30 00:44	5°  M43'29	27°24'23
inferior conj	4513 Nov 12 09:47	20°  M50'36	-1°41'06	retrograde	4514 Oct 13 14:39	13°  M01'38	
minimum elong	4513 Nov 12 12:38	20°  M42'23	1°39'56	evening set	4514 Oct 20 16:49	10°  M22'47	
asc. node	4513 Nov 17 09:43	15°  M56'32		min. Earth dist.	4514 Oct 24 10:13	7°  M02'27	0.64045 AU
morning rise	4513 Nov 18 14:45	15°  M13'08		inferior conj	4514 Oct 26 21:43	4°  M27'26	-2°43'29
direct	4513 Nov 21 09:07	14°  M31'27		minimum elong	4514 Oct 27 02:23	4°  M15'16	2°41'47
morning max el	4513 Nov 27 21:16	18°  M01'26	18°12'33		4514 Oct 31 20:35	30°  R  A	
	4513 Dec 06 19:30	0°  X		morning rise	4514 Nov 02 13:18	29°  A05'14	
morning set	4513 Dec 16 14:48	15°  X49'05		asc. node	4514 Nov 04 06:47	28°  A36'55	
desc. node	4513 Dec 24 03:08	27°  X58'58		direct	4514 Nov 05 01:22	28°  A33'53	
	4513 Dec 25 09:22	0°  3			4514 Nov 09 05:12	0°  M	
				morning max el	4514 Nov 11 13:57	1°  M59'04	17°53'03
superior conj	4513 Dec 31 12:50	9°  345'11	-0°49'29	morning set	4514 Nov 28 10:47	27°  M42'18	
minimum elong	4513 Dec 31 06:39	9°  320'51	0°48'41		4514 Nov 29 19:02	0°  X	
max. Earth dist.	4514 Jan 02 23:40	13°  336'37	1.45233 AU				
	4514 Jan 13 11:24	0° \approx		superior conj	4514 Dec 11 08:10	19°  X16'08	-0°02'20
evening rise	4514 Jan 16 19:23	5° \approx 11'32		minimum elong	4514 Dec 11 07:54	19°  X15'05	0°02'17
greatest brilliancy	4514 Jan 28 20:01	23° \approx 47'10	-0.7m	behind sun begin	4514 Dec 10 21:59	18°  X34'44	
	4514 Feb 02 00:32	0°  H		behind sun end	4514 Dec 11 17:50	19°  X55'22	
evening max el	4514 Feb 09 23:14	10°  H09'03	19°26'44	desc. node	4514 Dec 11 00:10	18°  X43'35	
asc. node	4514 Feb 13 09:01	13°  H01'19		max. Earth dist.	4514 Dec 16 18:06	27°  X57'54	1.44561 AU
retrograde	4514 Feb 17 03:44	14°  H16'40			4514 Dec 18 00:56	0°  3	
evening set	4514 Feb 20 16:04	13°  H04'21		evening rise	4514 Dec 27 07:05	14°  324'56	
inferior conj	4514 Feb 26 03:34	7°  H10'17	3°18'38		4515 Jan 06 13:33	0° \approx	

evening max el	4515 Jan 24 02:02	23°  42'03	20°25'48	asc. node	4516 Jan 18 03:07	12°  12'14	
asc. node	4515 Jan 31 06:03	28°  20'21		evening set	4516 Jan 20 06:39	10°  55'14	
retrograde	4515 Feb 01 01:59	28°  24'05		inferior conj	4516 Jan 25 14:51	4°  38'16	2°18'40
evening set	4515 Feb 04 22:53	26°  57'28		minimum elong	4516 Jan 25 12:26	4°  46'38	2°17'55
inferior conj	4515 Feb 10 07:47	20°  50'26	2°53'11	min. Earth dist.	4516 Jan 25 18:55	4°  24'07	0.67944 AU
minimum elong	4515 Feb 10 05:25	20°  58'32	2°52'37		4516 Jan 29 04:38	30°  R 	
min. Earth dist.	4515 Feb 11 00:10	19°  54'38	0.67450 AU	morning rise	4516 Jan 30 18:01	28°  Z  26'15	
morning rise	4515 Feb 15 11:43	14°  36'22		direct	4516 Feb 04 19:01	26°  Z  15'33	
direct	4515 Feb 21 03:16	12°  05'17			4516 Feb 12 11:38	0° 	
morning max el	4515 Mar 04 11:42	18°  52'30	24°30'19	morning max el	4516 Feb 14 21:00	2°  14'22	23°01'08
desc. node	4515 Mar 08 23:25	23°  49'51		desc. node	4516 Feb 23 20:26	12°  53'09	
	4515 Mar 13 21:30	0°  X			4516 Mar 06 22:27	0°  X	
	4515 Apr 03 00:41	0°  Y		morning set	4516 Mar 20 11:44	21°  X  24'28	
morning set	4515 Apr 09 10:15	10°  Y  52'19		max. Earth dist.	4516 Mar 24 20:46	28°  X  49'13	1.39736 AU
max. Earth dist.	4515 Apr 13 01:41	17°  Y  22'15	1.37553 AU		4516 Mar 25 13:08	0°  Y	
superior conj	4515 Apr 19 21:45	0°  8  11'40	-1°24'52	superior conj	4516 Apr 01 14:08	12°  Y  34'33	-1°49'01
minimum elong	4515 Apr 20 02:13	0°  8  33'14	1°24'13	minimum elong	4516 Apr 01 18:56	12°  Y  56'36	1°48'35
	4515 Apr 19 19:20	0°  8			4516 Apr 10 19:37	0°  8	
evening rise	4515 Apr 28 13:18	17°  8  17'20		evening rise	4516 Apr 11 05:40	0°  8  48'06	
asc. node	4515 Apr 29 05:21	18°  8  36'55		asc. node	4516 Apr 15 02:24	8°  8  07'22	
	4515 May 05 04:33	0°  II		evening max el	4516 Apr 27 09:52	26°  8  49'10	18°31'37
evening max el	4515 May 15 06:47	14°  II  26'25	19°13'07		4516 May 02 00:24	0°  II	
retrograde	4515 May 24 07:08	18°  II  50'11		retrograde	4516 May 05 02:00	0°  II  36'11	
evening set	4515 May 26 07:16	18°  II  38'04		evening set	4516 May 07 08:34	0°  II  17'20	
inferior conj	4515 Jun 03 17:02	14°  II  28'11	0°21'41		4516 May 08 06:11	30°  R  8	
minimum elong	4515 Jun 03 17:56	14°  II  26'40	0°21'21	inferior conj	4516 May 14 22:21	25°  8  48'16	1°53'21
desc. node	4515 Jun 04 22:38	13°  II  38'19		minimum elong	4516 May 15 01:47	25°  8  41'30	1°52'18
min. Earth dist.	4515 Jun 06 13:34	12°  II  33'49	0.56208 AU	min. Earth dist.	4516 May 18 08:05	23°  8  09'12	0.58035 AU
morning rise	4515 Jun 12 01:28	9°  II  38'56		desc. node	4516 May 21 19:40	20°  8  51'45	
direct	4515 Jun 17 00:03	8°  II  42'27		morning rise	4516 May 22 15:49	20°  8  25'26	
morning max el	4515 Jul 01 04:53	15°  II  57'52	25°26'00	direct	4516 May 28 12:58	18°  8  57'11	
	4515 Jul 12 13:03	0°  ☿		morning max el	4516 Jun 11 22:07	26°  8  36'28	26°47'56
asc. node	4515 Jul 26 04:37	24°  ☿  26'56			4516 Jun 15 03:28	0°  II	
morning set	4515 Jul 28 04:23	28°  ☿  36'39			4516 Jul 04 21:55	0°  ☿	
	4515 Jul 28 20:04	0°  ♁		morning set	4516 Jul 11 14:26	13°  ☿  22'59	
				asc. node	4516 Jul 12 01:39	14°  ☿  22'14	
superior conj	4515 Aug 04 02:54	13°  ♁  41'58	1°21'23	superior conj	4516 Jul 18 14:39	28°  ☿  37'13	1°03'47
minimum elong	4515 Aug 04 00:37	13°  ♁  29'26	1°21'04	minimum elong	4516 Jul 18 12:24	28°  ☿  24'49	1°03'23
max. Earth dist.	4515 Aug 05 06:01	16°  ♁  10'28	1.32445 AU	max. Earth dist.	4516 Jul 18 16:50	28°  ☿  49'19	1.32030 AU
evening rise	4515 Aug 11 04:53	28°  ♁  53'10			4516 Jul 19 05:38	0°  ♁	
	4515 Aug 11 17:52	0°  ♊		evening rise	4516 Jul 25 11:25	13°  ♁  32'38	
	4515 Aug 28 12:55	0°  ♊			4516 Aug 02 19:25	0°  ♊	
desc. node	4515 Aug 31 21:54	4°  ♊  55'04		desc. node	4516 Aug 17 18:56	23°  ♊  11'14	
evening max el	4515 Sep 12 09:35	18°  ♊  32'32	27°21'12		4516 Aug 23 20:34	0°  ♊	
retrograde	4515 Sep 26 04:59	25°  ♊  47'15		evening max el	4516 Aug 24 12:56	0°  ♊  39'25	26°44'33
evening set	4515 Oct 03 09:06	23°  ♊  21'32		retrograde	4516 Sep 07 11:10	7°  ♊  49'22	
min. Earth dist.	4515 Oct 06 23:53	20°  ♊  28'55	0.62235 AU	evening set	4516 Sep 14 07:46	5°  ♊  49'16	
inferior conj	4515 Oct 09 22:25	17°  ♊  45'08	-3°43'50	min. Earth dist.	4516 Sep 18 02:56	3°  ♊  12'35	0.60216 AU
minimum elong	4515 Oct 10 04:22	17°  ♊  31'17	3°42'03	inferior conj	4516 Sep 21 08:28	0°  ♊  34'58	-4°35'48
morning rise	4515 Oct 17 01:23	12°  ♊  41'19		minimum elong	4516 Sep 21 14:12	0°  ♊  23'15	4°34'39
direct	4515 Oct 19 09:58	12°  ♊  16'46			4516 Sep 22 01:41	30°  R  ♊	
asc. node	4515 Oct 22 03:51	12°  ♊  51'08		morning rise	4516 Sep 28 22:38	25°  ♊  52'35	
morning max el	4515 Oct 26 06:01	15°  ♊  45'23	17°51'26	direct	4516 Oct 01 07:01	25°  ♊  31'49	
	4515 Nov 05 04:30	0°  ♋		asc. node	4516 Oct 08 00:53	28°  ♊  32'00	
morning set	4515 Nov 11 04:19	10°  ♋  37'07		morning max el	4516 Oct 08 18:12	29°  ♊  12'07	18°09'01
superior conj	4515 Nov 22 05:19	0°  ♋  02'32	0°39'08		4516 Oct 09 13:04	0°  ♋	
minimum elong	4515 Nov 22 08:41	0°  ♋  16'53	0°38'40	morning set	4516 Oct 24 13:24	24°  ♋  16'08	
	4515 Nov 22 04:43	0°  ♋			4516 Oct 27 14:39	0°  ♋	
desc. node	4515 Nov 27 21:11	9°  ♋  30'41		superior conj	4516 Nov 03 03:50	12°  ♋  02'49	1°10'17
max. Earth dist.	4515 Nov 29 09:02	11°  ♋  57'10	1.43246 AU	minimum elong	4516 Nov 03 07:51	12°  ♋  20'52	1°09'48
evening rise	4515 Dec 06 19:06	23°  ♋  45'30		max. Earth dist.	4516 Nov 10 19:18	25°  ♋  21'51	1.41447 AU
	4515 Dec 10 20:11	0°  ♌		desc. node	4516 Nov 13 18:12	0°  ♋  17'08	
	4515 Dec 31 17:58	0°  ♌			4516 Nov 13 14:02	0°  ♋	
evening max el	4516 Jan 06 23:22	7°  ♌  16'15	21°36'46	evening rise	4516 Nov 15 22:24	3°  ♋  50'06	
retrograde	4516 Jan 15 23:31	12°  ♌  37'08					

	4516 Dec 03 04:04	0°♄			4517 Nov 28 00:19	0°♄	
evening max el	4516 Dec 19 15:58	20°♄52'49	22°54'59	evening max el	4517 Dec 02 05:28	4°♄32'54	24°14'42
retrograde	4516 Dec 29 18:39	26°♄52'39		retrograde	4517 Dec 13 10:22	11°♄07'08	
evening set	4517 Jan 03 13:44	24°♄54'43		evening set	4517 Dec 18 18:37	8°♄53'27	
asc. node	4517 Jan 04 00:08	24°♄32'04		asc. node	4517 Dec 21 21:09	5°♄34'25	
inferior conj	4517 Jan 08 22:47	18°♄31'21	1°36'29	min. Earth dist.	4517 Dec 23 11:41	3°♄28'45	0.67802 AU
minimum elong	4517 Jan 08 20:49	18°♄38'12	1°35'46	inferior conj	4517 Dec 24 05:52	2°♄27'34	0°47'42
min. Earth dist.	4517 Jan 08 15:32	18°♄56'26	0.68056 AU	minimum elong	4517 Dec 24 04:45	2°♄31'19	0°47'15
morning rise	4517 Jan 14 03:46	12°♄23'02			4517 Dec 26 02:51	30°♄♂	
direct	4517 Jan 18 14:13	10°♄35'15		morning rise	4517 Dec 29 14:57	26°♄♂24'50	
morning max el	4517 Jan 27 10:35	15°♄44'39	21°35'21	direct	4518 Jan 02 11:50	24°♄♂59'29	
	4517 Feb 07 22:28	0°♄		morning max el	4518 Jan 10 07:33	29°♄♂27'09	20°19'36
desc. node	4517 Feb 09 17:27	2°♄♂30'40			4518 Jan 10 20:26	0°♄	
	4517 Feb 27 23:39	0°♄		desc. node	4518 Jan 27 14:28	22°♄33'14	
morning set	4517 Feb 28 08:23	0°♄♂34'40			4518 Feb 01 13:14	0°♄	
max. Earth dist.	4517 Mar 06 20:53	11°♄♂08'59	1.41849 AU	morning set	4518 Feb 07 07:29	8°♄♂49'48	
				max. Earth dist.	4518 Feb 17 04:42	24°♄♂23'43	1.43607 AU
superior conj	4517 Mar 14 10:27	23°♄♂59'15	-2°04'54		4518 Feb 20 15:47	0°♄	
minimum elong	4517 Mar 14 13:21	24°♄♂11'50	2°04'48				
	4517 Mar 17 20:27	0°♄		superior conj	4518 Feb 23 06:11	4°♄♂16'16	-2°07'09
evening rise	4517 Mar 25 09:28	13°♄♂39'43		minimum elong	4518 Feb 23 04:03	4°♄♂07'28	2°07'06
asc. node	4517 Apr 01 23:26	27°♄♂15'12		evening rise	4518 Mar 07 20:28	25°♄♂43'37	
	4517 Apr 03 14:58	0°♄			4518 Mar 10 07:18	0°♄	
evening max el	4517 Apr 10 19:16	9°♄♂40'13	18°10'08	asc. node	4518 Mar 19 20:28	15°♄♂53'17	
retrograde	4517 Apr 17 15:14	13°♄♂07'22		evening max el	4518 Mar 25 07:41	22°♄♂51'03	18°08'07
evening set	4517 Apr 20 04:29	12°♄♂39'01		retrograde	4518 Mar 31 18:41	26°♄♂13'37	
inferior conj	4517 Apr 27 00:36	7°♄♂49'00	2°53'19	evening set	4518 Apr 03 14:01	25°♄♂34'16	
minimum elong	4517 Apr 27 03:48	7°♄♂41'39	2°52'39	inferior conj	4518 Apr 09 20:27	20°♄♂24'16	3°25'08
min. Earth dist.	4517 Apr 30 08:33	4°♄♂47'35	0.60194 AU	minimum elong	4518 Apr 09 22:08	20°♄♂19'52	3°24'57
morning rise	4517 May 04 00:46	2°♄♂01'15		min. Earth dist.	4518 Apr 12 17:29	17°♄♂24'58	0.62354 AU
desc. node	4517 May 08 16:41	0°♄♂08'36		morning rise	4518 Apr 16 04:49	14°♄♂21'27	
	4517 May 09 20:25	30°♄♂♂		direct	4518 Apr 23 01:17	11°♄♂50'12	
direct	4517 May 10 14:02	29°♄♂58'29		desc. node	4518 Apr 25 13:41	12°♄♂08'53	
	4517 May 11 07:45	0°♄		morning max el	4518 May 07 03:20	19°♄♂49'41	27°51'58
morning max el	4517 May 24 21:41	7°♄♂51'31	27°38'40		4518 May 15 19:47	0°♄	
	4517 Jun 10 17:06	0°♄			4518 Jun 03 15:39	0°♄	
morning set	4517 Jun 25 21:07	27°♄♂56'54		morning set	4518 Jun 09 22:28	12°♄♂12'22	
	4517 Jun 26 20:42	0°♄		max. Earth dist.	4518 Jun 15 12:01	23°♄♂51'50	1.32438 AU
asc. node	4517 Jun 28 22:40	4°♄♂25'43		asc. node	4518 Jun 15 19:43	24°♄♂33'13	
max. Earth dist.	4517 Jul 02 04:10	11°♄♂27'19	1.32026 AU				
superior conj	4517 Jul 03 02:02	13°♄♂27'39	0°42'12	superior conj	4518 Jun 17 11:22	28°♄♂08'03	0°17'13
minimum elong	4517 Jul 03 00:18	13°♄♂18'03	0°41'49	minimum elong	4518 Jun 17 10:34	28°♄♂03'41	0°17'02
evening rise	4517 Jul 09 21:30	28°♄♂19'40			4518 Jun 18 07:55	0°♄	
	4517 Jul 10 16:27	0°♄		evening rise	4518 Jun 24 09:12	13°♄♂08'02	
	4517 Jul 27 10:32	0°♄			4518 Jul 02 20:51	0°♄	
desc. node	4517 Aug 04 15:57	10°♄♂14'46		evening max el	4518 Jul 18 22:05	22°♄♂32'18	24°06'01
evening max el	4517 Aug 06 08:37	11°♄♂56'22	25°36'21	desc. node	4518 Jul 22 12:58	25°♄♂37'34	
retrograde	4517 Aug 20 07:37	19°♄♂02'07		retrograde	4518 Aug 01 16:52	29°♄♂28'46	
evening set	4517 Aug 26 07:59	17°♄♂37'27		evening set	4518 Aug 06 08:09	28°♄♂41'05	
min. Earth dist.	4517 Aug 30 20:34	14°♄♂59'29	0.58162 AU	min. Earth dist.	4518 Aug 12 08:37	25°♄♂43'23	0.56360 AU
inferior conj	4517 Sep 03 00:19	12°♄♂46'06	-5°09'00	inferior conj	4518 Aug 14 19:55	24°♄♂11'46	-5°08'20
minimum elong	4517 Sep 03 03:03	12°♄♂41'14	5°08'49	minimum elong	4518 Aug 14 16:47	24°♄♂16'39	5°08'07
morning rise	4517 Sep 11 00:23	8°♄♂27'02		morning rise	4518 Aug 23 03:58	20°♄♂12'54	
direct	4517 Sep 13 11:58	8°♄♂07'46		direct	4518 Aug 25 21:25	19°♄♂53'31	
morning max el	4517 Sep 21 23:12	12°♄♂09'34	18°47'20	morning max el	4518 Sep 04 18:00	24°♄♂28'51	19°47'22
asc. node	4517 Sep 24 21:53	15°♄♂24'40			4518 Sep 09 13:10	0°♄	
	4517 Oct 03 23:57	0°♄		asc. node	4518 Sep 11 18:55	3°♄♂14'28	
morning set	4517 Oct 08 09:16	8°♄♂25'31		morning set	4518 Sep 22 12:28	22°♄♂55'33	
					4518 Sep 26 00:03	0°♄	
superior conj	4517 Oct 16 22:44	25°♄♂02'43	1°30'39	superior conj	4518 Sep 30 08:42	8°♄♂46'53	1°41'20
minimum elong	4517 Oct 17 01:42	25°♄♂16'43	1°30'23	minimum elong	4518 Sep 30 10:02	8°♄♂53'32	1°41'17
	4517 Oct 19 14:14	0°♄		max. Earth dist.	4518 Oct 06 05:57	20°♄♂09'02	1.37296 AU
max. Earth dist.	4517 Oct 24 01:12	8°♄♂03'59	1.39374 AU	evening rise	4518 Oct 10 00:23	27°♄♂03'16	
evening rise	4517 Oct 28 00:11	14°♄♂55'56			4518 Oct 11 16:12	0°♄	
desc. node	4517 Oct 31 15:14	20°♄♂59'17		desc. node	4518 Oct 18 12:15	11°♄♂32'42	
	4517 Nov 06 06:45	0°♄			4518 Oct 30 17:41	0°♄	

evening max el	4518 Nov 14 17:48	18°♊15'17	25°29'10		4519 Sep 17 15:17	0°♎	
retrograde	4518 Nov 26 21:42	25°♊15'04		max. Earth dist.	4519 Sep 18 15:30	2°♎00'37	1.35447 AU
evening set	4518 Dec 02 19:38	22°♊47'30		evening rise	4519 Sep 22 19:27	10°♎03'50	
min. Earth dist.	4518 Dec 07 05:09	17°♊57'17	0.67196 AU		4519 Oct 04 05:12	0°♍	
inferior conj	4518 Dec 08 10:15	16°♊23'42	-0°06'45	desc. node	4519 Oct 05 09:18	1°♍52'34	
minimum elong	4518 Dec 08 10:26	16°♊23'09	0°06'40		4519 Oct 26 07:54	0°♊	
transit middle	4518 Dec 08 10:26	16°♊23'09	0°06'40	evening max el	4519 Oct 28 06:25	1°♊56'53	26°30'51
transit begin	4518 Dec 08 07:53	16°♊31'22		retrograde	4519 Nov 10 03:59	9°♊10'40	
transit end	4518 Dec 08 12:59	16°♊14'57		evening set	4519 Nov 16 14:55	6°♊33'19	
asc. node	4518 Dec 08 18:10	15°♊58'19		min. Earth dist.	4519 Nov 20 17:37	2°♊18'23	0.66245 AU
morning rise	4518 Dec 14 01:34	10°♊28'34		inferior conj	4519 Nov 22 10:05	0°♊16'36	-1°05'42
direct	4518 Dec 17 10:28	9°♊23'07		minimum elong	4519 Nov 22 11:54	0°♊11'09	1°04'56
morning max el	4518 Dec 24 12:23	13°♊20'10	19°17'39		4519 Nov 22 15:36	30°♑♍	
	4519 Jan 06 01:03	0°♎		asc. node	4519 Nov 25 15:11	26°♍40'36	
greatest brilliancy	4519 Jan 06 23:29	1°♎24'23	-0.7m	morning rise	4519 Nov 28 09:33	24°♍31'39	
desc. node	4519 Jan 14 11:29	12°♎53'29		direct	4519 Dec 01 08:33	23°♍42'24	
morning set	4519 Jan 17 07:19	17°♎16'01		morning max el	4519 Dec 07 23:46	27°♍19'40	18°31'29
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max. Earth dist.	4519 Jan 30 18:43	8°♏18'32	1.44796 AU	morning set	4519 Dec 28 06:17	26°♊56'02	
					4519 Dec 30 04:31	0°♎	
superior conj	4519 Feb 03 00:50	13°♏27'49	-1°50'48	desc. node	4520 Jan 01 08:32	3°♎26'36	
minimum elong	4519 Feb 02 16:51	12°♏56'06	1°50'12				
	4519 Feb 13 06:35	0°♏		superior conj	4520 Jan 13 04:22	22°♎04'36	-1°15'34
evening rise	4519 Feb 17 10:23	6°♏51'35		minimum elong	4520 Jan 12 19:37	21°♎30'18	1°14'34
	4519 Mar 03 19:51	0°♑		max. Earth dist.	4520 Jan 13 12:48	22°♎37'40	1.45289 AU
asc. node	4519 Mar 06 17:29	3°♑51'55			4520 Jan 18 05:37	0°♏	
evening max el	4519 Mar 08 20:11	6°♑13'50	18°24'54	evening rise	4520 Jan 29 01:01	17°♏02'49	
retrograde	4519 Mar 15 07:42	9°♑45'01			4520 Feb 06 05:07	0°♏	
evening set	4519 Mar 18 09:04	8°♑53'37		greatest brilliancy	4520 Feb 07 05:43	1°♏36'35	-0.8m
inferior conj	4519 Mar 24 05:42	3°♑25'14	3°35'02	evening max el	4520 Feb 20 06:20	19°♏43'30	18°59'27
minimum elong	4519 Mar 24 05:42	3°♑25'12	3°35'01	asc. node	4520 Feb 21 14:31	20°♏59'47	
min. Earth dist.	4519 Mar 26 11:53	0°♑48'14	0.64283 AU	retrograde	4520 Feb 27 02:30	23°♏34'41	
	4519 Mar 27 05:17	30°♑♏		evening set	4520 Mar 01 10:33	22°♏30'16	
morning rise	4519 Mar 30 01:34	27°♏14'48		inferior conj	4520 Mar 07 00:37	16°♏45'12	3°28'22
direct	4519 Apr 05 20:52	24°♏27'12		minimum elong	4520 Mar 06 23:18	16°♏49'20	3°28'14
desc. node	4519 Apr 12 10:42	26°♏35'04		min. Earth dist.	4520 Mar 08 15:16	14°♏43'34	0.65847 AU
	4519 Apr 16 23:45	0°♑		morning rise	4520 Mar 12 11:40	10°♏31'39	
morning max el	4519 Apr 19 12:30	2°♑23'47	27°28'48	direct	4520 Mar 18 23:19	7°♏41'41	
	4519 May 10 02:24	0°♒		desc. node	4520 Mar 29 07:45	12°♏53'36	
morning set	4519 May 24 15:54	26°♒01'18		morning max el	4520 Mar 31 22:24	15°♏22'14	26°35'03
	4519 May 26 15:52	0°♒			4520 Apr 12 22:46	0°♑	
max. Earth dist.	4519 May 29 12:20	5°♒50'16	1.33289 AU		4520 May 01 21:27	0°♒	
				morning set	4520 May 06 22:01	9°♒13'16	
superior conj	4519 Jun 01 16:46	12°♒32'29	-0°10'25	max. Earth dist.	4520 May 11 01:55	17°♒16'50	1.34612 AU
minimum elong	4519 Jun 01 17:18	12°♒35'17	0°10'18				
behind sun begin	4519 Jun 01 13:06	12°♒12'59		superior conj	4520 May 15 15:58	26°♒33'59	-0°39'37
behind sun end	4519 Jun 01 21:29	12°♒57'36		minimum elong	4520 May 15 18:06	26°♒44'58	0°39'11
asc. node	4519 Jun 02 16:46	14°♒40'34			4520 May 17 07:41	0°♒	
evening rise	4519 Jun 08 20:39	27°♒51'36		asc. node	4520 May 19 13:50	4°♒43'18	
	4519 Jun 09 21:06	0°♓		evening rise	4520 May 23 05:54	12°♒23'54	
	4519 Jun 27 18:10	0°♑			4520 Jun 01 09:16	0°♓	
evening max el	4519 Jun 30 12:00	2°♑55'26	22°28'51	evening max el	4520 Jun 11 10:10	13°♓37'35	20°59'13
desc. node	4519 Jul 09 09:58	8°♑45'36		retrograde	4520 Jun 23 02:36	19°♓21'34	
retrograde	4519 Jul 13 13:54	9°♑25'35		evening set	4520 Jun 25 06:49	19°♓10'25	
evening set	4519 Jul 16 17:08	9°♑03'56		desc. node	4520 Jun 25 07:00	19°♓10'20	
min. Earth dist.	4519 Jul 24 19:12	5°♑32'40	0.55152 AU	inferior conj	4520 Jul 04 15:00	15°♓13'02	-2°42'23
inferior conj	4519 Jul 25 21:43	4°♑55'02	-4°19'19	minimum elong	4520 Jul 04 07:40	15°♓23'23	2°39'55
minimum elong	4519 Jul 25 13:32	5°♑06'41	4°17'28	min. Earth dist.	4520 Jul 05 06:21	14°♓51'20	0.54821 AU
morning rise	4519 Aug 03 11:55	1°♑04'45		morning rise	4520 Jul 13 08:32	11°♓12'59	
direct	4519 Aug 06 13:38	0°♑43'16		direct	4520 Jul 16 22:59	10°♓45'02	
morning max el	4519 Aug 18 00:56	6°♑03'51	21°08'23	morning max el	4520 Jul 29 21:02	16°♓55'24	22°45'54
asc. node	4519 Aug 29 15:58	21°♑48'34			4520 Aug 09 06:28	0°♑	
	4519 Sep 03 01:36	0°♒		asc. node	4520 Aug 15 13:03	10°♑55'25	
morning set	4519 Sep 06 20:30	7°♒39'44		morning set	4520 Aug 21 07:17	22°♑31'13	
					4520 Aug 24 19:34	0°♒	
superior conj	4519 Sep 14 05:23	23°♒02'52	1°43'52				
minimum elong	4519 Sep 14 05:11	23°♒01'52	1°43'52	superior conj	4520 Aug 28 09:19	7°♒39'29	1°39'34






























































































































minimum elong	4520 Aug 28 07:57	7° \cap 32'10	1°39'29	minimum elong	4521 Aug 12 15:50	22° Ω 17'19	1°29'15
max. Earth dist.	4520 Aug 31 09:46	14° \cap 01'18	1.33959 AU	max. Earth dist.	4521 Aug 14 12:39	26° Ω 20'14	1.32883 AU
evening rise	4520 Sep 05 04:55	23° \cap 44'47			4521 Aug 16 05:40	0° \cap	
	4520 Sep 08 10:57	0° Ω		evening rise	4521 Aug 20 00:55	7° \cap 55'29	
desc. node	4520 Sep 21 06:20	21° Ω 51'34			4521 Aug 31 21:52	0° Ω	
	4520 Sep 26 19:35	0° \cap		desc. node	4521 Sep 08 03:20	11° Ω 20'55	
evening max el	4520 Oct 09 19:05	15° \cap 28'07	27°12'24	evening max el	4521 Sep 22 06:00	28° Ω 36'10	27°26'56
retrograde	4520 Oct 23 04:20	22° \cap 45'51			4521 Sep 23 18:50	0° \cap	
evening set	4520 Oct 30 02:08	20° \cap 05'13		retrograde	4521 Oct 05 22:15	5° \cap 52'14	
min. Earth dist.	4520 Nov 02 22:41	16° \cap 25'31	0.64947 AU	evening set	4521 Oct 13 02:20	3° \cap 17'36	
inferior conj	4520 Nov 05 03:05	14° \cap 00'50	-2°07'33		4521 Oct 16 22:23	30° \cap Ω	
minimum elong	4520 Nov 05 06:44	13° \cap 50'45	2°06'07	min. Earth dist.	4521 Oct 16 18:12	0° \cap 10'08	0.63314 AU
morning rise	4520 Nov 11 12:23	8° \cap 29'07		inferior conj	4521 Oct 19 10:36	27° Ω 30'10	-3°09'39
asc. node	4520 Nov 11 12:14	8° \cap 29'17		minimum elong	4521 Oct 19 15:55	27° Ω 16'56	3°07'50
direct	4520 Nov 14 03:47	7° \cap 52'13		morning rise	4521 Oct 26 06:58	22° Ω 15'17	
morning max el	4520 Nov 20 15:15	11° \cap 19'15	18°02'05	direct	4521 Oct 28 17:19	21° Ω 47'05	
	4520 Dec 03 14:10	0° \cap		asc. node	4521 Oct 29 09:19	21° Ω 49'14	
morning set	4520 Dec 08 10:52	8° \cap 04'30		morning max el	4521 Nov 04 07:58	25° Ω 12'24	17°50'06
desc. node	4520 Dec 18 05:35	24° \cap 07'55			4521 Nov 08 07:23	0° \cap	
	4520 Dec 21 21:17	0° Ω		morning set	4521 Nov 20 16:46	20° \cap 26'03	
					4521 Nov 26 05:13	0° \cap	
superior conj	4520 Dec 22 12:27	1° Ω 00'30	-0°29'19	superior conj	4521 Dec 02 18:09	11° \cap 01'32	0°16'24
minimum elong	4520 Dec 22 08:50	0° Ω 46'06	0°28'48	minimum elong	4521 Dec 02 19:50	11° \cap 08'30	0°16'10
max. Earth dist.	4520 Dec 26 08:21	7° Ω 04'29	1.45036 AU	desc. node	4521 Dec 05 02:36	14° \cap 53'46	
evening rise	4521 Jan 07 19:35	26° Ω 29'32		max. Earth dist.	4521 Dec 09 02:02	21° \cap 19'54	1.44073 AU
	4521 Jan 10 02:11	0° \approx			4521 Dec 14 13:32	0° Ω	
greatest brilliancy	4521 Jan 21 14:54	17° \approx 31'46	-0.7m	evening rise	4521 Dec 18 05:19	5° Ω 40'39	
	4521 Jan 30 14:55	0° \cap			4522 Jan 03 11:42	0° \approx	
evening max el	4521 Feb 02 12:15	3° \cap 16'14	19°50'15	evening max el	4522 Jan 16 12:40	16° \approx 49'22	20°54'49
asc. node	4521 Feb 07 11:32	7° \cap 03'04		retrograde	4522 Jan 24 22:17	21° \approx 47'27	
retrograde	4521 Feb 10 00:08	7° \cap 37'11		asc. node	4522 Jan 25 08:34	21° \approx 46'27	
evening set	4521 Feb 13 16:01	6° \cap 18'48		evening set	4522 Jan 28 23:26	20° \approx 14'11	
inferior conj	4521 Feb 19 02:10	0° \cap 19'05	3°09'02	inferior conj	4522 Feb 03 07:48	14° \approx 02'26	2°39'33
minimum elong	4521 Feb 19 00:02	0° \cap 26'12	3°08'37	minimum elong	4522 Feb 03 05:21	14° \approx 10'52	2°38'54
	4521 Feb 19 07:53	30° \cap \approx		min. Earth dist.	4522 Feb 03 18:42	13° \approx 24'53	0.67705 AU
min. Earth dist.	4521 Feb 20 02:12	28° \approx 58'59	0.66987 AU	morning rise	4522 Feb 08 11:05	7° \approx 49'16	
morning rise	4521 Feb 24 07:49	24° \approx 04'56		direct	4522 Feb 13 20:28	5° \approx 26'35	
direct	4521 Mar 02 07:27	21° \approx 24'34		morning max el	4522 Feb 24 16:09	11° \approx 53'36	23°52'40
morning max el	4521 Mar 14 07:30	28° \approx 34'33	25°19'42	desc. node	4522 Mar 03 01:49	19° \approx 11'25	
	4521 Mar 15 16:19	0° \cap			4522 Mar 11 03:59	0° \cap	
desc. node	4521 Mar 16 04:48	0° \cap 33'43			4522 Mar 30 12:26	0° \cap	
	4521 Apr 06 17:10	0° \cap		morning set	4522 Apr 01 04:57	2° \cap 52'15	
morning set	4521 Apr 19 12:19	21° \cap 35'41		max. Earth dist.	4522 Apr 05 00:39	9° \cap 32'11	1.38474 AU
max. Earth dist.	4521 Apr 23 04:36	28° \cap 21'50	1.36382 AU				
	4521 Apr 24 01:26	0° Ω		superior conj	4522 Apr 12 07:43	22° \cap 55'25	-1°35'48
superior conj	4521 Apr 29 06:11	10° Ω 05'06	-1°08'51	minimum elong	4522 Apr 12 12:31	23° \cap 18'08	1°35'13
minimum elong	4521 Apr 29 09:55	10° Ω 23'37	1°08'13		4522 Apr 16 00:15	0° Ω	
asc. node	4521 May 06 10:53	24° Ω 37'31		evening rise	4522 Apr 21 08:37	10° Ω 27'50	
evening rise	4521 May 07 10:48	26° Ω 38'45		asc. node	4522 Apr 23 07:54	14° Ω 17'57	
	4521 May 09 02:50	0° \cap			4522 May 02 04:43	0° \cap	
evening max el	4521 May 24 20:28	24° \cap 58'10	19°46'05	evening max el	4522 May 07 18:07	6° \cap 59'13	18°52'53
retrograde	4521 Jun 03 19:20	29° \cap 49'25		retrograde	4522 May 16 03:31	11° \cap 05'48	
evening set	4521 Jun 05 17:52	29° \cap 39'10		evening set	4522 May 18 06:04	10° \cap 51'15	
desc. node	4521 Jun 12 04:01	27° \cap 04'37		inferior conj	4522 May 26 07:15	6° \cap 33'17	1°04'19
inferior conj	4521 Jun 14 14:18	25° \cap 37'03	-0°43'21	minimum elong	4522 May 26 09:38	6° \cap 29'01	1°03'30
minimum elong	4521 Jun 14 12:19	25° \cap 40'07	0°42'37	min. Earth dist.	4522 May 29 11:17	4° \cap 17'53	0.56924 AU
min. Earth dist.	4521 Jun 16 19:14	24° \cap 15'27	0.55457 AU	desc. node	4522 May 30 01:03	3° \cap 54'37	
morning rise	4521 Jun 23 04:35	21° \cap 08'57		morning rise	4522 Jun 03 09:55	1° \cap 28'55	
direct	4521 Jun 27 14:02	20° \cap 26'20		direct	4522 Jun 08 18:13	0° \cap 20'11	
morning max el	4521 Jul 11 11:17	27° \cap 20'35	24°29'32	morning max el	4522 Jun 23 02:11	7° \cap 46'55	26°04'01
	4521 Jul 14 01:47	0° Ω			4522 Jul 09 15:13	0° Ω	
asc. node	4521 Aug 02 10:08	0° Ω 26'32		asc. node	4522 Jul 20 07:11	20° Ω 14'34	
	4521 Aug 02 04:51	0° Ω		morning set	4522 Jul 21 06:13	22° Ω 15'35	
morning set	4521 Aug 05 19:04	7° Ω 25'00			4522 Jul 24 20:24	0° Ω	
superior conj	4521 Aug 12 17:55	22° Ω 28'41	1°29'29	superior conj	4522 Jul 28 05:03	7° Ω 23'26	1°14'26

minimum elong	4522 Jul 28 02:44	7°Ω10'38	1°14'04	max. Earth dist.	4523 Jul 12 08:52	21°Ω33'17	1.31974 AU
max. Earth dist.	4522 Jul 28 21:30	8°Ω53'58	1.32220 AU		4523 Jul 16 04:52	0°Ω	
evening rise	4522 Aug 04 04:20	22°Ω26'28		evening rise	4523 Jul 19 12:37	7°Ω09'47	
	4522 Aug 07 21:36	0°Π			4523 Jul 31 10:21	0°Π	
	4522 Aug 25 21:47	0°Ω		desc. node	4523 Aug 12 21:22	17°Π57'01	
desc. node	4522 Aug 26 00:21	0°Ω08'37		evening max el	4523 Aug 17 12:40	22°Π53'14	26°18'59
evening max el	4522 Sep 04 12:39	11°Ω07'59	27°09'36		4523 Aug 30 12:04	0°Ω	
retrograde	4522 Sep 18 09:12	18°Ω20'48		retrograde	4523 Aug 31 11:55	0°Ω02'26	
evening set	4522 Sep 25 11:44	16°Ω04'07			4523 Sep 01 11:40	30°κΠ	
min. Earth dist.	4522 Sep 29 03:02	13°Ω20'29	0.61395 AU	evening set	4523 Sep 07 01:27	28°Π16'23	
inferior conj	4522 Oct 02 05:29	10°Ω37'04	-4°07'25	min. Earth dist.	4523 Sep 11 01:52	25°Π41'26	0.59325 AU
minimum elong	4522 Oct 02 11:36	10°Ω23'35	4°05'50	inferior conj	4523 Sep 14 08:10	23°Π11'31	-4°53'01
morning rise	4522 Oct 09 13:21	5°Ω42'23		minimum elong	4523 Sep 14 13:02	23°Π02'09	4°52'18
direct	4522 Oct 11 21:28	5°Ω19'45		morning rise	4523 Sep 22 02:49	18°Π39'17	
asc. node	4522 Oct 16 06:22	6°Ω42'04		direct	4523 Sep 24 11:58	18°Π19'34	
morning max el	4522 Oct 18 22:51	8°Ω51'55	17°56'33	morning max el	4523 Oct 02 08:29	22°Π07'53	18°22'44
	4522 Nov 01 17:04	0°Π		asc. node	4523 Oct 03 03:24	22°Π55'28	
morning set	4522 Nov 03 17:35	3°Π41'39			4523 Oct 08 12:12	0°Ω	
				morning set	4523 Oct 18 07:45	17°Ω34'48	
superior conj	4522 Nov 14 02:37	22°Π21'20	0°53'42		4523 Oct 24 20:18	0°Π	
minimum elong	4522 Nov 14 06:34	22°Π38'31	0°53'11				
	4522 Nov 18 13:38	0°♂		superior conj	4523 Oct 27 10:31	4°Π49'04	1°20'11
max. Earth dist.	4522 Nov 21 15:10	5°♂06'26	1.42521 AU	minimum elong	4523 Oct 27 14:13	5°Π06'03	1°19'48
desc. node	4522 Nov 21 23:37	5°♂41'13		max. Earth dist.	4523 Nov 03 22:48	18°Π11'08	1.40577 AU
evening rise	4522 Nov 27 22:20	15°♂16'14		evening rise	4523 Nov 08 10:50	25°Π45'56	
	4522 Dec 07 12:34	0°♂		desc. node	4523 Nov 08 20:38	26°Π26'20	
	4522 Dec 29 22:21	0°≈			4523 Nov 11 01:07	0°♂	
evening max el	4522 Dec 30 07:41	0°≈23'54	22°09'26		4523 Dec 01 06:44	0°♂	
retrograde	4523 Jan 08 19:04	6°≈02'11		evening max el	4523 Dec 12 22:37	14°♂01'20	23°29'08
asc. node	4523 Jan 12 05:36	4°≈59'18		retrograde	4523 Dec 23 12:59	20°♂17'18	
evening set	4523 Jan 13 07:06	4°≈13'22		evening set	4523 Dec 28 13:25	18°♂12'43	
	4523 Jan 17 02:23	30°κ♂		asc. node	4523 Dec 30 02:38	16°♂42'48	
inferior conj	4523 Jan 18 15:27	27°♂52'57	2°01'40	inferior conj	4524 Jan 02 23:14	11°♂47'35	1°16'34
minimum elong	4523 Jan 18 13:10	28°♂00'53	2°00'54	minimum elong	4524 Jan 02 21:34	11°♂53'18	1°15'55
min. Earth dist.	4523 Jan 18 14:32	27°♂56'05	0.68030 AU	min. Earth dist.	4524 Jan 02 11:21	12°♂28'20	0.67987 AU
morning rise	4523 Jan 23 19:05	21°♂42'14		morning rise	4524 Jan 08 05:40	5°♂41'08	
direct	4523 Jan 28 13:41	19°♂41'25		direct	4524 Jan 12 10:08	4°♂03'04	
morning max el	4523 Feb 07 02:59	25°♂19'14	22°23'51	morning max el	4524 Jan 20 19:23	8°♂54'00	21°01'33
	4523 Feb 11 08:15	0°≈		desc. node	4524 Feb 04 19:51	28°♂19'35	
desc. node	4523 Feb 17 22:50	8°≈30'40			4524 Feb 05 23:28	0°≈	
	4523 Mar 04 16:01	0°♂		morning set	4524 Feb 20 03:47	21°≈29'37	
morning set	4523 Mar 12 18:14	12°♂49'24			4524 Feb 25 12:23	0°♂	
max. Earth dist.	4523 Mar 17 21:06	21°♂19'16	1.40657 AU	max. Earth dist.	4524 Feb 27 23:41	4°♂00'09	1.42649 AU
	4523 Mar 22 21:51	0°♀					
				superior conj	4524 Mar 06 02:24	15°♂50'52	-2°07'52
superior conj	4523 Mar 25 16:07	4°♀54'28	-1°57'04	minimum elong	4524 Mar 06 03:31	15°♂55'39	2°07'51
minimum elong	4523 Mar 25 20:28	5°♀13'59	1°56'46		4524 Mar 14 05:25	0°♀	
evening rise	4523 Apr 04 20:07	23°♀42'58		evening rise	4524 Mar 17 17:17	6°♀14'50	
	4523 Apr 08 04:51	0°♂		asc. node	4524 Mar 27 01:56	22°♀35'36	
asc. node	4523 Apr 10 04:55	3°♂39'29			4524 Apr 01 03:53	0°♂	
evening max el	4523 Apr 21 00:16	19°♂34'49	18°20'03	evening max el	4524 Apr 03 11:23	2°♂35'39	18°07'03
retrograde	4523 Apr 28 06:34	23°♂11'39		retrograde	4524 Apr 10 02:15	5°♂58'53	
evening set	4523 Apr 30 15:53	22°♂49'10		evening set	4524 Apr 12 18:09	5°♂26'03	
inferior conj	4523 May 07 21:45	18°♂11'21	2°22'33	inferior conj	4524 Apr 19 07:59	0°♂27'43	3°09'52
minimum elong	4523 May 08 01:21	18°♂03'47	2°21'36	minimum elong	4524 Apr 19 10:38	0°♂21'18	3°09'25
min. Earth dist.	4523 May 11 08:17	15°♂19'26	0.58932 AU		4524 Apr 19 19:22	30°κ♀	
morning rise	4523 May 15 07:50	12°♂36'13		min. Earth dist.	4524 Apr 22 12:15	27°♀24'06	0.61126 AU
desc. node	4523 May 16 22:04	11°♂50'16		morning rise	4524 Apr 26 01:07	24°♀32'35	
direct	4523 May 21 12:43	10°♂52'58		direct	4524 May 02 18:45	22°♀16'07	
morning max el	4523 Jun 04 22:09	18°♂40'02	27°13'49	desc. node	4524 May 02 19:04	22°♀16'07	
	4523 Jun 14 10:57	0°Π			4524 May 16 18:58	0°♂	
	4523 Jul 02 05:24	0°♂		morning max el	4524 May 17 00:20	0°♂13'15	27°48'56
morning set	4523 Jul 05 15:03	6°♂57'27			4524 Jun 07 12:11	0°Π	
asc. node	4523 Jul 07 04:11	10°♂13'53		morning set	4524 Jun 18 19:46	21°Π24'55	
					4524 Jun 22 21:30	0°♂	
superior conj	4523 Jul 12 16:52	22°♂17'28	0°55'05	asc. node	4524 Jun 23 01:13	0°♂19'57	
minimum elong	4523 Jul 12 14:47	22°♂05'56	0°54'41	max. Earth dist.	4524 Jun 24 19:05	4°♂06'59	1.32146 AU

superior conj	4524 Jun 26 03:40	7°☿05'11	0°32'00	minimum elong	4525 Jun 10 11:17	21°♂37'53	0°05'45
minimum elong	4524 Jun 26 02:16	6°☿57'31	0°31'42	behind sun begin	4525 Jun 10 06:20	21°♂11'11	
evening rise	4524 Jul 02 23:40	21°☿58'52		behind sun end	4525 Jun 10 16:14	22°♂04'37	
	4524 Jul 06 20:26	0°♂			4525 Jun 14 07:55	0°☿	
	4524 Jul 25 13:46	0°♂		evening rise	4525 Jun 17 11:29	6°☿45'58	
evening max el	4524 Jul 29 05:29	3°♂52'00	24°59'56		4525 Jun 29 17:24	0°♂	
desc. node	4524 Jul 29 18:23	4°♂22'23		evening max el	4525 Jul 10 18:17	14°♂18'44	23°24'38
retrograde	4524 Aug 12 03:59	10°♂54'50		desc. node	4525 Jul 16 15:24	18°♂52'21	
evening set	4524 Aug 17 15:17	9°♂46'47		retrograde	4525 Jul 24 07:26	21°♂05'44	
min. Earth dist.	4524 Aug 22 17:03	7°♂02'08	0.57346 AU	evening set	4525 Jul 28 07:02	20°♂31'01	
inferior conj	4524 Aug 25 15:36	5°♂04'48	-5°13'53	min. Earth dist.	4525 Aug 04 03:53	17°♂20'47	0.55764 AU
minimum elong	4524 Aug 25 16:06	5°♂03'59	5°13'54	inferior conj	4525 Aug 06 03:00	16°♂11'15	-4°53'59
morning rise	4524 Sep 02 19:16	0°♂54'42		minimum elong	4525 Aug 05 21:14	16°♂19'47	4°53'11
direct	4524 Sep 05 08:57	0°♂35'36		morning rise	4525 Aug 14 13:51	12°♂17'50	
morning max el	4524 Sep 14 09:30	4°♂50'38	19°10'05	direct	4525 Aug 17 10:48	11°♂57'40	
asc. node	4524 Sep 19 00:26	10°♂14'32		morning max el	4525 Aug 27 23:13	16°♂50'47	20°19'19
	4524 Sep 30 08:03	0°♂		asc. node	4525 Sep 05 21:29	28°♂24'24	
morning set	4524 Oct 01 07:09	1°♂54'17			4525 Sep 06 20:29	0°♂	
				morning set	4525 Sep 15 12:43	16°♂31'08	
superior conj	4524 Oct 09 12:28	18°♂09'32	1°36'15		4525 Sep 22 02:11	0°♂	
minimum elong	4524 Oct 09 14:46	18°♂20'37	1°36'06				
	4524 Oct 15 19:46	0°♂		superior conj	4525 Sep 23 03:28	2°♂08'17	1°43'19
max. Earth dist.	4524 Oct 16 03:31	0°♂35'13	1.38484 AU	minimum elong	4525 Sep 23 04:07	2°♂11'36	1°43'18
evening rise	4524 Oct 19 22:35	7°♂19'19		max. Earth dist.	4525 Sep 28 10:06	12°♂33'04	1.36481 AU
desc. node	4524 Oct 25 17:40	17°♂05'23		evening rise	4525 Oct 02 07:20	19°♂50'22	
	4524 Nov 02 23:41	0°♂			4525 Oct 08 01:14	0°♂	
evening max el	4524 Nov 24 11:35	27°♂43'07	24°47'29	desc. node	4525 Oct 12 14:43	7°♂33'40	
	4524 Nov 26 22:51	0°♂			4525 Oct 28 00:54	0°♂	
retrograde	4524 Dec 06 02:51	4°♂29'06		evening max el	4525 Nov 07 00:09	11°♂26'26	25°57'23
evening set	4524 Dec 11 16:50	2°♂09'29		retrograde	4525 Nov 19 11:57	18°♂32'38	
	4524 Dec 13 20:34	30°♂		evening set	4525 Nov 25 15:40	16°♂00'18	
asc. node	4524 Dec 15 23:39	27°♂22'16		min. Earth dist.	4525 Nov 29 22:17	11°♂25'10	0.66840 AU
min. Earth dist.	4524 Dec 16 06:43	26°♂59'07	0.67591 AU	inferior conj	4525 Dec 01 08:08	9°♂39'12	-0°31'16
inferior conj	4524 Dec 17 05:25	25°♂44'01	0°25'15	minimum elong	4525 Dec 01 08:58	9°♂36'37	0°30'55
minimum elong	4524 Dec 17 04:47	25°♂46'04	0°24'59	asc. node	4525 Dec 02 20:42	7°♂46'56	
morning rise	4524 Dec 22 16:52	19°♂44'00		morning rise	4525 Dec 07 02:41	3°♂48'09	
direct	4524 Dec 26 08:30	18°♂27'20		direct	4525 Dec 10 07:13	2°♂49'55	
morning max el	4525 Jan 02 19:37	22°♂40'24	19°51'17	morning max el	4525 Dec 17 03:31	6°♂36'50	18°56'02
	4525 Jan 08 23:05	0°♂			4526 Jan 02 20:27	0°♂	
desc. node	4525 Jan 21 16:53	18°♂30'13		morning set	4526 Jan 08 07:43	8°♂32'15	
morning set	4525 Jan 28 23:48	29°♂38'57		desc. node	4526 Jan 08 13:57	8°♂56'38	
	4525 Jan 29 05:15	0°♂			4526 Jan 22 00:51	0°♂	
max. Earth dist.	4525 Feb 09 10:23	17°♂33'32	1.44194 AU	max. Earth dist.	4526 Jan 23 03:12	1°♂43'32	1.45098 AU
superior conj	4525 Feb 14 11:02	25°♂38'11	-2°02'40	superior conj	4526 Jan 24 21:19	4°♂29'12	-1°37'52
minimum elong	4525 Feb 14 06:12	25°♂18'35	2°02'27	minimum elong	4526 Jan 24 12:06	3°♂52'54	1°37'01
	4525 Feb 17 03:13	0°♂		evening rise	4526 Feb 08 23:48	28°♂38'32	
evening rise	4525 Feb 27 19:41	17°♂54'43			4526 Feb 09 19:51	0°♂	
	4525 Mar 06 22:25	0°♂		asc. node	4526 Feb 28 20:00	28°♂36'24	
asc. node	4525 Mar 13 22:57	10°♂57'47		evening max el	4526 Mar 01 12:00	29°♂18'24	18°37'28
evening max el	4525 Mar 18 00:13	15°♂52'14	18°13'06		4526 Mar 02 05:05	0°♂	
retrograde	4525 Mar 24 10:11	19°♂16'36		retrograde	4526 Mar 08 02:11	2°♂56'46	
evening set	4525 Mar 27 08:11	18°♂32'04		evening set	4526 Mar 11 06:20	1°♂59'47	
inferior conj	4525 Apr 02 09:59	13°♂14'05	3°31'40		4526 Mar 13 18:36	30°♂	
minimum elong	4525 Apr 02 10:56	13°♂11'28	3°31'36	inferior conj	4526 Mar 16 23:46	26°♂23'48	3°33'57
min. Earth dist.	4525 Apr 05 00:57	10°♂22'23	0.63213 AU	minimum elong	4526 Mar 16 23:10	26°♂25'37	3°33'56
morning rise	4525 Apr 08 12:37	7°♂07'39		min. Earth dist.	4526 Mar 18 23:11	24°♂01'01	0.64995 AU
direct	4525 Apr 15 09:39	4°♂27'50		morning rise	4526 Mar 22 15:28	20°♂11'40	
desc. node	4525 Apr 19 16:06	5°♂21'44		direct	4526 Mar 29 08:04	17°♂21'49	
morning max el	4525 Apr 29 07:34	12°♂26'37	27°46'24	desc. node	4526 Apr 06 13:08	20°♂39'48	
	4525 May 13 07:04	0°♂		morning max el	4526 Apr 11 17:29	25°♂12'46	27°09'19
	4525 May 30 23:04	0°♂			4526 Apr 16 02:20	0°♂	
morning set	4525 Jun 02 18:05	5°♂29'42			4526 May 06 18:37	0°♂	
max. Earth dist.	4525 Jun 08 00:14	16°♂21'41	1.32745 AU	morning set	4526 May 17 07:09	19°♂03'44	
asc. node	4525 Jun 09 22:14	20°♂27'37		max. Earth dist.	4526 May 21 20:31	28°♂07'23	1.33799 AU
					4526 May 22 18:31	0°♂	
superior conj	4525 Jun 10 11:34	21°♂39'24	0°05'49				

superior conj	4526 May 25 14:36	5°II54'19	-0°22'40	max. Earth dist.	4527 May 04 05:19	9°822'15	1.35312 AU
minimum elong	4526 May 25 15:47	6°II00'33	0°22'25				
asc. node	4526 May 27 19:18	10°II33'05		superior conj	4527 May 09 10:18	19°843'03	-0°52'08
evening rise	4526 Jun 01 22:14	21°II25'14		minimum elong	4527 May 09 13:08	19°857'27	0°51'36
	4526 Jun 06 03:00	0°☾			4527 May 14 10:08	0°II	
evening max el	4526 Jun 22 10:42	24°☾45'09	21°49'02	asc. node	4527 May 14 16:21	0°II32'16	
	4526 Jun 30 01:20	0°♂		evening rise	4527 May 17 05:54	5°II50'19	
desc. node	4526 Jul 03 12:24	0°♂52'48			4527 May 30 17:57	0°☾	
retrograde	4526 Jul 04 23:58	0°♂57'56		evening max el	4527 Jun 04 13:43	5°☾41'31	20°25'47
evening set	4526 Jul 07 15:22	0°♂42'14		retrograde	4527 Jun 15 13:08	11°☾03'31	
	4526 Jul 10 04:08	30°♂☾		evening set	4527 Jun 17 12:49	10°☾53'42	
inferior conj	4526 Jul 16 23:29	26°☾39'34	-3°43'01	desc. node	4527 Jun 20 09:24	10°☾07'54	
minimum elong	4526 Jul 16 14:49	26°☾51'42	3°40'36	inferior conj	4527 Jun 26 17:31	6°☾56'02	-1°52'29
min. Earth dist.	4526 Jul 16 14:08	26°☾52'39	0.54898 AU	minimum elong	4527 Jun 26 12:14	7°☾03'43	1°50'34
morning rise	4526 Jul 25 15:42	22°☾48'05		min. Earth dist.	4527 Jun 28 02:06	6°☾08'36	0.54967 AU
direct	4526 Jul 28 22:08	22°☾24'40		morning rise	4527 Jul 05 10:38	2°☾45'36	
morning max el	4526 Aug 10 01:08	28°☾05'43	21°48'22	direct	4527 Jul 09 08:02	2°☾12'54	
	4526 Aug 11 23:01	0°♂		morning max el	4527 Jul 22 18:10	8°☾43'44	23°30'10
asc. node	4526 Aug 23 18:33	17°♂13'11			4527 Aug 07 04:12	0°♂	
	4526 Aug 30 06:57	0°♂		asc. node	4527 Aug 10 15:37	6°♂31'09	
morning set	4526 Aug 30 22:08	1°♂18'55		morning set	4527 Aug 15 09:33	16°♂12'09	
					4527 Aug 21 19:29	0°♂	
superior conj	4526 Sep 07 03:35	16°♂33'57	1°42'49	superior conj	4527 Aug 22 09:49	1°♂17'18	1°35'57
minimum elong	4526 Sep 07 02:50	16°♂30'02	1°42'47	minimum elong	4527 Aug 22 08:05	1°♂07'59	1°35'48
max. Earth dist.	4526 Sep 10 23:12	24°♂26'34	1.34766 AU	max. Earth dist.	4527 Aug 24 21:05	6°♂33'51	1.33441 AU
	4526 Sep 13 18:04	0°♂		evening rise	4527 Aug 29 23:22	17°♂03'56	
evening rise	4526 Sep 15 08:59	3°♂08'52			4527 Sep 05 18:31	0°♂	
desc. node	4526 Sep 29 11:45	27°♂45'21		desc. node	4527 Sep 16 08:45	17°♂33'15	
	4526 Sep 30 22:25	0°♂			4527 Sep 25 09:14	0°♂	
evening max el	4526 Oct 20 12:43	25°♂04'03	26°51'20	evening max el	4527 Oct 03 00:44	8°♂26'52	27°22'11
	4526 Oct 26 16:08	0°♂		retrograde	4527 Oct 16 13:43	15°♂45'17	
retrograde	4526 Nov 02 15:43	2°♂20'37		evening set	4527 Oct 23 14:51	13°♂05'39	
	4526 Nov 08 21:56	30°♂♂		min. Earth dist.	4527 Oct 27 08:59	9°♂40'22	0.64290 AU
evening set	4526 Nov 09 07:51	29°♂40'35		inferior conj	4527 Oct 29 18:40	7°♂07'39	-2°34'06
min. Earth dist.	4526 Nov 13 07:44	25°♂41'07	0.65737 AU	minimum elong	4527 Oct 29 23:04	6°♂55'59	2°32'26
inferior conj	4526 Nov 15 05:20	23°♂28'35	-1°31'45	morning rise	4527 Nov 05 08:35	1°♂42'51	
minimum elong	4526 Nov 15 07:55	23°♂21'05	1°30'40	asc. node	4527 Nov 06 14:48	1°♂18'34	
asc. node	4526 Nov 19 17:46	18°♂52'16		direct	4527 Nov 07 21:24	1°♂10'13	
morning rise	4526 Nov 21 08:50	17°♂49'13		morning max el	4527 Nov 14 09:31	4°♂35'45	17°54'46
direct	4526 Nov 24 04:18	17°♂05'45		morning set	4527 Dec 01 11:27	0°♂32'11	
morning max el	4526 Nov 30 17:04	20°♂37'20	18°16'56		4527 Dec 01 03:52	0°♂	
	4526 Dec 07 23:11	0°♂		desc. node	4527 Dec 13 08:02	20°♂17'14	
morning set	4526 Dec 19 19:19	18°♂50'15					
desc. node	4526 Dec 26 10:59	29°♂33'29		superior conj	4527 Dec 14 16:06	22°♂27'07	-0°09'16
	4526 Dec 26 17:37	0°♂		minimum elong	4527 Dec 14 15:01	22°♂22'44	0°09'07
superior conj	4527 Jan 04 00:08	13°♂06'40	-0°56'35	behind sun begin	4527 Dec 14 06:32	21°♂48'26	
minimum elong	4527 Jan 03 17:09	12°♂39'11	0°55'40	behind sun end	4527 Dec 14 23:29	22°♂56'59	
max. Earth dist.	4527 Jan 05 22:22	16°♂08'13	1.45269 AU		4527 Dec 19 09:16	0°♂	
	4527 Jan 14 19:02	0°♂		max. Earth dist.	4527 Dec 19 16:55	0°♂30'19	1.44708 AU
evening rise	4527 Jan 20 05:05	8°♂28'18		evening rise	4527 Dec 30 18:02	17°♂43'20	
greatest brilliancy	4527 Jan 31 13:26	26°♂07'05	-0.7m		4528 Jan 07 19:19	0°♂	
	4527 Feb 03 03:06	0°♂		evening max el	4528 Jan 27 00:02	26°♂21'24	20°16'13
evening max el	4527 Feb 12 20:26	12°♂48'53	19°19'08		4528 Jan 31 12:08	0°♂	
asc. node	4527 Feb 15 17:03	15°♂18'18		asc. node	4528 Feb 02 14:04	0°♂48'58	
retrograde	4527 Feb 19 22:37	16°♂52'06		retrograde	4528 Feb 03 20:45	0°♂57'47	
evening set	4527 Feb 23 09:47	15°♂41'55			4528 Feb 07 00:35	30°♂♂	
inferior conj	4527 Feb 28 21:52	9°♂50'05	3°21'31	evening set	4528 Feb 07 16:16	29°♂33'24	
minimum elong	4527 Feb 28 20:08	9°♂55'40	3°21'17	inferior conj	4528 Feb 13 01:26	23°♂28'15	2°57'37
min. Earth dist.	4527 Mar 02 06:05	8°♂05'45	0.66381 AU	minimum elong	4528 Feb 12 23:06	23°♂36'08	2°57'06
morning rise	4527 Mar 06 06:12	3°♂35'46		min. Earth dist.	4528 Feb 13 19:46	22°♂26'02	0.67344 AU
direct	4527 Mar 12 12:58	0°♂48'46		morning rise	4528 Feb 18 05:42	17°♂14'04	
desc. node	4527 Mar 24 10:10	7°♂35'58		direct	4528 Feb 23 23:26	14°♂40'14	
morning max el	4527 Mar 25 03:22	8°♂18'43	26°05'04	morning max el	4528 Mar 06 12:02	21°♂33'52	24°43'19
	4527 Apr 11 02:30	0°♂		desc. node	4528 Mar 10 07:13	25°♂42'36	
	4527 Apr 29 06:00	0°♂			4528 Mar 13 19:54	0°♂	
morning set	4527 Apr 30 07:09	1°♂55'58			4528 Apr 03 08:44	0°♂	

morning set	4528 Apr 11 12:58	13° Υ 52'07		desc. node	4529 Feb 25 04:15	14° \approx 39'42	
max. Earth dist.	4528 Apr 15 03:52	20° Υ 22'50	1.37239 AU		4529 Mar 08 03:43	0° H	
	4528 Apr 20 06:51	0° B		morning set	4529 Mar 23 18:32	24° H 36'08	
					4529 Mar 26 22:46	0° Υ	
superior conj	4528 Apr 21 19:35	2° B 57'36	-1°20'45	max. Earth dist.	4529 Mar 27 23:00	1° Υ 44'50	1.39408 AU
minimum elong	4528 Apr 21 23:52	3° B 18'31	1°20'07				
evening rise	4528 Apr 30 08:07	19° B 54'28		superior conj	4529 Apr 04 14:29	15° Υ 28'07	-1°45'47
asc. node	4528 Apr 30 13:23	20° B 20'45		minimum elong	4529 Apr 04 19:21	15° Υ 50'39	1°45'18
	4528 May 05 12:31	0° II			4529 Apr 12 06:20	0° B	
evening max el	4528 May 17 05:12	17° II 19'48	19°21'01	evening rise	4529 Apr 14 01:59	3° B 30'17	
retrograde	4528 May 26 11:05	21° II 50'07		asc. node	4529 Apr 17 10:24	9° B 53'58	
evening set	4528 May 28 10:37	21° II 38'38		evening max el	4529 Apr 30 07:00	29° B 37'17	18°36'30
inferior conj	4528 Jun 05 23:18	17° II 31'10	0°05'15		4529 Apr 30 16:33	0° II	
minimum elong	4528 Jun 05 23:31	17° II 30'48	0°05'10	retrograde	4529 May 08 03:10	3° II 28'48	
transit middle	4528 Jun 05 23:31	17° II 30'48	0°05'10	evening set	4529 May 10 08:43	3° II 11'07	
transit begin	4528 Jun 05 19:52	17° II 36'48			4529 May 16 09:19	30° R B	
transit end	4528 Jun 06 03:11	17° II 24'48		inferior conj	4529 May 18 01:23	28° B 44'54	1°41'28
desc. node	4528 Jun 06 06:25	17° II 19'28		minimum elong	4529 May 18 04:39	28° B 38'38	1°40'26
min. Earth dist.	4528 Jun 08 16:24	15° II 44'56	0.55988 AU	min. Earth dist.	4529 May 21 10:07	26° B 11'25	0.57735 AU
morning rise	4528 Jun 14 09:29	12° II 47'32		desc. node	4529 May 24 03:26	24° B 22'41	
direct	4528 Jun 19 04:42	11° II 54'54		morning rise	4529 May 25 21:22	23° B 26'43	
morning max el	4528 Jul 03 07:51	19° II 05'20	25°11'52	direct	4529 May 31 15:23	22° B 03'44	
	4528 Jul 12 12:08	0° B		morning max el	4529 Jun 15 00:19	29° B 39'44	26°37'28
asc. node	4528 Jul 27 12:39	26° B 09'46			4529 Jun 15 08:35	0° II	
	4528 Jul 29 08:57	0° Q			4529 Jul 06 07:13	0° B	
morning set	4528 Jul 29 21:13	1° Q 04'45		morning set	4529 Jul 14 07:34	15° B 51'58	
				asc. node	4529 Jul 14 09:41	16° B 03'05	
superior conj	4528 Aug 05 19:43	16° Q 09'29	1°23'41		4529 Jul 20 19:41	0° Q	
minimum elong	4528 Aug 05 17:28	15° Q 57'11	1°23'23	superior conj	4529 Jul 21 07:20	1° Q 04'21	1°06'43
max. Earth dist.	4528 Aug 07 02:44	18° Q 58'57	1.32544 AU	minimum elong	4529 Jul 21 05:03	0° Q 51'45	1°06'20
	4528 Aug 12 06:34	0° np		max. Earth dist.	4529 Jul 21 13:11	1° Q 36'39	1.32069 AU
evening rise	4528 Aug 12 22:52	1° np 24'17		evening rise	4529 Jul 28 04:38	16° Q 01'25	
	4528 Aug 28 16:47	0° B			4529 Aug 04 04:55	0° np	
desc. node	4528 Sep 02 05:45	6° B 46'29		desc. node	4529 Aug 20 02:45	25° np 10'58	
evening max el	4528 Sep 14 10:15	21° B 21'23	27°23'46		4529 Aug 24 03:14	0° B	
retrograde	4528 Sep 28 04:55	28° B 36'20		evening max el	4529 Aug 27 14:33	3° B 34'37	26°52'04
evening set	4528 Oct 05 09:17	26° B 08'03		retrograde	4529 Sep 10 12:16	10° B 44'59	
min. Earth dist.	4528 Oct 09 00:15	23° B 11'47	0.62524 AU	evening set	4529 Sep 17 10:51	8° B 40'15	
inferior conj	4528 Oct 11 21:13	20° B 28'40	-3°35'03	min. Earth dist.	4529 Sep 21 04:40	6° B 02'19	0.60525 AU
minimum elong	4528 Oct 12 03:02	20° B 14'51	3°33'15	inferior conj	4529 Sep 24 09:38	3° B 22'44	-4°28'51
morning rise	4528 Oct 18 22:28	15° B 21'44		minimum elong	4529 Sep 24 15:33	3° B 10'24	4°27'36
direct	4528 Oct 21 07:24	14° B 56'19			4529 Sep 28 22:02	30° R np	
asc. node	4528 Oct 23 11:51	15° B 18'31		morning rise	4529 Oct 01 22:12	28° np 37'03	
morning max el	4528 Oct 28 01:48	18° B 23'51	17°50'27	direct	4529 Oct 04 06:28	28° np 15'50	
	4528 Nov 05 11:05	0° ml			4529 Oct 09 08:00	0° B	
morning set	4528 Nov 13 02:13	13° ml 19'07		asc. node	4529 Oct 10 08:53	0° B 46'45	
	4528 Nov 22 14:29	0° J		morning max el	4529 Oct 11 14:45	1° B 53'39	18°05'09
superior conj	4528 Nov 24 09:12	3° J 01'39	0°33'29	morning set	4529 Oct 27 09:17	26° B 52'19	
minimum elong	4528 Nov 24 12:14	3° J 14'28	0°33'03		4529 Oct 29 01:30	0° ml	
desc. node	4528 Nov 29 05:03	11° J 04'06		superior conj	4529 Nov 06 04:13	14° ml 51'38	1°06'16
max. Earth dist.	4528 Dec 01 08:40	14° J 34'24	1.43482 AU	minimum elong	4529 Nov 06 08:17	15° ml 09'44	1°05'46
evening rise	4528 Dec 09 04:58	27° J 00'26		max. Earth dist.	4529 Nov 13 19:53	28° ml 05'44	1.41736 AU
	4528 Dec 11 03:26	0° B			4529 Nov 14 23:17	0° J	
	4528 Dec 31 16:54	0° \approx		desc. node	4529 Nov 16 02:04	1° J 50'42	
evening max el	4529 Jan 08 22:11	9° \approx 55'32	21°25'39	evening rise	4529 Nov 19 05:18	6° J 56'37	
retrograde	4529 Jan 17 18:24	15° \approx 10'16			4529 Dec 04 08:23	0° B	
asc. node	4529 Jan 19 11:05	14° \approx 54'44		evening max el	4529 Dec 22 15:21	23° B 31'28	22°43'05
evening set	4529 Jan 21 23:59	13° \approx 30'36		retrograde	4530 Jan 01 14:00	29° B 25'43	
inferior conj	4529 Jan 27 08:10	7° \approx 15'00	2°24'26	evening set	4530 Jan 06 07:15	27° B 30'03	
minimum elong	4529 Jan 27 05:44	7° \approx 23'26	2°23'42	asc. node	4530 Jan 06 08:06	27° B 28'17	
min. Earth dist.	4529 Jan 27 14:00	6° \approx 54'49	0.67896 AU	inferior conj	4530 Jan 11 16:05	21° B 07'18	1°43'22
morning rise	4529 Feb 01 11:18	1° \approx 02'41		minimum elong	4530 Jan 11 14:00	21° B 14'30	1°42'37
	4529 Feb 02 20:03	30° R B		min. Earth dist.	4530 Jan 11 10:25	21° B 26'55	0.68063 AU
direct	4529 Feb 06 14:30	28° B 48'44		morning rise	4530 Jan 16 20:39	14° B 58'25	
	4529 Feb 10 17:46	0° \approx		direct	4530 Jan 21 09:11	13° B 07'19	
morning max el	4529 Feb 16 20:59	4° \approx 54'44	23°14'27				

morning max el	4530 Jan 30 09:47	18°  23'43	21°47'39	morning max el	4531 Jan 13 05:36	2°  04'36	20°30'03
	4530 Feb 08 23:56	0° 		desc. node	4531 Jan 29 22:20	24°  11'55	
desc. node	4530 Feb 12 01:17	4°  12'37			4531 Feb 02 19:35	0° 	
	4530 Mar 01 07:25	0° 		morning set	4531 Feb 10 20:36	12°  17'38	
morning set	4530 Mar 03 19:22	3°  57'48		max. Earth dist.	4531 Feb 20 04:41	27°  02'32	1.43378 AU
max. Earth dist.	4530 Mar 09 22:15	13°  56'30	1.41550 AU		4531 Feb 22 00:31	0° 	
superior conj	4530 Mar 17 14:04	27°  01'40	-2°03'16	superior conj	4531 Feb 26 13:39	7°  28'51	-2°07'55
minimum elong	4530 Mar 17 17:27	27°  16'29	2°03'06	minimum elong	4531 Feb 26 12:27	7°  23'51	2°07'54
	4530 Mar 19 06:29	0° 		evening rise	4531 Mar 10 21:43	28°  39'26	
evening rise	4530 Mar 28 07:54	16°  28'05			4531 Mar 11 16:04	0° 	
asc. node	4530 Apr 04 07:25	29°  05'23		asc. node	4531 Mar 22 04:26	17°  48'16	
	4530 Apr 04 20:07	0° 		evening max el	4531 Mar 28 03:48	25°  32'17	18°07'14
evening max el	4530 Apr 13 15:38	12°  24'10	18°12'06	retrograde	4531 Apr 03 15:33	28°  54'40	
retrograde	4530 Apr 20 13:57	15°  53'28		evening set	4531 Apr 06 09:57	28°  17'06	
evening set	4530 Apr 23 02:11	15°  26'43		inferior conj	4531 Apr 12 18:12	23°  10'08	3°21'50
inferior conj	4530 Apr 30 00:42	10°  39'43	2°46'10	minimum elong	4531 Apr 12 20:08	23°  05'08	3°21'35
minimum elong	4530 Apr 30 04:03	10°  32'11	2°45'24	min. Earth dist.	4531 Apr 15 17:17	20°  08'53	0.62042 AU
min. Earth dist.	4530 May 03 09:35	7°  40'01	0.59863 AU	morning rise	4531 Apr 19 04:43	17°  08'54	
morning rise	4530 May 07 03:24	4°  54'50		direct	4531 Apr 26 00:42	14°  41'03	
desc. node	4530 May 11 00:28	3°  15'57		desc. node	4531 Apr 27 21:31	14°  51'19	
direct	4530 May 13 14:41	2°  57'07		morning max el	4531 May 10 03:55	22°  40'33	27°52'23
morning max el	4530 May 27 23:02	10°  48'50	27°33'25		4531 May 16 15:21	0° 	
	4530 Jun 11 20:58	0° 			4531 Jun 05 01:26	0° 	
	4530 Jun 28 09:30	0° 		morning set	4531 Jun 12 17:13	14°  46'45	
morning set	4530 Jun 28 14:54	0°  28'02		asc. node	4531 Jun 18 03:45	26°  12'31	
asc. node	4530 Jul 01 06:42	6°  05'28		max. Earth dist.	4531 Jun 18 09:16	26°  42'21	1.32344 AU
max. Earth dist.	4530 Jul 05 00:43	14°  15'31	1.31999 AU		4531 Jun 19 21:43	0° 	
superior conj	4530 Jul 05 18:54	15°  55'40	0°45'42	superior conj	4531 Jun 20 04:42	0°  38'02	0°21'12
minimum elong	4530 Jul 05 17:03	15°  45'28	0°45'20	minimum elong	4531 Jun 20 03:43	0°  32'44	0°21'00
	4530 Jul 12 05:25	0° 		evening rise	4531 Jun 27 01:56	15°  36'01	
evening rise	4530 Jul 12 14:20	0°  47'31			4531 Jul 04 05:22	0° 	
	4530 Jul 28 10:56	0° 		evening max el	4531 Jul 22 01:28	25°  39'35	24°20'24
desc. node	4530 Aug 06 23:45	12°  27'01		desc. node	4531 Jul 24 20:46	28°  07'19	
evening max el	4530 Aug 09 11:20	14°  58'40	25°48'13		4531 Jul 27 12:40	0° 	
retrograde	4530 Aug 23 10:27	22°  27'05'31		retrograde	4531 Aug 04 21:41	2°  38'27	
evening set	4530 Aug 29 14:45	20°  35'00		evening set	4531 Aug 09 18:22	1°  45'44	
min. Earth dist.	4530 Sep 02 23:31	17°  58'32	0.58456 AU		4531 Aug 13 13:57	30°  R	
inferior conj	4530 Sep 06 04:24	15°  40'12	-5°05'50	min. Earth dist.	4531 Aug 15 12:21	28°  51'50	0.56595 AU
minimum elong	4530 Sep 06 07:49	15°  34'01	5°05'31	inferior conj	4531 Aug 18 03:06	27°  13'03	-5°11'25
morning rise	4530 Sep 14 03:09	11°  27'53		minimum elong	4531 Aug 18 00:56	27°  16'29	5°11'18
direct	4530 Sep 16 14:00	10°  27'58'34		morning rise	4531 Aug 26 10:04	23°  11'35	
morning max el	4530 Sep 24 21:06	14°  56'23	18°40'20	direct	4531 Aug 29 02:24	22°  52'23	
asc. node	4530 Sep 27 05:56	17°  29'43		morning max el	4531 Sep 07 17:40	27°  22'11	19°37'02
	4530 Oct 05 08:45	0° 			4531 Sep 10 05:36	0° 	
morning set	4530 Oct 11 03:50	10°  45'57'57		asc. node	4531 Sep 14 02:59	5°  27'11'55	
				morning set	4531 Sep 25 06:09	25°  25'24	
superior conj	4530 Oct 19 20:30	27°  44'02	1°28'11		4531 Sep 27 12:32	0° 	
minimum elong	4530 Oct 19 23:41	27°  45'58'57	1°27'55	superior conj	4531 Oct 03 04:33	11°  42'27	1°40'16
	4530 Oct 21 01:35	0° 		minimum elong	4531 Oct 03 06:09	11°  40'18	1°40'11
max. Earth dist.	4530 Oct 27 02:13	10°  53'58	1.39685 AU	max. Earth dist.	4531 Oct 09 06:37	23°  40'27	1.37596 AU
evening rise	4530 Oct 31 03:39	17°  53'11		evening rise	4531 Oct 13 00:45	29°  45'58	
desc. node	4530 Nov 02 23:05	22°  33'44			4531 Oct 13 02:34	0° 	
	4530 Nov 07 14:12	0° 		desc. node	4531 Oct 20 20:07	13°  48'35	
	4530 Nov 28 19:14	0° 			4531 Oct 31 21:03	0° 	
evening max el	4530 Dec 05 05:08	7°  31'04'47	24°02'57	evening max el	4531 Nov 17 17:36	20°  53'01	25°18'41
retrograde	4530 Dec 16 06:23	13°  40'47		retrograde	4531 Nov 29 18:31	27°  49'49	
evening set	4530 Dec 21 12:35	11°  29'20		evening set	4531 Dec 05 14:19	25°  42'15	
asc. node	4530 Dec 24 05:08	8°  40'39		min. Earth dist.	4531 Dec 10 00:56	20°  52'41	0.67309 AU
inferior conj	4530 Dec 26 23:25	5°  03'25	0°55'32	inferior conj	4531 Dec 11 04:22	18°  59'46	0°01'51
minimum elong	4530 Dec 26 22:09	5°  07'44	0°55'01	minimum elong	4531 Dec 11 04:19	18°  59'56	0°01'51
min. Earth dist.	4530 Dec 26 06:50	5°  59'32	0.67862 AU	transit middle	4531 Dec 11 04:19	18°  59'56	0°01'51
	4530 Dec 31 03:35	30°  R		transit begin	4531 Dec 11 01:33	19°  48'55	
morning rise	4531 Jan 01 07:45	28°  47'59'39		transit end	4531 Dec 11 07:05	18°  50'57	
direct	4531 Jan 05 06:31	27° 47'31'10		asc. node	4531 Dec 11 02:12	19° 47'06'50	
	4531 Jan 10 22:31	0°					

morning rise	4531 Dec 16 18:36	13° ♊ 03'13		inferior conj	4532 Nov 24 05:01	2° ♊ 53'01	-0°56'33
direct	4531 Dec 20 05:10	11° ♊ 54'58		minimum elong	4532 Nov 24 06:33	2° ♊ 48'19	0°55'52
morning max el	4531 Dec 27 09:17	15° ♊ 55'58	19°25'52	asc. node	4532 Nov 26 23:16	29° ♋ 42'08	
	4532 Jan 07 05:19	0° ♋			4532 Nov 26 16:30	30° ♋	
greatest brilliancy	4532 Jan 09 14:20	3° ♋ 31'32	-0.7m	morning rise	4532 Nov 30 03:08	27° ♋ 06'17	
desc. node	4532 Jan 16 19:23	14° ♋ 29'48		direct	4532 Dec 03 03:31	26° ♋ 14'47	
morning set	4532 Jan 20 18:39	20° ♋ 37'10			4532 Dec 09 22:05	0° ♌	
	4532 Jan 26 19:38	0° ♌		morning max el	4532 Dec 09 19:47	29° ♋ 54'14	18°37'17
max. Earth dist.	4532 Feb 02 17:42	10° ♌ 51'28	1.44662 AU	morning set	4532 Dec 30 13:19	0° ♋ 03'46	
					4532 Dec 30 12:22	0° ♋	
superior conj	4532 Feb 06 11:49	16° ♌ 49'23	-1°54'34	desc. node	4533 Jan 02 16:25	5° ♋ 00'53	
minimum elong	4532 Feb 06 04:32	16° ♌ 20'18	1°54'06				
	4532 Feb 14 15:09	0° ♌		superior conj	4533 Jan 15 16:26	25° ♋ 27'44	-1°21'53
evening rise	4532 Feb 20 15:01	9° ♌ 55'56		minimum elong	4533 Jan 15 07:19	24° ♋ 52'00	1°20'52
	4532 Mar 03 21:04	0° ♍		max. Earth dist.	4533 Jan 15 11:35	25° ♋ 08'44	1.45264 AU
asc. node	4532 Mar 08 01:28	5° ♍ 53'41			4533 Jan 18 13:49	0° ♌	
evening max el	4532 Mar 10 16:30	8° ♍ 54'00	18°21'16	evening rise	4533 Jan 31 09:02	20° ♌ 14'58	
retrograde	4532 Mar 17 03:22	12° ♍ 22'58			4533 Feb 06 11:36	0° ♌	
evening set	4532 Mar 20 03:50	11° ♍ 33'24		greatest brilliancy	4533 Feb 08 17:08	3° ♌ 32'30	-0.8m
inferior conj	4532 Mar 26 01:42	6° ♍ 07'47	3°34'39	evening max el	4533 Feb 22 03:11	22° ♌ 22'57	18°53'14
minimum elong	4532 Mar 26 01:57	6° ♍ 07'04	3°34'39	asc. node	4533 Feb 22 22:31	23° ♌ 10'06	
min. Earth dist.	4532 Mar 28 10:16	3° ♍ 26'22	0.64017 AU	retrograde	4533 Feb 28 21:29	26° ♌ 10'18	
morning rise	4532 Mar 31 23:13	29° ♌ 58'15		evening set	4533 Mar 04 04:32	25° ♌ 07'48	
	4532 Mar 31 22:22	30° ♌		inferior conj	4533 Mar 09 19:22	19° ♌ 25'04	3°30'14
direct	4532 Apr 07 19:15	27° ♌ 12'06		minimum elong	4533 Mar 09 18:14	19° ♌ 28'38	3°30'08
desc. node	4532 Apr 13 18:34	28° ♌ 57'42		min. Earth dist.	4533 Mar 11 12:16	17° ♌ 17'46	0.65640 AU
	4532 Apr 15 11:04	0° ♍		morning rise	4533 Mar 15 07:32	13° ♌ 11'53	
morning max el	4532 Apr 21 12:39	5° ♍ 09'43	27°34'23	direct	4533 Mar 21 20:40	10° ♌ 21'36	
	4532 May 10 08:12	0° ♎		desc. node	4533 Mar 31 15:37	15° ♌ 01'21	
morning set	4532 May 26 12:04	28° ♎ 40'25		morning max el	4533 Apr 03 22:32	18° ♌ 05'03	26°44'44
	4532 May 27 04:06	0° ♎			4533 Apr 13 22:57	0° ♍	
max. Earth dist.	4532 May 31 10:56	8° ♎ 45'16	1.33131 AU		4533 May 03 07:02	0° ♎	
				morning set	4533 May 09 20:05	11° ♎ 58'15	
superior conj	4532 Jun 03 10:51	15° ♎ 05'34	-0°06'04	max. Earth dist.	4533 May 14 02:17	20° ♎ 16'35	1.34388 AU
minimum elong	4532 Jun 03 11:10	15° ♎ 07'13	0°06'01				
behind sun begin	4532 Jun 03 06:08	14° ♎ 40'22		superior conj	4533 May 18 11:07	29° ♎ 10'44	-0°35'06
behind sun end	4532 Jun 03 16:11	15° ♎ 34'05		minimum elong	4533 May 18 12:59	29° ♎ 20'29	0°34'44
asc. node	4532 Jun 04 00:47	16° ♎ 20'09			4533 May 18 20:36	0° ♎	
	4532 Jun 10 09:36	0° ♏		asc. node	4533 May 21 21:49	6° ♎ 23'36	
evening rise	4532 Jun 10 13:34	0° ♏ 20'57		evening rise	4533 May 25 23:15	14° ♎ 55'12	
	4532 Jun 27 08:02	0° ♏			4533 Jun 02 15:32	0° ♏	
evening max el	4532 Jul 02 14:54	6° ♏ 02'58	22°43'13	evening max el	4533 Jun 14 11:24	16° ♏ 40'06	21°11'38
desc. node	4532 Jul 10 17:47	11° ♏ 38'13		retrograde	4533 Jun 26 09:30	22° ♏ 31'45	
retrograde	4532 Jul 15 20:20	12° ♏ 38'00		desc. node	4533 Jun 27 14:49	22° ♏ 28'14	
evening set	4532 Jul 19 04:29	12° ♏ 13'34		evening set	4533 Jun 28 16:05	22° ♏ 19'44	
min. Earth dist.	4532 Jul 26 23:00	8° ♏ 48'11	0.55285 AU	inferior conj	4533 Jul 08 00:48	18° ♏ 21'32	-2°59'19
inferior conj	4532 Jul 28 07:12	8° ♏ 02'08	-4°30'09	minimum elong	4533 Jul 07 16:55	18° ♏ 32'35	2°56'47
minimum elong	4532 Jul 27 23:28	8° ♏ 13'14	4°28'35	min. Earth dist.	4533 Jul 08 09:46	18° ♏ 08'58	0.54813 AU
morning rise	4532 Aug 05 20:33	4° ♏ 11'29		morning rise	4533 Jul 16 18:11	14° ♏ 24'28	
direct	4532 Aug 08 20:59	3° ♏ 50'24		direct	4533 Jul 20 06:26	13° ♏ 57'53	
morning max el	4532 Aug 20 02:21	9° ♏ 03'47	20°55'00	morning max el	4533 Aug 01 23:45	20° ♏ 00'30	22°30'38
asc. node	4532 Aug 31 00:03	23° ♏ 40'02			4533 Aug 10 07:27	0° ♏	
	4532 Sep 03 11:49	0° ♐		asc. node	4533 Aug 17 21:06	12° ♏ 42'14	
morning set	4532 Sep 08 13:37	10° ♐ 07'39		morning set	4533 Aug 24 00:06	24° ♏ 58'15	
					4533 Aug 26 09:04	0° ♐	
superior conj	4532 Sep 15 23:52	25° ♐ 34'02	1°43'57	superior conj	4533 Aug 31 02:53	10° ♐ 07'49	1°40'36
minimum elong	4532 Sep 15 23:53	25° ♐ 34'08	1°43'56	minimum elong	4533 Aug 31 01:40	10° ♐ 01'21	1°40'32
	4532 Sep 18 04:05	0° ♑		max. Earth dist.	4533 Sep 03 08:13	16° ♐ 53'21	1.34158 AU
max. Earth dist.	4532 Sep 20 15:13	4° ♑ 54'37	1.35707 AU	evening rise	4533 Sep 08 00:50	26° ♐ 20'22	
evening rise	4532 Sep 24 17:17	12° ♑ 45'04			4533 Sep 09 22:20	0° ♑	
	4532 Oct 04 13:08	0° ♑		desc. node	4533 Sep 23 14:08	23° ♑ 32'59	
desc. node	4532 Oct 06 17:07	3° ♑ 30'28			4533 Sep 27 21:49	0° ♑	
	4532 Oct 25 21:42	0° ♒		evening max el	4533 Oct 12 18:58	18° ♑ 08'32	27°07'46
evening max el	4532 Oct 30 06:15	4° ♒ 35'10	26°22'47	retrograde	4533 Oct 26 02:39	25° ♑ 25'54	
retrograde	4532 Nov 12 01:30	11° ♒ 47'08		evening set	4533 Nov 01 23:09	22° ♑ 45'12	
evening set	4532 Nov 18 10:34	9° ♒ 11'02		min. Earth dist.	4533 Nov 05 20:34	19° ♑ 00'28	0.65164 AU
min. Earth dist.	4532 Nov 22 14:19	4° ♒ 50'45	0.66411 AU				

inferior conj	4533 Nov 07 23:10	16°♄38'47	-1°58'07	retrograde	4534 Oct 08 21:36	8°♄37'23	
minimum elong	4533 Nov 08 02:32	16°♄29'21	1°56'45	evening set	4534 Oct 16 01:12	6°♄00'59	
asc. node	4533 Nov 13 20:19	11°♄18'30		min. Earth dist.	4534 Oct 19 17:30	2°♄49'15	0.63577 AU
morning rise	4533 Nov 14 06:55	11°♄04'59		inferior conj	4534 Oct 22 08:15	0°♄10'44	-3°00'24
direct	4533 Nov 16 23:20	10°♄26'26		minimum elong	4534 Oct 22 13:21	29°♂57'49	2°58'37
morning max el	4533 Nov 23 10:50	13°♄54'14	18°05'22		4534 Oct 22 12:30	30°♂♂	
	4533 Dec 04 21:13	0°♂		morning rise	4534 Oct 29 02:57	24°♂53'18	
morning set	4533 Dec 11 13:37	10°♂59'42		direct	4534 Oct 31 13:51	24°♂24'04	
desc. node	4533 Dec 20 13:25	25°♂41'07		asc. node	4534 Oct 31 17:22	24°♂24'10	
	4533 Dec 23 05:56	0°♂		morning max el	4534 Nov 07 03:36	27°♂49'05	17°50'45
					4534 Nov 09 02:59	0°♄	
superior conj	4533 Dec 25 22:29	4°♂16'59	-0°36'31	morning set	4534 Nov 23 16:09	23°♄11'35	
minimum elong	4533 Dec 25 17:56	3°♂58'57	0°35'54		4534 Nov 27 14:50	0°♂	
max. Earth dist.	4533 Dec 29 07:19	9°♂36'20	1.45119 AU				
evening rise	4534 Jan 11 06:05	29°♂46'58		superior conj	4534 Dec 06 00:22	14°♂06'58	0°09'54
	4534 Jan 11 09:27	0°♄		minimum elong	4534 Dec 06 01:26	14°♂11'19	0°09'45
greatest brilliancy	4534 Jan 24 11:36	20°♄02'16	-0.7m	behind sun begin	4534 Dec 05 17:40	13°♂39'22	
	4534 Jan 31 11:03	0°♂		behind sun end	4534 Dec 06 09:12	14°♂43'12	
evening max el	4534 Feb 05 09:46	5°♂55'06	19°41'42	desc. node	4534 Dec 07 10:26	16°♂26'28	
asc. node	4534 Feb 09 19:34	9°♂24'08		max. Earth dist.	4534 Dec 12 01:21	23°♂54'08	1.44256 AU
retrograde	4534 Feb 12 18:54	10°♂11'11			4534 Dec 15 21:46	0°♂	
evening set	4534 Feb 16 09:32	8°♂54'52		evening rise	4534 Dec 21 16:07	8°♂57'43	
inferior conj	4534 Feb 21 20:05	2°♂57'02	3°12'38		4535 Jan 04 15:48	0°♄	
minimum elong	4534 Feb 21 18:03	3°♂03'48	3°12'17	evening max el	4535 Jan 19 10:57	19°♄27'46	20°44'26
min. Earth dist.	4534 Feb 22 22:10	1°♂30'43	0.66843 AU	retrograde	4535 Jan 27 17:07	24°♄20'14	
	4534 Feb 24 02:22	30°♂♄		asc. node	4535 Jan 27 16:36	24°♄20'14	
morning rise	4534 Feb 27 02:21	26°♄42'50		evening set	4535 Jan 31 16:45	22°♄49'17	
direct	4534 Mar 05 03:53	24°♄00'34		inferior conj	4535 Feb 06 01:15	16°♄39'03	2°44'36
	4534 Mar 16 00:51	0°♂		minimum elong	4535 Feb 05 22:49	16°♄47'23	2°43'58
morning max el	4534 Mar 17 07:51	1°♂16'00	25°31'56	min. Earth dist.	4535 Feb 06 14:01	15°♄55'11	0.67624 AU
desc. node	4534 Mar 18 12:38	2°♂30'40		morning rise	4535 Feb 11 04:42	10°♄25'29	
	4534 Apr 07 23:37	0°♂		direct	4535 Feb 16 16:13	7°♄59'51	
morning set	4534 Apr 22 13:01	24°♂28'37		morning max el	4535 Feb 27 16:30	14°♄34'13	24°05'54
	4534 Apr 25 12:45	0°♂		desc. node	4535 Mar 05 09:39	21°♄00'41	
max. Earth dist.	4534 Apr 26 06:34	1°♂23'52	1.36097 AU		4535 Mar 12 06:34	0°♂	
					4535 Mar 31 21:28	0°♂	
superior conj	4534 May 02 02:49	12°♂46'25	-1°04'29	morning set	4535 Apr 04 09:15	5°♂55'57	
minimum elong	4534 May 02 06:19	13°♂03'56	1°03'53	max. Earth dist.	4535 Apr 08 03:00	12°♂30'26	1.38147 AU
asc. node	4534 May 08 18:50	26°♂19'07					
evening rise	4534 May 10 04:56	29°♂12'49		superior conj	4535 Apr 15 06:28	25°♂43'11	-1°32'01
	4534 May 10 14:14	0°♂		minimum elong	4535 Apr 15 11:10	26°♂05'38	1°31'24
evening max el	4534 May 27 19:43	27°♂53'37	19°55'41		4535 Apr 17 11:53	0°♂	
	4534 May 30 06:18	0°♂		evening rise	4535 Apr 24 03:58	13°♂06'01	
retrograde	4534 Jun 07 00:53	2°♂52'49		asc. node	4535 Apr 25 15:52	16°♂01'56	
evening set	4534 Jun 08 23:21	2°♂42'51			4535 May 03 07:01	0°♂	
desc. node	4534 Jun 14 11:50	0°♂41'13		evening max el	4535 May 10 15:51	9°♂49'03	18°59'32
	4534 Jun 15 17:48	30°♂♂		retrograde	4535 May 19 06:21	14°♂01'27	
inferior conj	4534 Jun 17 22:13	28°♂42'09	-1°01'20	evening set	4535 May 21 07:55	13°♂47'53	
minimum elong	4534 Jun 17 19:22	28°♂46'29	1°00'16	inferior conj	4535 May 29 12:07	9°♂32'52	0°49'41
min. Earth dist.	4534 Jun 19 22:14	27°♂29'21	0.55304 AU	minimum elong	4535 May 29 14:03	9°♂29'29	0°49'00
morning rise	4534 Jun 26 13:31	24°♂19'01		desc. node	4535 Jun 01 08:50	7°♂32'58	
direct	4534 Jun 30 19:36	23°♂39'26		min. Earth dist.	4535 Jun 01 13:52	7°♂24'29	0.56658 AU
	4534 Jul 14 02:31	0°♂		morning rise	4535 Jun 06 16:54	4°♂33'38	
morning max el	4534 Jul 14 14:28	0°♂27'48	24°14'22	direct	4535 Jun 11 21:48	3°♂29'24	
	4534 Aug 03 15:52	0°♂		morning max el	4535 Jun 26 04:58	10°♂52'39	25°51'13
asc. node	4534 Aug 04 18:07	2°♂09'44			4535 Jul 10 20:21	0°♂	
morning set	4534 Aug 08 11:48	9°♂51'53		asc. node	4535 Jul 22 15:08	21°♂55'42	
				morning set	4535 Jul 23 23:09	24°♂43'35	
					4535 Jul 26 10:09	0°♂	
superior conj	4534 Aug 15 10:55	24°♂55'31	1°31'21				
minimum elong	4534 Aug 15 08:54	24°♂44'37	1°31'08	superior conj	4535 Jul 30 21:48	9°♂50'19	1°17'01
max. Earth dist.	4534 Aug 17 09:51	29°♂09'06	1.33013 AU	minimum elong	4535 Jul 30 19:29	9°♂37'34	1°16'41
	4534 Aug 17 19:21	0°♂		max. Earth dist.	4535 Jul 31 17:58	11°♂41'07	1.32288 AU
evening rise	4534 Aug 22 19:27	10°♂27'01		evening rise	4535 Aug 06 21:57	24°♂55'53	
	4534 Sep 02 05:48	0°♂			4535 Aug 09 09:26	0°♂	
desc. node	4534 Sep 10 11:09	13°♂07'36			4535 Aug 26 20:52	0°♂	
	4534 Sep 23 21:16	0°♄		desc. node	4535 Aug 28 08:09	2°♂02'50	
evening max el	4534 Sep 25 06:10	1°♄20'33	27°26'42				

evening max el	4535 Sep 07 13:36	13° Ω 58'47	27°14'20		4536 Aug 24 18:07	0° Ω	
retrograde	4535 Sep 21 09:50	21° Ω 12'29		retrograde	4536 Sep 02 13:50	3° Ω 01'16	
evening set	4535 Sep 28 13:07	18° Ω 52'18		evening set	4536 Sep 09 06:06	1° Ω 10'10	
min. Earth dist.	4535 Oct 02 04:03	16° Ω 05'48	0.61693 AU		4536 Sep 11 04:32	30° \mathbb{R} \mathbb{M}	
inferior conj	4535 Oct 05 05:15	13° Ω 21'53	-3°59'13	min. Earth dist.	4536 Sep 13 04:24	28° \mathbb{M} 34'54	0.59637 AU
minimum elong	4535 Oct 05 11:21	13° Ω 08'10	3°57'34	inferior conj	4536 Sep 16 10:35	26° \mathbb{M} 01'56	-4°47'23
morning rise	4535 Oct 12 11:26	8° Ω 23'59		minimum elong	4536 Sep 16 15:50	25° \mathbb{M} 51'37	4°46'31
direct	4535 Oct 14 19:36	8° Ω 00'47		morning rise	4536 Sep 24 03:43	21° \mathbb{M} 26'05	
asc. node	4535 Oct 18 14:23	9° Ω 03'41		direct	4536 Sep 26 12:29	21° \mathbb{M} 06'04	
morning max el	4535 Oct 21 19:00	11° Ω 31'33	17°54'21	morning max el	4536 Oct 04 05:36	24° \mathbb{M} 51'29	18°17'29
	4535 Nov 03 02:28	0° \mathbb{M}		asc. node	4536 Oct 04 11:25	25° \mathbb{M} 05'43	
morning set	4535 Nov 06 14:34	6° \mathbb{M} 20'29			4536 Oct 08 12:47	0° Ω	
				morning set	4536 Oct 20 03:04	20° Ω 09'01	
					4536 Oct 25 07:44	0° \mathbb{M}	
superior conj	4535 Nov 17 05:00	25° \mathbb{M} 15'38	0°48'42				
minimum elong	4535 Nov 17 08:47	25° \mathbb{M} 32'02	0°48'12				
	4535 Nov 19 23:26	0° \mathbb{X}		superior conj	4536 Oct 29 09:45	7° \mathbb{M} 34'06	1°16'51
desc. node	4535 Nov 24 07:28	7° \mathbb{X} 14'02		minimum elong	4536 Oct 29 13:35	7° \mathbb{M} 51'36	1°16'25
max. Earth dist.	4535 Nov 24 15:01	7° \mathbb{X} 45'02	1.42787 AU	max. Earth dist.	4536 Nov 05 23:29	20° \mathbb{M} 56'38	1.40888 AU
evening rise	4535 Dec 01 07:08	18° \mathbb{X} 27'32		desc. node	4536 Nov 10 04:29	27° \mathbb{M} 59'48	
	4535 Dec 08 19:07	0° \mathbb{Z}		evening rise	4536 Nov 10 16:21	28° \mathbb{M} 48'29	
	4535 Dec 30 11:53	0° \approx			4536 Nov 11 09:52	0° \mathbb{X}	
evening max el	4536 Jan 02 06:43	3° \approx 01'56	21°57'52		4536 Dec 01 08:46	0° \mathbb{Z}	
retrograde	4536 Jan 11 14:12	8° \approx 34'17		evening max el	4536 Dec 14 22:16	16° \mathbb{Z} 39'33	23°17'12
asc. node	4536 Jan 14 13:38	7° \approx 46'55		retrograde	4536 Dec 25 08:36	22° \mathbb{Z} 49'55	
evening set	4536 Jan 16 00:28	6° \approx 47'55		evening set	4536 Dec 30 07:07	20° \mathbb{Z} 47'45	
inferior conj	4536 Jan 21 08:44	0° \approx 28'35	2°07'55	asc. node	4536 Dec 31 10:40	19° \mathbb{Z} 43'27	
minimum elong	4536 Jan 21 06:23	0° \approx 36'43	2°07'08	inferior conj	4537 Jan 04 16:39	14° \mathbb{Z} 23'10	1°23'52
min. Earth dist.	4536 Jan 21 09:34	0° \approx 25'42	0.68009 AU	minimum elong	4537 Jan 04 14:52	14° \mathbb{Z} 29'19	1°23'10
	4536 Jan 21 16:58	30° \mathbb{R} \mathbb{Z}		min. Earth dist.	4537 Jan 04 06:23	14° \mathbb{Z} 58'26	0.68020 AU
morning rise	4536 Jan 26 12:09	24° \mathbb{Z} 17'18		morning rise	4537 Jan 09 22:31	8° \mathbb{Z} 15'59	
direct	4536 Jan 31 08:58	22° \mathbb{Z} 12'58		direct	4537 Jan 14 05:05	6° \mathbb{Z} 34'29	
morning max el	4536 Feb 10 02:42	27° \mathbb{Z} 58'16	22°36'44	morning max el	4537 Jan 22 18:04	11° \mathbb{Z} 31'38	21°13'07
	4536 Feb 12 00:47	0° \approx		desc. node	4537 Feb 06 03:45	29° \mathbb{Z} 59'50	
desc. node	4536 Feb 20 06:42	10° \approx 14'24			4537 Feb 06 03:48	0° \approx	
	4536 Mar 04 22:53	0° \mathbb{X}		morning set	4537 Feb 22 16:05	24° \approx 55'27	
morning set	4536 Mar 15 02:50	16° \mathbb{X} 05'10			4537 Feb 25 20:50	0° \mathbb{X}	
max. Earth dist.	4536 Mar 19 22:38	24° \mathbb{X} 09'02	1.40334 AU	max. Earth dist.	4537 Mar 02 00:21	6° \mathbb{X} 42'53	1.42378 AU
	4536 Mar 23 07:59	0° \mathbb{Y}					
				superior conj	4537 Mar 09 07:39	18° \mathbb{X} 57'22	-2°07'08
superior conj	4536 Mar 27 17:44	7° \mathbb{Y} 50'29	-1°54'26	minimum elong	4537 Mar 09 09:29	19° \mathbb{X} 05'11	2°07'06
minimum elong	4536 Mar 27 22:17	8° \mathbb{Y} 11'09	1°54'04		4537 Mar 15 15:19	0° \mathbb{Y}	
evening rise	4536 Apr 06 17:14	26° \mathbb{Y} 26'31		evening rise	4537 Mar 20 16:50	9° \mathbb{Y} 05'39	
	4536 Apr 08 14:29	0° \mathbb{Z}		asc. node	4537 Mar 29 09:57	24° \mathbb{Y} 27'18	
asc. node	4536 Apr 11 12:54	5° \mathbb{Z} 26'43			4537 Apr 01 23:41	0° \mathbb{Z}	
evening max el	4536 Apr 22 21:01	22° \mathbb{Z} 20'21	18°23'46	evening max el	4537 Apr 06 07:39	5° \mathbb{Z} 18'10	18°07'47
retrograde	4536 Apr 30 06:32	26° \mathbb{Z} 00'25		retrograde	4537 Apr 13 00:02	8° \mathbb{Z} 42'23	
evening set	4536 May 02 14:53	25° \mathbb{Z} 39'16		evening set	4537 Apr 15 15:03	8° \mathbb{Z} 11'07	
inferior conj	4536 May 09 23:28	21° \mathbb{Z} 04'39	2°12'46	inferior conj	4537 Apr 22 07:00	3° \mathbb{Z} 15'40	3°04'27
minimum elong	4536 May 10 03:03	20° \mathbb{Z} 57'16	2°11'45	minimum elong	4537 Apr 22 09:51	3° \mathbb{Z} 08'52	3°03'56
min. Earth dist.	4536 May 13 10:02	18° \mathbb{Z} 16'41	0.58608 AU	min. Earth dist.	4537 Apr 25 12:44	0° \mathbb{Z} 12'21	0.60800 AU
morning rise	4536 May 17 12:08	15° \mathbb{Z} 33'36			4537 Apr 25 18:14	30° \mathbb{R} \mathbb{Y}	
desc. node	4536 May 18 05:53	15° \mathbb{Z} 11'31		morning rise	4537 Apr 29 02:34	27° \mathbb{Y} 23'01	
direct	4536 May 23 14:29	13° \mathbb{Z} 55'33		desc. node	4537 May 05 02:55	25° \mathbb{Y} 12'27	
morning max el	4536 Jun 06 23:55	21° \mathbb{Z} 40'16	27°05'29	direct	4537 May 05 18:54	25° \mathbb{Y} 11'11	
	4536 Jun 14 06:46	0° \mathbb{I}			4537 May 16 14:42	0° \mathbb{Z}	
	4536 Jul 02 16:39	0° \mathbb{E}		morning max el	4537 May 20 01:11	3° \mathbb{Z} 06'52	27°46'08
morning set	4536 Jul 07 08:26	9° \mathbb{E} 27'06			4537 Jun 08 19:17	0° \mathbb{I}	
asc. node	4536 Jul 08 12:10	11° \mathbb{E} 53'41		morning set	4537 Jun 21 13:54	23° \mathbb{I} 56'49	
					4537 Jun 24 11:02	0° \mathbb{E}	
superior conj	4536 Jul 14 09:38	24° \mathbb{E} 44'57	0°58'17	asc. node	4537 Jun 25 09:13	1° \mathbb{E} 58'58	
minimum elong	4536 Jul 14 07:29	24° \mathbb{E} 33'03	0°57'53	max. Earth dist.	4537 Jun 27 15:52	6° \mathbb{E} 55'42	1.32095 AU
max. Earth dist.	4536 Jul 14 05:09	24° \mathbb{E} 20'13	1.31984 AU				
	4536 Jul 16 18:45	0° \mathbb{O}		superior conj	4537 Jun 28 20:41	9° \mathbb{E} 33'41	0°35'43
evening rise	4536 Jul 21 05:39	9° \mathbb{O} 38'02		minimum elong	4537 Jun 28 19:09	9° \mathbb{E} 25'16	0°35'24
	4536 Jul 31 17:19	0° \mathbb{M}		evening rise	4537 Jul 05 16:25	24° \mathbb{E} 26'30	
desc. node	4536 Aug 14 05:10	20° \mathbb{M} 01'38			4537 Jul 08 08:09	0° \mathbb{O}	
evening max el	4536 Aug 19 14:49	25° \mathbb{M} 51'45	26°28'35		4537 Jul 26 03:56	0° \mathbb{M}	

desc. node	4537 Aug 01 02:11	6° \mathbb{M} 41'09		4538 Jun 30 21:45	0° \mathcal{O}	
evening max el	4537 Aug 01 08:41	6° \mathbb{M} 56'50	25°13'06	evening max el	4538 Jul 13 21:33	17° \mathcal{O} 26'05 23°39'13
retrograde	4537 Aug 15 07:27	14° \mathbb{M} 00'35		desc. node	4538 Jul 18 23:11	21° \mathcal{O} 30'48
evening set	4537 Aug 20 23:35	12° \mathbb{M} 46'46		retrograde	4538 Jul 27 12:53	24° \mathcal{O} 16'49
min. Earth dist.	4537 Aug 25 20:22	10° \mathbb{M} 04'49	0.57627 AU	evening set	4538 Jul 31 18:04	23° \mathcal{O} 37'47
inferior conj	4537 Aug 28 21:01	8° \mathbb{M} 01'36	-5°13'03	min. Earth dist.	4538 Aug 07 07:29	20° \mathcal{O} 32'18 0.55956 AU
minimum elong	4537 Aug 28 22:22	7° \mathbb{M} 59'17	5°12'59	inferior conj	4538 Aug 09 11:14	19° \mathcal{O} 14'49 -5°00'16
morning rise	4537 Sep 05 23:28	3° \mathbb{M} 48'21		minimum elong	4538 Aug 09 06:21	19° \mathcal{O} 22'09 4°59'42
direct	4537 Sep 08 12:23	3° \mathbb{M} 29'12		morning rise	4538 Aug 17 21:08	15° \mathcal{O} 19'51
morning max el	4537 Sep 17 08:03	7° \mathbb{M} 39'22	19°01'38	direct	4538 Aug 20 16:50	15° \mathcal{O} 00'00
asc. node	4537 Sep 21 08:28	12° \mathbb{M} 15'35		morning max el	4538 Aug 30 23:35	19° \mathcal{O} 46'32 20°07'44
	4537 Oct 01 19:10	0° \mathcal{O}		asc. node	4538 Sep 08 05:31	0° \mathbb{M} 18'51
morning set	4537 Oct 04 01:17	4° \mathcal{O} 25'05			4538 Sep 08 00:47	0° \mathbb{M}
				morning set	4538 Sep 18 06:07	19° \mathbb{M} 00'13
superior conj	4537 Oct 12 09:18	20° \mathcal{O} 47'31	1°34'26		4538 Sep 23 14:59	0° \mathcal{O}
minimum elong	4537 Oct 12 11:50	20° \mathcal{O} 59'40	1°34'14			
	4537 Oct 17 06:58	0° \mathbb{M}		superior conj	4538 Sep 25 22:39	4° \mathcal{O} 41'51 1°42'46
max. Earth dist.	4537 Oct 19 04:39	3° \mathbb{M} 27'15	1.38796 AU	minimum elong	4538 Sep 25 23:33	4° \mathcal{O} 46'22 1°42'44
evening rise	4537 Oct 23 00:38	10° \mathbb{M} 12'13		max. Earth dist.	4538 Oct 01 10:36	15° \mathcal{O} 28'01 1.36761 AU
desc. node	4537 Oct 28 01:31	18° \mathbb{M} 39'57		evening rise	4538 Oct 05 06:31	22° \mathcal{O} 35'35
	4537 Nov 04 05:55	0° \mathcal{O}			4538 Oct 09 10:47	0° \mathbb{M}
	4537 Nov 27 03:01	0° \mathcal{O}		desc. node	4538 Oct 14 22:31	9° \mathbb{M} 10'18
evening max el	4537 Nov 27 11:27	0° \mathcal{O} 21'00	24°36'11		4538 Oct 29 00:48	0° \mathcal{O}
retrograde	4537 Dec 08 23:07	7° \mathcal{O} 02'55		evening max el	4538 Nov 09 23:54	14° \mathcal{O} 04'18 25°47'46
evening set	4537 Dec 14 11:06	4° \mathcal{O} 45'20		retrograde	4538 Nov 22 09:00	21° \mathcal{O} 08'28
asc. node	4537 Dec 18 07:43	0° \mathcal{O} 30'11		evening set	4538 Nov 28 10:45	18° \mathcal{O} 37'40
	4537 Dec 18 16:59	30° \mathcal{R}		min. Earth dist.	4538 Dec 02 18:20	13° \mathcal{O} 57'18 0.66975 AU
min. Earth dist.	4537 Dec 19 02:05	29° \mathcal{O} 30'00	0.67674 AU	inferior conj	4538 Dec 04 02:33	12° \mathcal{O} 15'31 -0°22'25
inferior conj	4537 Dec 19 23:12	28° \mathcal{O} 19'43	0°33'24	minimum elong	4538 Dec 04 03:08	12° \mathcal{O} 13'40 0°22'09
minimum elong	4537 Dec 19 22:23	28° \mathcal{O} 22'24	0°33'05	asc. node	4538 Dec 05 04:45	10° \mathcal{O} 53'35
morning rise	4537 Dec 25 09:46	22° \mathcal{O} 18'44		morning rise	4538 Dec 09 19:56	6° \mathcal{O} 23'04
direct	4537 Dec 29 03:14	20° \mathcal{O} 59'02		direct	4538 Dec 13 01:57	5° \mathcal{O} 22'24
morning max el	4538 Jan 05 17:10	25° \mathcal{O} 16'51	20°00'53	morning max el	4538 Dec 20 00:03	9° \mathcal{O} 12'33 19°03'15
	4538 Jan 09 20:42	0° \mathcal{O}			4539 Jan 04 02:45	0° \mathcal{O}
desc. node	4538 Jan 24 00:48	20° \mathcal{O} 07'51		desc. node	4539 Jan 10 21:49	10° \mathcal{O} 32'18
	4538 Jan 30 12:29	0° \approx		morning set	4539 Jan 11 17:23	11° \mathcal{O} 48'28
morning set	4538 Feb 01 12:41	3° \approx 05'26			4539 Jan 23 08:57	0° \approx
max. Earth dist.	4538 Feb 12 10:17	20° \approx 10'58	1.44005 AU	max. Earth dist.	4539 Jan 26 02:14	4° \approx 16'19 1.45010 AU
superior conj	4538 Feb 17 20:11	28° \approx 55'09	-2°04'41	superior conj	4539 Jan 28 09:09	7° \approx 52'47 -1°42'52
minimum elong	4538 Feb 17 16:19	28° \approx 39'20	2°04'33	minimum elong	4539 Jan 28 00:14	7° \approx 17'33 1°42'06
	4538 Feb 18 12:03	0° \mathcal{H}			4539 Feb 11 03:49	0° \mathcal{H}
evening rise	4538 Mar 02 22:22	20° \mathcal{H} 54'17		evening rise	4539 Feb 12 05:59	1° \mathcal{H} 46'53
	4538 Mar 08 05:33	0° \mathcal{Y}			4539 Mar 02 13:45	0° \mathcal{Y}
asc. node	4538 Mar 16 07:00	12° \mathcal{Y} 55'25		asc. node	4539 Mar 03 04:02	0° \mathcal{Y} 41'33
evening max el	4538 Mar 20 20:24	18° \mathcal{Y} 32'50	18°10'56	evening max el	4539 Mar 04 08:27	1° \mathcal{Y} 57'57 18°32'38
retrograde	4538 Mar 27 06:30	21° \mathcal{Y} 56'16		retrograde	4539 Mar 10 21:34	5° \mathcal{Y} 33'38
evening set	4538 Mar 30 03:34	21° \mathcal{Y} 13'32		evening set	4539 Mar 14 00:42	4° \mathcal{Y} 38'38
inferior conj	4538 Apr 05 06:55	15° \mathcal{Y} 58'13	3°29'40		4539 Mar 19 00:40	30° \mathcal{R}
minimum elong	4538 Apr 05 08:08	15° \mathcal{Y} 54'56	3°29'35	inferior conj	4539 Mar 19 19:11	29° \mathcal{H} 05'12 3°34'36
min. Earth dist.	4538 Apr 08 00:01	13° \mathcal{Y} 03'33	0.62920 AU	minimum elong	4539 Mar 19 18:47	29° \mathcal{H} 06'22 3°34'35
morning rise	4538 Apr 11 11:29	9° \mathcal{Y} 52'54		min. Earth dist.	4539 Mar 21 20:57	26° \mathcal{H} 37'12 0.64757 AU
direct	4538 Apr 18 08:28	7° \mathcal{Y} 15'55		morning rise	4539 Mar 25 12:16	22° \mathcal{H} 53'29
desc. node	4538 Apr 21 23:58	7° \mathcal{Y} 55'12		direct	4539 Apr 01 05:54	20° \mathcal{H} 04'11
morning max el	4538 May 02 07:56	15° \mathcal{Y} 14'58	27°49'06	desc. node	4539 Apr 08 21:02	22° \mathcal{H} 55'40
	4538 May 14 08:34	0° \mathcal{B}		morning max el	4539 Apr 14 17:41	27° \mathcal{H} 57'27 27°16'42
	4538 Jun 01 10:12	0° \mathbb{I}			4539 Apr 16 16:27	0° \mathcal{Y}
morning set	4538 Jun 05 13:20	8° \mathbb{I} 05'19			4539 May 08 02:23	0° \mathcal{B}
max. Earth dist.	4538 Jun 10 22:04	19° \mathbb{I} 13'54	1.32628 AU	morning set	4539 May 20 04:00	21° \mathcal{B} 44'46
asc. node	4538 Jun 12 06:16	22° \mathbb{I} 06'33			4539 May 24 07:17	0° \mathbb{I}
				max. Earth dist.	4539 May 24 19:50	1° \mathbb{I} 04'11 1.33610 AU
superior conj	4538 Jun 13 05:08	24° \mathbb{I} 10'00	0°09'57			
minimum elong	4538 Jun 13 04:39	24° \mathbb{I} 07'25	0°09'50	superior conj	4539 May 28 09:01	8° \mathbb{I} 28'14 -0°18'15
behind sun begin	4538 Jun 13 00:30	23° \mathbb{I} 44'57		minimum elong	4539 May 28 09:58	8° \mathbb{I} 33'14 0°18'04
behind sun end	4538 Jun 13 08:49	24° \mathbb{I} 29'55		asc. node	4539 May 30 03:19	12° \mathbb{I} 12'37
	4538 Jun 15 21:33	0° \mathcal{O}		evening rise	4539 Jun 04 15:16	23° \mathbb{I} 54'52
evening rise	4538 Jun 20 04:14	9° \mathcal{O} 14'04			4539 Jun 07 13:55	0° \mathcal{O}

evening max el	4539 Jun 25 12:48	27°☿50'10	22°02'43	asc. node	4540 May 16 00:20	2°♊13'28	
	4539 Jun 27 23:16	0°♊		evening rise	4540 May 18 23:32	8°♊23'02	
desc. node	4539 Jul 05 20:13	3°♊55'44			4540 May 30 16:06	0°☿	
retrograde	4539 Jul 08 06:54	4°♊09'39		evening max el	4540 Jun 06 14:07	8°☿41'47	20°37'06
evening set	4539 Jul 11 02:05	3°♊52'11		retrograde	4540 Jun 17 19:41	14°☿11'30	
min. Earth dist.	4539 Jul 19 17:45	0°♊09'19	0.54962 AU	evening set	4540 Jun 19 20:31	14°☿01'25	
inferior conj	4539 Jul 20 09:16	29°☿47'33	-3°56'56	desc. node	4540 Jun 21 17:15	13°☿35'33	
minimum elong	4539 Jul 20 00:37	29°☿59'41	3°54'41	inferior conj	4540 Jun 29 02:45	10°☿04'15	-2°10'34
	4539 Jul 20 00:23	30°☿☿		minimum elong	4540 Jun 28 20:40	10°☿12'59	2°08'25
morning rise	4539 Jul 29 00:49	25°☿56'59		min. Earth dist.	4540 Jun 30 05:30	9°☿25'47	0.54895 AU
direct	4539 Aug 01 05:28	25°☿34'23		morning rise	4540 Jul 07 20:08	5°☿57'45	
	4539 Aug 11 20:08	0°♊		direct	4540 Jul 11 15:00	5°☿26'51	
morning max el	4539 Aug 13 03:12	1°♊08'18	21°34'09	morning max el	4540 Jul 24 21:12	11°☿50'52	23°14'38
asc. node	4539 Aug 26 02:34	19°♊02'27			4540 Aug 07 11:02	0°♊	
	4539 Aug 31 19:02	0°♊		asc. node	4540 Aug 11 23:35	8°♊16'29	
morning set	4539 Sep 02 15:04	3°♊46'45		morning set	4540 Aug 17 02:16	18°♊39'22	
					4540 Aug 22 09:12	0°♊	
superior conj	4539 Sep 09 21:37	19°♊04'21	1°43'19	superior conj	4540 Aug 24 03:05	3°♊45'26	1°37'21
minimum elong	4539 Sep 09 21:03	19°♊01'27	1°43'18	minimum elong	4540 Aug 24 01:28	3°♊36'47	1°37'14
max. Earth dist.	4539 Sep 13 22:17	27°♊20'03	1.34991 AU	max. Earth dist.	4540 Aug 26 18:49	9°♊24'26	1.33612 AU
	4539 Sep 15 06:20	0°♊		evening rise	4540 Aug 31 18:37	19°♊38'13	
evening rise	4539 Sep 18 05:53	5°♊47'53			4540 Sep 06 04:39	0°♊	
desc. node	4539 Oct 01 19:30	29°♊25'00		desc. node	4540 Sep 17 16:31	19°♊16'58	
	4539 Oct 02 04:24	0°♊			4540 Sep 25 06:09	0°♊	
evening max el	4539 Oct 23 12:25	27°♊43'21	26°44'37	evening max el	4540 Oct 05 00:40	11°♊09'15	27°19'23
	4539 Oct 26 00:58	0°♊		retrograde	4540 Oct 18 12:32	18°♊27'39	
retrograde	4539 Nov 05 13:41	4°♊59'21		evening set	4540 Oct 25 12:33	15°♊47'31	
evening set	4539 Nov 12 04:02	2°♊20'02		min. Earth dist.	4540 Oct 29 07:30	12°♊17'12	0.64526 AU
	4539 Nov 14 15:16	30°♊♊		inferior conj	4540 Oct 31 15:20	9°♊47'06	-2°24'38
min. Earth dist.	4539 Nov 16 04:52	28°♊15'13	0.65924 AU	minimum elong	4540 Oct 31 19:28	9°♊35'57	2°23'03
inferior conj	4539 Nov 18 00:41	26°♊06'13	-1°22'23	morning rise	4540 Nov 07 03:37	4°♊19'46	
minimum elong	4539 Nov 18 02:59	25°♊59'26	1°21'25	asc. node	4540 Nov 07 22:50	4°♊01'58	
asc. node	4539 Nov 22 01:48	21°♊49'40		direct	4540 Nov 09 17:15	3°♊45'45	
morning rise	4539 Nov 24 02:45	20°♊24'51		morning max el	4540 Nov 16 05:01	7°♊11'42	17°56'54
direct	4539 Nov 26 23:22	19°♊39'30			4540 Dec 01 12:21	0°♊	
morning max el	4539 Dec 03 12:53	23°♊12'56	18°21'38	morning set	4540 Dec 03 12:37	3°♊23'20	
	4539 Dec 09 00:48	0°♊		desc. node	4540 Dec 14 15:48	21°♊50'26	
morning set	4539 Dec 23 00:26	21°♊52'51					
	4539 Dec 28 01:51	0°♊		superior conj	4540 Dec 17 00:33	25°♊39'33	-0°16'20
desc. node	4539 Dec 28 18:49	1°♊07'42		minimum elong	4540 Dec 16 22:36	25°♊31'42	0°16'02
				behind sun begin	4540 Dec 16 21:22	25°♊26'43	
superior conj	4540 Jan 07 11:43	16°♊28'39	-1°03'31	behind sun end	4540 Dec 16 23:50	25°♊36'41	
minimum elong	4540 Jan 07 03:59	15°♊58'20	1°02'33		4540 Dec 19 17:42	0°♊	
max. Earth dist.	4540 Jan 08 20:54	18°♊38'50	1.45292 AU	max. Earth dist.	4540 Dec 21 15:43	3°♊02'27	1.44838 AU
	4540 Jan 16 02:53	0°♊		evening rise	4541 Jan 02 04:54	21°♊01'44	
evening rise	4540 Jan 23 14:21	11°♊43'35			4541 Jan 08 01:32	0°♊	
greatest brilliancy	4540 Feb 03 05:40	28°♊22'18	-0.8m	greatest brilliancy	4541 Jan 16 19:33	13°♊08'02	-0.6m
	4540 Feb 04 07:08	0°♊		evening max el	4541 Jan 28 21:54	29°♊00'53	20°06'55
evening max el	4540 Feb 15 17:30	15°♊28'19	19°11'56		4541 Jan 29 21:57	0°♊	
asc. node	4540 Feb 18 01:04	17°♊33'11		asc. node	4541 Feb 03 22:06	3°♊15'44	
retrograde	4540 Feb 22 17:29	19°♊27'12		retrograde	4541 Feb 05 15:26	3°♊31'42	
evening set	4540 Feb 26 03:30	18°♊19'05		evening set	4541 Feb 09 09:39	2°♊09'27	
inferior conj	4540 Mar 02 16:14	12°♊29'38	3°24'12		4541 Feb 11 17:09	30°♊♊	
minimum elong	4540 Mar 02 14:38	12°♊34'44	3°24'00	inferior conj	4541 Feb 14 19:07	26°♊06'13	3°01'54
min. Earth dist.	4540 Mar 04 02:42	10°♊39'03	0.66202 AU	minimum elong	4541 Feb 14 16:51	26°♊13'52	3°01'24
morning rise	4540 Mar 08 01:26	6°♊15'29		min. Earth dist.	4541 Feb 15 15:26	24°♊57'41	0.67228 AU
direct	4540 Mar 14 09:58	3°♊27'10		morning rise	4541 Feb 19 23:49	19°♊52'03	
desc. node	4540 Mar 25 18:04	9°♊39'16		direct	4541 Feb 25 19:41	17°♊15'42	
morning max el	4540 Mar 27 03:37	11°♊01'24	26°15'58	morning max el	4541 Mar 09 12:19	24°♊15'19	24°56'12
	4540 Apr 11 06:01	0°♊		desc. node	4541 Mar 12 15:04	27°♊36'43	
	4540 Apr 29 16:21	0°♊			4541 Mar 14 15:58	0°♊	
morning set	4540 May 02 06:15	4°♊44'45		morning set	4541 Apr 04 16:21	16°♊50'14	
max. Earth dist.	4540 May 06 06:17	12°♊23'19	1.35057 AU	max. Earth dist.	4541 Apr 18 06:02	23°♊24'21	1.36934 AU
					4541 Apr 21 18:16	0°♊	
superior conj	4540 May 11 06:01	22°♊22'07	-0°47'39				
minimum elong	4540 May 11 08:36	22°♊35'19	0°47'10				
	4540 May 14 22:42	0°♊					

superior conj	4541 Apr 24 17:04	5°♄42'36	-1°16'35	max. Earth dist.	4542 Mar 31 01:26	4°♄42'01	1.39085 AU
minimum elong	4541 Apr 24 21:10	6°♄02'45	1°15'56				
asc. node	4541 May 02 21:22	22°♄04'11		superior conj	4542 Apr 07 14:23	18°♄20'14	-1°42'23
evening rise	4541 May 03 02:43	22°♄31'00		minimum elong	4542 Apr 07 19:16	18°♄43'01	1°41'51
	4541 May 06 21:43	0°♄			4542 Apr 13 17:21	0°♄	
evening max el	4541 May 20 03:50	20°♄14'00	19°29'22	evening rise	4542 Apr 16 22:02	6°♄11'34	
retrograde	4541 May 29 15:28	24°♄51'18		asc. node	4542 Apr 19 18:25	11°♄40'11	
evening set	4541 May 31 14:31	24°♄40'19			4542 Apr 30 23:06	0°♄	
desc. node	4541 Jun 08 14:18	21°♄00'06		evening max el	4542 May 03 04:15	2°♄25'44	18°41'47
inferior conj	4541 Jun 09 06:02	20°♄34'57	-0°11'40	retrograde	4542 May 11 04:45	6°♄22'12	
minimum elong	4541 Jun 09 05:31	20°♄35'47	0°11'29	evening set	4542 May 13 09:16	6°♄05'40	
transit middle	4541 Jun 09 05:31	20°♄35'47	0°11'29	inferior conj	4542 May 21 04:53	1°♄42'18	1°28'53
transit begin	4541 Jun 09 02:49	20°♄40'07		minimum elong	4542 May 21 07:53	1°♄36'39	1°27'53
transit end	4541 Jun 09 08:14	20°♄31'26			4542 May 23 11:23	30°♄	
min. Earth dist.	4541 Jun 11 19:15	18°♄57'10	0.55789 AU	min. Earth dist.	4542 May 24 12:15	29°♄14'49	0.57445 AU
morning rise	4541 Jun 17 17:49	15°♄56'53		desc. node	4542 May 26 11:19	27°♄55'44	
direct	4541 Jun 22 09:38	15°♄07'57		morning rise	4542 May 29 03:17	26°♄28'49	
morning max el	4541 Jul 06 10:52	22°♄12'50	24°57'18	direct	4542 Jun 03 17:59	25°♄11'02	
	4541 Jul 13 07:45	0°♄			4542 Jun 15 00:54	0°♄	
asc. node	4541 Jul 29 20:37	27°♄52'22		morning max el	4542 Jun 18 02:42	2°♄43'48	26°26'22
	4541 Jul 30 21:28	0°♄			4542 Jul 07 15:35	0°♄	
morning set	4541 Aug 01 13:59	3°♄32'17		asc. node	4542 Jul 16 17:39	17°♄43'53	
				morning set	4542 Jul 17 00:40	18°♄20'47	
					4542 Jul 22 09:43	0°♄	
superior conj	4541 Aug 08 12:34	18°♄36'34	1°25'51				
minimum elong	4541 Aug 08 10:22	18°♄24'32	1°25'35	superior conj	4542 Jul 24 00:03	3°♄31'25	1°09'35
max. Earth dist.	4541 Aug 09 23:33	21°♄47'15	1.32656 AU	minimum elong	4542 Jul 23 21:44	3°♄18'41	1°09'11
	4541 Aug 13 19:38	0°♄		max. Earth dist.	4542 Jul 24 09:36	4°♄24'06	1.32115 AU
evening rise	4541 Aug 15 16:57	3°♄55'18		evening rise	4542 Jul 30 21:58	18°♄30'25	
	4541 Aug 29 22:04	0°♄			4542 Aug 05 15:10	0°♄	
desc. node	4541 Sep 04 13:34	8°♄36'14		desc. node	4542 Aug 22 10:36	27°♄09'24	
evening max el	4541 Sep 17 10:48	24°♄08'57	27°25'35		4542 Aug 24 16:42	0°♄	
	4541 Sep 25 12:14	0°♄		evening max el	4542 Aug 30 15:59	6°♄28'48	26°58'52
retrograde	4541 Oct 01 04:40	1°♄24'09		retrograde	4542 Sep 13 13:12	13°♄39'51	
	4541 Oct 06 13:30	30°♄		evening set	4542 Sep 20 13:28	11°♄30'40	
evening set	4541 Oct 08 09:04	28°♄53'31		min. Earth dist.	4542 Sep 24 06:12	8°♄51'07	0.60830 AU
min. Earth dist.	4541 Oct 12 00:17	25°♄53'28	0.62803 AU	inferior conj	4542 Sep 27 10:25	6°♄09'54	-4°21'36
inferior conj	4541 Oct 14 19:41	23°♄11'17	-3°26'08	minimum elong	4542 Sep 27 16:28	5°♄57'03	4°20'12
minimum elong	4541 Oct 15 01:21	22°♄57'36	3°24'19	morning rise	4542 Oct 04 21:22	1°♄21'02	
morning rise	4541 Oct 21 19:12	18°♄01'25		direct	4542 Oct 07 05:33	0°♄59'21	
direct	4541 Oct 24 04:35	17°♄35'05		asc. node	4542 Oct 12 16:53	3°♄03'29	
asc. node	4541 Oct 25 19:51	17°♄47'44		morning max el	4542 Oct 14 11:13	4°♄34'57	18°01'48
morning max el	4541 Oct 30 21:31	21°♄01'42	17°49'58	morning set	4542 Oct 30 05:29	29°♄29'35	
	4541 Nov 06 16:01	0°♄			4542 Oct 30 12:03	0°♄	
morning set	4541 Nov 16 00:29	16°♄02'16					
	4541 Nov 24 00:12	0°♄		superior conj	4542 Nov 09 05:08	17°♄42'21	1°02'00
superior conj	4541 Nov 27 13:42	6°♄02'41	0°27'34	minimum elong	4542 Nov 09 09:12	18°♄00'18	1°01'29
minimum elong	4541 Nov 27 16:19	6°♄13'40	0°27'12		4542 Nov 16 08:39	0°♄	
desc. node	4541 Dec 01 12:50	12°♄37'12		max. Earth dist.	4542 Nov 16 20:25	0°♄49'03	1.42016 AU
max. Earth dist.	4541 Dec 04 08:22	17°♄11'43	1.43700 AU	desc. node	4542 Nov 18 09:52	3°♄24'07	
	4541 Dec 12 10:54	0°♄		evening rise	4542 Nov 22 12:45	10°♄04'57	
evening rise	4541 Dec 12 15:11	0°♄16'33			4542 Dec 05 13:18	0°♄	
	4542 Jan 01 17:40	0°♄		evening max el	4542 Dec 25 14:41	26°♄10'32	22°31'13
evening max el	4542 Jan 11 20:54	12°♄35'07	21°14'39		4542 Dec 30 01:12	0°♄	
retrograde	4542 Jan 20 13:15	17°♄43'49		retrograde	4543 Jan 04 09:21	1°♄59'16	
asc. node	4542 Jan 21 19:08	17°♄35'26		asc. node	4543 Jan 08 16:10	0°♄23'01	
evening set	4542 Jan 24 17:18	16°♄06'22		evening set	4543 Jan 09 00:46	0°♄05'55	
inferior conj	4542 Jan 30 01:31	9°♄52'05	2°30'00		4543 Jan 09 03:36	30°♄	
minimum elong	4542 Jan 29 23:04	10°♄00'33	2°29'17	inferior conj	4543 Jan 14 09:24	23°♄43'51	1°50'03
min. Earth dist.	4542 Jan 30 09:05	9°♄25'54	0.67841 AU	minimum elong	4543 Jan 14 07:14	23°♄51'21	1°49'18
morning rise	4542 Feb 04 04:39	3°♄39'30		min. Earth dist.	4543 Jan 14 05:21	23°♄57'53	0.68060 AU
direct	4542 Feb 09 10:03	1°♄22'26		morning rise	4543 Jan 19 13:35	17°♄34'22	
morning max el	4542 Feb 19 21:06	7°♄35'38	23°27'46	direct	4543 Jan 24 04:14	15°♄39'54	
desc. node	4542 Feb 27 12:05	16°♄27'15		morning max el	4543 Feb 02 09:13	21°♄03'39	22°00'09
	4542 Mar 09 08:19	0°♄			4543 Feb 09 23:40	0°♄	
morning set	4542 Mar 27 00:37	27°♄45'47		desc. node	4543 Feb 14 09:07	5°♄55'29	
	4542 Mar 28 08:13	0°♄			4543 Mar 02 14:51	0°♄	

morning set	4543 Mar 07 05:51	7° H 19'54		superior conj	4544 Feb 29 20:34	10° H 40'31	-2°08'16
max. Earth dist.	4543 Mar 12 23:43	16° H 45'14	1.41245 AU	minimum elong	4544 Feb 29 20:15	10° H 39'10	2°08'16
					4544 Mar 12 01:07	0° Y	
superior conj	4543 Mar 20 17:10	0° Y 02'58	-2°01'18	evening rise	4544 Mar 12 22:31	1° Y 34'35	
minimum elong	4543 Mar 20 20:58	0° Y 19'44	2°01'06	asc. node	4544 Mar 23 12:30	19° Y 43'26	
	4543 Mar 20 16:30	0° Y		evening max el	4544 Mar 29 23:57	28° Y 14'38	18°06'47
evening rise	4543 Mar 31 06:01	19° Y 15'47			4544 Apr 01 01:21	0° B	
	4543 Apr 06 02:53	0° B		retrograde	4544 Apr 05 12:37	1° B 37'04	
asc. node	4543 Apr 06 15:28	0° B 55'31		evening set	4544 Apr 08 06:07	1° B 01'13	
evening max el	4543 Apr 16 12:05	15° B 08'52	18°14'28		4544 Apr 10 02:04	30° R Y	
retrograde	4543 Apr 23 13:01	18° B 40'35		inferior conj	4544 Apr 14 16:15	25° Y 57'18	3°17'59
evening set	4543 Apr 26 00:11	18° B 15'25		minimum elong	4544 Apr 14 18:27	25° Y 51'45	3°17'41
inferior conj	4543 May 03 01:12	13° B 31'35	2°38'18	min. Earth dist.	4544 Apr 17 17:18	22° Y 54'39	0.61723 AU
minimum elong	4543 May 03 04:41	13° B 23'57	2°37'29	morning rise	4544 Apr 21 05:01	19° Y 57'58	
min. Earth dist.	4543 May 06 10:52	10° B 34'06	0.59532 AU	direct	4544 Apr 28 00:20	17° Y 33'49	
morning rise	4543 May 10 06:28	7° B 49'50		desc. node	4544 Apr 29 05:23	17° Y 38'07	
desc. node	4543 May 13 08:21	6° B 27'23		morning max el	4544 May 12 04:32	25° Y 32'54	27°51'59
direct	4543 May 16 15:38	5° B 57'10			4544 May 16 07:04	0° B	
morning max el	4543 May 31 00:33	13° B 47'35	27°27'24		4544 Jun 05 10:24	0° II	
	4543 Jun 12 23:07	0° II		morning set	4544 Jun 14 11:48	17° II 21'25	
	4543 Jun 29 21:50	0° B		asc. node	4544 Jun 19 11:46	27° II 52'35	
morning set	4543 Jul 01 08:37	2° B 59'36			4544 Jun 20 11:19	0° B	
asc. node	4543 Jul 03 14:44	7° B 45'47		max. Earth dist.	4544 Jun 20 06:23	29° II 33'13	1.32261 AU
superior conj	4543 Jul 08 11:47	18° B 24'19	0°49'09	superior conj	4544 Jun 21 21:57	3° B 08'36	0°25'09
minimum elong	4543 Jul 08 09:50	18° B 13'35	0°48'46	minimum elong	4544 Jun 21 20:49	3° B 02'25	0°24'53
max. Earth dist.	4543 Jul 07 21:13	17° B 04'03	1.31979 AU	evening rise	4544 Jun 28 18:40	18° B 04'48	
	4543 Jul 13 18:38	0° O			4544 Jul 04 14:50	0° O	
evening rise	4543 Jul 15 07:15	3° O 16'07		evening max el	4544 Jul 24 04:52	28° O 47'20	24°34'33
	4543 Jul 29 13:30	0° H			4544 Jul 25 12:23	0° H	
desc. node	4543 Aug 09 07:37	14° H 37'58		desc. node	4544 Jul 26 04:39	0° H 35'05	
evening max el	4543 Aug 12 13:54	18° H 00'36	25°59'32	retrograde	4544 Aug 07 02:12	5° H 47'59	
retrograde	4543 Aug 26 13:07	25° H 08'29		evening set	4544 Aug 12 04:08	4° H 50'04	
evening set	4543 Sep 01 20:59	23° H 32'18		min. Earth dist.	4544 Aug 17 16:02	1° H 59'42	0.56848 AU
min. Earth dist.	4543 Sep 06 02:24	20° H 56'48	0.58758 AU	inferior conj	4544 Aug 20 09:52	0° H 14'05	-5°13'18
inferior conj	4543 Sep 09 08:06	18° H 33'58	-5°01'56	minimum elong	4544 Aug 20 08:40	0° H 16'00	5°13'17
minimum elong	4543 Sep 09 12:06	18° H 26'33	5°01'29		4544 Aug 20 18:37	30° R O	
morning rise	4543 Sep 17 05:29	14° H 08'16		morning rise	4544 Aug 28 15:43	26° O 09'44	
direct	4543 Sep 19 15:38	13° H 48'52		direct	4544 Aug 31 07:01	25° O 50'38	
morning max el	4543 Sep 27 18:51	17° H 43'06	18°33'44		4544 Sep 09 10:31	0° H	
asc. node	4543 Sep 29 13:57	19° H 36'35		morning max el	4544 Sep 09 17:03	0° H 15'08	19°27'05
	4543 Oct 06 16:03	0° A		asc. node	4544 Sep 15 11:00	7° H 10'48	
morning set	4543 Oct 13 22:35	13° A 31'13		morning set	4544 Sep 26 23:55	27° H 55'54	
					4544 Sep 28 00:39	0° A	
superior conj	4543 Oct 22 18:38	0° M 26'42	1°25'32	superior conj	4544 Oct 05 00:37	13° A 58'59	1°39'00
minimum elong	4543 Oct 22 22:01	0° M 42'26	1°25'12	minimum elong	4544 Oct 05 02:28	14° A 08'00	1°38'53
	4543 Oct 22 12:55	0° M		max. Earth dist.	4544 Oct 11 07:20	25° A 55'46	1.37906 AU
max. Earth dist.	4543 Oct 30 03:02	13° M 42'40	1.39999 AU		4544 Oct 13 13:04	0° M	
evening rise	4543 Nov 03 07:38	20° M 52'08		evening rise	4544 Oct 15 01:31	2° M 42'08	
desc. node	4543 Nov 05 06:54	24° M 08'05		desc. node	4544 Oct 22 03:56	14° M 44'29	
	4543 Nov 08 22:00	0° X			4544 Nov 01 01:17	0° X	
	4543 Nov 29 16:42	0° B		evening max el	4544 Nov 19 17:25	23° X 31'10	25°08'01
evening max el	4543 Dec 08 04:48	9° B 49'01	23°51'10		4544 Nov 29 01:38	0° B	
retrograde	4543 Dec 19 02:20	16° B 14'30		retrograde	4544 Dec 01 15:09	0° B 24'30	
evening set	4543 Dec 24 06:30	14° B 05'24			4544 Dec 04 01:17	30° R X	
asc. node	4543 Dec 26 13:12	11° B 45'59		evening set	4544 Dec 07 08:51	28° X 01'01	
min. Earth dist.	4543 Dec 29 02:00	8° B 30'27	0.67913 AU	min. Earth dist.	4544 Dec 11 20:37	23° X 00'11	0.67413 AU
inferior conj	4543 Dec 29 16:57	7° B 39'34	1°03'11	asc. node	4544 Dec 12 10:14	22° X 15'47	
minimum elong	4543 Dec 29 15:32	7° B 44'25	1°02'37	inferior conj	4544 Dec 12 22:22	21° X 36'02	0°10'21
morning rise	4544 Jan 04 00:34	1° B 34'48		minimum elong	4544 Dec 12 22:06	21° X 36'53	0°10'14
direct	4544 Jan 08 01:15	0° B 03'03		transit middle	4544 Dec 12 22:06	21° X 36'53	0°10'14
morning max el	4544 Jan 16 03:50	4° B 42'29	20°40'47	transit begin	4544 Dec 12 19:57	21° X 43'56	
desc. node	4544 Feb 01 06:09	25° B 51'11		transit end	4544 Dec 13 00:15	21° X 29'52	
	4544 Feb 04 01:23	0° A		morning rise	4544 Dec 18 11:34	15° X 38'10	
morning set	4544 Feb 14 09:38	15° A 45'51		direct	4544 Dec 21 23:53	14° X 27'01	
max. Earth dist.	4544 Feb 23 04:41	29° A 42'16	1.43133 AU	morning max el	4544 Dec 29 06:18	18° X 32'05	19°34'25
	4544 Feb 23 09:04	0° H					

	4545 Jan 07 08:14	0°♄			4545 Dec 02 08:45	30°♍	
greatest brilliancy	4545 Jan 11 08:12	5°♄50'30	-0.7m	morning rise	4545 Dec 02 20:35	29°♍41'33	
desc. node	4545 Jan 18 03:11	16°♄06'39		direct	4545 Dec 05 22:23	28°♍47'44	
morning set	4545 Jan 23 06:25	24°♄00'19			4545 Dec 09 15:11	0°♄	
	4545 Jan 27 03:16	0°♄		morning max el	4545 Dec 12 15:53	2°♄29'30	18°43'28
max. Earth dist.	4545 Feb 04 16:54	13°♄26'09	1.44510 AU		4545 Dec 31 19:43	0°♄	
				morning set	4546 Jan 02 21:01	3°♄14'20	
superior conj	4545 Feb 08 22:20	20°♄10'28	-1°57'54	desc. node	4546 Jan 05 00:12	6°♄35'56	
minimum elong	4545 Feb 08 15:51	19°♄44'29	1°57'31	max. Earth dist.	4546 Jan 18 10:29	27°♄41'05	1.45221 AU
	4545 Feb 14 23:38	0°♄					
evening rise	4545 Feb 22 19:05	12°♄59'37		superior conj	4546 Jan 19 04:30	28°♄51'49	-1°27'53
	4545 Mar 05 00:30	0°♄		minimum elong	4546 Jan 18 19:11	28°♄15'16	1°26'55
asc. node	4545 Mar 10 09:32	7°♄55'20			4546 Jan 19 21:52	0°♄	
evening max el	4545 Mar 13 12:47	11°♄35'08	18°18'01	evening rise	4546 Feb 03 16:34	23°♄26'53	
retrograde	4545 Mar 19 23:07	15°♄02'07			4546 Feb 07 18:26	0°♄	
evening set	4545 Mar 22 22:43	14°♄14'19		greatest brilliancy	4546 Feb 11 00:46	5°♄14'01	-0.9m
inferior conj	4545 Mar 28 21:54	8°♄51'24	3°33'53	evening max el	4546 Feb 24 23:53	25°♄03'05	18°47'22
minimum elong	4545 Mar 28 22:24	8°♄50'00	3°33'52	asc. node	4546 Feb 25 06:34	25°♄19'49	
min. Earth dist.	4545 Mar 31 08:46	6°♄06'01	0.63744 AU	retrograde	4546 Mar 03 16:32	28°♄47'00	
morning rise	4545 Apr 03 21:09	2°♄42'52		evening set	4546 Mar 06 22:35	27°♄46'23	
	4545 Apr 10 02:02	30°♄		inferior conj	4546 Mar 12 14:16	22°♄05'57	3°31'49
direct	4545 Apr 10 17:44	29°♄58'35		minimum elong	4546 Mar 12 13:18	22°♄08'54	3°31'44
	4545 Apr 11 09:37	0°♄		min. Earth dist.	4546 Mar 14 09:24	19°♄53'08	0.65424 AU
desc. node	4545 Apr 16 02:24	1°♄23'46		morning rise	4546 Mar 18 03:36	15°♄53'09	
morning max el	4545 Apr 24 12:45	7°♄56'47	27°39'15	direct	4546 Mar 24 18:03	13°♄02'47	
	4545 May 11 12:49	0°♄		desc. node	4546 Apr 02 23:25	17°♄11'45	
	4545 May 28 15:55	0°♄		morning max el	4546 Apr 06 22:38	20°♄48'55	26°53'52
morning set	4545 May 29 07:54	1°♄19'02			4546 Apr 14 21:04	0°♄	
max. Earth dist.	4545 Jun 03 09:14	11°♄39'59	1.32987 AU		4546 May 04 16:01	0°♄	
				morning set	4546 May 12 17:45	14°♄42'41	
superior conj	4545 Jun 06 04:45	17°♄38'35	-0°01'47	max. Earth dist.	4546 May 17 02:23	23°♄16'27	1.34175 AU
minimum elong	4545 Jun 06 04:50	17°♄39'02	0°01'46		4546 May 20 09:23	0°♄	
behind sun begin	4545 Jun 05 23:31	17°♄10'31					
behind sun end	4545 Jun 06 10:09	18°♄07'35		superior conj	4546 May 21 06:01	1°♄47'17	-0°30'39
asc. node	4545 Jun 06 08:48	18°♄00'23		minimum elong	4546 May 21 07:39	1°♄55'45	0°30'18
	4545 Jun 11 22:22	0°♄		asc. node	4546 May 24 05:50	8°♄04'37	
evening rise	4545 Jun 13 06:23	2°♄50'30		evening rise	4546 May 28 16:29	17°♄26'40	
	4545 Jun 28 03:45	0°♄			4546 Jun 03 23:21	0°♄	
evening max el	4545 Jul 05 17:54	9°♄11'00	22°57'38	evening max el	4546 Jun 17 12:49	19°♄43'39	21°24'22
desc. node	4545 Jul 13 01:39	14°♄27'28		retrograde	4546 Jun 29 16:23	25°♄42'55	
retrograde	4545 Jul 19 02:22	15°♄50'29		desc. node	4546 Jun 29 22:39	25°♄42'46	
evening set	4545 Jul 22 15:45	15°♄22'49		evening set	4546 Jul 02 01:44	25°♄29'50	
min. Earth dist.	4545 Jul 30 02:41	12°♄03'01	0.55437 AU	inferior conj	4546 Jul 11 10:35	21°♄30'24	-3°15'39
inferior conj	4545 Jul 31 16:19	11°♄08'41	-4°39'48	minimum elong	4546 Jul 11 02:17	21°♄42'00	3°13'04
minimum elong	4545 Jul 31 09:10	11°♄19'02	4°38'30	min. Earth dist.	4546 Jul 11 13:07	21°♄26'51	0.54822 AU
morning rise	4545 Aug 09 04:48	7°♄17'21		morning rise	4546 Jul 20 03:39	17°♄35'49	
direct	4545 Aug 12 03:59	6°♄56'36		direct	4546 Jul 23 13:48	17°♄10'27	
morning max el	4545 Aug 23 03:24	12°♄02'47	20°42'06	morning max el	4546 Aug 05 02:15	23°♄05'26	22°15'42
asc. node	4545 Sep 02 08:02	25°♄32'28			4546 Aug 11 04:26	0°♄	
	4545 Sep 04 20:45	0°♄		asc. node	4546 Aug 20 05:04	14°♄30'06	
morning set	4545 Sep 11 06:45	12°♄36'15		morning set	4546 Aug 26 16:55	27°♄26'13	
					4546 Aug 27 22:08	0°♄	
superior conj	4545 Sep 18 18:27	28°♄06'04	1°43'51	superior conj	4546 Sep 02 20:32	12°♄37'22	1°41'30
minimum elong	4545 Sep 18 18:42	28°♄07'18	1°43'51	minimum elong	4546 Sep 02 19:28	12°♄31'47	1°41'28
	4545 Sep 19 16:50	0°♄		max. Earth dist.	4546 Sep 06 06:51	19°♄46'43	1.34360 AU
max. Earth dist.	4545 Sep 23 15:10	7°♄49'31	1.35973 AU	evening rise	4546 Sep 10 20:58	28°♄57'29	
evening rise	4545 Sep 27 15:24	15°♄27'39			4546 Sep 11 09:53	0°♄	
	4545 Oct 05 21:26	0°♄		desc. node	4546 Sep 25 21:57	25°♄14'51	
desc. node	4545 Oct 09 00:56	5°♄08'41			4546 Sep 29 01:05	0°♄	
	4545 Oct 26 15:18	0°♄		evening max el	4546 Oct 15 18:46	20°♄49'20	27°02'30
evening max el	4545 Nov 02 06:03	7°♄13'53	26°14'18	retrograde	4546 Oct 29 00:50	28°♄06'25	
retrograde	4545 Nov 14 22:47	14°♄23'53		evening set	4546 Nov 04 19:55	25°♄25'45	
evening set	4545 Nov 21 06:01	11°♄49'04		min. Earth dist.	4546 Nov 08 18:10	21°♄35'58	0.65375 AU
min. Earth dist.	4545 Nov 25 10:48	7°♄23'33	0.66569 AU	inferior conj	4546 Nov 10 19:02	19°♄17'20	-1°48'38
inferior conj	4545 Nov 26 23:45	5°♄29'55	-0°47'25	minimum elong	4546 Nov 10 22:07	19°♄08'35	1°47'22
minimum elong	4545 Nov 27 01:02	5°♄25'58	0°46'52	asc. node	4546 Nov 16 04:18	14°♄10'53	
asc. node	4545 Nov 29 07:16	2°♄45'55					

morning rise	4546 Nov 17 01:17	13° \mathbb{M} 41'34		inferior conj	4547 Oct 25 05:40	2° \mathbb{M} 51'48	-2°51'04
direct	4546 Nov 19 18:45	13° \mathbb{M} 01'21		minimum elong	4547 Oct 25 10:32	2° \mathbb{M} 39'17	2°49'18
morning max el	4546 Nov 26 06:29	16° \mathbb{M} 30'09	18°09'03		4547 Oct 28 04:31	30° \mathbb{R} $\underline{\mathbb{A}}$	
	4546 Dec 06 03:09	0° \mathbb{A}		morning rise	4547 Oct 31 22:42	27° $\underline{\mathbb{A}}$ 31'48	
morning set	4546 Dec 14 16:58	13° \mathbb{A} 57'27		direct	4547 Nov 03 10:11	27° $\underline{\mathbb{A}}$ 01'29	
desc. node	4546 Dec 22 21:13	27° \mathbb{A} 15'03		asc. node	4547 Nov 03 01:20	27° $\underline{\mathbb{A}}$ 02'10	
	4546 Dec 24 14:20	0° \mathbb{B}			4547 Nov 09 12:16	0° \mathbb{M}	
superior conj	4546 Dec 29 08:59	7° \mathbb{B} 35'47	-0°43'44	morning max el	4547 Nov 09 23:15	0° \mathbb{M} 26'29	17°51'48
minimum elong	4546 Dec 29 03:32	7° \mathbb{B} 14'12	0°42'59	morning set	4547 Nov 26 16:01	25° \mathbb{M} 59'13	
max. Earth dist.	4547 Jan 01 06:13	12° \mathbb{B} 08'33	1.45190 AU		4547 Nov 29 00:07	0° \mathbb{A}	
	4547 Jan 12 16:48	0° \mathbb{A}		superior conj	4547 Dec 09 07:16	17° \mathbb{A} 15'05	0°03'12
evening rise	4547 Jan 14 16:20	3° \mathbb{A} 04'34		minimum elong	4547 Dec 09 07:37	17° \mathbb{A} 16'33	0°03'10
greatest brilliancy	4547 Jan 27 06:44	22° \mathbb{A} 27'55	-0.7m	behind sun begin	4547 Dec 08 21:56	16° \mathbb{A} 36'55	
	4547 Feb 01 10:23	0° \mathbb{H}		behind sun end	4547 Dec 09 17:18	17° \mathbb{A} 56'05	
evening max el	4547 Feb 08 07:08	8° \mathbb{H} 34'25	19°33'29	desc. node	4547 Dec 09 18:14	17° \mathbb{A} 59'52	
asc. node	4547 Feb 12 03:35	11° \mathbb{H} 43'51		max. Earth dist.	4547 Dec 15 00:29	26° \mathbb{A} 28'08	1.44430 AU
retrograde	4547 Feb 15 13:41	12° \mathbb{H} 45'51			4547 Dec 17 05:57	0° \mathbb{B}	
evening set	4547 Feb 19 03:05	11° \mathbb{H} 31'38		evening rise	4547 Dec 25 03:04	12° \mathbb{B} 15'56	
inferior conj	4547 Feb 24 14:07	5° \mathbb{H} 35'47	3°16'02		4548 Jan 05 20:32	0° \mathbb{A}	
minimum elong	4547 Feb 24 12:11	5° \mathbb{H} 42'09	3°15'42	evening max el	4548 Jan 22 09:08	22° \mathbb{A} 06'48	20°34'19
min. Earth dist.	4547 Feb 25 18:18	4° \mathbb{H} 03'09	0.66690 AU	retrograde	4548 Jan 30 11:57	26° \mathbb{A} 53'41	
	4547 Mar 01 04:50	30° \mathbb{R} \mathbb{A}		asc. node	4548 Jan 30 00:37	26° \mathbb{A} 52'28	
morning rise	4547 Mar 01 21:03	29° \mathbb{A} 21'29		evening set	4548 Feb 03 10:06	25° \mathbb{A} 25'03	
direct	4547 Mar 08 00:26	26° \mathbb{A} 37'28		inferior conj	4548 Feb 08 18:47	19° \mathbb{A} 16'29	2°49'26
	4547 Mar 15 22:00	0° \mathbb{H}		minimum elong	4548 Feb 08 16:23	19° \mathbb{A} 24'42	2°48'50
morning max el	4547 Mar 20 08:13	3° \mathbb{H} 58'15	25°43'51	min. Earth dist.	4548 Feb 09 09:29	18° \mathbb{A} 26'12	0.67533 AU
desc. node	4547 Mar 20 20:27	4° \mathbb{H} 29'33		morning rise	4548 Feb 13 22:28	13° \mathbb{A} 02'37	
	4547 Apr 09 05:18	0° \mathbb{Y}		direct	4548 Feb 19 12:09	10° \mathbb{A} 34'00	
morning set	4547 Apr 25 13:16	27° \mathbb{Y} 20'50		morning max el	4548 Mar 01 16:54	17° \mathbb{A} 15'32	24°19'06
	4547 Apr 26 23:46	0° \mathbb{B}		desc. node	4548 Mar 06 17:29	22° \mathbb{A} 51'28	
max. Earth dist.	4547 Apr 29 08:18	4° \mathbb{B} 26'19	1.35814 AU		4548 Mar 12 07:44	0° \mathbb{H}	
					4548 Apr 01 06:05	0° \mathbb{Y}	
superior conj	4547 May 04 23:10	15° \mathbb{B} 27'29	-1°00'06	morning set	4548 Apr 06 13:01	8° \mathbb{Y} 58'45	
minimum elong	4547 May 05 02:27	15° \mathbb{B} 43'56	0°59'31	max. Earth dist.	4548 Apr 10 05:18	15° \mathbb{Y} 29'49	1.37820 AU
asc. node	4547 May 11 02:52	28° \mathbb{B} 01'25					
	4547 May 12 01:59	0° \mathbb{I}		superior conj	4548 Apr 17 04:54	28° \mathbb{Y} 30'44	-1°28'05
evening rise	4547 May 12 22:55	1° \mathbb{I} 46'57		minimum elong	4548 Apr 17 09:29	28° \mathbb{Y} 52'46	1°27'28
	4547 May 29 23:12	0° \mathbb{B}			4548 Apr 17 23:26	0° \mathbb{B}	
evening max el	4547 May 30 19:14	0° \mathbb{B} 50'53	20°05'48	evening rise	4548 Apr 25 23:09	15° \mathbb{B} 44'18	
retrograde	4547 Jun 10 06:50	5° \mathbb{B} 58'09		asc. node	4548 Apr 26 23:55	17° \mathbb{B} 46'29	
evening set	4547 Jun 12 05:26	5° \mathbb{B} 48'21			4548 May 03 12:00	0° \mathbb{I}	
desc. node	4547 Jun 16 19:42	4° \mathbb{B} 16'47		evening max el	4548 May 12 13:53	12° \mathbb{I} 40'52	19°06'43
inferior conj	4547 Jun 21 06:33	1° \mathbb{B} 48'55	-1°19'30	retrograde	4548 May 21 09:40	16° \mathbb{I} 59'19	
minimum elong	4547 Jun 21 02:50	1° \mathbb{B} 54'29	1°18'07	evening set	4548 May 23 10:22	16° \mathbb{I} 46'36	
min. Earth dist.	4547 Jun 23 01:23	0° \mathbb{B} 44'59	0.55165 AU	inferior conj	4548 May 31 17:36	12° \mathbb{I} 34'25	0°34'20
	4547 Jun 24 08:30	30° \mathbb{R} \mathbb{I}		minimum elong	4548 May 31 18:59	12° \mathbb{I} 32'03	0°33'50
morning rise	4547 Jun 29 22:39	27° \mathbb{I} 30'30		desc. node	4548 Jun 02 16:43	11° \mathbb{I} 13'35	
direct	4547 Jul 04 01:31	26° \mathbb{I} 53'35		min. Earth dist.	4548 Jun 03 16:40	10° \mathbb{I} 33'30	0.56407 AU
	4547 Jul 13 06:14	0° \mathbb{B}		morning rise	4548 Jun 09 00:23	7° \mathbb{I} 40'33	
morning max el	4547 Jul 17 17:42	3° \mathbb{B} 36'03	23°59'02	direct	4548 Jun 14 01:54	6° \mathbb{I} 40'33	
	4547 Aug 05 01:51	0° \mathbb{Q}		morning max el	4548 Jun 28 07:54	13° \mathbb{I} 59'44	25°37'49
asc. node	4547 Aug 07 02:06	3° \mathbb{Q} 54'12			4548 Jul 10 23:30	0° \mathbb{B}	
morning set	4547 Aug 11 04:33	12° \mathbb{Q} 19'41		asc. node	4548 Jul 23 23:09	23° \mathbb{B} 37'48	
				morning set	4548 Jul 25 16:04	27° \mathbb{B} 11'56	
superior conj	4547 Aug 18 03:59	27° \mathbb{Q} 23'34	1°33'06		4548 Jul 26 23:34	0° \mathbb{Q}	
minimum elong	4547 Aug 18 02:04	27° \mathbb{Q} 13'11	1°32'55				
	4547 Aug 19 08:58	0° \mathbb{M}		superior conj	4548 Aug 01 14:36	12° \mathbb{Q} 17'46	1°19'31
max. Earth dist.	4547 Aug 20 07:12	1° \mathbb{M} 59'14	1.33151 AU	minimum elong	4548 Aug 01 12:18	12° \mathbb{Q} 05'07	1°19'11
evening rise	4547 Aug 25 14:09	13° \mathbb{M} 00'01		max. Earth dist.	4548 Aug 02 14:29	14° \mathbb{Q} 28'49	1.32370 AU
	4547 Sep 03 14:19	0° $\underline{\mathbb{A}}$		evening rise	4548 Aug 08 15:42	27° \mathbb{Q} 26'12	
desc. node	4547 Sep 12 18:59	14° $\underline{\mathbb{A}}$ 54'25			4548 Aug 09 21:38	0° \mathbb{M}	
	4547 Sep 24 07:29	0° \mathbb{M}			4548 Aug 26 22:05	0° $\underline{\mathbb{A}}$	
evening max el	4547 Sep 28 06:14	4° \mathbb{M} 05'04	27°25'45	desc. node	4548 Aug 29 16:01	3° $\underline{\mathbb{A}}$ 56'18	
retrograde	4547 Oct 11 20:52	11° \mathbb{M} 22'42		evening max el	4548 Sep 09 14:26	16° $\underline{\mathbb{A}}$ 48'56	27°18'17
evening set	4547 Oct 18 23:47	8° \mathbb{M} 44'50		retrograde	4548 Sep 23 10:16	24° $\underline{\mathbb{A}}$ 03'14	
min. Earth dist.	4547 Oct 22 16:37	5° \mathbb{M} 28'34	0.63833 AU	evening set	4548 Sep 30 14:04	21° $\underline{\mathbb{A}}$ 39'57	

min. Earth dist.	4548 Oct 04 04:52	18° Ω 50'14	0.61989 AU	min. Earth dist.	4549 Sep 16 06:41	1° Ω 26'58	0.59949 AU
inferior conj	4548 Oct 07 04:40	16° Ω 06'14	-3°50'51		4549 Sep 18 02:38	30° \mathbb{R} \mathbb{M}	
minimum elong	4548 Oct 07 10:42	15° Ω 52'24	3°49'07	inferior conj	4549 Sep 19 12:35	28° \mathbb{M} 51'23	-4°41'17
morning rise	4548 Oct 14 09:09	11° Ω 05'08		minimum elong	4549 Sep 19 18:08	28° \mathbb{M} 40'14	4°40'15
direct	4548 Oct 16 17:29	10° Ω 41'16		morning rise	4549 Sep 27 04:08	24° \mathbb{M} 11'56	
asc. node	4548 Oct 19 22:22	11° Ω 27'18		direct	4549 Sep 29 12:38	23° \mathbb{M} 51'33	
morning max el	4548 Oct 23 15:01	14° Ω 10'49	17°52'35	asc. node	4549 Oct 06 19:25	27° \mathbb{M} 17'22	
	4548 Nov 03 11:00	0° \mathbb{M}		morning max el	4549 Oct 07 02:30	27° \mathbb{M} 34'12	18°12'44
morning set	4548 Nov 08 11:52	9° \mathbb{M} 00'28			4549 Oct 09 07:52	0° Ω	
				morning set	4549 Oct 22 22:34	22° Ω 43'53	
superior conj	4548 Nov 19 07:54	28° \mathbb{M} 11'42	0°43'29		4549 Oct 26 19:00	0° \mathbb{M}	
minimum elong	4548 Nov 19 11:29	28° \mathbb{M} 27'03	0°42'59				
	4548 Nov 20 09:14	0° \mathbb{M}		superior conj	4549 Nov 01 09:20	10° \mathbb{M} 20'21	1°13'17
desc. node	4548 Nov 25 15:17	8° \mathbb{M} 47'03		minimum elong	4549 Nov 01 13:17	10° \mathbb{M} 38'12	1°12'49
max. Earth dist.	4548 Nov 26 14:43	10° \mathbb{M} 23'01	1.43041 AU	max. Earth dist.	4549 Nov 09 00:12	23° \mathbb{M} 41'52	1.41189 AU
evening rise	4548 Dec 03 16:21	21° \mathbb{M} 40'23		desc. node	4549 Nov 12 12:20	29° \mathbb{M} 33'13	
	4548 Dec 09 01:57	0° \mathbb{Z}			4549 Nov 12 18:50	0° \mathbb{M}	
	4548 Dec 30 06:10	0° \approx		evening rise	4549 Nov 13 22:22	1° \mathbb{M} 52'28	
evening max el	4549 Jan 04 05:44	5° \approx 40'51	21°46'28		4549 Dec 02 11:49	0° \mathbb{Z}	
retrograde	4549 Jan 13 09:17	11° \approx 07'05		evening max el	4549 Dec 17 21:53	19° \mathbb{Z} 18'12	23°05'14
asc. node	4549 Jan 15 21:40	10° \approx 33'06		retrograde	4549 Dec 28 04:06	25° \mathbb{Z} 22'54	
evening set	4549 Jan 17 17:51	9° \approx 23'08		evening set	4550 Jan 02 00:46	23° \mathbb{Z} 23'02	
inferior conj	4549 Jan 23 02:04	3° \approx 05'03	2°13'57	asc. node	4550 Jan 02 18:41	22° \mathbb{Z} 42'45	
minimum elong	4549 Jan 22 23:41	3° \approx 13'20	2°13'13	inferior conj	4550 Jan 07 10:02	16° \mathbb{Z} 59'05	1°30'59
min. Earth dist.	4549 Jan 23 04:39	2° \approx 56'04	0.67979 AU	minimum elong	4550 Jan 07 08:07	17° \mathbb{Z} 05'38	1°30'16
	4549 Jan 25 08:51	30° \mathbb{R} \mathbb{Z}		min. Earth dist.	4550 Jan 07 01:22	17° \mathbb{Z} 28'55	0.68044 AU
morning rise	4549 Jan 28 05:19	26° \mathbb{Z} 53'19		morning rise	4550 Jan 12 15:23	10° \mathbb{Z} 51'17	
direct	4549 Feb 02 04:23	24° \mathbb{Z} 45'31		direct	4550 Jan 17 00:03	9° \mathbb{Z} 06'22	
	4549 Feb 11 11:08	0° \approx		morning max el	4550 Jan 25 16:56	14° \mathbb{Z} 09'58	21°24'58
morning max el	4549 Feb 12 02:32	0° \approx 38'06	22°49'47		4550 Feb 07 07:11	0° \approx	
desc. node	4549 Feb 21 14:31	11° \approx 59'18		desc. node	4550 Feb 08 11:33	1° \approx 40'31	
	4549 Mar 06 05:10	0° \mathbb{H}		morning set	4550 Feb 26 04:02	28° \approx 20'42	
morning set	4549 Mar 18 10:51	19° \mathbb{H} 19'51			4550 Feb 27 05:04	0° \mathbb{H}	
max. Earth dist.	4549 Mar 23 00:26	27° \mathbb{H} 01'05	1.40012 AU	max. Earth dist.	4550 Mar 05 01:24	9° \mathbb{H} 27'47	1.42102 AU
	4549 Mar 24 17:54	0° \mathbb{Y}					
superior conj	4549 Mar 30 18:56	10° \mathbb{Y} 46'00	-1°51'32	superior conj	4550 Mar 12 12:22	22° \mathbb{H} 02'35	-2°06'04
minimum elong	4549 Mar 30 23:39	11° \mathbb{Y} 07'33	1°51'08	minimum elong	4550 Mar 12 14:49	22° \mathbb{H} 13'10	2°05'59
evening rise	4549 Apr 09 14:05	29° \mathbb{Y} 09'50			4550 Mar 17 01:18	0° \mathbb{Y}	
	4549 Apr 10 00:38	0° \mathbb{B}		evening rise	4550 Mar 23 16:01	11° \mathbb{Y} 55'41	
asc. node	4549 Apr 13 20:58	7° \mathbb{B} 14'03		asc. node	4550 Mar 31 18:01	26° \mathbb{Y} 18'29	
evening max el	4549 Apr 25 17:56	25° \mathbb{B} 07'04	18°27'51		4550 Apr 03 00:30	0° \mathbb{B}	
retrograde	4549 May 03 06:55	28° \mathbb{B} 50'44		evening max el	4550 Apr 09 03:56	8° \mathbb{B} 00'57	18°08'50
evening set	4549 May 05 14:17	28° \mathbb{B} 30'51		retrograde	4550 Apr 15 22:05	11° \mathbb{B} 26'32	
inferior conj	4549 May 13 01:39	23° \mathbb{B} 59'15	2°02'12	evening set	4550 Apr 18 12:11	10° \mathbb{B} 56'50	
minimum elong	4549 May 13 05:11	23° \mathbb{B} 52'11	2°01'10	inferior conj	4550 Apr 25 06:20	6° \mathbb{B} 04'17	2°58'26
min. Earth dist.	4549 May 16 11:56	21° \mathbb{B} 15'52	0.58295 AU	minimum elong	4550 Apr 25 09:24	5° \mathbb{B} 57'09	2°57'50
morning rise	4549 May 20 16:55	18° \mathbb{B} 32'34		min. Earth dist.	4550 Apr 28 13:20	3° \mathbb{B} 01'45	0.60476 AU
desc. node	4549 May 20 13:45	18° \mathbb{B} 36'38		morning rise	4550 May 02 04:22	0° \mathbb{B} 14'10	
direct	4549 May 26 16:32	16° \mathbb{B} 59'46			4550 May 02 13:34	30° \mathbb{R} \mathbb{Y}	
morning max el	4549 Jun 10 01:51	24° \mathbb{B} 41'39	26°56'22	desc. node	4550 May 07 10:46	28° \mathbb{Y} 12'23	
	4549 Jun 14 22:36	0° \mathbb{I}		direct	4550 May 08 19:09	28° \mathbb{Y} 07'12	
	4549 Jul 04 03:16	0° \mathbb{E}			4550 May 15 09:15	0° \mathbb{B}	
morning set	4549 Jul 10 01:46	11° \mathbb{E} 56'34		morning max el	4550 May 23 02:11	6° \mathbb{B} 01'27	27°42'31
asc. node	4549 Jul 10 20:13	13° \mathbb{E} 34'04			4550 Jun 10 01:21	0° \mathbb{I}	
				morning set	4550 Jun 24 07:54	26° \mathbb{I} 28'10	
superior conj	4549 Jul 17 02:24	27° \mathbb{E} 12'25	1°01'25		4550 Jun 26 00:23	0° \mathbb{E}	
minimum elong	4549 Jul 17 00:12	27° \mathbb{E} 00'12	1°01'00	asc. node	4550 Jun 27 17:16	3° \mathbb{E} 38'07	
max. Earth dist.	4549 Jul 17 01:30	27° \mathbb{E} 07'24	1.32005 AU	max. Earth dist.	4550 Jun 30 12:33	9° \mathbb{E} 43'54	1.32051 AU
	4549 Jul 18 08:46	0° \mathbb{Q}					
evening rise	4549 Jul 23 22:47	12° \mathbb{Q} 06'35		superior conj	4550 Jul 01 13:39	12° \mathbb{E} 01'43	0°39'22
	4549 Aug 02 01:24	0° \mathbb{M}		minimum elong	4550 Jul 01 11:59	11° \mathbb{E} 52'37	0°39'01
desc. node	4549 Aug 16 13:03	22° \mathbb{M} 04'34		evening rise	4550 Jul 08 09:11	26° \mathbb{E} 53'58	
evening max el	4549 Aug 22 16:51	28° \mathbb{M} 49'16	26°37'27		4550 Jul 09 20:28	0° \mathbb{Q}	
	4549 Aug 23 23:51	0° Ω			4550 Jul 26 23:08	0° \mathbb{M}	
retrograde	4549 Sep 05 15:29	5° Ω 58'53		desc. node	4550 Aug 03 10:04	8° \mathbb{M} 57'34	
evening set	4549 Sep 12 10:11	4° Ω 02'53		evening max el	4550 Aug 04 11:43	10° \mathbb{M} 00'41	25°25'52
				retrograde	4550 Aug 18 10:36	17° \mathbb{M} 05'27	

evening set	4550 Aug 24 07:21	15° \cap 45'45		retrograde	4551 Jul 30 18:09	27° Ω 27'30	
min. Earth dist.	4550 Aug 28 23:32	13° \cap 06'10	0.57911 AU	evening set	4551 Aug 04 04:53	26° Ω 43'52	
inferior conj	4550 Sep 01 01:59	10° \cap 57'21	-5°11'17	min. Earth dist.	4551 Aug 10 11:06	23° Ω 42'47	0.56164 AU
minimum elong	4550 Sep 01 04:08	10° \cap 53'37	5°11'10	inferior conj	4551 Aug 12 19:07	22° Ω 17'31	-5°05'23
morning rise	4550 Sep 09 03:10	6° \cap 40'59		minimum elong	4551 Aug 12 15:11	22° Ω 23'33	5°05'01
direct	4550 Sep 11 15:21	6° \cap 21'47		morning rise	4551 Aug 21 04:02	18° Ω 20'40	
morning max el	4550 Sep 20 06:21	10° \cap 27'18	18°53'43	direct	4551 Aug 23 22:30	18° Ω 01'05	
asc. node	4550 Sep 23 16:29	14° \cap 17'53		morning max el	4551 Sep 02 23:43	22° Ω 41'27	19°56'33
	4550 Oct 03 05:33	0° Ω			4551 Sep 09 02:00	0° \cap	
morning set	4550 Oct 06 19:33	6° Ω 56'27		asc. node	4551 Sep 10 13:32	2° \cap 14'01	
				morning set	4551 Sep 20 23:34	21° \cap 29'17	
					4551 Sep 25 03:44	0° Ω	
superior conj	4550 Oct 15 06:26	23° Ω 26'31	1°32'23				
minimum elong	4550 Oct 15 09:12	23° Ω 39'43	1°32'10				
	4550 Oct 18 18:17	0° \cap		superior conj	4551 Sep 28 18:02	7° Ω 15'54	1°42'01
max. Earth dist.	4550 Oct 22 05:48	6° \cap 18'52	1.39108 AU	minimum elong	4551 Sep 28 19:10	7° Ω 21'36	1°41'59
evening rise	4550 Oct 26 03:09	13° \cap 06'27		max. Earth dist.	4551 Oct 04 11:07	18° Ω 22'07	1.37049 AU
desc. node	4550 Oct 30 09:20	20° \cap 14'20		evening rise	4551 Oct 08 06:03	25° Ω 21'38	
	4550 Nov 05 12:41	0° \nearrow			4551 Oct 10 20:43	0° \cap	
	4550 Nov 27 15:11	0° \searrow		desc. node	4551 Oct 17 06:21	10° \cap 46'35	
evening max el	4550 Nov 30 11:12	2° \searrow 58'37	24°24'41		4551 Oct 30 02:19	0° \nearrow	
retrograde	4550 Dec 11 19:14	9° \searrow 36'29		evening max el	4551 Nov 12 23:34	16° \nearrow 41'28	25°37'48
evening set	4550 Dec 17 05:14	7° \searrow 20'56		retrograde	4551 Nov 25 05:55	23° \nearrow 43'22	
asc. node	4550 Dec 20 15:43	3° \searrow 37'24		evening set	4551 Dec 01 05:37	21° \nearrow 14'14	
min. Earth dist.	4550 Dec 21 21:19	2° \searrow 00'37	0.67749 AU	min. Earth dist.	4551 Dec 05 14:14	16° \nearrow 28'35	0.67103 AU
inferior conj	4550 Dec 22 16:51	0° \searrow 55'10	0°41'27	inferior conj	4551 Dec 06 20:48	14° \nearrow 51'05	-0°13'37
minimum elong	4550 Dec 22 15:52	0° \searrow 58'27	0°41'03	minimum elong	4551 Dec 06 21:09	14° \nearrow 49'58	0°13'28
	4550 Dec 23 09:24	30° \nearrow		transit middle	4551 Dec 06 21:09	14° \nearrow 49'58	0°13'28
morning rise	4550 Dec 28 02:36	24° \nearrow 53'15		transit begin	4551 Dec 06 19:35	14° \nearrow 54'55	
direct	4550 Dec 31 21:54	23° \nearrow 30'32		transit end	4551 Dec 06 22:42	14° \nearrow 45'01	
morning max el	4551 Jan 08 14:51	27° \nearrow 53'27	20°10'48	asc. node	4551 Dec 07 12:44	14° \nearrow 00'30	
	4551 Jan 10 14:10	0° \searrow		morning rise	4551 Dec 12 13:03	8° \nearrow 57'13	
desc. node	4551 Jan 26 08:34	21° \searrow 45'18		direct	4551 Dec 15 20:36	7° \nearrow 54'01	
	4551 Jan 31 19:26	0° \approx		morning max el	4551 Dec 22 20:39	11° \nearrow 47'41	19°10'46
morning set	4551 Feb 05 01:42	6° \approx 32'30			4552 Jan 05 08:32	0° \searrow	
max. Earth dist.	4551 Feb 15 10:13	22° \approx 48'43	1.43800 AU	greatest brilliancy	4552 Jan 05 17:15	0° \searrow 33'05	-0.7m
	4551 Feb 19 20:54	0° \nearrow		desc. node	4552 Jan 13 05:35	12° \searrow 07'18	
				morning set	4552 Jan 15 03:30	15° \searrow 05'31	
superior conj	4551 Feb 21 04:44	2° \nearrow 10'26	-2°06'15		4552 Jan 24 17:05	0° \approx	
minimum elong	4551 Feb 21 01:50	1° \nearrow 58'29	2°06'10	max. Earth dist.	4552 Jan 29 01:04	6° \approx 48'06	1.44903 AU
evening rise	4551 Mar 06 00:31	23° \nearrow 52'24					
	4551 Mar 09 13:26	0° \cap		superior conj	4552 Jan 31 20:36	11° \approx 14'51	-1°47'25
asc. node	4551 Mar 18 15:02	14° \cap 52'00		minimum elong	4552 Jan 31 12:07	10° \approx 41'18	1°46'45
evening max el	4551 Mar 23 16:30	21° \cap 13'21	18°09'12		4552 Feb 12 12:07	0° \nearrow	
retrograde	4551 Mar 30 03:00	24° \cap 36'12		evening rise	4552 Feb 15 11:29	4° \nearrow 52'59	
evening set	4551 Apr 01 23:07	23° \cap 55'18			4552 Mar 02 08:09	0° \cap	
inferior conj	4551 Apr 08 04:05	18° \cap 42'46	3°27'16	asc. node	4552 Mar 04 12:02	2° \cap 45'05	
minimum elong	4551 Apr 08 05:34	18° \cap 38'51	3°27'08	evening max el	4552 Mar 06 04:48	4° \cap 37'12	18°28'18
min. Earth dist.	4551 Apr 10 23:20	15° \cap 45'25	0.62619 AU	retrograde	4552 Mar 12 16:59	8° \cap 10'23	
morning rise	4551 Apr 14 10:41	12° \cap 38'42		evening set	4552 Mar 15 19:10	7° \cap 17'20	
direct	4551 Apr 21 07:26	10° \cap 04'42		inferior conj	4552 Mar 21 14:45	1° \cap 46'37	3°34'55
desc. node	4551 Apr 24 07:47	10° \cap 31'33		minimum elong	4552 Mar 21 14:35	1° \cap 47'07	3°34'54
morning max el	4551 May 05 08:22	18° \cap 04'05	27°51'03		4552 Mar 23 02:54	30° \nearrow	
	4551 May 15 08:16	0° \searrow		min. Earth dist.	4552 Mar 23 18:55	29° \nearrow 13'35	0.64505 AU
	4551 Jun 02 20:51	0° \cap		morning rise	4552 Mar 27 09:18	25° \nearrow 35'28	
morning set	4551 Jun 08 08:24	10° \cap 40'27		direct	4552 Apr 03 03:51	22° \nearrow 46'59	
max. Earth dist.	4551 Jun 13 19:42	22° \cap 05'35	1.32516 AU	desc. node	4552 Apr 10 04:48	25° \nearrow 13'18	
asc. node	4551 Jun 14 14:19	23° \cap 45'40			4552 Apr 16 00:45	0° \cap	
				morning max el	4552 Apr 16 17:50	0° \cap 42'18	27°23'31
superior conj	4551 Jun 15 22:36	26° \cap 40'14	0°14'02		4552 May 08 09:30	0° \searrow	
minimum elong	4551 Jun 15 21:56	26° \cap 36'39	0°13'53	morning set	4552 May 22 00:33	24° \searrow 24'59	
behind sun begin	4551 Jun 15 19:22	26° \cap 22'43			4552 May 24 19:52	0° \cap	
behind sun end	4551 Jun 16 00:30	26° \cap 50'35		max. Earth dist.	4552 May 26 18:52	4° \cap 00'19	1.33431 AU
	4551 Jun 17 11:18	0° \searrow					
evening rise	4551 Jun 22 20:58	11° \searrow 42'02		superior conj	4552 May 30 03:18	11° \cap 01'44	-0°13'52
	4551 Jul 02 03:58	0° Ω		minimum elong	4552 May 30 04:01	11° \cap 05'30	0°13'43
evening max el	4551 Jul 17 00:50	20° Ω 33'23	23°53'48	behind sun begin	4552 May 30 01:10	10° \cap 50'27	
desc. node	4551 Jul 21 07:04	24° Ω 06'06		behind sun end	4552 May 30 06:51	11° \cap 20'33	

asc. node	4552 May 31 11:20	13°♊52'17		superior conj	4553 May 14 01:30	24°♊59'51	-0°43'11
evening rise	4552 Jun 06 08:14	26°♊24'13		minimum elong	4553 May 14 03:50	25°♊11'50	0°42'43
	4552 Jun 08 01:34	0°♊			4553 May 16 11:30	0°♊	
	4552 Jun 26 16:56	0°♊		asc. node	4553 May 18 08:23	3°♊54'16	
evening max el	4552 Jun 27 15:14	0°♊56'08	22°16'42	evening rise	4553 May 21 17:03	10°♊54'43	
desc. node	4552 Jul 07 04:05	6°♊54'49			4553 May 31 18:21	0°♊	
retrograde	4552 Jul 10 13:45	7°♊21'38		evening max el	4553 Jun 09 14:49	11°♊42'22	20°48'48
evening set	4552 Jul 13 13:06	7°♊02'04		retrograde	4553 Jun 21 02:17	17°♊19'44	
min. Earth dist.	4552 Jul 21 21:28	3°♊25'37	0.55053 AU	evening set	4553 Jun 23 04:45	17°♊09'10	
inferior conj	4552 Jul 22 19:00	2°♊55'14	-4°09'50	desc. node	4553 Jun 24 01:05	16°♊59'12	
minimum elong	4552 Jul 22 10:32	3°♊07'12	-4°07'48	inferior conj	4553 Jul 02 12:11	13°♊12'03	-2°28'19
	4552 Jul 28 13:01	30°♊		minimum elong	4553 Jul 02 05:23	13°♊21'44	2°25'58
morning rise	4552 Jul 31 09:49	29°♊05'02		min. Earth dist.	4553 Jul 03 08:54	12°♊42'34	0.54849 AU
direct	4552 Aug 03 12:50	28°♊43'05		morning rise	4553 Jul 11 05:41	9°♊09'09	
	4552 Aug 09 04:56	0°♊		direct	4553 Jul 14 22:09	8°♊39'53	
morning max el	4552 Aug 15 05:04	4°♊09'52	21°20'09	morning max el	4553 Jul 28 00:05	14°♊56'38	22°59'09
asc. node	4552 Aug 27 10:34	20°♊52'02			4553 Aug 08 16:12	0°♊	
	4552 Sep 01 06:36	0°♊		asc. node	4553 Aug 14 07:37	10°♊01'54	
morning set	4552 Sep 04 08:02	6°♊14'13		morning set	4553 Aug 19 19:01	21°♊05'54	
					4553 Aug 23 23:00	0°♊	
superior conj	4552 Sep 11 15:47	21°♊34'40	1°43'40	superior conj	4553 Aug 26 20:27	6°♊13'03	1°38'38
minimum elong	4552 Sep 11 15:26	21°♊32'49	1°43'40	minimum elong	4553 Aug 26 18:58	6°♊05'09	1°38'32
	4552 Sep 15 18:54	0°♊		max. Earth dist.	4553 Aug 29 16:47	12°♊14'49	1.33794 AU
max. Earth dist.	4552 Sep 15 21:33	0°♊13'10	1.35233 AU	evening rise	4553 Sep 03 14:07	22°♊12'27	
evening rise	4552 Sep 20 03:07	8°♊27'23			4553 Sep 07 15:27	0°♊	
	4552 Oct 02 11:20	0°♊		desc. node	4553 Sep 20 00:25	20°♊59'42	
desc. node	4552 Oct 03 03:23	1°♊03'58			4553 Sep 26 05:38	0°♊	
	4552 Oct 25 03:10	0°♊		evening max el	4553 Oct 08 00:38	13°♊50'35	27°15'55
evening max el	4552 Oct 25 12:08	0°♊21'46	26°37'23	retrograde	4553 Oct 21 11:10	21°♊08'43	
retrograde	4552 Nov 07 11:30	7°♊36'44		evening set	4553 Oct 28 10:00	18°♊28'19	
evening set	4552 Nov 14 00:01	4°♊58'25		min. Earth dist.	4553 Nov 01 05:50	14°♊52'56	0.64753 AU
min. Earth dist.	4552 Nov 18 01:51	0°♊48'08	0.66102 AU	inferior conj	4553 Nov 03 11:48	12°♊25'41	-2°15'11
	4552 Nov 18 18:06	30°♊		minimum elong	4553 Nov 03 15:40	12°♊15'06	2°13'40
inferior conj	4552 Nov 19 19:52	28°♊42'55	-1°13'04	morning rise	4553 Nov 09 22:28	6°♊55'57	
minimum elong	4552 Nov 19 21:53	28°♊36'53	1°12'13	asc. node	4553 Nov 10 06:49	6°♊47'11	
asc. node	4552 Nov 23 09:46	24°♊48'16		direct	4553 Nov 12 13:02	6°♊20'25	
morning rise	4552 Nov 25 20:31	22°♊59'35		morning max el	4553 Nov 19 00:34	9°♊46'52	17°59'31
direct	4552 Nov 28 18:22	22°♊12'12			4553 Dec 02 20:30	0°♊	
morning max el	4552 Dec 05 08:45	25°♊47'38	18°26'43	morning set	4553 Dec 06 14:24	6°♊15'48	
	4552 Dec 08 23:29	0°♊		desc. node	4553 Dec 16 23:40	23°♊23'28	
morning set	4552 Dec 25 06:11	24°♊56'45					
	4552 Dec 28 10:05	0°♊		superior conj	4553 Dec 20 09:41	28°♊53'24	-0°23'30
desc. node	4552 Dec 30 02:38	2°♊41'27		minimum elong	4553 Dec 20 06:49	28°♊41'58	0°23'04
					4553 Dec 21 02:21	0°♊	
superior conj	4553 Jan 09 23:30	19°♊50'48	-1°10'16	max. Earth dist.	4553 Dec 24 14:40	5°♊34'26	1.44952 AU
minimum elong	4553 Jan 09 15:10	19°♊18'04	1°09'16	evening rise	4554 Jan 05 15:47	24°♊19'55	
max. Earth dist.	4553 Jan 10 19:25	21°♊08'52	1.45297 AU		4554 Jan 09 08:18	0°♊	
	4553 Jan 16 10:58	0°♊		greatest brilliancy	4554 Jan 19 21:39	15°♊57'36	-0.6m
evening rise	4553 Jan 25 23:10	14°♊57'23			4554 Jan 30 06:49	0°♊	
	4553 Feb 04 12:21	0°♊		evening max el	4554 Jan 31 19:42	1°♊40'01	19°57'49
greatest brilliancy	4553 Feb 04 20:30	0°♊31'43	-0.8m	asc. node	4554 Feb 06 06:05	5°♊40'10	
evening max el	4553 Feb 17 14:29	18°♊07'23	19°05'05	retrograde	4554 Feb 08 10:07	6°♊05'23	
asc. node	4553 Feb 19 09:03	19°♊45'59		evening set	4554 Feb 12 03:06	4°♊45'12	
retrograde	4553 Feb 24 12:21	22°♊02'02			4554 Feb 16 13:59	30°♊	
evening set	4553 Feb 27 21:17	20°♊55'57		inferior conj	4554 Feb 17 12:54	28°♊43'53	3°05'54
inferior conj	4553 Mar 05 10:42	15°♊08'52	3°26'34	minimum elong	4554 Feb 17 10:42	28°♊51'14	3°05'28
minimum elong	4553 Mar 05 09:16	15°♊13'26	3°26'25	min. Earth dist.	4554 Feb 18 11:14	27°♊29'05	0.67105 AU
min. Earth dist.	4553 Mar 06 23:26	13°♊12'14	0.66013 AU	morning rise	4554 Feb 22 18:06	22°♊29'42	
morning rise	4553 Mar 10 20:53	8°♊54'59		direct	4554 Feb 28 16:01	19°♊51'07	
direct	4553 Mar 17 07:08	6°♊05'39		morning max el	4554 Mar 12 12:38	26°♊56'19	25°08'53
desc. node	4553 Mar 28 01:49	11°♊43'22		desc. node	4554 Mar 14 22:52	29°♊31'09	
morning max el	4553 Mar 30 03:46	13°♊43'33	26°26'26		4554 Mar 15 09:10	0°♊	
	4553 Apr 12 08:31	0°♊			4554 Apr 05 23:42	0°♊	
	4553 May 01 02:31	0°♊		morning set	4554 Apr 17 16:43	19°♊45'58	
morning set	4553 May 05 04:55	7°♊31'37		max. Earth dist.	4554 Apr 21 08:13	26°♊25'46	1.36636 AU
max. Earth dist.	4553 May 09 06:58	15°♊23'15	1.34815 AU		4554 Apr 23 05:47	0°♊	

superior conj	4554 Apr 27 14:15	8°♄25'49	-1°12'19	minimum elong	4555 Apr 10 18:44	21°♄33'08	1°38'15
minimum elong	4554 Apr 27 18:10	8°♄45'06	1°11'41		4555 Apr 15 04:44	0°♄	
asc. node	4554 May 05 05:25	23°♄46'43		evening rise	4555 Apr 19 17:51	8°♄51'18	
evening rise	4554 May 05 21:09	25°♄06'06		asc. node	4555 Apr 22 02:26	13°♄25'09	
	4554 May 08 08:02	0°♄			4555 May 01 17:14	0°♄	
evening max el	4554 May 23 02:41	23°♄08'05	19°38'09	evening max el	4555 May 06 01:40	5°♄14'06	18°47'34
retrograde	4554 Jun 01 20:17	27°♄52'46		retrograde	4555 May 14 06:50	9°♄15'56	
evening set	4554 Jun 03 18:59	27°♄42'13		evening set	4555 May 16 10:16	9°♄00'30	
desc. node	4554 Jun 10 22:06	24°♄39'12		inferior conj	4555 May 24 08:52	4°♄40'02	1°15'31
inferior conj	4554 Jun 12 13:13	23°♄38'41	-0°29'03	minimum elong	4555 May 24 11:34	4°♄35'06	1°14'37
minimum elong	4554 Jun 12 11:54	23°♄40'45	0°28'34	min. Earth dist.	4555 May 27 14:34	2°♄18'55	0.57157 AU
min. Earth dist.	4554 Jun 14 22:08	22°♄09'32	0.55604 AU	desc. node	4555 May 28 19:08	1°♄30'40	
morning rise	4554 Jun 21 02:24	19°♄06'04			4555 May 31 09:18	30°♄	
direct	4554 Jun 25 14:49	18°♄20'37		morning rise	4555 Jun 01 09:35	29°♄31'25	
morning max el	4554 Jul 09 13:59	25°♄19'50	24°42'33	direct	4555 Jun 06 20:54	28°♄18'37	
	4554 Jul 13 22:49	0°♄			4555 Jun 13 10:22	0°♄	
asc. node	4554 Aug 01 04:41	29°♄35'12		morning max el	4555 Jun 21 05:17	5°♄48'13	26°14'41
	4554 Aug 01 09:35	0°♄			4555 Jul 08 22:58	0°♄	
morning set	4554 Aug 04 06:48	5°♄59'21		asc. node	4555 Jul 19 01:44	19°♄24'59	
				morning set	4555 Jul 19 17:44	20°♄49'09	
superior conj	4554 Aug 11 05:29	21°♄03'15	1°27'55		4555 Jul 23 23:45	0°♄	
minimum elong	4554 Aug 11 03:21	20°♄51'35	1°27'40	superior conj	4555 Jul 26 16:47	5°♄58'10	1°12'20
max. Earth dist.	4554 Aug 12 20:35	24°♄35'49	1.32771 AU	minimum elong	4555 Jul 26 14:28	5°♄45'23	1°11'58
	4554 Aug 15 09:04	0°♄		max. Earth dist.	4555 Jul 27 06:04	7°♄11'22	1.32165 AU
evening rise	4554 Aug 18 11:14	6°♄26'15		evening rise	4555 Aug 02 15:24	20°♄59'17	
	4554 Aug 31 04:34	0°♄			4555 Aug 07 02:10	0°♄	
desc. node	4554 Sep 06 21:26	10°♄24'48		desc. node	4555 Aug 24 18:28	29°♄06'11	
evening max el	4554 Sep 20 11:18	26°♄55'24	27°26'42		4555 Aug 25 10:49	0°♄	
	4554 Sep 24 01:29	0°♄		evening max el	4555 Sep 02 17:16	9°♄21'39	27°05'00
retrograde	4554 Oct 04 04:18	4°♄11'01		retrograde	4555 Sep 16 14:05	16°♄33'40	
evening set	4554 Oct 11 08:36	1°♄38'09		evening set	4555 Sep 23 15:44	14°♄20'18	
	4554 Oct 13 10:25	30°♄		min. Earth dist.	4555 Sep 27 07:36	11°♄38'43	0.61134 AU
min. Earth dist.	4554 Oct 15 00:07	28°♄34'13	0.63078 AU	inferior conj	4555 Sep 30 10:55	8°♄56'10	-4°13'56
inferior conj	4554 Oct 17 17:55	25°♄53'08	-3°17'05	minimum elong	4555 Sep 30 17:02	8°♄42'55	4°12'26
minimum elong	4554 Oct 17 23:25	25°♄39'40	3°15'15	morning rise	4555 Oct 07 20:14	4°♄04'11	
morning rise	4554 Oct 24 15:45	20°♄40'31		direct	4555 Oct 10 04:20	3°♄42'02	
direct	4554 Oct 27 01:37	20°♄13'12		asc. node	4555 Oct 15 00:56	5°♄21'56	
asc. node	4554 Oct 28 03:53	20°♄18'57		morning max el	4555 Oct 17 07:37	7°♄15'39	17°58'48
morning max el	4554 Nov 02 17:15	23°♄39'04	17°49'54		4555 Oct 31 22:20	0°♄	
	4554 Nov 07 18:41	0°♄		morning set	4555 Nov 02 01:57	2°♄07'05	
morning set	4554 Nov 18 23:11	18°♄46'08					
	4554 Nov 25 10:01	0°♄		superior conj	4555 Nov 12 06:35	20°♄34'07	0°57'28
superior conj	4554 Nov 30 18:53	9°♄05'11	0°21'27	minimum elong	4555 Nov 12 10:35	20°♄51'43	0°56'57
minimum elong	4554 Nov 30 21:00	9°♄14'03	0°21'08		4555 Nov 17 18:17	0°♄	
desc. node	4554 Dec 03 20:43	14°♄10'05		max. Earth dist.	4555 Nov 19 20:42	3°♄30'23	1.42293 AU
max. Earth dist.	4554 Dec 07 08:06	19°♄48'10	1.43909 AU	desc. node	4555 Nov 20 17:45	4°♄57'17	
	4554 Dec 13 18:48	0°♄		evening rise	4555 Nov 25 20:44	13°♄14'09	
evening rise	4554 Dec 16 01:44	3°♄33'04			4555 Dec 06 19:00	0°♄	
	4555 Jan 02 20:04	0°♄		evening max el	4555 Dec 28 13:56	28°♄48'53	22°19'24
evening max el	4555 Jan 14 19:31	15°♄14'02	21°03'49		4555 Dec 29 19:04	0°♄	
retrograde	4555 Jan 23 08:10	20°♄16'52		retrograde	4556 Jan 07 04:40	4°♄32'04	
asc. node	4555 Jan 24 03:07	20°♄13'29		asc. node	4556 Jan 11 00:10	3°♄15'15	
evening set	4555 Jan 27 10:40	18°♄41'38		evening set	4556 Jan 11 18:16	2°♄41'08	
inferior conj	4555 Feb 01 18:56	12°♄28'39	2°35'23		4556 Jan 14 08:36	30°♄	
minimum elong	4555 Feb 01 16:29	12°♄37'07	2°34'42	inferior conj	4556 Jan 17 02:43	26°♄19'52	1°56'36
min. Earth dist.	4555 Feb 02 04:17	11°♄56'25	0.67778 AU	minimum elong	4556 Jan 17 00:29	26°♄27'37	1°55'50
morning rise	4555 Feb 06 22:09	6°♄15'46		min. Earth dist.	4556 Jan 17 00:21	26°♄28'06	0.68051 AU
direct	4555 Feb 12 05:42	3°♄55'40		morning rise	4556 Jan 22 06:35	20°♄09'42	
morning max el	4555 Feb 22 21:23	10°♄16'13	23°41'05	direct	4556 Jan 26 23:21	18°♄11'50	
desc. node	4555 Mar 01 19:55	18°♄14'49		morning max el	4556 Feb 05 08:47	23°♄43'07	22°12'48
	4555 Mar 10 12:24	0°♄			4556 Feb 10 21:27	0°♄	
	4555 Mar 29 17:40	0°♄		desc. node	4556 Feb 16 16:57	7°♄38'18	
morning set	4555 Mar 30 06:07	0°♄52'52			4556 Mar 02 22:09	0°♄	
max. Earth dist.	4555 Apr 03 03:56	7°♄39'18	1.38758 AU	morning set	4556 Mar 09 15:45	10°♄39'53	
				max. Earth dist.	4556 Mar 15 01:12	19°♄34'01	1.40930 AU
superior conj	4555 Apr 10 13:53	21°♄10'18	-1°38'49		4556 Mar 21 02:38	0°♄	

superior conj	4556 Mar 22 19:47	3°Υ02'19	-1°59'06	evening rise	4557 Mar 15 22:52	4°Υ28'02	
minimum elong	4556 Mar 22 23:55	3°Υ20'45	1°58'50	asc. node	4557 Mar 25 20:29	21°Υ36'57	
evening rise	4556 Apr 02 03:49	22°Υ01'59			4557 Mar 31 22:19	0°Ϡ	
	4556 Apr 06 11:01	0°Ϡ		evening max el	4557 Apr 01 20:08	0°Ϡ56'53	18°06'42
asc. node	4556 Apr 07 23:28	2°Ϡ44'19		retrograde	4557 Apr 08 09:52	4°Ϡ19'35	
evening max el	4556 Apr 18 08:38	17°Ϡ53'40	18°17'17	evening set	4557 Apr 11 02:30	3°Ϡ45'22	
retrograde	4556 Apr 25 12:24	21°Ϡ28'04			4557 Apr 16 07:26	30°ϠΥ	
evening set	4556 Apr 27 22:32	21°Ϡ04'24		inferior conj	4557 Apr 17 14:35	28°Υ44'30	3°13'38
inferior conj	4556 May 05 02:07	16°Ϡ23'49	2°29'47	minimum elong	4557 Apr 17 17:02	28°Υ38'27	3°13'14
minimum elong	4556 May 05 05:41	16°Ϡ16'11	2°28'52	min. Earth dist.	4557 Apr 20 17:27	25°Υ41'03	0.61404 AU
min. Earth dist.	4556 May 08 12:22	13°Ϡ29'04	0.59203 AU	morning rise	4557 Apr 24 05:41	22°Υ47'19	
morning rise	4556 May 12 09:58	10°Ϡ45'30		direct	4557 May 01 00:11	20°Υ27'10	
desc. node	4556 May 14 16:09	9°Ϡ42'17		desc. node	4557 May 01 13:10	20°Υ28'02	
direct	4556 May 18 16:53	8°Ϡ57'53		morning max el	4557 May 15 05:11	28°Υ25'23	27°50'42
morning max el	4556 Jun 02 02:10	16°Ϡ46'41	27°20'29		4557 May 16 17:57	0°Ϡ	
	4556 Jun 12 23:24	0°Π			4557 Jun 06 18:49	0°Π	
	4556 Jun 30 09:52	0°Ϟ		morning set	4557 Jun 17 06:11	19°Π54'38	
morning set	4556 Jul 03 02:11	5°Ϟ30'01		asc. node	4557 Jun 21 19:47	29°Π32'01	
asc. node	4556 Jul 04 22:45	9°Ϟ25'46			4557 Jun 22 00:58	0°Ϟ	
max. Earth dist.	4556 Jul 09 17:35	19°Ϟ51'23	1.31971 AU	max. Earth dist.	4557 Jun 23 03:17	2°Ϟ22'34	1.32194 AU
superior conj	4556 Jul 10 04:35	20°Ϟ52'05	0°52'30	superior conj	4557 Jun 24 15:05	5°Ϟ37'59	0°29'00
minimum elong	4556 Jul 10 02:33	20°Ϟ40'53	0°52'07	minimum elong	4557 Jun 24 13:48	5°Ϟ30'57	0°28'43
	4556 Jul 14 08:13	0°Ω		evening rise	4557 Jul 01 11:21	20°Ϟ32'38	
evening rise	4556 Jul 17 00:09	5°Ω44'01			4557 Jul 06 01:22	0°Ω	
	4556 Jul 29 18:08	0°ϯ			4557 Jul 25 11:17	0°ϯ	
desc. node	4556 Aug 10 15:27	16°ϯ46'03		evening max el	4557 Jul 27 08:09	1°ϯ53'27	24°48'20
evening max el	4556 Aug 14 16:16	21°ϯ00'40	26°10'15	desc. node	4557 Jul 28 12:27	2°ϯ58'52	
retrograde	4556 Aug 28 15:33	28°ϯ09'19		retrograde	4557 Aug 10 06:15	8°ϯ55'20	
evening set	4556 Sep 04 02:37	26°ϯ27'42		evening set	4557 Aug 15 13:17	7°ϯ52'01	
min. Earth dist.	4556 Sep 08 05:09	23°ϯ52'40	0.59065 AU	min. Earth dist.	4557 Aug 20 19:34	5°ϯ04'53	0.57112 AU
inferior conj	4556 Sep 11 11:17	21°ϯ25'49	-4°57'21	inferior conj	4557 Aug 23 16:04	3°ϯ12'51	-5°14'11
minimum elong	4556 Sep 11 15:49	21°ϯ17'16	4°56'45	minimum elong	4557 Aug 23 15:49	3°ϯ13'16	5°14'11
morning rise	4556 Sep 19 07:15	16°ϯ56'38			4557 Aug 29 05:31	30°ϠΩ	
direct	4556 Sep 21 16:48	16°ϯ37'05		morning rise	4557 Aug 31 20:46	29°Ω05'26	
morning max el	4556 Sep 29 16:20	20°ϯ28'03	18°27'34	direct	4557 Sep 03 11:07	28°Ω46'22	
asc. node	4556 Sep 30 21:59	21°ϯ44'12			4557 Sep 08 09:25	0°ϯ	
	4556 Oct 06 21:37	0°ϡ		morning max el	4557 Sep 12 16:02	3°ϯ05'44	19°17'43
morning set	4556 Oct 15 17:28	16°ϡ03'59		asc. node	4557 Sep 17 19:01	9°ϯ10'03	
	4556 Oct 23 00:26	0°ϣ		morning set	4557 Sep 29 17:46	0°ϡ25'54	
					4557 Sep 29 12:34	0°ϡ	
superior conj	4556 Oct 24 17:04	3°ϣ09'22	1°22'37	superior conj	4557 Oct 07 20:53	16°ϡ35'22	1°37'31
minimum elong	4556 Oct 24 20:37	3°ϣ25'51	1°22'16	minimum elong	4557 Oct 07 22:58	16°ϡ45'32	1°37'24
max. Earth dist.	4556 Nov 01 03:42	16°ϣ29'14	1.40312 AU	max. Earth dist.	4557 Oct 14 08:09	28°ϡ48'11	1.38214 AU
evening rise	4556 Nov 05 12:05	23°ϣ51'32			4557 Oct 14 23:57	0°ϣ	
desc. node	4556 Nov 06 14:46	25°ϣ41'45		evening rise	4557 Oct 18 02:39	5°ϣ32'42	
	4556 Nov 09 06:20	0°ϣ		desc. node	4557 Oct 24 11:47	16°ϣ19'43	
	4556 Nov 29 16:22	0°ϣ			4557 Nov 02 06:27	0°ϣ	
evening max el	4556 Dec 10 04:26	12°ϣ26'40	23°39'21	evening max el	4557 Nov 22 17:13	26°ϣ08'51	24°57'08
retrograde	4556 Dec 20 22:11	18°ϣ47'13			4557 Nov 27 03:54	0°ϣ	
evening set	4556 Dec 26 00:19	16°ϣ40'33		retrograde	4557 Dec 04 11:34	2°ϣ58'24	
asc. node	4556 Dec 27 21:12	14°ϣ49'19		evening set	4557 Dec 10 03:15	0°ϣ37'01	
inferior conj	4556 Dec 31 10:24	10°ϣ15'01	1°10'44		4557 Dec 10 19:42	30°Ϡϣ	
minimum elong	4556 Dec 31 08:51	10°ϣ20'22	1°10'06	min. Earth dist.	4557 Dec 14 16:09	25°ϣ31'02	0.67509 AU
min. Earth dist.	4556 Dec 30 21:05	11°ϣ00'31	0.67955 AU	asc. node	4557 Dec 14 18:14	25°ϣ24'11	
morning rise	4557 Jan 05 17:21	4°ϣ09'19		inferior conj	4557 Dec 15 16:15	24°ϣ11'44	0°18'43
direct	4557 Jan 09 20:03	2°ϣ34'11		minimum elong	4557 Dec 15 15:47	24°ϣ13'16	0°18'31
morning max el	4557 Jan 18 02:10	7°ϣ19'45	20°51'49	morning rise	4557 Dec 21 04:28	18°ϣ12'41	
desc. node	4557 Feb 02 13:59	27°ϣ30'25		direct	4557 Dec 24 18:34	16°ϣ58'33	
	4557 Feb 04 06:48	0°ϣ		morning max el	4558 Jan 01 03:26	21°ϣ07'51	19°43'22
morning set	4557 Feb 16 22:30	19°ϣ13'13			4558 Jan 08 09:43	0°ϣ	
	4557 Feb 23 17:38	0°ϣ		greatest brilliancy	4558 Jan 14 06:08	8°ϣ23'52	-0.7m
max. Earth dist.	4557 Feb 25 04:53	2°ϣ22'38	1.42877 AU	desc. node	4558 Jan 20 11:00	17°ϣ43'27	
superior conj	4557 Mar 04 02:56	13°ϣ50'16	-2°08'14	morning set	4558 Jan 26 18:37	27°ϣ24'28	
minimum elong	4557 Mar 04 03:26	13°ϣ52'24	2°08'14		4558 Jan 28 10:52	0°ϣ	
	4557 Mar 13 10:35	0°Υ		max. Earth dist.	4558 Feb 07 16:19	16°ϣ01'21	1.44347 AU

superior conj	4558 Feb 12 08:22	23° \approx 29'50	-2°00'44	superior conj	4559 Jan 22 16:30	2° \approx 15'31	-1°33'34
minimum elong	4558 Feb 12 02:46	23° \approx 07'15	2°00'28	minimum elong	4559 Jan 22 07:10	1° \approx 38'48	1°32'38
	4558 Feb 16 08:18	0° H		evening rise	4559 Feb 06 23:36	26° \approx 37'12	
evening rise	4558 Feb 25 22:38	16° H 01'27			4559 Feb 09 01:46	0° H	
	4558 Mar 06 05:44	0° Y		asc. node	4559 Feb 27 14:34	27° H 27'28	
asc. node	4558 Mar 12 17:31	9° Y 55'02		evening max el	4559 Feb 27 20:29	27° H 42'43	18°41'53
evening max el	4558 Mar 16 09:01	14° Y 15'47	18°15'10		4559 Mar 02 12:47	0° Y	
retrograde	4558 Mar 22 19:02	17° Y 41'08		retrograde	4559 Mar 06 11:43	1° Y 23'32	
evening set	4558 Mar 25 17:47	16° Y 55'06		evening set	4559 Mar 09 16:46	0° Y 24'50	
inferior conj	4558 Mar 31 18:20	11° Y 34'50	3°32'43		4559 Mar 10 07:51	30° R H	
minimum elong	4558 Mar 31 19:05	11° Y 32'45	3°32'40	inferior conj	4559 Mar 15 09:21	24° H 46'46	3°33'02
min. Earth dist.	4558 Apr 03 07:25	8° Y 45'54	0.63465 AU	minimum elong	4559 Mar 15 08:35	24° H 49'06	3°33'00
morning rise	4558 Apr 06 19:24	5° Y 27'22		min. Earth dist.	4559 Mar 17 06:47	22° H 28'32	0.65198 AU
direct	4558 Apr 13 16:19	2° Y 45'23		morning rise	4559 Mar 20 23:55	18° H 34'18	
desc. node	4558 Apr 18 10:12	3° Y 52'06		direct	4559 Mar 27 15:33	15° H 44'08	
morning max el	4558 Apr 27 12:53	10° Y 43'53	27°43'22	desc. node	4559 Apr 05 07:13	19° H 23'46	
	4558 May 12 16:26	0° B		morning max el	4559 Apr 09 22:48	23° H 32'56	27°02'26
	4558 May 30 03:33	0° II			4559 Apr 15 16:55	0° Y	
morning set	4558 Jun 01 03:30	3° II 56'12			4559 May 06 00:34	0° B	
max. Earth dist.	4558 Jun 06 07:22	14° II 33'31	1.32855 AU	morning set	4559 May 15 15:09	17° B 25'56	
				max. Earth dist.	4559 May 20 02:19	26° B 15'43	1.33967 AU
					4559 May 21 22:12	0° II	
superior conj	4558 Jun 08 22:30	20° II 10'23	0°02'29				
minimum elong	4558 Jun 08 22:23	20° II 09'45	0°02'27	superior conj	4559 May 24 00:46	4° II 22'56	-0°26'11
behind sun begin	4558 Jun 08 17:07	19° II 41'29		minimum elong	4559 May 24 02:09	4° II 30'10	0°25'54
behind sun end	4558 Jun 09 03:38	20° II 38'03		asc. node	4559 May 26 13:51	9° II 45'06	
asc. node	4558 Jun 08 16:48	19° II 39'45		evening rise	4559 May 31 09:41	19° II 57'40	
	4558 Jun 13 11:33	0° E			4559 Jun 05 08:33	0° E	
evening rise	4558 Jun 15 23:10	5° E 19'15		evening max el	4559 Jun 20 14:32	22° E 48'09	21°37'31
	4558 Jun 29 03:41	0° O		desc. node	4559 Jul 02 06:28	28° E 53'44	
evening max el	4558 Jul 08 20:59	12° O 18'30	23°12'07	retrograde	4559 Jul 02 23:27	28° E 54'55	
desc. node	4558 Jul 15 09:28	17° O 12'29		evening set	4559 Jul 05 11:55	28° E 40'31	
retrograde	4558 Jul 22 08:04	19° O 02'08		inferior conj	4559 Jul 14 20:31	24° E 39'28	-3°31'10
evening set	4558 Jul 26 02:57	18° O 30'49		minimum elong	4559 Jul 14 11:56	24° E 51'26	3°28'40
min. Earth dist.	4558 Aug 02 06:17	15° O 16'19	0.55604 AU	min. Earth dist.	4559 Jul 14 16:36	24° E 44'56	0.54852 AU
inferior conj	4558 Aug 04 01:06	14° O 13'49	-4°48'14	morning rise	4559 Jul 23 13:08	20° E 46'50	
minimum elong	4558 Aug 03 18:40	14° O 23'14	4°47'13	direct	4559 Jul 26 21:17	20° E 22'34	
morning rise	4558 Aug 12 12:42	10° O 21'32		morning max el	4559 Aug 08 04:43	26° E 10'00	22°00'54
direct	4558 Aug 15 10:42	10° O 01'06			4559 Aug 11 19:54	0° O	
morning max el	4558 Aug 26 04:10	15° O 00'12	20°29'41	asc. node	4559 Aug 22 13:06	16° O 18'39	
asc. node	4558 Sep 04 16:03	27° O 25'27		morning set	4559 Aug 29 09:47	29° O 54'15	
	4558 Sep 06 04:19	0° M			4559 Aug 29 10:53	0° M	
morning set	4558 Sep 13 23:57	15° M 04'45					
	4558 Sep 21 05:42	0° A		superior conj	4559 Sep 05 14:20	15° M 07'18	1°42'17
superior conj	4558 Sep 21 13:13	0° A 38'18	1°43'37	minimum elong	4559 Sep 05 13:27	15° M 02'39	1°42'15
minimum elong	4558 Sep 21 13:42	0° A 40'41	1°43'36	max. Earth dist.	4559 Sep 09 05:42	22° M 40'17	1.34574 AU
max. Earth dist.	4558 Sep 26 15:19	10° A 44'24	1.36242 AU		4559 Sep 12 21:47	0° A	
evening rise	4558 Sep 30 13:50	18° A 10'49		evening rise	4559 Sep 13 17:24	1° A 35'17	
	4558 Oct 07 06:16	0° M		desc. node	4559 Sep 28 05:50	26° A 56'08	
desc. node	4558 Oct 11 08:47	6° M 46'24			4559 Sep 30 05:33	0° M	
	4558 Oct 27 11:56	0° J		evening max el	4559 Oct 18 18:30	23° M 29'17	26°56'39
evening max el	4558 Nov 05 05:49	9° J 52'07	26°05'23		4559 Oct 28 01:33	0° J	
retrograde	4558 Nov 17 19:56	17° J 00'07		retrograde	4559 Oct 31 22:56	0° J 46'05	
evening set	4558 Nov 24 01:18	14° J 26'38			4559 Nov 04 14:29	30° R M	
min. Earth dist.	4558 Nov 28 07:04	9° J 55'57	0.66719 AU	evening set	4559 Nov 07 16:27	28° M 05'40	
inferior conj	4558 Nov 29 18:22	8° J 06'23	-0°38'25	min. Earth dist.	4559 Nov 11 15:34	24° M 10'43	0.65578 AU
minimum elong	4558 Nov 29 19:23	8° J 03'12	0°37'57	inferior conj	4559 Nov 13 14:42	21° M 55'16	-1°39'13
asc. node	4558 Dec 01 15:17	5° J 50'42		minimum elong	4559 Nov 13 17:31	21° M 47'12	1°38'03
morning rise	4558 Dec 05 13:57	2° J 16'33		asc. node	4559 Nov 18 12:18	17° M 04'50	
direct	4558 Dec 08 17:13	1° J 20'23		morning rise	4559 Nov 19 19:28	16° M 17'33	
morning max el	4558 Dec 15 12:06	5° J 04'44	18°50'02	direct	4559 Nov 22 14:00	15° M 35'37	
	4559 Jan 02 02:46	0° Z		morning max el	4559 Nov 29 02:12	19° M 05'45	18°13'05
morning set	4559 Jan 06 05:25	6° Z 26'41			4559 Dec 07 07:55	0° J	
desc. node	4559 Jan 07 08:02	8° Z 11'06		morning set	4559 Dec 17 20:52	16° J 56'28	
	4559 Jan 21 06:01	0° \approx		desc. node	4559 Dec 25 05:06	28° J 49'13	
max. Earth dist.	4559 Jan 21 09:28	0° \approx 13'36	1.45163 AU		4559 Dec 25 22:46	0° Z	

superior conj	4560 Jan 01 19:53	10°♄55'26	-0°50'52	desc. node	4560 Dec 11 02:09	19°♄33'42	
minimum elong	4560 Jan 01 13:33	10°♄30'30	0°50'01				
max. Earth dist.	4560 Jan 04 04:57	14°♄39'52	1.45243 AU	superior conj	4560 Dec 11 14:45	20°♄24'54	-0°03'40
	4560 Jan 14 00:26	0°♄		minimum elong	4560 Dec 11 14:19	20°♄23'10	0°03'37
evening rise	4560 Jan 18 02:13	6°♄21'01		behind sun begin	4560 Dec 11 04:30	19°♄43'16	
greatest brilliancy	4560 Jan 30 00:47	24°♄49'30	-0.7m	behind sun end	4560 Dec 12 00:08	21°♄02'59	
	4560 Feb 02 12:02	0°♄		max. Earth dist.	4560 Dec 16 23:22	29°♄01'02	1.44586 AU
evening max el	4560 Feb 11 04:22	11°♄13'26	19°25'40		4560 Dec 17 14:14	0°♄	
asc. node	4560 Feb 14 11:36	14°♄01'29		evening rise	4560 Dec 27 14:03	15°♄34'29	
retrograde	4560 Feb 18 08:31	15°♄20'24			4561 Jan 06 01:53	0°♄	
evening set	4560 Feb 21 20:43	14°♄08'21		evening max el	4561 Jan 24 07:14	24°♄46'15	20°24'28
inferior conj	4560 Feb 27 08:16	8°♄14'36	3°19'07	asc. node	4561 Jan 31 08:37	29°♄22'55	
minimum elong	4560 Feb 27 06:27	8°♄20'33	3°18'52	retrograde	4561 Feb 01 06:44	29°♄27'31	
min. Earth dist.	4560 Feb 28 14:37	6°♄35'39	0.66526 AU	evening set	4561 Feb 05 03:28	28°♄01'10	
morning rise	4560 Mar 03 15:56	2°♄00'15		inferior conj	4561 Feb 10 12:23	21°♄54'26	2°54'04
	4560 Mar 06 13:48	30°♄		minimum elong	4561 Feb 10 10:01	22°♄02'28	2°53'31
direct	4560 Mar 09 21:08	29°♄14'35		min. Earth dist.	4561 Feb 11 05:03	20°♄57'41	0.67435 AU
	4560 Mar 13 10:32	0°♄		morning rise	4561 Feb 15 16:21	15°♄40'20	
desc. node	4560 Mar 22 04:16	6°♄29'45		direct	4561 Feb 21 08:13	13°♄08'50	
morning max el	4560 Mar 22 08:35	6°♄40'36	25°55'27	morning max el	4561 Mar 04 17:15	19°♄57'05	24°32'12
	4560 Apr 09 10:19	0°♄		desc. node	4561 Mar 09 01:21	24°♄43'43	
	4560 Apr 27 10:32	0°♄			4561 Mar 13 07:15	0°♄	
morning set	4560 Apr 27 13:07	0°♄11'56			4561 Apr 02 14:19	0°♄	
max. Earth dist.	4560 May 01 09:48	7°♄28'22	1.35536 AU	morning set	4561 Apr 09 16:13	12°♄00'02	
				max. Earth dist.	4561 Apr 13 07:30	18°♄29'50	1.37503 AU
					4561 Apr 19 10:57	0°♄	
superior conj	4560 May 06 19:20	18°♄07'57	-0°55'40				
minimum elong	4560 May 06 22:22	18°♄23'17	0°55'08	superior conj	4561 Apr 20 03:00	1°♄17'28	-1°24'04
asc. node	4560 May 12 10:54	29°♄43'24		minimum elong	4561 Apr 20 07:27	1°♄38'57	1°23'26
	4560 May 12 14:07	0°♄		evening rise	4561 Apr 28 18:08	18°♄21'57	
evening rise	4560 May 14 16:48	4°♄20'48		asc. node	4561 Apr 29 07:57	19°♄30'33	
	4560 May 29 09:28	0°♄			4561 May 04 19:01	0°♄	
evening max el	4560 Jun 01 19:09	3°♄49'43	20°16'25	evening max el	4561 May 15 12:06	15°♄33'26	19°14'16
retrograde	4560 Jun 12 13:11	9°♄05'00		retrograde	4561 May 24 13:17	19°♄58'12	
evening set	4560 Jun 14 12:11	8°♄55'16		evening set	4561 May 26 13:16	19°♄46'12	
desc. node	4560 Jun 18 03:30	7°♄50'36		inferior conj	4561 Jun 03 23:29	15°♄36'40	0°18'22
inferior conj	4560 Jun 23 15:20	4°♄56'53	-1°37'50	minimum elong	4561 Jun 04 00:15	15°♄35'23	0°18'05
minimum elong	4560 Jun 23 10:45	5°♄03'39	1°36'09	desc. node	4561 Jun 05 00:30	14°♄54'40	
min. Earth dist.	4560 Jun 25 04:42	4°♄01'53	0.55049 AU	min. Earth dist.	4561 Jun 06 19:30	13°♄43'33	0.56174 AU
morning rise	4560 Jul 02 08:02	0°♄42'55		morning rise	4561 Jun 12 08:09	10°♄48'18	
direct	4560 Jul 06 07:54	0°♄08'21		direct	4561 Jun 17 06:16	9°♄52'21	
morning max el	4560 Jul 19 20:59	6°♄44'39	23°43'31	morning max el	4561 Jul 01 10:50	17°♄06'58	25°23'59
	4560 Aug 05 10:47	0°♄			4561 Jul 12 00:20	0°♄	
asc. node	4560 Aug 08 10:09	5°♄39'27		asc. node	4561 Jul 26 07:13	25°♄20'27	
morning set	4560 Aug 12 21:19	14°♄47'41		morning set	4561 Jul 28 08:56	29°♄40'06	
					4561 Jul 28 12:41	0°♄	
superior conj	4560 Aug 19 21:10	29°♄52'06	1°34'45				
minimum elong	4560 Aug 19 19:21	29°♄42'18	1°34'34	superior conj	4561 Aug 04 07:25	14°♄45'16	1°21'53
	4560 Aug 19 22:38	0°♄		minimum elong	4561 Aug 04 05:09	14°♄32'48	1°21'35
max. Earth dist.	4560 Aug 22 04:42	4°♄49'47	1.33305 AU	max. Earth dist.	4561 Aug 05 11:05	17°♄16'46	1.32461 AU
evening rise	4560 Aug 27 09:07	15°♄33'52		evening rise	4561 Aug 11 09:34	29°♄56'56	
	4560 Sep 03 23:33	0°♄			4561 Aug 11 10:10	0°♄	
desc. node	4560 Sep 14 02:51	16°♄40'19			4561 Aug 28 01:04	0°♄	
	4560 Sep 23 22:56	0°♄		desc. node	4561 Aug 31 23:50	5°♄48'30	
evening max el	4560 Sep 30 06:15	6°♄48'46	27°24'04	evening max el	4561 Sep 12 15:12	19°♄38'32	27°21'32
retrograde	4560 Oct 13 20:02	14°♄06'57		retrograde	4561 Sep 26 10:29	26°♄53'11	
evening set	4560 Oct 20 22:03	11°♄28'02		evening set	4561 Oct 03 14:37	24°♄27'08	
min. Earth dist.	4560 Oct 24 15:34	8°♄06'57	0.64083 AU	min. Earth dist.	4561 Oct 07 05:28	21°♄33'57	0.62278 AU
inferior conj	4560 Oct 27 02:49	5°♄32'15	-2°41'40	inferior conj	4561 Oct 10 03:46	18°♄50'18	-3°42'13
minimum elong	4560 Oct 27 07:26	5°♄20'10	2°39'58	minimum elong	4561 Oct 10 09:42	18°♄36'26	3°40'27
morning rise	4560 Nov 02 18:11	0°♄09'40		morning rise	4561 Oct 17 06:31	13°♄46'01	
	4560 Nov 03 04:21	30°♄		direct	4561 Oct 19 15:07	13°♄21'22	
asc. node	4560 Nov 04 09:21	29°♄42'03		asc. node	4561 Oct 22 06:25	13°♄53'11	
direct	4560 Nov 05 06:19	29°♄38'10		morning max el	4561 Oct 26 10:55	16°♄49'50	17°51'14
	4560 Nov 07 08:08	0°♄			4561 Nov 04 18:23	0°♄	
morning max el	4560 Nov 11 18:50	3°♄03'22	17°53'13	morning set	4561 Nov 11 09:28	11°♄41'48	
morning set	4560 Nov 28 16:19	28°♄48'02			4561 Nov 21 18:59	0°♄	
	4560 Nov 29 09:10	0°♄					

superior conj	4561 Nov 22 11:19	1°♊09'39	0°38'01	morning set	4562 Oct 25 18:18	25°♏20'19	
minimum elong	4561 Nov 22 14:37	1°♊23'42	0°37'33		4562 Oct 28 05:54	0°♏	
desc. node	4561 Nov 27 23:10	10°♊20'47					
max. Earth dist.	4561 Nov 29 14:26	13°♊01'07	1.43282 AU	superior conj	4562 Nov 04 09:22	13°♏08'47	1°09'27
evening rise	4561 Dec 07 01:56	24°♊54'47		minimum elong	4562 Nov 04 13:23	13°♏26'50	1°08'59
	4561 Dec 10 08:57	0°♊		max. Earth dist.	4562 Nov 12 00:57	26°♏27'26	1.41489 AU
	4561 Dec 31 03:29	0°♊			4562 Nov 14 03:51	0°♊	
evening max el	4562 Jan 07 04:40	8°♊20'32	21°35'11	desc. node	4562 Nov 14 20:10	1°♊07'20	
retrograde	4562 Jan 16 04:15	13°♊40'31		evening rise	4562 Nov 17 04:53	4°♊58'39	
asc. node	4562 Jan 18 05:39	13°♊17'42			4562 Dec 03 15:32	0°♊	
evening set	4562 Jan 20 11:11	11°♊58'55		evening max el	4562 Dec 20 21:23	21°♊57'23	22°53'15
inferior conj	4562 Jan 25 19:22	5°♊42'09	2°19'53	retrograde	4562 Dec 30 23:29	27°♊56'26	
minimum elong	4562 Jan 25 16:57	5°♊50'32	2°19'08	evening set	4563 Jan 04 18:19	25°♊58'48	
min. Earth dist.	4562 Jan 25 23:42	5°♊27'08	0.67941 AU	asc. node	4563 Jan 05 02:41	25°♊40'45	
	4562 Jan 30 09:35	30°♊		inferior conj	4563 Jan 10 03:20	19°♊35'29	1°37'58
morning rise	4562 Jan 30 22:32	29°♊30'05		minimum elong	4563 Jan 10 01:20	19°♊42'25	1°37'13
direct	4562 Feb 04 23:51	27°♊18'54		min. Earth dist.	4563 Jan 09 20:17	19°♊59'51	0.68063 AU
	4562 Feb 11 09:22	0°♊		morning rise	4563 Jan 15 08:14	13°♊27'07	
morning max el	4562 Feb 15 02:27	3°♊18'40	23°02'58	direct	4563 Jan 19 19:00	11°♊38'50	
desc. node	4562 Feb 23 22:23	13°♊45'45		morning max el	4563 Jan 28 15:58	16°♊49'09	21°37'02
	4562 Mar 07 10:45	0°♊			4563 Feb 08 09:18	0°♊	
morning set	4562 Mar 21 18:10	22°♊33'11		desc. node	4563 Feb 10 19:25	3°♊22'36	
max. Earth dist.	4562 Mar 26 02:31	29°♊55'32	1.39691 AU		4563 Feb 28 12:53	0°♊	
	4562 Mar 26 03:33	0°♊		morning set	4563 Mar 01 15:26	1°♊45'11	
				max. Earth dist.	4563 Mar 08 02:34	12°♊14'24	1.41813 AU
superior conj	4562 Apr 02 19:39	13°♊40'41	-1°48'28				
minimum elong	4562 Apr 03 00:29	14°♊02'53	1°48'00	superior conj	4563 Mar 15 16:26	25°♊06'38	-2°04'40
	4562 Apr 11 11:07	0°♊		minimum elong	4563 Mar 15 19:26	25°♊19'42	2°04'33
evening rise	4562 Apr 12 10:38	1°♊52'41			4563 Mar 18 11:11	0°♊	
asc. node	4562 Apr 16 04:57	9°♊01'00		evening rise	4563 Mar 26 14:45	14°♊45'10	
evening max el	4562 Apr 28 14:56	27°♊54'30	18°32'18	asc. node	4563 Apr 03 01:58	28°♊09'22	
	4562 May 01 04:03	0°♊			4563 Apr 04 04:13	0°♊	
retrograde	4562 May 06 07:37	1°♊42'11		evening max el	4563 Apr 12 00:13	10°♊44'42	18°10'22
evening set	4562 May 08 14:01	1°♊23'31		retrograde	4563 Apr 18 20:28	14°♊12'06	
	4562 May 11 19:08	30°♊		evening set	4563 Apr 21 09:34	13°♊44'01	
inferior conj	4562 May 16 04:14	26°♊54'51	1°50'58	inferior conj	4563 Apr 28 06:02	8°♊54'23	2°51'50
minimum elong	4562 May 16 07:38	26°♊48'11	1°49'55	minimum elong	4563 Apr 28 09:15	8°♊47'00	2°51'08
min. Earth dist.	4562 May 19 13:50	24°♊16'34	0.57990 AU	min. Earth dist.	4563 May 01 14:07	5°♊53'09	0.60146 AU
desc. node	4562 May 22 21:32	22°♊04'54		morning rise	4563 May 05 06:34	3°♊06'59	
morning rise	4562 May 23 22:03	21°♊32'41		desc. node	4563 May 09 18:35	1°♊16'44	
direct	4562 May 29 18:45	20°♊05'11		direct	4563 May 11 19:33	1°♊04'57	
morning max el	4562 Jun 13 03:53	27°♊44'00	26°46'35	morning max el	4563 May 26 03:19	8°♊57'51	27°38'05
	4562 Jun 15 08:47	0°♊			4563 Jun 11 05:59	0°♊	
	4562 Jul 05 13:04	0°♊		morning set	4563 Jun 27 01:46	29°♊00'00	
morning set	4562 Jul 12 18:59	14°♊26'02			4563 Jun 27 13:17	0°♊	
asc. node	4562 Jul 13 04:16	15°♊15'00		asc. node	4563 Jun 30 01:16	5°♊18'01	
				max. Earth dist.	4563 Jul 03 09:10	12°♊32'45	1.32014 AU
superior conj	4562 Jul 19 19:07	29°♊39'58	1°04'24				
minimum elong	4562 Jul 19 16:52	29°♊27'31	1°04'02	superior conj	4563 Jul 04 06:32	14°♊30'22	0°42'56
	4562 Jul 19 22:45	0°♊		minimum elong	4563 Jul 04 04:46	14°♊20'37	0°42'35
max. Earth dist.	4562 Jul 19 21:50	29°♊54'56	1.32031 AU	evening rise	4563 Jul 11 01:58	29°♊22'17	
evening rise	4562 Jul 26 15:57	14°♊35'35			4563 Jul 11 09:04	0°♊	
	4562 Aug 03 10:18	0°♊			4563 Jul 27 21:37	0°♊	
desc. node	4562 Aug 18 20:50	24°♊06'10		desc. node	4563 Aug 05 17:50	11°♊12'16	
	4562 Aug 23 23:45	0°♊		evening max el	4563 Aug 07 14:35	13°♊04'31	25°38'12
evening max el	4562 Aug 25 18:44	1°♊46'29	26°45'44	retrograde	4563 Aug 21 13:35	20°♊10'28	
retrograde	4562 Sep 08 16:52	8°♊56'25		evening set	4563 Aug 27 14:36	18°♊44'53	
evening set	4562 Sep 15 13:47	6°♊55'37		min. Earth dist.	4563 Sep 01 02:34	16°♊07'14	0.58201 AU
min. Earth dist.	4562 Sep 19 08:44	4°♊18'47	0.60258 AU	inferior conj	4563 Sep 04 06:29	13°♊53'07	-5°08'45
inferior conj	4562 Sep 22 14:11	1°♊40'55	-4°34'40	minimum elong	4563 Sep 04 09:22	13°♊47'59	5°08'31
minimum elong	4562 Sep 22 19:59	1°♊29'04	4°33'30	morning rise	4563 Sep 12 06:24	9°♊33'36	
	4562 Sep 24 16:58	30°♊		direct	4563 Sep 14 17:51	9°♊14'21	
morning rise	4562 Sep 30 04:09	26°♊58'03		morning max el	4563 Sep 23 04:28	13°♊15'36	18°46'16
direct	4562 Oct 02 12:28	26°♊37'15		asc. node	4563 Sep 26 00:31	16°♊22'36	
asc. node	4562 Oct 09 03:29	29°♊31'44			4563 Oct 04 14:52	0°♊	
	4562 Oct 09 16:01	0°♊		morning set	4563 Oct 09 14:00	9°♊29'18	
morning max el	4562 Oct 09 23:15	0°♊17'13	18°08'25				

superior conj	4563 Oct 18 03:55	26°♄07'42	1°30'06		4564 Sep 25 16:16	0°♄	
minimum elong	4563 Oct 18 06:55	26°♄21'52	1°29'51				
	4563 Oct 20 05:28	0°♄		superior conj	4564 Sep 30 13:40	9°♄51'10	1°41'05
max. Earth dist.	4563 Oct 25 06:55	9°♄10'30	1.39422 AU	minimum elong	4564 Sep 30 15:03	9°♄58'04	1°41'02
evening rise	4563 Oct 29 06:12	16°♄03'13		max. Earth dist.	4564 Oct 06 11:39	21°♄16'05	1.37344 AU
desc. node	4563 Nov 01 17:09	21°♄49'23		evening rise	4564 Oct 10 06:00	28°♄09'28	
	4563 Nov 06 19:43	0°♄			4564 Oct 11 06:51	0°♄	
	4563 Nov 28 07:52	0°♄		desc. node	4564 Oct 18 14:10	12°♄22'54	
evening max el	4563 Dec 03 10:55	5°♄37'01	24°12'58		4564 Oct 30 04:54	0°♄	
retrograde	4563 Dec 14 15:18	12°♄10'41		evening max el	4564 Nov 14 23:18	19°♄19'22	25°27'36
evening set	4563 Dec 19 23:16	9°♄57'18		retrograde	4564 Nov 27 02:47	26°♄18'41	
asc. node	4563 Dec 22 23:44	6°♄44'36		evening set	4564 Dec 03 00:24	23°♄51'25	
min. Earth dist.	4563 Dec 24 16:30	4°♄31'53	0.67818 AU	min. Earth dist.	4564 Dec 07 10:04	19°♄00'26	0.67219 AU
inferior conj	4563 Dec 25 10:27	3°♄31'22	0°49'21	inferior conj	4564 Dec 08 14:58	17°♄27'27	-0°04'58
minimum elong	4563 Dec 25 09:19	3°♄35'14	0°48'53	minimum elong	4564 Dec 08 15:05	17°♄27'03	0°04'54
	4563 Dec 28 04:31	30°♄♄		transit middle	4564 Dec 08 15:05	17°♄27'03	0°04'54
morning rise	4563 Dec 30 19:25	27°♄28'29		transit begin	4564 Dec 08 12:25	17°♄35'38	
direct	4564 Jan 03 16:34	26°♄02'42		transit end	4564 Dec 08 17:45	17°♄18'27	
	4564 Jan 11 00:02	0°♄		asc. node	4564 Dec 08 20:47	17°♄08'42	
morning max el	4564 Jan 11 12:44	0°♄31'04	20°20'57	morning rise	4564 Dec 14 06:07	11°♄32'07	
desc. node	4564 Jan 28 16:26	23°♄24'10		direct	4564 Dec 17 15:15	10°♄26'16	
	4564 Feb 02 01:52	0°♄		morning max el	4564 Dec 24 17:26	14°♄23'46	19°18'41
morning set	4564 Feb 08 14:47	10°♄00'36			4565 Jan 05 13:19	0°♄	
max. Earth dist.	4564 Feb 18 10:06	25°♄27'23	1.43578 AU	greatest brilliancy	4565 Jan 07 03:22	2°♄22'35	-0.7m
	4564 Feb 21 05:31	0°♄		desc. node	4565 Jan 14 13:27	13°♄43'43	
				morning set	4565 Jan 17 14:19	18°♄25'29	
superior conj	4564 Feb 24 12:42	5°♄24'52	-2°07'22		4565 Jan 25 00:57	0°♄	
minimum elong	4564 Feb 24 10:44	5°♄16'47	2°07'20	max. Earth dist.	4565 Jan 30 24:00	9°♄21'12	1.44780 AU
evening rise	4564 Mar 08 02:09	26°♄49'59					
	4564 Mar 09 21:42	0°♄		superior conj	4565 Feb 03 07:49	14°♄37'25	-1°51'34
asc. node	4564 Mar 19 23:00	16°♄48'25		minimum elong	4565 Feb 02 23:57	14°♄06'07	1°51'00
evening max el	4564 Mar 25 12:36	23°♄55'09	18°07'57		4565 Feb 12 20:25	0°♄	
retrograde	4564 Mar 31 23:42	27°♄17'41		evening rise	4565 Feb 17 16:31	7°♄58'52	
evening set	4564 Apr 03 18:52	26°♄38'35			4565 Mar 03 07:12	0°♄	
inferior conj	4564 Apr 10 01:33	21°♄29'01	3°24'22	asc. node	4565 Mar 06 20:02	4°♄48'23	
minimum elong	4564 Apr 10 03:18	21°♄24'29	3°24'10	evening max el	4565 Mar 09 01:09	7°♄17'43	18°24'22
min. Earth dist.	4564 Apr 12 22:55	18°♄29'20	0.62307 AU	retrograde	4565 Mar 15 12:33	10°♄48'32	
morning rise	4564 Apr 16 10:14	15°♄26'21		evening set	4565 Mar 18 13:48	9°♄57'23	
direct	4564 Apr 23 06:36	12°♄55'35		inferior conj	4565 Mar 24 10:35	4°♄29'25	3°34'50
desc. node	4564 Apr 25 15:37	13°♄12'14		minimum elong	4565 Mar 24 10:38	4°♄29'14	3°34'50
morning max el	4564 May 07 08:52	20°♄55'12	27°52'11	min. Earth dist.	4565 Mar 26 17:07	1°♄51'43	0.64244 AU
	4564 May 15 05:19	0°♄			4565 Mar 28 10:47	30°♄♄	
	4564 Jun 03 06:45	0°♄		morning rise	4565 Mar 30 06:42	28°♄19'02	
morning set	4564 Jun 10 03:16	13°♄16'05		direct	4565 Apr 06 02:05	25°♄31'40	
max. Earth dist.	4564 Jun 15 17:09	24°♄57'46	1.32417 AU	desc. node	4565 Apr 12 12:40	27°♄34'30	
asc. node	4564 Jun 15 22:17	25°♄25'23			4565 Apr 15 22:47	0°♄	
				morning max el	4565 Apr 19 17:59	3°♄28'31	27°29'40
superior conj	4564 Jun 17 15:58	29°♄11'12	0°18'05		4565 May 09 15:39	0°♄	
minimum elong	4564 Jun 17 15:08	29°♄06'38	0°17'53	morning set	4565 May 24 20:52	27°♄05'15	
	4564 Jun 18 00:56	0°♄			4565 May 26 08:04	0°♄	
evening rise	4564 Jun 24 13:41	14°♄10'51		max. Earth dist.	4565 May 29 17:38	6°♄56'22	1.33265 AU
	4564 Jul 02 11:32	0°♄					
evening max el	4564 Jul 19 04:09	23°♄41'13	24°08'12	superior conj	4565 Jun 01 21:27	13°♄35'38	-0°09'29
desc. node	4564 Jul 22 14:51	26°♄38'44		minimum elong	4565 Jun 01 21:56	13°♄38'12	0°09'24
	4564 Jul 28 21:17	0°♄		behind sun begin	4565 Jun 01 17:31	13°♄14'40	
retrograde	4564 Aug 01 23:10	0°♄38'06		behind sun end	4565 Jun 02 02:21	14°♄01'47	
	4564 Aug 06 02:19	30°♄♄		asc. node	4565 Jun 02 19:19	15°♄32'19	
evening set	4564 Aug 06 15:18	29°♄49'39		evening rise	4565 Jun 09 01:09	28°♄54'08	
min. Earth dist.	4564 Aug 12 14:43	26°♄52'34	0.56391 AU		4565 Jun 09 13:39	0°♄	
inferior conj	4564 Aug 15 02:33	25°♄19'53	-5°09'18		4565 Jun 27 01:08	0°♄	
minimum elong	4564 Aug 14 23:35	25°♄24'30	5°09'06	evening max el	4565 Jun 30 17:54	4°♄03'27	22°30'52
morning rise	4564 Aug 23 10:27	21°♄20'41		desc. node	4565 Jul 09 11:54	9°♄50'38	
direct	4564 Aug 26 03:44	21°♄01'20		retrograde	4565 Jul 13 20:20	10°♄34'16	
morning max el	4564 Sep 04 23:34	25°♄35'54	19°45'50	evening set	4565 Jul 17 00:16	10°♄12'14	
	4564 Sep 08 22:24	0°♄		min. Earth dist.	4565 Jul 25 01:14	6°♄41'49	0.55170 AU
asc. node	4564 Sep 11 21:34	4°♄10'52		inferior conj	4565 Jul 26 04:34	6°♄03'00	-4°21'34
morning set	4564 Sep 22 17:08	23°♄59'07		minimum elong	4565 Jul 25 20:26	6°♄14'35	4°19'48

morning rise	4565 Aug 03 18:35	2°♎12'41		morning rise	4566 Jul 14 15:17	12°♊21'05	
direct	4565 Aug 06 20:10	1°♎51'14		direct	4566 Jul 18 05:30	11°♊53'17	
morning max el	4565 Aug 18 06:40	7°♎10'49	21°06'31	morning max el	4566 Jul 31 02:52	18°♊02'30	22°43'49
asc. node	4565 Aug 29 18:36	22°♎43'00			4566 Aug 09 18:51	0°♎	
	4565 Sep 02 17:18	0°♎		asc. node	4566 Aug 16 15:38	11°♎48'28	
morning set	4565 Sep 07 01:05	8°♎42'19		morning set	4566 Aug 22 11:47	23°♎33'15	
					4566 Aug 25 12:32	0°♎	
superior conj	4565 Sep 14 10:07	24°♎05'51	1°43'52	superior conj	4566 Aug 29 13:55	8°♎41'38	1°39'47
minimum elong	4565 Sep 14 09:58	24°♎05'05	1°43'52	minimum elong	4566 Aug 29 12:34	8°♎34'31	1°39'42
	4565 Sep 17 07:33	0°♎			4566 Sep 01 15:02	15°♎06'49	1.33983 AU
max. Earth dist.	4565 Sep 18 21:00	3°♎06'57	1.35482 AU	max. Earth dist.	4566 Sep 06 09:50	24°♎48'01	
evening rise	4565 Sep 23 00:40	11°♎08'16		evening rise	4566 Sep 09 02:30	0°♎	
	4565 Oct 03 18:47	0°♎			4566 Sep 22 08:14	22°♎42'13	
desc. node	4565 Oct 05 11:12	2°♎42'46		desc. node	4566 Sep 27 06:46	0°♎	
	4565 Oct 25 13:20	0°♎			4566 Oct 11 00:37	16°♎32'19	27°11'51
evening max el	4565 Oct 28 11:55	3°♎00'53	26°29'46	evening max el	4566 Oct 24 09:40	23°♎50'02	
retrograde	4565 Nov 10 09:11	10°♎14'27		retrograde	4566 Oct 31 07:15	21°♎09'27	
evening set	4565 Nov 16 19:50	7°♎37'20		evening set	4566 Nov 04 03:56	17°♎29'04	0.64976 AU
min. Earth dist.	4565 Nov 20 22:42	3°♎21'39	0.66269 AU	min. Earth dist.	4566 Nov 06 08:06	15°♎04'44	-2°05'41
inferior conj	4565 Nov 22 14:56	1°♎20'23	-1°03'51	inferior conj	4566 Nov 06 11:41	14°♎54'47	2°04'15
minimum elong	4565 Nov 22 16:41	1°♎15'05	1°03'05	minimum elong	4566 Nov 12 17:11	9°♎32'45	
	4565 Nov 23 17:55	30°♎		morning rise	4566 Nov 12 14:53	9°♎35'26	
asc. node	4565 Nov 25 17:50	27°♎49'25		asc. node	4566 Nov 15 08:43	8°♎55'37	
morning rise	4565 Nov 28 14:12	25°♎35'11		direct	4566 Nov 21 20:09	12°♎22'43	18°02'30
direct	4565 Dec 01 13:23	24°♎45'38		morning max el	4566 Dec 04 03:52	0°♎	
morning max el	4565 Dec 08 04:43	28°♎23'08	18°32'14		4566 Dec 09 16:44	9°♎10'32	
	4565 Dec 09 16:51	0°♎		morning set	4566 Dec 19 07:31	24°♎57'12	
morning set	4565 Dec 28 12:43	28°♎03'49		desc. node	4566 Dec 22 10:53	0°♎	
	4565 Dec 29 17:56	0°♎					
desc. node	4566 Jan 01 10:29	4°♎16'19		superior conj	4566 Dec 23 19:22	2°♎09'33	-0°30'42
				minimum elong	4566 Dec 23 15:34	1°♎54'27	0°30'10
superior conj	4566 Jan 13 11:33	23°♎14'39	-1°16'48	max. Earth dist.	4566 Dec 27 13:45	8°♎07'25	1.45052 AU
minimum elong	4566 Jan 13 02:43	22°♎40'01	1°15'47	evening rise	4567 Jan 09 02:33	27°♎38'35	
max. Earth dist.	4566 Jan 13 18:07	23°♎40'22	1.45288 AU		4567 Jan 10 15:13	0°♎	
	4566 Jan 17 18:56	0°♎		greatest brilliancy	4567 Jan 22 20:00	18°♎34'22	-0.7m
evening rise	4566 Jan 29 07:38	18°♎11'18			4567 Jan 30 23:46	0°♎	
	4566 Feb 05 18:14	0°♎		evening max el	4567 Feb 03 17:24	4°♎19'39	19°48'58
greatest brilliancy	4566 Feb 07 09:40	2°♎35'13	-0.8m	asc. node	4567 Feb 08 14:09	8°♎03'20	
evening max el	4566 Feb 20 11:24	20°♎47'22	18°58'32	retrograde	4567 Feb 11 04:52	8°♎39'49	
asc. node	4566 Feb 21 17:06	21°♎58'09		evening set	4567 Feb 14 20:36	7°♎21'41	
retrograde	4566 Feb 27 07:17	24°♎37'57		inferior conj	4567 Feb 20 06:47	1°♎22'14	3°09'42
evening set	4566 Mar 02 15:12	23°♎33'48		minimum elong	4567 Feb 20 04:40	1°♎29'16	3°09'18
inferior conj	4566 Mar 08 05:22	17°♎49'04	3°28'39		4567 Feb 21 07:29	30°♎	
minimum elong	4566 Mar 08 04:05	17°♎53'04	3°28'32	min. Earth dist.	4567 Feb 21 07:07	0°♎01'13	0.66974 AU
min. Earth dist.	4566 Mar 09 20:21	15°♎46'35	0.65820 AU	morning rise	4567 Feb 25 12:32	25°♎08'01	
morning rise	4566 Mar 13 16:35	11°♎35'32		direct	4567 Mar 03 12:25	22°♎27'24	
direct	4566 Mar 20 04:26	8°♎45'32		morning max el	4567 Mar 15 13:01	29°♎38'06	25°21'19
desc. node	4566 Mar 30 09:43	13°♎50'06			4567 Mar 15 21:36	0°♎	
morning max el	4566 Apr 02 03:54	16°♎26'31	26°36'25	desc. node	4567 Mar 17 06:45	1°♎27'34	
	4566 Apr 13 09:33	0°♎			4567 Apr 07 06:24	0°♎	
	4566 May 02 12:14	0°♎		morning set	4567 Apr 20 17:51	22°♎40'36	
morning set	4566 May 08 03:14	10°♎17'46		max. Earth dist.	4567 Apr 24 10:17	29°♎27'54	1.36342 AU
max. Earth dist.	4566 May 12 07:26	18°♎23'19	1.34582 AU		4567 Apr 24 17:06	0°♎	
				superior conj	4567 Apr 30 11:10	11°♎08'30	-1°08'01
superior conj	4566 May 16 20:47	27°♎37'23	-0°38'41	minimum elong	4567 Apr 30 14:51	11°♎26'51	1°07'23
minimum elong	4566 May 16 22:52	27°♎48'08	0°38'17	asc. node	4567 May 07 13:25	25°♎29'13	
	4566 May 18 00:18	0°♎		evening rise	4567 May 08 15:26	27°♎41'09	
asc. node	4566 May 20 16:22	5°♎35'02			4567 May 09 18:59	0°♎	
evening rise	4566 May 24 10:28	13°♎26'29		evening max el	4567 May 26 01:47	26°♎03'35	19°47'25
	4566 Jun 01 23:14	0°♎			4567 May 31 15:49	0°♎	
evening max el	4566 Jun 12 15:47	14°♎44'23	21°00'54	retrograde	4567 Jun 05 01:34	0°♎56'03	
retrograde	4566 Jun 24 09:00	20°♎29'27		evening set	4567 Jun 07 00:03	0°♎45'52	
desc. node	4566 Jun 26 08:56	20°♎20'03			4567 Jun 09 17:19	30°♎	
evening set	4566 Jun 26 13:33	20°♎18'11		desc. node	4567 Jun 13 05:56	28°♎17'55	
inferior conj	4566 Jul 05 21:50	16°♎20'41	-2°45'41	inferior conj	4567 Jun 15 20:50	26°♎43'58	-0°46'50
minimum elong	4566 Jul 05 14:23	16°♎31'11	2°43'12				
min. Earth dist.	4566 Jul 06 12:18	16°♎00'15	0.54820 AU				

minimum elong	4567 Jun 15 18:42	26° Π 47'17	0°46'02	inferior conj	4568 May 26 13:21	7° Π 39'17	1°01'28
min. Earth dist.	4567 Jun 18 01:05	25° Π 23'38	0.55429 AU	minimum elong	4568 May 26 15:39	7° Π 35'10	1°00'40
morning rise	4567 Jun 24 11:13	22° Π 16'39		min. Earth dist.	4568 May 29 17:04	5° Π 24'52	0.56880 AU
direct	4567 Jun 28 20:14	21° Π 34'27		desc. node	4568 May 30 02:58	5° Π 08'07	
morning max el	4567 Jul 12 17:10	28° Π 27'53	24°27'33	morning rise	4568 Jun 03 16:17	2° Π 35'41	
	4567 Jul 14 06:22	0° \mathfrak{D}		direct	4568 Jun 09 00:08	1° Π 27'34	
	4567 Aug 02 20:53	0° Ω		morning max el	4568 Jun 23 08:00	8° Π 53'54	26°02'22
asc. node	4567 Aug 03 12:40	1° Ω 18'50			4568 Jul 09 04:56	0° \mathfrak{D}	
morning set	4567 Aug 06 23:34	8° Ω 27'09		asc. node	4568 Jul 20 09:42	21° \mathfrak{D} 06'18	
				morning set	4568 Jul 21 10:43	23° \mathfrak{D} 17'43	
					4568 Jul 24 13:31	0° Ω	
superior conj	4567 Aug 13 22:26	23° Ω 30'47	1°29'53				
minimum elong	4567 Aug 13 20:22	23° Ω 19'31	1°29'40	superior conj	4568 Jul 28 09:31	8° Ω 25'22	1°15'00
max. Earth dist.	4567 Aug 15 17:47	27° Ω 25'40	1.32895 AU	minimum elong	4568 Jul 28 07:11	8° Ω 12'34	1°14'39
	4567 Aug 16 22:33	0° \mathfrak{M}		max. Earth dist.	4568 Jul 29 02:30	9° Ω 58'53	1.32225 AU
evening rise	4567 Aug 21 05:39	8° \mathfrak{M} 58'18		evening rise	4568 Aug 04 08:54	23° Ω 28'43	
	4567 Sep 01 11:50	0° \mathfrak{L}			4568 Aug 07 13:38	0° \mathfrak{M}	
desc. node	4567 Sep 09 05:14	12° \mathfrak{L} 12'47			4568 Aug 25 08:10	0° \mathfrak{L}	
evening max el	4567 Sep 23 11:36	29° \mathfrak{L} 41'13	27°27'00	desc. node	4568 Aug 26 02:14	1° \mathfrak{L} 01'39	
	4567 Sep 23 19:35	0° \mathfrak{M}		evening max el	4568 Sep 04 18:17	12° \mathfrak{L} 13'24	27°10'20
retrograde	4567 Oct 07 03:43	6° \mathfrak{M} 57'25		retrograde	4568 Sep 18 14:48	19° \mathfrak{L} 26'21	
evening set	4567 Oct 14 07:44	4° \mathfrak{M} 22'32		evening set	4568 Sep 25 17:27	17° \mathfrak{L} 09'09	
min. Earth dist.	4567 Oct 17 23:40	1° \mathfrak{M} 14'28	0.63350 AU	min. Earth dist.	4568 Sep 29 08:43	14° \mathfrak{L} 25'04	0.61438 AU
	4567 Oct 19 05:52	30° \mathfrak{R} \mathfrak{L}		inferior conj	4568 Oct 02 10:58	11° \mathfrak{L} 41'36	-4°05'58
inferior conj	4567 Oct 20 15:50	28° \mathfrak{L} 34'41	-3°07'52	minimum elong	4568 Oct 02 17:06	11° \mathfrak{L} 28'02	4°04'23
minimum elong	4567 Oct 20 21:07	28° \mathfrak{L} 21'30	3°06'04	morning rise	4568 Oct 09 18:37	6° \mathfrak{L} 46'26	
morning rise	4567 Oct 27 11:58	23° \mathfrak{L} 19'26		direct	4568 Oct 12 02:43	6° \mathfrak{L} 23'46	
direct	4567 Oct 29 22:23	22° \mathfrak{L} 51'06		asc. node	4568 Oct 16 08:56	7° \mathfrak{L} 42'08	
asc. node	4567 Oct 30 11:54	22° \mathfrak{L} 52'39		morning max el	4568 Oct 19 03:50	9° \mathfrak{L} 55'44	17°56'12
morning max el	4567 Nov 05 12:55	26° \mathfrak{L} 16'22	17°50'11		4568 Nov 01 08:05	0° \mathfrak{M}	
	4567 Nov 08 17:30	0° \mathfrak{M}		morning set	4568 Nov 03 22:38	4° \mathfrak{M} 45'07	
morning set	4567 Nov 21 22:13	21° \mathfrak{M} 31'04					
	4567 Nov 26 19:39	0° \mathfrak{J}		superior conj	4568 Nov 14 08:27	23° \mathfrak{M} 27'03	0°52'42
superior conj	4567 Dec 04 00:35	12° \mathfrak{J} 09'26	0°15'06	minimum elong	4568 Nov 14 12:21	23° \mathfrak{M} 44'04	0°52'11
minimum elong	4567 Dec 04 02:09	12° \mathfrak{J} 15'53	0°14'53		4568 Nov 18 04:01	0° \mathfrak{J}	
behind sun begin	4567 Dec 03 22:29	12° \mathfrak{J} 00'44		max. Earth dist.	4568 Nov 21 20:36	6° \mathfrak{J} 09'47	1.42561 AU
behind sun end	4567 Dec 04 05:49	12° \mathfrak{J} 31'02		desc. node	4568 Nov 22 01:33	6° \mathfrak{J} 30'09	
desc. node	4567 Dec 06 04:33	15° \mathfrak{J} 43'05		evening rise	4568 Nov 28 05:04	16° \mathfrak{J} 24'17	
max. Earth dist.	4567 Dec 10 07:34	22° \mathfrak{J} 23'30	1.44106 AU		4568 Dec 07 01:13	0° \mathfrak{Z}	
	4567 Dec 15 02:51	0° \mathfrak{Z}			4568 Dec 29 03:52	0° \mathfrak{A}	
evening rise	4567 Dec 19 12:24	6° \mathfrak{Z} 50'03		evening max el	4568 Dec 30 13:02	1° \mathfrak{A} 27'14	22°07'47
	4568 Jan 03 23:31	0° \mathfrak{A}		retrograde	4569 Jan 08 23:53	7° \mathfrak{A} 04'43	
evening max el	4568 Jan 17 17:56	17° \mathfrak{A} 52'49	20°53'14	asc. node	4569 Jan 12 08:12	6° \mathfrak{A} 05'09	
retrograde	4568 Jan 26 03:02	22° \mathfrak{A} 50'01		evening set	4569 Jan 13 11:40	5° \mathfrak{A} 16'14	
asc. node	4568 Jan 26 11:11	22° \mathfrak{A} 49'23			4569 Jan 18 01:31	30° \mathfrak{R} \mathfrak{Z}	
evening set	4568 Jan 30 03:59	21° \mathfrak{A} 17'03		inferior conj	4569 Jan 18 20:00	28° \mathfrak{Z} 55'57	2°03'00
inferior conj	4568 Feb 04 12:21	15° \mathfrak{A} 05'29	2°40'35	minimum elong	4569 Jan 18 17:42	29° \mathfrak{Z} 03'56	2°02'13
minimum elong	4568 Feb 04 09:55	15° \mathfrak{A} 13'53	2°39'55	min. Earth dist.	4569 Jan 18 19:21	28° \mathfrak{Z} 58'15	0.68030 AU
min. Earth dist.	4568 Feb 04 23:32	14° \mathfrak{A} 27'02	0.67703 AU	morning rise	4569 Jan 23 23:36	22° \mathfrak{Z} 45'09	
morning rise	4568 Feb 09 15:41	8° \mathfrak{A} 52'14		direct	4569 Jan 28 18:31	20° \mathfrak{Z} 43'49	
direct	4568 Feb 15 01:22	6° \mathfrak{A} 29'07		morning max el	4569 Feb 07 08:27	26° \mathfrak{Z} 22'41	22°25'39
morning max el	4568 Feb 25 21:42	12° \mathfrak{A} 57'08	23°54'25		4569 Feb 10 16:13	0° \mathfrak{A}	
desc. node	4568 Mar 03 03:47	20° \mathfrak{A} 03'44		desc. node	4569 Feb 18 00:49	9° \mathfrak{A} 22'02	
	4568 Mar 10 15:30	0° \mathfrak{H}			4569 Mar 04 05:05	0° \mathfrak{H}	
	4568 Mar 30 02:46	0° \mathfrak{Y}		morning set	4569 Mar 13 01:00	13° \mathfrak{H} 58'09	
morning set	4568 Apr 01 11:00	3° \mathfrak{Y} 58'40		max. Earth dist.	4569 Mar 18 02:47	22° \mathfrak{H} 24'01	1.40612 AU
max. Earth dist.	4568 Apr 05 06:21	10° \mathfrak{Y} 37'31	1.38429 AU		4569 Mar 22 12:41	0° \mathfrak{Y}	
superior conj	4568 Apr 12 13:00	23° \mathfrak{Y} 59'37	-1°35'08	superior conj	4569 Mar 25 21:53	6° \mathfrak{Y} 00'18	-1°56'37
minimum elong	4568 Apr 12 17:48	24° \mathfrak{Y} 22'20	1°34'31	minimum elong	4569 Mar 26 02:17	6° \mathfrak{Y} 20'07	1°56'18
	4568 Apr 15 16:12	0° \mathfrak{B}		evening rise	4569 Apr 05 01:15	24° \mathfrak{Y} 47'06	
evening rise	4568 Apr 21 13:27	11° \mathfrak{B} 30'45			4569 Apr 07 20:04	0° \mathfrak{B}	
asc. node	4568 Apr 23 10:27	15° \mathfrak{B} 10'05		asc. node	4569 Apr 10 07:29	4° \mathfrak{B} 32'34	
	4568 May 01 17:02	0° \mathfrak{H}		evening max el	4569 Apr 21 05:17	20° \mathfrak{B} 39'00	18°20'32
evening max el	4568 May 07 23:14	8° \mathfrak{H} 03'43	18°53'48	retrograde	4569 Apr 28 12:02	24° \mathfrak{B} 16'17	
retrograde	4568 May 16 09:22	12° \mathfrak{H} 11'10		evening set	4569 Apr 30 21:11	23° \mathfrak{B} 54'02	
evening set	4568 May 18 11:43	11° \mathfrak{H} 56'48		inferior conj	4569 May 08 03:27	19° \mathfrak{B} 16'40	2°20'32

minimum elong	4569 May 08 07:02	19°8'09"09	2°19'34"	minimum elong	4570 Apr 20 15:59	1°8'25"34	3°08'11"
min. Earth dist.	4569 May 11 14:01	16°8'25"17	0.58883 AU	4570 Apr 22 03:08	30°8'19"		
morning rise	4569 May 15 13:54	13°8'42"07		min. Earth dist.	4570 Apr 23 17:46	28°9'28"26	0.61084 AU
desc. node	4569 May 16 23:59	13°8'00"45		morning rise	4570 Apr 27 06:48	25°9'37"12	
direct	4569 May 21 18:25	11°8'59"38		desc. node	4570 May 03 21:02	23°9'21"28	
morning max el	4569 Jun 05 03:52	19°8'46"23	27°12'44"	direct	4570 May 04 00:15	23°9'21"25	
	4569 Jun 13 21:12	0°11'		4570 May 16 21:19	0°8'		
	4569 Jul 01 21:27	0°12'		morning max el	4570 May 18 05:56	1°8'18"19	27°48'34"
morning set	4569 Jul 05 19:37	7°5'59"43		4570 Jun 08 02:29	0°11'		
asc. node	4569 Jul 07 06:44	11°5'05"23		morning set	4570 Jun 20 00:26	22°11'26"52	
				4570 Jun 23 14:35	0°12'		
superior conj	4569 Jul 12 21:20	23°5'19"23	0°55'46"	asc. node	4570 Jun 24 03:47	1°5'10"55	
minimum elong	4569 Jul 12 19:14	23°5'07"46	0°55'22"	max. Earth dist.	4570 Jun 26 00:04	5°5'11"05	1.32136 AU
max. Earth dist.	4569 Jul 12 13:50	22°5'37"59	1.31972 AU				
	4569 Jul 15 22:02	0°12'		superior conj	4570 Jun 27 08:10	8°5'06"43	0°32'48"
evening rise	4569 Jul 19 17:06	8°11'14"5		minimum elong	4570 Jun 27 06:44	7°5'58"53	0°32'29"
	4569 Jul 31 00:21	0°13'		evening rise	4570 Jul 04 04:06	23°5'00"11	
desc. node	4569 Aug 12 23:15	18°11'51"54		4570 Jul 07 12:44	0°12'		
evening max el	4569 Aug 17 18:29	23°11'59"37	26°20'24"	4570 Jul 25 21:00	0°13'		
	4569 Aug 26 09:09	0°14'		evening max el	4570 Jul 30 11:27	4°11'58"58	25°01'53"
retrograde	4569 Aug 31 17:42	1°14'08"45		desc. node	4570 Jul 30 20:16	5°11'19"51	
	4569 Sep 05 23:55	30°8'11"		retrograde	4570 Aug 13 10:00	12°11'01"56	
evening set	4569 Sep 07 07:40	29°11'21"56		evening set	4570 Aug 18 22:03	10°11'53"01	
min. Earth dist.	4569 Sep 11 07:45	26°11'46"58	0.59371 AU	min. Earth dist.	4570 Aug 23 23:02	8°11'08"51	0.57381 AU
inferior conj	4569 Sep 14 14:01	24°11'16"38	-4°52'13"	inferior conj	4570 Aug 26 21:53	6°11'10"43	-5°14'06"
minimum elong	4569 Sep 14 18:59	24°11'07"03	4°51'28"	minimum elong	4570 Aug 26 22:33	6°11'09"37	5°14'05"
morning rise	4569 Sep 22 08:30	19°11'43"50		morning rise	4570 Sep 04 01:23	2°11'00"12	
direct	4569 Sep 24 17:33	19°11'24"06		direct	4570 Sep 06 14:56	1°11'41"07	
morning max el	4569 Oct 02 13:35	23°11'12"03	18°21'55"	morning max el	4570 Sep 15 14:49	5°11'55"30	19°08'53"
asc. node	4569 Oct 03 05:59	23°11'53"02		asc. node	4570 Sep 20 03:01	11°11'10"19	
	4569 Oct 08 00:27	0°15'		4570 Oct 01 00:00	0°16'		
morning set	4569 Oct 18 12:31	18°15'37"20		morning set	4570 Oct 02 11:49	2°15'56"40	
	4569 Oct 24 11:55	0°16'					
superior conj	4569 Oct 27 15:51	5°15'53"06	1°19'30"	superior conj	4570 Oct 10 17:30	19°15'12"53	1°35'52"
minimum elong	4569 Oct 27 19:34	6°15'10"11	1°19'06"	minimum elong	4570 Oct 10 19:50	19°15'24"11	1°35'42"
max. Earth dist.	4569 Nov 04 04:21	19°15'15"16	1.40621 AU	4570 Oct 16 11:02	0°16'		
evening rise	4569 Nov 08 17:03	26°15'52"27		max. Earth dist.	4570 Oct 17 09:14	1°15'40"56	1.38526 AU
desc. node	4569 Nov 08 22:33	27°15'15"05		evening rise	4570 Oct 21 04:21	8°15'24"53	
	4569 Nov 10 14:56	0°17'		desc. node	4570 Oct 26 19:34	17°15'54"28	
	4569 Nov 30 17:34	0°18'		4570 Nov 03 12:19	0°18'		
evening max el	4569 Dec 13 04:03	15°15'04"39	23°27'30"	evening max el	4570 Nov 25 17:05	28°15'46"41	24°45'55"
retrograde	4569 Dec 23 17:53	21°15'19"53		4570 Nov 26 23:48	0°19'		
evening set	4569 Dec 28 18:03	19°15'15"38		retrograde	4570 Dec 07 07:51	5°15'32"10	
asc. node	4569 Dec 30 05:14	17°15'51"10		evening set	4570 Dec 12 21:34	3°15'12"50	
min. Earth dist.	4570 Jan 02 16:09	13°15'30"35	0.67991 AU	4570 Dec 15 22:39	30°8'11"		
inferior conj	4570 Jan 03 03:49	12°15'50"33	1°18'06"	asc. node	4570 Dec 17 02:16	28°15'32"19	
minimum elong	4570 Jan 03 02:08	12°15'56"22	1°17'27"	min. Earth dist.	4570 Dec 17 11:35	28°15'01"48	0.67604 AU
morning rise	4570 Jan 08 10:09	6°15'44"01		inferior conj	4570 Dec 18 10:04	26°15'47"20	0°26'58"
direct	4570 Jan 12 14:56	5°15'05"26		minimum elong	4570 Dec 18 09:25	26°15'49"31	0°26'42"
morning max el	4570 Jan 21 00:41	9°15'57"13	21°03'10"	morning rise	4570 Dec 23 21:23	20°15'47"11	
desc. node	4570 Feb 04 21:49	29°15'10"10		direct	4570 Dec 27 13:17	19°15'30"03	
	4570 Feb 05 11:34	0°19'		morning max el	4571 Jan 04 00:46	23°15'43"44	19°52'37"
morning set	4570 Feb 20 11:04	22°15'39"52		4571 Jan 09 09:08	0°20'		
	4570 Feb 25 02:06	0°20'		desc. node	4571 Jan 22 18:51	19°15'20"20	
max. Earth dist.	4570 Feb 28 05:20	5°20'04"20	1.42614 AU	4571 Jan 29 18:20	0°21'		
				morning set	4571 Jan 30 07:10	0°21'49"27	
superior conj	4570 Mar 07 08:40	16°20'58"15	-2°07'48"	max. Earth dist.	4571 Feb 10 15:55	18°21'37"04	1.44171 AU
minimum elong	4570 Mar 07 09:56	17°20'03"39	2°07'47"				
	4570 Mar 14 20:19	0°21'		superior conj	4571 Feb 15 17:53	26°21'47"19	-2°03'08"
evening rise	4570 Mar 18 22:46	7°21'20"03		minimum elong	4571 Feb 15 13:13	26°21'28"23	2°02'56"
asc. node	4570 Mar 28 04:32	23°21'29"34		4571 Feb 17 17:09	0°22'		
	4570 Apr 01 13:04	0°22'		evening rise	4571 Mar 01 01:39	19°21'01"26	
evening max el	4570 Apr 04 16:22	3°21'39"18	18°07'04"	4571 Mar 07 12:20	0°23'		
retrograde	4570 Apr 11 07:24	7°21'02"36		asc. node	4571 Mar 15 01:34	11°21'53"13	
evening set	4570 Apr 13 23:10	6°21'30"00		evening max el	4571 Mar 19 05:13	16°21'55"56	18°12'43"
inferior conj	4570 Apr 20 13:18	1°21'32"03	3°08'38"	retrograde	4571 Mar 25 15:10	20°21'20"07	
				evening set	4571 Mar 28 13:01	19°21'35"49	

inferior conj	4571 Apr 03 15:02	14°♈18'12	3°31'06		4572 Mar 14 23:59	30°♏♏	
minimum elong	4571 Apr 03 16:03	14°♈15'26	3°31'02	inferior conj	4572 Mar 17 04:37	27°♏27'28	3°34'00
min. Earth dist.	4571 Apr 06 06:19	11°♈26'02	0.63175 AU	minimum elong	4572 Mar 17 04:03	27°♏29'09	3°33'59
morning rise	4571 Apr 09 17:59	8°♈11'50		min. Earth dist.	4572 Mar 19 04:22	25°♏03'52	0.64959 AU
direct	4571 Apr 16 14:59	5°♈32'27		morning rise	4572 Mar 22 20:30	21°♏15'21	
desc. node	4571 Apr 20 18:05	6°♈22'56		direct	4572 Mar 29 13:14	18°♏25'37	
morning max el	4571 Apr 30 13:07	13°♈31'13	27°46'47	desc. node	4572 Apr 06 15:08	21°♏37'35	
	4571 May 13 18:53	0°♏		morning max el	4572 Apr 11 23:02	26°♏17'03	27°10'28
	4571 May 31 14:56	0°♐			4572 Apr 15 09:43	0°♈	
morning set	4571 Jun 03 22:56	6°♐32'25			4572 May 06 08:41	0°♏	
max. Earth dist.	4571 Jun 09 05:24	17°♐26'28	1.32729 AU	morning set	4572 May 17 12:17	20°♏07'53	
asc. node	4571 Jun 11 00:50	21°♐18'42		max. Earth dist.	4572 May 22 02:00	29°♏13'50	1.33768 AU
					4572 May 22 11:02	0°♐	
superior conj	4571 Jun 11 16:11	22°♐41'29	0°06'42	superior conj	4572 May 25 19:23	6°♐57'32	-0°21'44
minimum elong	4571 Jun 11 15:52	22°♐39'44	0°06'36	minimum elong	4572 May 25 20:31	7°♐03'31	0°21'30
behind sun begin	4571 Jun 11 11:02	22°♐13'41		asc. node	4572 May 27 21:53	11°♐24'47	
behind sun end	4571 Jun 11 20:42	23°♐05'49		evening rise	4572 Jun 02 02:49	22°♐27'49	
	4571 Jun 15 01:04	0°♑			4572 Jun 05 18:56	0°♑	
evening rise	4571 Jun 18 15:58	7°♑47'37		evening max el	4572 Jun 22 16:32	25°♑52'50	21°50'58
	4571 Jun 30 06:37	0°♒			4572 Jun 27 23:14	0°♒	
evening max el	4571 Jul 12 00:15	15°♒26'01	23°26'41	desc. node	4572 Jul 03 14:21	2°♒00'05	
desc. node	4571 Jul 17 17:19	19°♒53'53		retrograde	4572 Jul 05 06:32	2°♒06'38	
retrograde	4571 Jul 25 13:42	22°♒13'35		evening set	4572 Jul 07 22:29	1°♒50'41	
evening set	4571 Jul 29 14:10	21°♒38'15			4572 Jul 13 03:33	30°♏♑	
min. Earth dist.	4571 Aug 05 09:54	18°♒28'45	0.55786 AU	inferior conj	4572 Jul 17 06:26	27°♑47'45	-3°45'54
inferior conj	4571 Aug 07 09:40	17°♒18'08	-4°55'28	minimum elong	4572 Jul 16 21:45	27°♑59'54	3°43'30
minimum elong	4571 Aug 07 04:03	17°♒26'27	4°54'44	min. Earth dist.	4572 Jul 16 20:10	28°♑02'07	0.54906 AU
morning rise	4571 Aug 15 20:21	13°♒24'35		morning rise	4572 Jul 25 22:31	23°♑56'28	
direct	4571 Aug 18 17:09	13°♒04'27		direct	4572 Jul 29 04:45	23°♑33'08	
morning max el	4571 Aug 29 04:48	17°♒56'43	20°17'43	morning max el	4572 Aug 10 07:00	29°♑13'09	21°46'20
asc. node	4571 Sep 07 00:04	29°♒18'53			4572 Aug 11 02:35	0°♒	
	4571 Sep 07 10:06	0°♓		asc. node	4572 Aug 23 21:07	18°♒06'53	
morning set	4571 Sep 16 17:19	17°♓33'34			4572 Aug 29 23:24	0°♓	
	4571 Sep 22 18:38	0°♑		morning set	4572 Aug 31 02:42	2°♓21'26	
superior conj	4571 Sep 24 08:17	3°♑11'15	1°43'11	superior conj	4572 Sep 07 08:16	17°♓36'45	1°42'54
minimum elong	4571 Sep 24 09:00	3°♑14'50	1°43'10	minimum elong	4572 Sep 07 07:34	17°♓33'04	1°42'53
max. Earth dist.	4571 Sep 29 15:45	13°♑39'27	1.36518 AU	max. Earth dist.	4572 Sep 11 04:39	25°♓32'52	1.34798 AU
evening rise	4571 Oct 03 12:45	20°♑55'04			4572 Sep 13 10:06	0°♑	
	4571 Oct 08 15:39	0°♒		evening rise	4572 Sep 15 14:06	4°♑12'55	
desc. node	4571 Oct 13 16:36	8°♒23'12		desc. node	4572 Sep 29 13:37	28°♑35'34	
	4571 Oct 28 10:51	0°♓			4572 Sep 30 11:14	0°♒	
evening max el	4571 Nov 08 05:37	12°♓29'59	25°56'00	evening max el	4572 Oct 20 18:11	26°♒07'55	26°50'21
retrograde	4571 Nov 20 17:04	19°♓35'54			4572 Oct 25 07:38	0°♓	
evening set	4571 Nov 26 20:29	17°♓03'49		retrograde	4572 Nov 02 20:57	3°♓24'24	
min. Earth dist.	4571 Dec 01 03:14	12°♓27'57	0.66864 AU	evening set	4572 Nov 09 12:49	0°♓44'31	
inferior conj	4571 Dec 02 12:53	10°♓42'30	-0°29'27		4572 Nov 10 09:36	30°♏♒	
minimum elong	4571 Dec 02 13:39	10°♓40'03	0°29'06	min. Earth dist.	4572 Nov 13 12:50	26°♒44'17	0.65768 AU
asc. node	4571 Dec 03 23:19	8°♓56'25		inferior conj	4572 Nov 15 10:12	24°♒32'12	-1°29'50
morning rise	4571 Dec 08 07:16	4°♓51'16		minimum elong	4572 Nov 15 12:44	24°♒24'50	1°28'47
direct	4571 Dec 11 12:01	3°♓52'41		asc. node	4572 Nov 19 20:21	19°♒59'53	
morning max el	4571 Dec 18 08:32	7°♓39'57	18°56'57	morning rise	4572 Nov 21 13:30	18°♒52'32	
	4572 Jan 03 09:32	0°♑		direct	4572 Nov 24 09:07	18°♒08'50	
morning set	4572 Jan 09 14:30	9°♑40'38		morning max el	4572 Nov 30 21:58	21°♒40'37	18°17'30
desc. node	4572 Jan 09 15:53	9°♑46'02			4572 Dec 07 11:07	0°♓	
	4572 Jan 22 14:17	0°♒		morning set	4572 Dec 20 01:27	19°♓56'48	
max. Earth dist.	4572 Jan 24 08:30	2°♒45'45	1.45089 AU		4572 Dec 26 07:14	0°♑	
superior conj	4572 Jan 26 04:26	5°♒38'38	-1°38'52	desc. node	4572 Dec 26 12:54	0°♑22'38	
minimum elong	4572 Jan 25 19:15	5°♒02'28	1°38'01	superior conj	4573 Jan 04 07:12	14°♑15'58	-0°57'54
evening rise	4572 Feb 10 06:09	29°♒45'53		minimum elong	4573 Jan 04 00:04	13°♑47'55	0°57'00
	4572 Feb 10 09:37	0°♏		max. Earth dist.	4573 Jan 06 03:35	17°♑10'14	1.45277 AU
asc. node	4572 Feb 29 22:36	29°♏33'16			4573 Jan 14 08:22	0°♒	
	4572 Mar 01 08:34	0°♈		evening rise	4573 Jan 20 11:49	9°♒36'31	
evening max el	4572 Mar 01 17:01	0°♈21'49	18°36'48	greatest brilliancy	4573 Jan 31 17:55	27°♒07'27	-0.7m
retrograde	4572 Mar 08 07:02	3°♈59'48			4573 Feb 02 15:24	0°♏	
evening set	4572 Mar 11 11:03	3°♈03'05					

evening max el	4573 Feb 13 01:30	13° H 52'09	19°18'08	evening max el	4574 Jan 27 05:13	27° \approx 25'14	20°14'51
asc. node	4573 Feb 15 19:38	16° H 17'05			4574 Jan 30 02:15	0° H	
retrograde	4573 Feb 20 03:22	17° H 54'44		asc. node	4574 Feb 02 16:39	1° H 50'42	
evening set	4573 Feb 23 14:22	16° H 44'49		retrograde	4574 Feb 04 01:27	2° H 00'47	
inferior conj	4573 Mar 01 02:31	10° H 53'21	3°22'02	evening set	4574 Feb 07 20:49	0° H 36'40	
minimum elong	4573 Mar 01 00:50	10° H 58'50	3°21'47		4574 Feb 08 14:56	30° R \approx	
min. Earth dist.	4573 Mar 02 11:05	9° H 08'03	0.66354 AU	inferior conj	4574 Feb 13 06:00	24° \approx 31'48	2°58'29
morning rise	4573 Mar 06 10:59	4° H 39'02		minimum elong	4574 Feb 13 03:41	24° \approx 39'38	2°57'58
direct	4573 Mar 12 17:59	1° H 51'50		min. Earth dist.	4574 Feb 14 00:39	23° \approx 28'39	0.67331 AU
desc. node	4573 Mar 24 12:09	8° H 31'10		morning rise	4574 Feb 18 10:20	18° \approx 17'37	
morning max el	4573 Mar 25 08:53	9° H 22'34	26°06'41	direct	4574 Feb 24 04:23	15° \approx 43'24	
	4573 Apr 10 14:36	0° Y		morning max el	4574 Mar 07 17:33	22° \approx 37'52	24°45'07
	4573 Apr 28 21:10	0° B		desc. node	4574 Mar 11 09:10	26° \approx 36'15	
morning set	4573 Apr 30 12:32	3° B 01'02			4574 Mar 14 05:00	0° H	
max. Earth dist.	4573 May 04 10:58	10° B 29'03	1.35272 AU		4574 Apr 03 22:22	0° Y	
				morning set	4574 Apr 12 18:45	14° Y 58'28	
superior conj	4573 May 09 15:13	20° B 46'50	-0°51'14	max. Earth dist.	4574 Apr 16 09:38	21° Y 29'33	1.37197 AU
minimum elong	4573 May 09 18:00	21° B 01'00	0°50'42		4574 Apr 20 22:34	0° B	
	4573 May 14 02:40	0° II					
asc. node	4573 May 14 18:55	1° II 24'16		superior conj	4574 Apr 23 00:43	4° B 02'06	-1°19'58
evening rise	4573 May 17 10:31	6° II 53'12		minimum elong	4574 Apr 23 04:59	4° B 22'54	1°19'19
	4573 May 30 04:25	0° E		evening rise	4574 May 01 12:50	20° B 57'46	
evening max el	4573 Jun 04 19:16	6° E 48'25	20°27'24	asc. node	4574 May 01 15:56	21° B 13'17	
retrograde	4573 Jun 15 19:37	12° E 11'35			4574 May 06 03:43	0° II	
evening set	4573 Jun 17 19:25	12° E 01'44		evening max el	4574 May 18 10:27	18° II 25'32	19°22'11
desc. node	4573 Jun 20 11:23	11° E 20'07		retrograde	4574 May 27 17:10	22° II 56'54	
inferior conj	4573 Jun 27 00:22	8° E 04'08	-1°56'03	evening set	4574 May 29 16:36	22° II 45'30	
minimum elong	4573 Jun 26 18:56	8° E 12'02	1°54'05	inferior conj	4574 Jun 07 05:43	18° II 38'21	0°01'58
min. Earth dist.	4573 Jun 28 08:05	7° E 18'03	0.54957 AU	minimum elong	4574 Jun 07 05:48	18° II 38'13	0°01'55
morning rise	4573 Jul 05 17:28	3° E 54'18		transit middle	4574 Jun 07 05:48	18° II 38'13	0°01'55
direct	4573 Jul 09 14:33	3° E 21'48		transit begin	4574 Jun 07 01:58	18° II 44'29	
morning max el	4573 Jul 23 00:07	9° E 51'36	23°27'56	transit end	4574 Jun 07 09:38	18° II 31'56	
	4573 Aug 06 18:41	0° Q		desc. node	4574 Jun 07 08:24	18° II 33'58	
asc. node	4573 Aug 10 18:09	7° Q 23'52		min. Earth dist.	4574 Jun 09 22:16	16° II 53'20	0.55958 AU
morning set	4573 Aug 15 14:02	17° Q 14'15		morning rise	4574 Jun 15 16:06	13° II 55'32	
	4573 Aug 21 12:30	0° P		direct	4574 Jun 20 10:52	13° II 03'25	
				morning max el	4574 Jul 04 13:44	20° II 13'00	25°09'52
superior conj	4573 Aug 22 14:22	2° P 19'26	1°36'14		4574 Jul 12 22:32	0° E	
minimum elong	4573 Aug 22 12:40	2° P 10'16	1°36'06	asc. node	4574 Jul 28 15:11	27° E 02'01	
max. Earth dist.	4573 Aug 25 02:15	7° P 39'06	1.33467 AU		4574 Jul 30 01:35	0° Q	
evening rise	4573 Aug 30 04:12	18° P 06'56		morning set	4574 Jul 31 01:42	2° Q 06'56	
	4573 Sep 05 09:34	0° A					
desc. node	4573 Sep 16 10:39	18° A 24'08		superior conj	4574 Aug 07 00:12	17° Q 11'34	1°24'08
	4573 Sep 24 18:18	0° M		minimum elong	4574 Aug 06 21:58	16° Q 59'19	1°23'51
evening max el	4573 Oct 03 06:13	9° M 30'56	27°21'50	max. Earth dist.	4574 Aug 08 07:46	20° Q 04'02	1.32559 AU
retrograde	4573 Oct 16 19:05	16° M 49'23			4574 Aug 12 23:11	0° P	
evening set	4573 Oct 23 20:01	14° M 09'46		evening rise	4574 Aug 14 03:31	2° P 26'55	
min. Earth dist.	4573 Oct 27 14:17	10° M 43'45	0.64322 AU		4574 Aug 29 05:43	0° A	
inferior conj	4573 Oct 29 23:42	8° M 11'24	-2°32'15	desc. node	4574 Sep 03 07:40	7° A 38'45	
minimum elong	4573 Oct 30 04:04	7° M 59'49	2°30'37	evening max el	4574 Sep 15 15:51	22° A 26'28	27°24'05
morning rise	4573 Nov 05 13:24	2° M 46'16		retrograde	4574 Sep 29 10:24	29° A 41'22	
asc. node	4573 Nov 06 17:23	2° M 23'08		evening set	4574 Oct 06 14:46	27° A 12'46	
direct	4573 Nov 08 02:18	2° M 13'27		min. Earth dist.	4574 Oct 10 05:46	24° A 15'58	0.62563 AU
morning max el	4573 Nov 14 14:22	5° M 39'02	17°55'02	inferior conj	4574 Oct 13 02:31	21° A 33'00	-3°33'27
	4573 Nov 30 18:04	0° X		minimum elong	4574 Oct 13 08:19	21° A 19'12	3°31'38
morning set	4573 Dec 01 17:04	1° X 37'29		morning rise	4574 Oct 20 03:33	16° A 25'38	
desc. node	4573 Dec 13 09:55	21° X 06'20		direct	4574 Oct 22 12:30	16° A 00'07	
				asc. node	4574 Oct 24 14:25	16° A 20'17	
superior conj	4573 Dec 14 22:45	23° X 35'33	-0°10'39	morning max el	4574 Oct 29 06:42	19° A 27'33	17°50'20
minimum elong	4573 Dec 14 21:31	23° X 30'31	0°10'27		4574 Nov 06 00:32	0° M	
behind sun begin	4573 Dec 14 13:40	22° X 58'48		morning set	4574 Nov 14 07:24	14° M 23'21	
behind sun end	4573 Dec 15 05:22	24° X 02'12			4574 Nov 23 04:55	0° X	
	4573 Dec 18 22:46	0° Z					
max. Earth dist.	4573 Dec 19 22:13	1° Z 33'02	1.44726 AU	superior conj	4574 Nov 25 15:17	4° X 08'27	0°32'18
evening rise	4573 Dec 31 01:02	18° Z 52'36		minimum elong	4574 Nov 25 18:14	4° X 20'55	0°31'54
	4574 Jan 07 07:57	0° \approx		desc. node	4574 Nov 30 06:55	11° X 53'09	
greatest brilliancy	4574 Jan 14 14:36	10° \approx 52'07	-0.6m	max. Earth dist.	4574 Dec 02 14:08	15° X 38'06	1.43514 AU

evening rise	4574 Dec 10 11:52	28° ♄ 09'22		minimum elong	4575 Nov 07 13:55	16° ♄ 15'46	1°04'53
	4574 Dec 11 16:27	0° ♄		max. Earth dist.	4575 Nov 15 01:32	29° ♄ 10'54	1.41782 AU
	4575 Jan 01 03:22	0° ♄			4575 Nov 15 13:17	0° ♄	
evening max el	4575 Jan 10 03:29	10° ♄ 59'22	21°24'03	desc. node	4575 Nov 17 03:57	2° ♄ 40'14	
retrograde	4575 Jan 18 23:08	16° ♄ 13'12		evening rise	4575 Nov 20 11:53	8° ♄ 05'09	
asc. node	4575 Jan 20 13:42	15° ♄ 59'16			4575 Dec 04 20:16	0° ♄	
evening set	4575 Jan 23 04:31	14° ♄ 33'50		evening max el	4575 Dec 23 20:46	24° ♄ 35'31	22°41'20
inferior conj	4575 Jan 28 12:41	8° ♄ 18'25	2°25'33		4575 Dec 31 05:52	0° ♄	
minimum elong	4575 Jan 28 10:15	8° ♄ 26'51	2°24'50	retrograde	4576 Jan 02 18:50	0° ♄ 28'59	
min. Earth dist.	4575 Jan 28 18:45	7° ♄ 57'24	0.67895 AU		4576 Jan 05 04:18	30° ♄	
morning rise	4575 Feb 02 15:49	2° ♄ 06'04		evening set	4576 Jan 07 11:51	28° ♄ 33'37	
	4575 Feb 06 11:42	30° ♄		asc. node	4576 Jan 07 10:43	28° ♄ 35'56	
direct	4575 Feb 07 19:21	29° ♄ 51'39		inferior conj	4576 Jan 12 20:39	22° ♄ 10'57	1°44'44
	4575 Feb 09 04:02	0° ♄		minimum elong	4576 Jan 12 18:33	22° ♄ 18'13	1°44'00
morning max el	4575 Feb 18 02:27	5° ♄ 58'37	23°16'14	min. Earth dist.	4576 Jan 12 15:12	22° ♄ 29'48	0.68069 AU
desc. node	4575 Feb 26 06:10	15° ♄ 31'54		morning rise	4576 Jan 18 01:08	16° ♄ 02'00	
	4575 Mar 08 15:55	0° ♄		direct	4576 Jan 22 13:59	14° ♄ 10'24	
morning set	4575 Mar 25 00:49	25° ♄ 43'46		morning max el	4576 Jan 31 15:11	19° ♄ 27'46	21°49'20
	4575 Mar 27 13:14	0° ♄			4576 Feb 09 10:20	0° ♄	
max. Earth dist.	4575 Mar 29 04:44	2° ♄ 50'32	1.39367 AU	desc. node	4576 Feb 13 03:12	5° ♄ 04'03	
					4576 Feb 29 20:39	0° ♄	
superior conj	4575 Apr 05 19:55	16° ♄ 33'17	-1°45'11	morning set	4576 Mar 04 02:20	5° ♄ 07'42	
minimum elong	4575 Apr 06 00:48	16° ♄ 55'55	1°44'41	max. Earth dist.	4576 Mar 10 03:53	15° ♄ 01'25	1.41510 AU
	4575 Apr 12 22:04	0° ♄					
evening rise	4575 Apr 15 06:54	4° ♄ 33'59		superior conj	4576 Mar 17 19:59	28° ♄ 08'33	-2°02'57
asc. node	4575 Apr 18 12:59	10° ♄ 47'00		minimum elong	4576 Mar 17 23:27	28° ♄ 23'48	2°02'47
	4575 Apr 30 19:32	0° ♄			4576 Mar 18 21:16	0° ♄	
evening max el	4575 May 01 12:02	0° ♄ 41'49	18°37'12	evening rise	4576 Mar 28 13:09	17° ♄ 33'10	
retrograde	4575 May 09 08:47	4° ♄ 34'02		asc. node	4576 Apr 04 10:02	29° ♄ 59'34	
evening set	4575 May 11 14:09	4° ♄ 16'33			4576 Apr 04 10:08	0° ♄	
inferior conj	4575 May 19 07:15	29° ♄ 50'45	1°38'59	evening max el	4576 Apr 13 20:35	13° ♄ 28'34	18°12'23
minimum elong	4575 May 19 10:28	29° ♄ 44'36	1°37'58	retrograde	4576 Apr 20 19:16	16° ♄ 58'13	
	4575 May 19 02:24	30° ♄		evening set	4576 Apr 23 07:19	16° ♄ 31'43	
min. Earth dist.	4575 May 22 15:48	27° ♄ 18'05	0.57689 AU	inferior conj	4576 Apr 30 06:11	11° ♄ 45'09	2°44'30
desc. node	4575 May 25 05:24	25° ♄ 35'12		minimum elong	4576 Apr 30 09:33	11° ♄ 37'36	2°43'45
morning rise	4575 May 27 03:33	24° ♄ 33'15		min. Earth dist.	4576 May 03 15:12	8° ♄ 45'43	0.59813 AU
direct	4575 Jun 01 21:08	23° ♄ 11'01		morning rise	4576 May 07 09:15	6° ♄ 00'41	
	4575 Jun 15 10:26	0° ♄		desc. node	4576 May 11 02:26	4° ♄ 24'42	
morning max el	4575 Jun 16 06:04	0° ♄ 46'40	26°36'08	direct	4576 May 13 20:13	4° ♄ 03'41	
	4575 Jul 06 22:05	0° ♄		morning max el	4576 May 28 04:41	11° ♄ 55'19	27°32'45
morning set	4575 Jul 15 12:08	16° ♄ 54'43			4576 Jun 11 09:16	0° ♄	
asc. node	4575 Jul 15 12:14	16° ♄ 55'16			4576 Jun 28 01:55	0° ♄	
	4575 Jul 21 12:51	0° ♄		morning set	4576 Jun 28 19:32	1° ♄ 31'18	
				asc. node	4576 Jul 01 09:16	6° ♄ 57'42	
superior conj	4575 Jul 22 11:49	2° ♄ 06'51	1°07'21	max. Earth dist.	4576 Jul 05 05:44	15° ♄ 21'09	1.31989 AU
minimum elong	4575 Jul 22 09:32	1° ♄ 54'13	1°06'57				
max. Earth dist.	4575 Jul 22 18:13	2° ♄ 42'07	1.32067 AU	superior conj	4576 Jul 05 23:25	16° ♄ 58'32	0°46'28
evening rise	4575 Jul 29 09:11	17° ♄ 04'12		minimum elong	4576 Jul 05 21:32	16° ♄ 48'13	0°46'04
	4575 Aug 04 20:10	0° ♄			4576 Jul 11 22:10	0° ♄	
desc. node	4575 Aug 21 04:41	26° ♄ 05'39		evening rise	4576 Jul 12 18:49	1° ♄ 50'19	
	4575 Aug 24 09:23	0° ♄			4576 Jul 27 22:57	0° ♄	
evening max el	4575 Aug 28 20:20	4° ♄ 41'32	26°53'11	desc. node	4576 Aug 07 01:44	13° ♄ 24'21	
retrograde	4575 Sep 11 17:57	11° ♄ 51'59		evening max el	4576 Aug 09 17:15	16° ♄ 06'39	25°49'56
evening set	4575 Sep 18 16:50	9° ♄ 46'34		retrograde	4576 Aug 23 16:23	23° ♄ 13'40	
min. Earth dist.	4575 Sep 22 10:29	7° ♄ 08'27	0.60569 AU	evening set	4576 Aug 29 21:16	21° ♄ 42'16	
inferior conj	4575 Sep 25 15:20	4° ♄ 28'37	-4°27'40	min. Earth dist.	4576 Sep 03 05:28	19° ♄ 06'02	0.58499 AU
minimum elong	4575 Sep 25 21:18	4° ♄ 16'10	4°26'22	inferior conj	4576 Sep 06 10:31	16° ♄ 47'01	-5°05'22
	4575 Oct 02 07:28	30° ♄		minimum elong	4576 Sep 06 14:03	16° ♄ 40'36	5°05'02
morning rise	4575 Oct 03 03:43	29° ♄ 42'29		morning rise	4576 Sep 14 09:06	12° ♄ 24'14	
direct	4575 Oct 05 11:56	29° ♄ 21'13		direct	4576 Sep 16 19:49	12° ♄ 04'55	
	4575 Oct 08 14:03	0° ♄		morning max el	4576 Sep 25 02:23	16° ♄ 02'16	18°39'19
asc. node	4575 Oct 11 11:27	1° ♄ 46'42		asc. node	4576 Sep 27 08:30	18° ♄ 27'36	
morning max el	4575 Oct 12 19:50	2° ♄ 58'42	18°04'37		4576 Oct 04 23:11	0° ♄	
morning set	4575 Oct 28 14:16	27° ♄ 56'31		morning set	4576 Oct 11 08:36	12° ♄ 01'38	
	4575 Oct 29 16:45	0° ♄					
				superior conj	4576 Oct 20 01:45	28° ♄ 48'58	1°27'38
superior conj	4575 Nov 07 09:52	15° ♄ 57'43	1°05'24	minimum elong	4576 Oct 20 04:58	29° ♄ 04'02	1°27'19

	4576 Oct 20 16:55	0°♄		superior conj	4577 Oct 03 09:30	12°♄26'34	1°39'58
max. Earth dist.	4576 Oct 27 07:51	11°♄59'45	1.39735 AU	minimum elong	4577 Oct 03 11:09	12°♄34'39	1°39'54
evening rise	4576 Oct 31 09:44	19°♄00'22		max. Earth dist.	4577 Oct 09 12:15	24°♄09'05	1.37642 AU
desc. node	4576 Nov 03 01:00	23°♄23'29			4577 Oct 12 17:21	0°♄	
	4576 Nov 07 03:25	0°♄		evening rise	4577 Oct 13 06:23	0°♄58'03	
	4576 Nov 28 03:59	0°♄		desc. node	4577 Oct 20 22:03	13°♄58'50	
evening max el	4576 Dec 05 10:35	8°♄14'46	24°01'16		4577 Oct 31 08:39	0°♄	
retrograde	4576 Dec 16 11:20	14°♄44'09		evening max el	4577 Nov 17 23:04	21°♄57'14	25°17'12
evening set	4576 Dec 21 17:15	12°♄33'02		retrograde	4577 Nov 29 23:34	28°♄53'36	
asc. node	4576 Dec 24 07:45	9°♄50'30		evening set	4577 Dec 05 19:04	26°♄28'20	
min. Earth dist.	4576 Dec 26 11:40	7°♄02'31	0.67874 AU	min. Earth dist.	4577 Dec 10 05:51	21°♄32'02	0.67326 AU
inferior conj	4576 Dec 27 04:02	6°♄07'04	0°57'08	inferior conj	4577 Dec 11 09:04	20°♄03'43	0°03'39
minimum elong	4576 Dec 27 02:44	6°♄11'30	0°56'37	minimum elong	4577 Dec 11 08:58	20°♄04'02	0°03'36
morning rise	4577 Jan 01 12:15	0°♄03'12		transit middle	4577 Dec 11 08:58	20°♄04'02	0°03'36
	4577 Jan 01 13:58	30°♄♄		transit begin	4577 Dec 11 06:15	20°♄12'52	
direct	4577 Jan 05 11:17	28°♄34'15		transit end	4577 Dec 11 11:41	19°♄55'13	
	4577 Jan 09 16:21	0°♄		asc. node	4577 Dec 11 04:48	20°♄17'36	
morning max el	4577 Jan 13 10:50	3°♄08'27	20°31'27	morning rise	4577 Dec 16 23:09	14°♄06'59	
desc. node	4577 Jan 30 00:14	25°♄02'39		direct	4577 Dec 20 09:57	12°♄58'20	
	4577 Feb 02 08:04	0°♄		morning max el	4577 Dec 27 14:22	16°♄59'50	19°26'58
morning set	4577 Feb 11 03:55	13°♄28'33			4578 Jan 06 17:04	0°♄	
max. Earth dist.	4577 Feb 20 10:08	28°♄06'34	1.43343 AU	greatest brilliancy	4578 Jan 09 18:45	4°♄32'07	-0.7m
	4577 Feb 21 14:12	0°♄		desc. node	4578 Jan 16 21:16	15°♄20'06	
				morning set	4578 Jan 21 01:44	21°♄47'19	
superior conj	4577 Feb 26 20:07	8°♄37'28	-2°08'04		4578 Jan 26 08:43	0°♄	
minimum elong	4577 Feb 26 19:05	8°♄33'10	2°08'03	max. Earth dist.	4578 Feb 02 23:04	11°♄54'57	1.44644 AU
evening rise	4577 Mar 11 03:21	29°♄45'55					
	4577 Mar 11 06:34	0°♄		superior conj	4578 Feb 06 18:45	17°♄59'18	-1°55'16
asc. node	4577 Mar 22 07:04	18°♄43'54		minimum elong	4578 Feb 06 11:36	17°♄30'45	1°54'48
evening max el	4577 Mar 28 08:46	26°♄36'54	18°07'09		4578 Feb 14 04:54	0°♄	
retrograde	4577 Apr 03 20:37	29°♄59'16		evening rise	4578 Feb 20 21:05	11°♄03'31	
evening set	4577 Apr 06 14:53	29°♄21'57			4578 Mar 04 09:20	0°♄	
inferior conj	4577 Apr 12 23:23	24°♄15'27	3°20'56	asc. node	4578 Mar 09 04:07	6°♄50'37	
minimum elong	4577 Apr 13 01:23	24°♄10'20	3°20'41	evening max el	4578 Mar 11 21:29	9°♄58'20	18°20'46
min. Earth dist.	4577 Apr 15 22:46	21°♄13'56	0.61994 AU	retrograde	4578 Mar 18 08:14	13°♄26'58	
morning rise	4577 Apr 19 10:15	18°♄14'26		evening set	4578 Mar 21 08:35	12°♄37'39	
direct	4577 Apr 26 06:06	15°♄47'09		inferior conj	4578 Mar 27 06:37	7°♄12'25	3°34'23
desc. node	4577 Apr 27 23:27	15°♄55'53		minimum elong	4578 Mar 27 06:56	7°♄11'33	3°34'22
morning max el	4577 May 10 09:30	23°♄46'41	27°52'25	min. Earth dist.	4578 Mar 29 15:31	4°♄30'24	0.63981 AU
	4577 May 15 23:33	0°♄		morning rise	4578 Apr 02 04:24	1°♄02'58	
	4577 Jun 04 16:12	0°♄			4578 Apr 03 14:55	30°♄♄	
morning set	4577 Jun 12 21:59	15°♄50'34		direct	4578 Apr 09 00:30	28°♄17'06	
asc. node	4577 Jun 18 06:20	27°♄05'00		desc. node	4578 Apr 14 20:29	29°♄58'01	
max. Earth dist.	4577 Jun 18 14:23	27°♄48'26	1.32330 AU		4578 Apr 14 21:57	0°♄	
	4577 Jun 19 14:40	0°♄		morning max el	4578 Apr 22 18:07	6°♄14'51	27°35'05
					4578 May 10 20:58	0°♄	
superior conj	4577 Jun 20 09:16	1°♄41'18	0°22'03	morning set	4578 May 27 16:57	29°♄44'19	
minimum elong	4577 Jun 20 08:15	1°♄35'48	0°21'50		4578 May 27 20:07	0°♄	
evening rise	4577 Jun 27 06:24	16°♄38'57		max. Earth dist.	4578 Jun 01 16:07	9°♄51'10	1.33111 AU
	4577 Jul 03 20:30	0°♄					
evening max el	4577 Jul 22 07:29	26°♄48'13	24°22'27	superior conj	4578 Jun 04 15:29	16°♄08'48	-0°05'11
desc. node	4577 Jul 24 22:45	29°♄07'53		minimum elong	4578 Jun 04 15:44	16°♄10'10	0°05'08
	4577 Jul 26 01:57	0°♄		behind sun begin	4578 Jun 04 10:37	15°♄42'46	
retrograde	4577 Aug 05 03:52	3°♄47'18		behind sun end	4578 Jun 04 20:52	16°♄37'36	
evening set	4577 Aug 10 01:21	2°♄53'49		asc. node	4578 Jun 05 03:23	17°♄12'31	
	4577 Aug 15 18:42	30°♄♄			4578 Jun 11 02:16	0°♄	
min. Earth dist.	4577 Aug 15 18:24	0°♄00'27	0.56631 AU	evening rise	4578 Jun 11 18:01	1°♄23'36	
inferior conj	4577 Aug 18 09:36	28°♄20'43	-5°12'04		4578 Jun 27 17:28	0°♄	
minimum elong	4577 Aug 18 07:36	28°♄23'52	5°12'00	evening max el	4578 Jul 03 20:47	7°♄11'04	22°45'13
morning rise	4577 Aug 26 16:24	24°♄18'50		desc. node	4578 Jul 11 19:45	12°♄42'41	
direct	4577 Aug 29 08:34	23°♄59'40		retrograde	4578 Jul 17 02:38	13°♄46'45	
morning max el	4577 Sep 07 23:08	28°♄28'45	19°35'36	evening set	4578 Jul 20 11:33	13°♄21'51	
	4577 Sep 09 11:20	0°♄		min. Earth dist.	4578 Jul 28 05:00	9°♄57'17	0.55302 AU
asc. node	4577 Sep 14 05:33	6°♄08'04		inferior conj	4578 Jul 29 13:56	9°♄10'08	-4°32'16
morning set	4577 Sep 25 10:48	26°♄28'42		minimum elong	4578 Jul 29 06:17	9°♄21'07	4°30'44
	4577 Sep 27 04:41	0°♄		morning rise	4578 Aug 07 03:07	5°♄19'26	
				direct	4578 Aug 10 03:24	4°♄58'22	

morning max el	4578 Aug 21 07:59	10°♎10'48	20°53'15	morning max el	4579 Aug 03 05:33	21°♏08'20	22°28'38
asc. node	4578 Sep 01 02:36	24°♎34'49			4579 Aug 10 18:16	0°♎	
	4578 Sep 04 02:58	0°♎		asc. node	4579 Aug 18 23:39	13°♎36'13	
morning set	4578 Sep 09 18:10	11°♎10'48		morning set	4579 Aug 25 04:35	26°♎01'17	
					4579 Aug 27 01:44	0°♎	
superior conj	4578 Sep 17 04:36	26°♎37'37	1°43'54	superior conj	4579 Sep 01 07:28	11°♎11'01	1°40'47
minimum elong	4578 Sep 17 04:40	26°♎37'57	1°43'55	minimum elong	4579 Sep 01 06:17	11°♎04'44	1°40'44
	4578 Sep 18 20:16	0°♎		max. Earth dist.	4579 Sep 04 13:32	18°♎00'10	1.34180 AU
max. Earth dist.	4578 Sep 21 20:45	6°♎01'39	1.35740 AU	evening rise	4579 Sep 09 05:45	27°♎24'42	
evening rise	4578 Sep 25 22:32	13°♎50'17			4579 Sep 10 13:50	0°♎	
	4578 Oct 05 02:46	0°♎		desc. node	4579 Sep 24 16:04	24°♎24'43	
desc. node	4578 Oct 07 19:04	4°♎21'31			4579 Sep 28 09:15	0°♎	
	4578 Oct 26 04:36	0°♎		evening max el	4579 Oct 14 00:28	19°♎13'40	27°07'05
evening max el	4578 Oct 31 11:46	5°♎40'04	26°21'38	retrograde	4579 Oct 27 07:56	26°♎31'01	
retrograde	4578 Nov 13 06:41	12°♎51'49		evening set	4579 Nov 03 04:12	23°♎50'21	
evening set	4578 Nov 19 15:28	10°♎15'58		min. Earth dist.	4579 Nov 07 01:44	20°♎04'54	0.65195 AU
min. Earth dist.	4578 Nov 23 19:21	5°♎54'58	0.66434 AU	inferior conj	4579 Nov 09 04:07	17°♎43'37	-1°56'12
inferior conj	4578 Nov 25 09:49	3°♎57'44	-0°54'37	minimum elong	4579 Nov 09 07:26	17°♎34'19	1°54'51
minimum elong	4578 Nov 25 11:19	3°♎53'12	0°53'59	asc. node	4579 Nov 14 22:50	12°♎26'11	
asc. node	4578 Nov 28 01:49	0°♎52'30		morning rise	4579 Nov 15 11:39	12°♎09'32	
	4578 Nov 28 22:46	30°♎		direct	4579 Nov 18 04:13	11°♎30'46	
morning rise	4578 Dec 01 07:45	28°♎10'47		morning max el	4579 Nov 24 15:44	14°♎58'39	18°05'51
direct	4578 Dec 04 08:21	27°♎18'57			4579 Dec 05 10:23	0°♎	
	4578 Dec 09 23:52	0°♎		morning set	4579 Dec 12 19:34	12°♎06'56	
morning max el	4578 Dec 11 00:46	0°♎58'38	18°38'07	desc. node	4579 Dec 21 15:20	26°♎31'14	
	4578 Dec 31 01:29	0°♎			4579 Dec 23 19:19	0°♎	
morning set	4578 Dec 31 19:55	1°♎12'58					
desc. node	4579 Jan 03 18:19	5°♎51'19		superior conj	4579 Dec 27 05:28	5°♎27'13	-0°37'56
				minimum elong	4579 Dec 27 00:45	5°♎08'30	0°37'16
superior conj	4579 Jan 16 23:41	26°♎38'50	-1°23'03	max. Earth dist.	4579 Dec 30 12:42	10°♎40'04	1.45136 AU
minimum elong	4579 Jan 16 14:31	26°♎02'53	1°22'04		4580 Jan 11 22:21	0°♎	
max. Earth dist.	4579 Jan 16 16:58	26°♎12'28	1.45264 AU	evening rise	4580 Jan 12 13:02	0°♎56'51	
	4579 Jan 19 02:57	0°♎		greatest brilliancy	4580 Jan 25 16:21	21°♎04'30	-0.7m
evening rise	4579 Feb 01 15:39	21°♎24'13			4580 Jan 31 21:07	0°♎	
	4579 Feb 07 00:44	0°♎		evening max el	4580 Feb 06 14:53	6°♎59'23	19°40'29
greatest brilliancy	4579 Feb 09 20:36	4°♎29'57	-0.8m	asc. node	4580 Feb 10 22:08	10°♎24'51	
evening max el	4579 Feb 23 08:13	23°♎27'22	18°52'19	retrograde	4580 Feb 13 23:38	11°♎14'44	
asc. node	4579 Feb 24 01:08	24°♎08'48		evening set	4580 Feb 17 14:07	9°♎58'41	
retrograde	4579 Mar 02 02:15	27°♎14'08		inferior conj	4580 Feb 23 00:43	4°♎01'08	3°13'17
evening set	4579 Mar 05 09:10	26°♎11'52		minimum elong	4580 Feb 22 22:42	4°♎07'47	3°12'56
inferior conj	4579 Mar 11 00:07	20°♎29'28	3°30'28	min. Earth dist.	4580 Feb 24 03:06	2°♎33'52	0.66826 AU
minimum elong	4579 Mar 10 23:01	20°♎32'53	3°30'22		4580 Feb 26 04:10	30°♎	
min. Earth dist.	4579 Mar 12 17:21	18°♎21'19	0.65616 AU	morning rise	4580 Feb 28 07:05	27°♎46'52	
morning rise	4579 Mar 16 12:28	14°♎16'17		direct	4580 Mar 05 08:52	25°♎04'22	
direct	4579 Mar 23 01:46	11°♎25'59			4580 Mar 15 02:15	0°♎	
desc. node	4579 Apr 01 17:32	15°♎58'37		morning max el	4580 Mar 17 13:24	2°♎20'37	25°33'36
morning max el	4579 Apr 05 04:01	19°♎09'47	26°45'58	desc. node	4580 Mar 18 14:33	3°♎25'39	
	4579 Apr 14 08:56	0°♎			4580 Apr 07 12:22	0°♎	
	4579 May 03 21:31	0°♎		morning set	4580 Apr 22 18:33	25°♎34'41	
morning set	4579 May 11 01:13	13°♎02'56			4580 Apr 25 04:07	0°♎	
max. Earth dist.	4579 May 15 07:44	21°♎23'17	1.34358 AU	max. Earth dist.	4580 Apr 26 12:16	2°♎31'11	1.36053 AU
superior conj	4579 May 19 15:53	0°♎14'26	-0°34'13	superior conj	4580 May 02 07:48	13°♎51'00	-1°03'38
minimum elong	4579 May 19 17:42	0°♎23'55	0°33'50	minimum elong	4580 May 02 11:16	14°♎08'20	1°03'02
	4579 May 19 13:06	0°♎		asc. node	4580 May 08 21:27	27°♎12'13	
asc. node	4579 May 23 00:25	7°♎16'13		evening rise	4580 May 10 09:34	0°♎16'25	
evening rise	4579 May 27 03:46	15°♎58'08			4580 May 10 06:20	0°♎	
	4579 Jun 03 06:05	0°♎		evening max el	4580 May 28 01:07	29°♎00'38	19°57'08
evening max el	4579 Jun 15 17:02	17°♎47'31	21°13'23		4580 May 29 02:42	0°♎	
retrograde	4579 Jun 27 15:54	23°♎40'19		retrograde	4580 Jun 07 07:16	4°♎01'06	
desc. node	4579 Jun 28 16:46	23°♎37'48		evening set	4580 Jun 09 05:41	3°♎51'12	
evening set	4579 Jun 29 22:52	23°♎28'10		desc. node	4580 Jun 14 13:47	1°♎55'42	
inferior conj	4579 Jul 09 07:37	19°♎29'50	-3°02'34		4580 Jun 17 22:46	30°♎	
minimum elong	4579 Jul 08 23:38	19°♎41'01	3°00'00	inferior conj	4580 Jun 18 04:54	29°♎50'42	-1°04'52
min. Earth dist.	4579 Jul 09 15:40	19°♎18'32	0.54810 AU	minimum elong	4580 Jun 18 01:53	29°♎55'16	1°03'45
morning rise	4579 Jul 18 00:52	15°♎33'12		min. Earth dist.	4580 Jun 20 04:09	28°♎39'14	0.55278 AU
direct	4579 Jul 21 12:55	15°♎06'45					




































































































































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direct	4580 Jul 01 01:55	24° Π 49'08		min. Earth dist.	4581 Jun 01 19:44	8° Π 32'57	0.56621 AU
	4580 Jul 13 01:00	0° Ξ		morning rise	4581 Jun 06 23:24	5° Π 41'49	
morning max el	4580 Jul 14 20:25	1° Ξ 36'39	24°12'15	direct	4581 Jun 12 03:50	4° Π 38'10	
	4580 Aug 03 07:20	0° Ω		morning max el	4581 Jun 26 10:51	12° Π 00'49	25°49'23
asc. node	4580 Aug 04 20:42	3° Ω 03'28			4581 Jul 10 09:12	0° Ξ	
morning set	4580 Aug 08 16:18	10° Ω 55'12		asc. node	4581 Jul 22 17:44	22° Ξ 48'36	
				morning set	4581 Jul 24 03:39	25° Ξ 46'26	
					4581 Jul 26 03:02	0° Ω	
superior conj	4580 Aug 15 15:26	25° Ω 58'47	1°31'43				
minimum elong	4580 Aug 15 13:27	25° Ω 48'00	1°31'31				
max. Earth dist.	4580 Aug 17 15:01	0° Π 15'45	1.33030 AU	superior conj	4581 Jul 31 02:17	10° Ω 52'59	1°17'34
	4580 Aug 17 12:05	0° Π		minimum elong	4581 Jul 30 23:58	10° Ω 40'15	1°17'13
evening rise	4580 Aug 23 00:12	11° Π 30'59		max. Earth dist.	4581 Jul 31 22:58	12° Ω 46'37	1.32298 AU
	4580 Sep 01 19:53	0° Ξ		evening rise	4581 Aug 07 02:32	25° Ω 58'53	
desc. node	4580 Sep 10 13:05	14° Ξ 00'18			4581 Aug 09 01:33	0° Π	
	4580 Sep 23 01:24	0° Π			4581 Aug 26 07:59	0° Ξ	
evening max el	4580 Sep 25 11:42	2° Π 26'07	27°26'35	desc. node	4581 Aug 28 10:07	2° Ξ 56'28	
retrograde	4580 Oct 09 03:00	9° Π 43'04		evening max el	4581 Sep 07 19:13	15° Ξ 04'37	27°14'57
evening set	4580 Oct 16 06:31	7° Π 06'28		retrograde	4581 Sep 21 15:25	22° Ξ 18'22	
min. Earth dist.	4580 Oct 19 22:54	3° Π 54'04	0.63615 AU	evening set	4581 Sep 28 18:46	19° Ξ 57'45	
inferior conj	4580 Oct 22 13:25	1° Π 15'47	-2°58'38	min. Earth dist.	4581 Oct 02 09:41	17° Ξ 10'48	0.61734 AU
minimum elong	4580 Oct 22 18:29	1° Π 02'56	2°56'50	inferior conj	4581 Oct 05 10:40	14° Ξ 26'52	-3°57'48
	4580 Oct 23 19:44	30° Ξ		minimum elong	4581 Oct 05 16:47	14° Ξ 13'07	3°56'06
morning rise	4580 Oct 29 07:53	25° Ξ 57'59		morning rise	4581 Oct 12 16:39	9° Ξ 28'31	
direct	4580 Oct 31 18:51	25° Ξ 28'37		direct	4581 Oct 15 00:48	9° Ξ 05'15	
asc. node	4580 Oct 31 19:53	25° Ξ 28'38		asc. node	4581 Oct 18 16:56	10° Ξ 04'44	
morning max el	4580 Nov 07 08:29	28° Ξ 53'35	17°50'50	morning max el	4581 Oct 21 23:56	12° Ξ 35'53	17°54'03
	4580 Nov 08 09:42	0° Π			4581 Nov 02 17:03	0° Π	
morning set	4580 Nov 23 21:34	24° Π 17'12		morning set	4581 Nov 06 19:37	7° Π 24'42	
	4580 Nov 27 05:03	0° Ξ					
				superior conj	4581 Nov 17 10:51	26° Π 22'11	0°47'41
superior conj	4580 Dec 06 06:49	15° Ξ 15'34	0°08'35	minimum elong	4581 Nov 17 14:36	26° Π 38'22	0°47'10
minimum elong	4580 Dec 06 07:45	15° Ξ 19'22	0°08'28		4581 Nov 19 13:40	0° Ξ	
behind sun begin	4580 Dec 05 23:26	14° Ξ 45'10		desc. node	4581 Nov 24 09:22	8° Ξ 03'42	
behind sun end	4580 Dec 06 16:04	15° Ξ 53'30		max. Earth dist.	4581 Nov 24 20:26	8° Ξ 49'06	1.42821 AU
desc. node	4580 Dec 07 12:20	17° Ξ 16'24		evening rise	4581 Dec 01 13:53	19° Ξ 36'28	
max. Earth dist.	4580 Dec 12 06:42	24° Ξ 57'51	1.44285 AU		4581 Dec 08 07:41	0° Ξ	
	4580 Dec 15 10:57	0° Ξ			4581 Dec 29 19:17	0° \approx	
evening rise	4580 Dec 21 23:08	10° Ξ 07'38		evening max el	4582 Jan 02 12:05	4° \approx 06'27	21°56'16
	4581 Jan 04 03:41	0° \approx		retrograde	4582 Jan 11 19:02	9° \approx 37'59	
evening max el	4581 Jan 19 16:11	20° \approx 32'07	20°42'58	asc. node	4582 Jan 14 16:12	8° \approx 53'33	
retrograde	4581 Jan 27 21:52	25° \approx 23'48		evening set	4582 Jan 16 05:03	7° \approx 51'57	
asc. node	4581 Jan 27 19:10	25° \approx 23'44		inferior conj	4582 Jan 21 13:18	1° \approx 32'48	2°09'10
evening set	4581 Jan 31 21:19	23° \approx 53'09		minimum elong	4582 Jan 21 10:57	1° \approx 40'57	2°08'25
inferior conj	4581 Feb 06 05:49	17° \approx 43'08	2°45'34	min. Earth dist.	4582 Jan 21 14:22	1° \approx 29'03	0.68005 AU
minimum elong	4581 Feb 06 03:24	17° \approx 51'27	2°44'57		4582 Jan 22 16:11	30° Ξ	
min. Earth dist.	4581 Feb 06 18:52	16° \approx 58'21	0.67614 AU	morning rise	4582 Jan 26 16:40	25° Ξ 21'27	
morning rise	4581 Feb 11 09:18	11° \approx 29'31		direct	4582 Jan 31 13:50	23° Ξ 16'35	
direct	4581 Feb 16 21:08	9° \approx 03'26		morning max el	4582 Feb 10 08:11	29° Ξ 02'56	22°38'35
morning max el	4581 Feb 27 22:03	15° \approx 38'50	24°07'45		4582 Feb 11 06:19	0° \approx	
desc. node	4581 Mar 05 11:34	21° \approx 54'09		desc. node	4582 Feb 20 08:35	11° \approx 06'48	
	4581 Mar 11 17:19	0° Ξ			4582 Mar 05 11:28	0° Ξ	
	4581 Mar 31 11:23	0° Υ		morning set	4582 Mar 16 09:33	17° Ξ 14'59	
morning set	4581 Apr 04 15:17	7° Υ 03'36		max. Earth dist.	4582 Mar 21 04:28	25° Ξ 15'36	1.40292 AU
max. Earth dist.	4581 Apr 08 08:48	13° Υ 37'24	1.38101 AU		4582 Mar 23 22:29	0° Υ	
superior conj	4581 Apr 15 11:45	26° Υ 48'39	-1°31'16	superior conj	4582 Mar 28 23:27	8° Υ 57'26	-1°53'55
minimum elong	4581 Apr 15 16:27	27° Υ 11'04	1°30'40	minimum elong	4582 Mar 29 04:04	9° Υ 18'20	1°53'33
	4581 Apr 17 03:35	0° Ξ		evening rise	4582 Apr 07 22:22	27° Υ 31'45	
evening rise	4581 Apr 24 08:49	14° Ξ 10'14			4582 Apr 09 05:44	0° Ξ	
asc. node	4581 Apr 25 18:29	16° Ξ 55'23		asc. node	4582 Apr 12 15:31	6° Ξ 20'50	
	4581 May 02 20:17	0° Π		evening max el	4582 Apr 24 02:05	23° Ξ 25'38	18°24'14
evening max el	4581 May 10 21:02	10° Π 55'00	19°00'31	retrograde	4582 May 01 12:03	27° Ξ 06'08	
retrograde	4581 May 19 12:18	15° Π 08'18		evening set	4582 May 03 20:14	26° Ξ 45'11	
evening set	4581 May 21 13:41	14° Π 54'53		inferior conj	4582 May 11 05:14	22° Ξ 10'58	2°10'35
inferior conj	4581 May 29 18:22	10° Π 40'16	0°46'40	minimum elong	4582 May 11 08:48	22° Ξ 03'39	2°09'34
minimum elong	4581 May 29 20:11	10° Π 37'05	0°46'01	min. Earth dist.	4582 May 14 15:46	19° Ξ 23'38	0.58567 AU

morning rise	4582 May 18 18:17	16° ♄ 40'30		4583 Apr 28 06:27	30° ♄ ♁	
desc. node	4582 May 19 07:50	16° ♄ 23'29		morning rise	4583 Apr 30 08:17	28° ♄ 28'32
direct	4582 May 24 20:17	15° ♄ 03'11		desc. node	4583 May 06 04:51	26° ♄ 19'19
morning max el	4582 Jun 08 05:40	22° ♄ 47'27	27°04'16	direct	4583 May 07 00:24	26° ♄ 17'25
	4582 Jun 14 15:31	0° ♄			4583 May 16 10:10	0° ♄
	4582 Jul 03 08:22	0° ♄		morning max el	4583 May 21 06:48	4° ♄ 12'54 27°45'44
morning set	4582 Jul 08 13:01	10° ♄ 29'51			4583 Jun 09 08:58	0° ♄
asc. node	4582 Jul 09 14:47	12° ♄ 46'04		morning set	4583 Jun 22 18:36	24° ♄ 59'53
					4583 Jun 25 03:52	0° ♄
superior conj	4582 Jul 15 14:08	25° ♄ 47'24	0°58'58	asc. node	4583 Jun 26 11:51	2° ♄ 51'07
minimum elong	4582 Jul 15 11:58	25° ♄ 35'26	0°58'33	max. Earth dist.	4583 Jun 28 20:54	8° ♄ 00'56 1.32083 AU
max. Earth dist.	4582 Jul 15 10:07	25° ♄ 25'17	1.31984 AU			
	4582 Jul 17 11:54	0° ♄		superior conj	4583 Jun 30 01:14	10° ♄ 36'20 0°36'31
evening rise	4582 Jul 22 10:10	10° ♄ 40'33		minimum elong	4583 Jun 29 23:41	10° ♄ 27'46 0°36'11
	4582 Aug 01 07:41	0° ♄		evening rise	4583 Jul 06 20:55	25° ♄ 29'00
desc. node	4582 Aug 15 07:09	20° ♄ 56'58			4583 Jul 09 00:31	0° ♄
evening max el	4582 Aug 20 20:38	26° ♄ 58'35	26°29'55		4583 Jul 26 12:55	0° ♄
	4582 Aug 24 09:54	0° ♄		desc. node	4583 Aug 02 04:10	7° ♄ 39'26
retrograde	4582 Sep 03 19:35	4° ♄ 08'03		evening max el	4583 Aug 02 14:41	8° ♄ 04'54 25°15'01
evening set	4582 Sep 10 12:13	2° ♄ 16'13		retrograde	4583 Aug 16 13:28	15° ♄ 08'49
	4582 Sep 14 00:01	30° ♄ ♁		evening set	4583 Aug 22 06:21	13° ♄ 54'07
min. Earth dist.	4582 Sep 14 10:15	29° ♄ 40'54	0.59678 AU	min. Earth dist.	4583 Aug 27 02:24	11° ♄ 12'35 0.57663 AU
inferior conj	4582 Sep 17 16:24	27° ♄ 07'36	-4°46'29	inferior conj	4583 Aug 30 03:19	9° ♄ 08'35 -5°13'01
minimum elong	4582 Sep 17 21:43	26° ♄ 57'06	4°45'35	minimum elong	4583 Aug 30 04:49	9° ♄ 06'00 5°12'58
morning rise	4582 Sep 25 09:20	22° ♄ 31'13		morning rise	4583 Sep 07 05:36	4° ♄ 54'56
direct	4582 Sep 27 18:01	22° ♄ 11'11		direct	4583 Sep 09 18:24	4° ♄ 35'47
morning max el	4582 Oct 05 10:41	25° ♄ 56'15	18°16'46	morning max el	4583 Sep 18 13:24	8° ♄ 45'20 19°00'29
asc. node	4582 Oct 05 14:00	26° ♄ 04'19		asc. node	4583 Sep 22 11:03	13° ♄ 12'37
	4582 Oct 08 22:57	0° ♄			4583 Oct 02 10:42	0° ♄
morning set	4582 Oct 21 07:54	21° ♄ 12'31		morning set	4583 Oct 05 06:02	5° ♄ 28'41
	4582 Oct 25 23:10	0° ♄				
superior conj	4582 Oct 30 15:08	8° ♄ 39'09	1°16'06	superior conj	4583 Oct 13 14:26	21° ♄ 52'05 1°33'58
minimum elong	4582 Oct 30 18:59	8° ♄ 56'43	1°15'41	minimum elong	4583 Oct 13 17:01	22° ♄ 04'28 1°33'47
max. Earth dist.	4582 Nov 07 05:05	22° ♄ 01'47	1.40930 AU		4583 Oct 17 22:10	0° ♄
desc. node	4582 Nov 11 06:24	28° ♄ 49'23		max. Earth dist.	4583 Oct 20 10:25	4° ♄ 33'58 1.38843 AU
evening rise	4582 Nov 11 22:39	29° ♄ 56'02		evening rise	4583 Oct 24 06:33	11° ♄ 19'01
	4582 Nov 11 23:37	0° ♄		desc. node	4583 Oct 29 03:28	19° ♄ 30'01
	4582 Dec 01 19:48	0° ♄			4583 Nov 04 18:36	0° ♄
evening max el	4582 Dec 16 03:42	17° ♄ 43'38	23°15'32		4583 Nov 27 07:32	0° ♄
retrograde	4582 Dec 26 13:28	23° ♄ 53'15		evening max el	4583 Nov 28 16:55	1° ♄ 25'01 24°34'29
evening set	4582 Dec 31 11:44	21° ♄ 51'23		retrograde	4583 Dec 10 04:04	8° ♄ 06'19
asc. node	4583 Jan 01 13:15	20° ♄ 52'15		evening set	4583 Dec 15 15:47	5° ♄ 49'01
inferior conj	4583 Jan 05 21:13	15° ♄ 26'53	1°25'21	asc. node	4583 Dec 19 10:16	1° ♄ 40'34
minimum elong	4583 Jan 05 19:25	15° ♄ 33'07	1°24'40	min. Earth dist.	4583 Dec 20 06:55	0° ♄ 32'59 0.67692 AU
min. Earth dist.	4583 Jan 05 11:11	16° ♄ 01'26	0.68026 AU		4583 Dec 20 16:50	30° ♄ ♁
morning rise	4583 Jan 11 03:00	9° ♄ 19'38		inferior conj	4583 Dec 21 03:49	29° ♄ 23'19 0°35'07
direct	4583 Jan 15 09:52	7° ♄ 37'36		minimum elong	4583 Dec 21 02:59	29° ♄ 26'08 0°34'46
morning max el	4583 Jan 23 23:23	12° ♄ 35'38	21°14'44	morning rise	4583 Dec 26 14:16	23° ♄ 22'13
	4583 Feb 06 15:24	0° ♄		direct	4583 Dec 30 08:01	22° ♄ 02'05
desc. node	4583 Feb 07 05:37	0° ♄		morning max el	4584 Jan 06 22:18	26° ♄ 20'29 20°02'10
morning set	4583 Feb 23 23:17	26° ♄ 06'08			4584 Jan 10 05:13	0° ♄
	4583 Feb 26 10:18	0° ♄		desc. node	4584 Jan 25 02:40	20° ♄ 58'01
max. Earth dist.	4583 Mar 03 05:59	7° ♄ 47'46	1.42343 AU		4584 Jan 31 01:24	0° ♄
				morning set	4584 Feb 02 19:57	4° ♄ 15'49
superior conj	4583 Mar 10 13:50	20° ♄ 05'08	-2°07'01	max. Earth dist.	4584 Feb 13 15:41	21° ♄ 14'15 1.43979 AU
minimum elong	4583 Mar 10 15:47	20° ♄ 13'30	2°06'58			
	4583 Mar 16 06:04	0° ♄		superior conj	4584 Feb 19 02:50	0° ♄ 03'50 -2°05'04
evening rise	4583 Mar 21 22:15	10° ♄ 11'21		minimum elong	4584 Feb 18 23:08	29° ♄ 48'43 2°04'55
asc. node	4583 Mar 30 12:34	25° ♄ 21'56			4584 Feb 19 01:54	0° ♄
	4583 Apr 02 10:59	0° ♄		evening rise	4584 Mar 03 04:09	22° ♄ 00'41
evening max el	4583 Apr 07 12:37	6° ♄ 22'36	18°07'53		4584 Mar 07 19:40	0° ♄
retrograde	4583 Apr 14 05:13	9° ♄ 46'58		asc. node	4584 Mar 16 09:35	13° ♄ 50'54
evening set	4583 Apr 16 20:06	9° ♄ 15'56		evening max el	4584 Mar 21 01:20	19° ♄ 36'45 18°10'42
inferior conj	4583 Apr 23 12:21	4° ♄ 20'53	3°03'09	retrograde	4584 Mar 27 11:29	23° ♄ 00'07
minimum elong	4583 Apr 23 15:15	4° ♄ 14'00	3°02'36	evening set	4584 Mar 30 08:25	22° ♄ 17'38
min. Earth dist.	4583 Apr 26 18:16	1° ♄ 17'38	0.60755 AU	inferior conj	4584 Apr 05 11:58	17° ♄ 02'43 3°29'06
				minimum elong	4584 Apr 05 13:14	16° ♄ 59'18 3°28'59

min. Earth dist.	4584 Apr 08 05:24	14° Υ 07'35	0.62874 AU		4585 Mar 20 03:04	30° \mathbb{R} \mathbb{H}	
morning rise	4584 Apr 11 16:51	10° Υ 57'31		min. Earth dist.	4585 Mar 22 02:08	27° \mathbb{H} 40'18	0.64717 AU
direct	4584 Apr 18 13:45	8° Υ 20'59		morning rise	4585 Mar 25 17:18	23° \mathbb{H} 57'25	
desc. node	4584 Apr 22 01:52	8° Υ 57'19		direct	4585 Apr 01 11:03	21° \mathbb{H} 08'15	
morning max el	4584 May 02 13:28	16° Υ 20'12	27°49'30	desc. node	4585 Apr 08 22:53	23° \mathbb{H} 53'54	
	4584 May 13 19:33	0° \mathbb{B}		morning max el	4585 Apr 14 23:12	29° \mathbb{H} 02'01	27°17'48
	4584 Jun 01 01:41	0° \mathbb{H}			4585 Apr 15 21:46	0° Υ	
morning set	4584 Jun 05 18:10	9° \mathbb{H} 08'56			4585 May 07 16:06	0° \mathbb{B}	
max. Earth dist.	4584 Jun 11 03:17	20° \mathbb{H} 19'57	1.32608 AU	morning set	4585 May 20 09:02	22° \mathbb{B} 49'01	
asc. node	4584 Jun 12 08:52	22° \mathbb{H} 58'38			4585 May 23 23:37	0° \mathbb{H}	
				max. Earth dist.	4585 May 25 01:14	2° \mathbb{H} 10'48	1.33581 AU
superior conj	4584 Jun 13 09:45	25° \mathbb{H} 12'59	0°10'49				
minimum elong	4584 Jun 13 09:14	25° \mathbb{H} 10'11	0°10'42	superior conj	4585 May 28 13:44	9° \mathbb{H} 31'36	-0°17'20
behind sun begin	4584 Jun 13 05:19	24° \mathbb{H} 49'02		minimum elong	4585 May 28 14:38	9° \mathbb{H} 36'21	0°17'09
behind sun end	4584 Jun 13 13:08	25° \mathbb{H} 31'21		asc. node	4585 May 30 05:54	13° \mathbb{H} 04'50	
	4584 Jun 15 14:34	0° \mathbb{B}		evening rise	4585 Jun 04 19:47	24° \mathbb{H} 57'36	
evening rise	4584 Jun 20 08:44	10° \mathbb{B} 16'41			4585 Jun 07 06:04	0° \mathbb{B}	
	4584 Jun 30 11:31	0° \mathbb{Q}		evening max el	4585 Jun 25 18:41	28° \mathbb{B} 58'17	22°04'44
evening max el	4584 Jul 14 03:34	18° \mathbb{Q} 34'30	23°41'19		4585 Jun 26 21:02	0° \mathbb{Q}	
desc. node	4584 Jul 19 01:11	22° \mathbb{Q} 32'49		desc. node	4585 Jul 05 22:09	5° \mathbb{Q} 02'28	
retrograde	4584 Jul 27 19:11	25° \mathbb{Q} 25'42		retrograde	4585 Jul 08 13:26	5° \mathbb{Q} 18'39	
evening set	4584 Aug 01 01:14	24° \mathbb{Q} 45'57		evening set	4585 Jul 11 09:14	5° \mathbb{Q} 00'51	
min. Earth dist.	4584 Aug 07 13:31	21° \mathbb{Q} 41'08	0.55986 AU	min. Earth dist.	4585 Jul 19 23:48	1° \mathbb{Q} 18'56	0.54977 AU
inferior conj	4584 Aug 09 17:55	20° \mathbb{Q} 22'31	-5°01'33	inferior conj	4585 Jul 20 16:12	0° \mathbb{Q} 55'53	-3°59'38
minimum elong	4584 Aug 09 13:12	20° \mathbb{Q} 29'37	5°01'02	minimum elong	4585 Jul 20 07:34	1° \mathbb{Q} 08'01	3°57'24
morning rise	4584 Aug 18 03:40	16° \mathbb{Q} 27'18			4585 Jul 22 08:21	30° \mathbb{R} \mathbb{B}	
direct	4584 Aug 20 23:13	16° \mathbb{Q} 07'29		morning rise	4585 Jul 29 07:37	27° \mathbb{B} 05'22	
morning max el	4584 Aug 31 05:10	20° \mathbb{Q} 53'09	20°06'05	direct	4585 Aug 01 12:04	26° \mathbb{B} 42'49	
	4584 Sep 07 13:09	0° \mathbb{H}			4585 Aug 10 15:09	0° \mathbb{Q}	
asc. node	4584 Sep 08 08:06	1° \mathbb{H} 14'02		morning max el	4585 Aug 13 09:01	2° \mathbb{Q} 15'39	21°32'06
morning set	4584 Sep 18 10:43	20° \mathbb{H} 03'02		asc. node	4585 Aug 26 05:09	19° \mathbb{Q} 56'22	
	4584 Sep 23 07:22	0° \mathbb{Q}			4585 Aug 31 11:15	0° \mathbb{H}	
				morning set	4585 Sep 02 19:35	4° \mathbb{H} 49'04	
superior conj	4584 Sep 26 03:31	5° \mathbb{Q} 45'18	1°42'35				
minimum elong	4584 Sep 26 04:27	5° \mathbb{Q} 50'04	1°42'33	superior conj	4585 Sep 10 02:17	20° \mathbb{H} 06'58	1°43'23
max. Earth dist.	4584 Oct 01 16:14	16° \mathbb{Q} 34'29	1.36804 AU	minimum elong	4585 Sep 10 01:47	20° \mathbb{H} 04'18	1°43'22
evening rise	4584 Oct 05 11:58	23° \mathbb{Q} 40'45		max. Earth dist.	4585 Sep 14 03:41	28° \mathbb{H} 25'53	1.35028 AU
	4584 Oct 09 01:18	0° \mathbb{H}			4585 Sep 14 22:30	0° \mathbb{Q}	
desc. node	4584 Oct 15 00:30	10° \mathbb{H} 00'28		evening rise	4585 Sep 18 11:01	6° \mathbb{Q} 51'50	
	4584 Oct 28 11:21	0° \mathbb{H}		desc. node	4585 Oct 01 21:30	0° \mathbb{H} 15'24	
evening max el	4584 Nov 10 05:21	15° \mathbb{H} 07'55	25°46'20		4585 Oct 01 17:37	0° \mathbb{H}	
retrograde	4584 Nov 22 14:05	22° \mathbb{H} 11'47		evening max el	4585 Oct 23 17:52	28° \mathbb{H} 46'53	26°43'36
evening set	4584 Nov 28 15:31	19° \mathbb{H} 41'13			4585 Oct 25 01:15	0° \mathbb{H}	
min. Earth dist.	4584 Dec 02 23:15	15° \mathbb{H} 00'07	0.66997 AU	retrograde	4585 Nov 05 18:53	6° \mathbb{H} 02'47	
inferior conj	4584 Dec 04 07:15	13° \mathbb{H} 18'52	-0°20'33	evening set	4585 Nov 12 08:58	3° \mathbb{H} 23'39	
minimum elong	4584 Dec 04 07:47	13° \mathbb{H} 17'10	0°20'20		4585 Nov 15 19:17	30° \mathbb{R} \mathbb{H}	
asc. node	4584 Dec 05 07:18	12° \mathbb{H} 03'30		min. Earth dist.	4585 Nov 16 09:56	29° \mathbb{H} 18'02	0.65949 AU
morning rise	4584 Dec 10 00:28	7° \mathbb{H} 26'14		inferior conj	4585 Nov 18 05:31	27° \mathbb{H} 09'32	-1°20'30
direct	4584 Dec 13 06:42	6° \mathbb{H} 25'13		minimum elong	4585 Nov 18 07:46	27° \mathbb{H} 02'54	1°19'33
morning max el	4584 Dec 20 05:03	10° \mathbb{H} 15'47	19°04'13	asc. node	4585 Nov 22 04:20	22° \mathbb{H} 57'28	
	4585 Jan 03 15:34	0° \mathbb{B}		morning rise	4585 Nov 24 07:23	21° \mathbb{H} 27'54	
desc. node	4585 Jan 10 23:43	11° \mathbb{B} 21'52		direct	4585 Nov 27 04:10	20° \mathbb{H} 42'17	
morning set	4585 Jan 12 00:12	12° \mathbb{B} 57'09		morning max el	4585 Dec 03 17:47	24° \mathbb{H} 15'56	18°22'18
	4585 Jan 22 22:18	0° \approx			4585 Dec 08 11:41	0° \mathbb{H}	
max. Earth dist.	4585 Jan 26 07:30	5° \approx 18'41	1.44997 AU	morning set	4585 Dec 23 06:40	22° \mathbb{H} 59'44	
					4585 Dec 27 15:26	0° \mathbb{B}	
superior conj	4585 Jan 28 16:11	9° \approx 02'13	-1°43'46	desc. node	4585 Dec 28 20:45	1° \mathbb{B} 57'01	
minimum elong	4585 Jan 28 07:20	8° \approx 27'12	1°43'02				
	4585 Feb 10 17:35	0° \mathbb{H}		superior conj	4586 Jan 07 18:51	17° \mathbb{B} 38'14	-1°04'49
evening rise	4585 Feb 12 12:12	2° \mathbb{H} 54'08		minimum elong	4586 Jan 07 11:00	17° \mathbb{B} 07'25	1°03'51
	4585 Mar 01 21:58	0° Υ		max. Earth dist.	4586 Jan 09 02:09	19° \mathbb{B} 41'01	1.45295 AU
asc. node	4585 Mar 03 06:36	1° Υ 38'18			4586 Jan 15 16:14	0° \approx	
evening max el	4585 Mar 04 13:25	3° Υ 01'32	18°32'02	evening rise	4586 Jan 23 21:04	12° \approx 51'56	
retrograde	4585 Mar 11 02:23	6° Υ 36'50		greatest brilliancy	4586 Feb 03 10:00	29° \approx 22'08	-0.8m
evening set	4585 Mar 14 05:24	5° Υ 42'07			4586 Feb 03 19:50	0° \mathbb{H}	
inferior conj	4585 Mar 20 00:00	0° Υ 09'06	3°34'34	evening max el	4586 Feb 15 22:33	16° \mathbb{H} 31'37	19°10'54
minimum elong	4585 Mar 19 23:40	0° Υ 10'07	3°34'34	asc. node	4586 Feb 18 03:37	18° \mathbb{H} 31'36	

retrograde	4586 Feb 22 22:12	20° K 29'51		evening set	4587 Feb 10 14:13	3° K 12'28	
evening set	4586 Feb 26 08:05	19° K 22'00			4587 Feb 13 19:19	30° R \approx	
inferior conj	4586 Mar 03 20:53	13° K 32'54	3°24'35	inferior conj	4587 Feb 15 23:43	27° \approx 09'31	3°02'39
minimum elong	4586 Mar 03 19:20	13° K 37'52	3°24'24	minimum elong	4587 Feb 15 21:28	27° \approx 17'05	3°02'11
min. Earth dist.	4586 Mar 05 07:42	11° K 41'22	0.66179 AU	min. Earth dist.	4587 Feb 16 20:20	26° \approx 00'03	0.67219 AU
morning rise	4586 Mar 09 06:15	7° K 18'44		morning rise	4587 Feb 21 04:30	20° \approx 55'17	
direct	4586 Mar 15 15:01	4° K 30'15		direct	4587 Feb 27 00:40	18° \approx 18'37	
desc. node	4586 Mar 26 19:55	10° K 34'24		morning max el	4587 Mar 10 17:51	25° \approx 18'57	24°57'55
morning max el	4586 Mar 28 09:05	12° K 05'02	26°17'26	desc. node	4587 Mar 13 16:59	28° \approx 30'03	
	4586 Apr 11 17:45	0° Y			4587 Mar 15 00:08	0° K	
	4586 Apr 30 07:27	0° B			4587 Apr 05 05:57	0° Y	
morning set	4586 May 03 11:31	5° B 49'01		morning set	4587 Apr 15 20:47	17° Y 55'35	
max. Earth dist.	4586 May 07 11:47	13° B 29'13	1.35022 AU	max. Earth dist.	4587 Apr 19 11:45	24° Y 30'13	1.36895 AU
					4587 Apr 22 10:05	0° B	
superior conj	4586 May 12 10:51	23° B 25'09	-0°46'46	superior conj	4587 Apr 25 22:09	6° B 46'13	-1°15'45
minimum elong	4586 May 12 13:23	23° B 38'08	0°46'17	minimum elong	4587 Apr 26 02:13	7° B 06'14	1°15'07
	4586 May 15 15:20	0° II			4587 May 03 23:57	22° B 56'02	
asc. node	4586 May 17 02:55	3° II 05'15		asc. node	4587 May 04 07:24	23° B 33'26	
evening rise	4586 May 20 04:05	9° II 25'11		evening rise	4587 May 07 13:28	0° II	
	4586 May 31 04:23	0° B			4587 May 21 09:05	21° II 18'59	19°30'34
evening max el	4586 Jun 07 19:38	9° B 48'03	20°38'45	evening max el	4587 May 30 21:34	25° II 57'21	
retrograde	4586 Jun 19 02:03	15° B 18'56		retrograde	4587 Jun 01 20:31	25° II 46'28	
evening set	4586 Jun 21 03:06	15° B 08'47		evening set	4587 Jun 09 16:11	22° II 13'36	
desc. node	4586 Jun 22 19:08	14° B 46'19		desc. node	4587 Jun 10 12:27	21° II 41'22	-0°15'02
inferior conj	4586 Jun 30 09:32	11° B 11'41	-2°14'02	inferior conj	4587 Jun 10 11:47	21° II 42'26	0°14'47
minimum elong	4586 Jun 30 03:18	11° B 20'37	2°11'50	minimum elong	4587 Jun 10 11:47	21° II 42'26	0°14'47
min. Earth dist.	4586 Jul 01 11:26	10° B 34'29	0.54885 AU	transit middle	4587 Jun 10 10:18	21° II 44'49	
morning rise	4586 Jul 09 02:51	7° B 05'46		transit begin	4587 Jun 10 13:17	21° II 40'03	
direct	4586 Jul 12 21:27	6° B 35'04		transit end	4587 Jun 13 01:04	20° II 04'49	0.55757 AU
morning max el	4586 Jul 26 03:04	12° B 58'04	23°12'31	min. Earth dist.	4587 Jun 19 00:23	17° II 04'10	
	4586 Aug 08 00:53	0° Q		morning rise	4587 Jun 23 15:47	16° II 15'41	
asc. node	4586 Aug 13 02:12	9° Q 09'26		direct	4587 Jul 07 16:44	23° II 19'50	24°55'24
morning set	4586 Aug 18 06:45	19° Q 41'21		morning max el	4587 Jul 13 16:45	0° B	
	4586 Aug 23 02:14	0° M			4587 Jul 30 23:14	28° B 44'44	
superior conj	4586 Aug 25 07:38	4° M 47'32	1°37'37	asc. node	4587 Jul 31 13:58	0° Q	
minimum elong	4586 Aug 25 06:04	4° M 39'03	1°37'30	morning set	4587 Aug 02 18:30	4° Q 34'16	
max. Earth dist.	4586 Aug 28 00:03	10° M 29'50	1.33635 AU				
evening rise	4586 Sep 01 23:28	20° M 41'17		superior conj	4587 Aug 09 17:03	19° Q 38'26	1°26'18
	4586 Sep 06 19:56	0° Q		minimum elong	4587 Aug 09 14:52	19° Q 26'30	1°26'02
desc. node	4586 Sep 18 18:29	20° Q 08'02		max. Earth dist.	4587 Aug 11 04:40	22° Q 52'29	1.32665 AU
	4586 Sep 25 16:10	0° M			4587 Aug 14 12:24	0° M	
evening max el	4586 Oct 06 06:13	12° M 13'32	27°18'58	evening rise	4587 Aug 16 21:38	4° M 57'49	
retrograde	4586 Oct 19 17:55	19° M 31'54			4587 Aug 30 11:28	0° Q	
evening set	4586 Oct 26 17:43	16° M 51'47		desc. node	4587 Sep 05 15:30	9° Q 28'22	
min. Earth dist.	4586 Oct 30 12:49	13° M 20'44	0.64557 AU	evening max el	4587 Sep 18 16:25	25° Q 14'03	27°25'51
inferior conj	4586 Nov 01 20:23	10° M 51'01	-2°22'48		4587 Sep 24 17:49	0° M	
minimum elong	4586 Nov 02 00:29	10° M 39'58	2°21'13	retrograde	4587 Oct 02 10:10	2° M 29'17	
morning rise	4586 Nov 08 08:27	5° M 23'20		evening set	4587 Oct 09 14:34	29° Q 58'20	
asc. node	4586 Nov 09 01:23	5° M 07'14			4587 Oct 09 13:36	30° R Q	
direct	4586 Nov 10 22:12	4° M 49'06		min. Earth dist.	4587 Oct 13 05:51	26° Q 57'44	0.62843 AU
morning max el	4586 Nov 17 09:55	8° M 15'07	17°57'15	inferior conj	4587 Oct 16 01:00	24° Q 15'42	-3°24'28
	4586 Dec 02 02:26	0° A		minimum elong	4587 Oct 16 06:39	24° Q 02'02	3°22'38
morning set	4586 Dec 04 18:22	4° A 29'02		morning rise	4587 Oct 23 00:19	19° Q 05'25	
desc. node	4586 Dec 15 17:47	22° A 39'47		direct	4587 Oct 25 09:45	18° Q 38'58	
				asc. node	4587 Oct 26 22:28	18° Q 50'04	
superior conj	4586 Dec 18 07:23	26° A 48'24	-0°17'44	morning max el	4587 Nov 01 02:28	22° Q 05'26	17°49'53
minimum elong	4586 Dec 18 05:16	26° A 39'51	0°17'25		4587 Nov 07 04:40	0° M	
	4586 Dec 20 07:17	0° B		morning set	4587 Nov 17 05:46	17° M 06'31	
max. Earth dist.	4586 Dec 22 21:08	4° B 05'25	1.44857 AU		4587 Nov 24 14:44	0° A	
evening rise	4587 Jan 03 11:59	22° B 11'07					
	4587 Jan 08 14:23	0° \approx		superior conj	4587 Nov 28 19:55	7° A 09'32	0°26'22
greatest brilliancy	4587 Jan 18 01:45	14° \approx 14'39	-0.6m	minimum elong	4587 Nov 28 22:27	7° A 20'06	0°26'00
evening max el	4587 Jan 30 03:07	0° K 04'31	20°05'31	desc. node	4587 Dec 02 14:48	13° A 26'12	
	4587 Jan 30 01:21	0° K		max. Earth dist.	4587 Dec 05 13:51	18° A 14'56	1.43737 AU
asc. node	4587 Feb 05 00:38	4° K 16'46			4587 Dec 13 00:10	0° B	
retrograde	4587 Feb 06 20:09	4° K 34'27		evening rise	4587 Dec 13 22:09	1° B 25'14	

	4588 Jan 02 04:54	0°♊		evening max el	4588 Dec 25 20:05	27°♊13'42	22°29'31
evening max el	4588 Jan 13 02:12	13°♊38'23	21°13'06		4588 Dec 28 20:47	0°♊	
retrograde	4588 Jan 21 18:02	18°♊46'14		retrograde	4589 Jan 04 14:12	3°♊01'38	
asc. node	4588 Jan 22 21:42	18°♊39'03		asc. node	4589 Jan 08 18:45	1°♊29'31	
evening set	4588 Jan 25 21:53	17°♊09'03		evening set	4589 Jan 09 05:23	1°♊08'37	
inferior conj	4588 Jan 31 06:05	10°♊54'57	2°31'06		4589 Jan 10 10:52	30°♊	
minimum elong	4588 Jan 31 03:39	11°♊03'25	2°30'24	inferior conj	4589 Jan 14 13:58	24°♊46'38	1°51'26
min. Earth dist.	4588 Jan 31 13:55	10°♊27'55	0.67837 AU	minimum elong	4589 Jan 14 11:48	24°♊54'10	1°50'40
morning rise	4588 Feb 05 09:14	4°♊42'20		min. Earth dist.	4589 Jan 14 10:09	24°♊59'52	0.68064 AU
direct	4588 Feb 10 14:56	2°♊24'48		morning rise	4589 Jan 19 18:07	18°♊37'02	
morning max el	4588 Feb 21 02:38	8°♊39'03	23°29'35	direct	4589 Jan 24 09:03	16°♊42'06	
desc. node	4588 Feb 28 14:01	17°♊19'03		morning max el	4589 Feb 02 14:38	22°♊06'51	22°01'50
	4588 Mar 08 20:24	0°♋			4589 Feb 09 09:35	0°♊	
morning set	4588 Mar 27 06:54	28°♋52'59		desc. node	4589 Feb 14 11:04	6°♊46'15	
	4588 Mar 27 22:43	0°♌			4589 Mar 02 04:10	0°♋	
max. Earth dist.	4588 Mar 31 07:14	5°♌47'33	1.39038 AU	morning set	4589 Mar 07 12:45	8°♋28'53	
				max. Earth dist.	4589 Mar 13 05:24	17°♋49'40	1.41201 AU
superior conj	4588 Apr 07 19:49	19°♌25'03	-1°41'44		4589 Mar 20 07:25	0°♌	
minimum elong	4588 Apr 08 00:43	19°♌47'53	1°41'12				
	4588 Apr 13 09:14	0°♍		superior conj	4589 Mar 20 23:03	1°♌09'01	-2°00'58
evening rise	4588 Apr 17 02:58	7°♍14'59		minimum elong	4589 Mar 21 02:55	1°♌26'10	2°00'44
asc. node	4588 Apr 19 21:00	12°♍32'38		evening rise	4589 Mar 31 11:15	20°♌20'08	
	4588 Apr 30 07:41	0°♎			4589 Apr 05 17:34	0°♍	
evening max el	4588 May 03 09:22	3°♎30'15	18°42'35	asc. node	4589 Apr 06 18:02	1°♍48'42	
retrograde	4588 May 11 10:32	7°♎27'32		evening max el	4589 Apr 16 17:05	16°♍12'50	18°14'49
evening set	4588 May 13 14:51	7°♎11'11		retrograde	4589 Apr 23 18:24	19°♍44'56	
inferior conj	4588 May 21 10:54	2°♎48'14	1°26'12	evening set	4589 Apr 26 05:24	19°♍20'00	
minimum elong	4588 May 21 13:51	2°♎42'43	1°25'14	inferior conj	4589 May 03 06:47	14°♍36'37	2°36'33
min. Earth dist.	4588 May 24 18:03	0°♎21'39	0.57398 AU	minimum elong	4589 May 03 10:16	14°♍28'59	2°35'41
	4588 May 25 06:24	30°♏		min. Earth dist.	4589 May 06 16:33	11°♍39'29	0.59484 AU
desc. node	4588 May 26 13:13	29°♏08'55		morning rise	4589 May 10 12:25	8°♍55'18	
morning rise	4588 May 29 09:36	27°♏35'29		desc. node	4589 May 13 10:15	7°♍36'26	
direct	4588 Jun 03 23:50	26°♏18'24		direct	4589 May 16 21:14	7°♍03'22	
	4588 Jun 13 19:24	0°♐		morning max el	4589 May 31 06:14	14°♍53'35	27°26'31
morning max el	4588 Jun 18 08:32	3°♐50'46	26°24'53		4589 Jun 12 10:56	0°♐	
	4588 Jul 07 06:07	0°♑			4589 Jun 29 14:16	0°♑	
asc. node	4588 Jul 16 20:17	18°♑36'02		morning set	4589 Jul 01 13:13	4°♑01'42	
morning set	4588 Jul 17 05:14	19°♑23'11		asc. node	4589 Jul 03 17:19	8°♑37'13	
	4588 Jul 22 02:56	0°♒		max. Earth dist.	4589 Jul 08 02:12	18°♑08'29	1.31976 AU
superior conj	4588 Jul 24 04:33	4°♒33'33	1°10'11	superior conj	4589 Jul 08 16:16	19°♑26'03	0°49'52
minimum elong	4588 Jul 24 02:15	4°♒20'49	1°09'48	minimum elong	4589 Jul 08 14:18	19°♑15'12	0°49'29
max. Earth dist.	4588 Jul 24 14:39	5°♒29'15	1.32116 AU		4589 Jul 13 11:43	0°♒	
evening rise	4588 Jul 31 02:33	19°♒32'49		evening rise	4589 Jul 15 11:43	4°♒17'47	
	4588 Aug 05 06:49	0°♓			4589 Jul 29 02:37	0°♓	
desc. node	4588 Aug 22 12:32	28°♓03'11		desc. node	4589 Aug 09 09:33	15°♓33'25	
	4588 Aug 24 00:59	0°♈		evening max el	4589 Aug 12 19:44	19°♓06'56	26°01'05
evening max el	4588 Aug 30 21:44	7°♈34'55	26°59'50	retrograde	4589 Aug 26 18:58	26°♓14'53	
retrograde	4588 Sep 13 18:54	14°♈46'04		evening set	4589 Sep 02 03:19	24°♓37'53	
evening set	4588 Sep 20 19:24	12°♈36'16		min. Earth dist.	4589 Sep 06 08:18	22°♓02'29	0.58800 AU
min. Earth dist.	4588 Sep 24 11:58	9°♈56'27	0.60876 AU	inferior conj	4589 Sep 09 14:02	19°♓39'08	-5°01'20
inferior conj	4588 Sep 27 16:05	7°♈15'01	-4°20'16	minimum elong	4589 Sep 09 18:10	19°♓31'29	5°00'52
minimum elong	4588 Sep 27 22:10	7°♈02'04	4°18'51	morning rise	4589 Sep 17 11:15	15°♓12'56	
morning rise	4588 Oct 05 02:50	2°♈25'42		direct	4589 Sep 19 21:17	14°♓53'33	
direct	4588 Oct 07 10:59	2°♈03'59		morning max el	4589 Sep 28 00:01	18°♓47'24	18°32'51
asc. node	4588 Oct 12 19:31	4°♈03'14		asc. node	4589 Sep 29 16:33	20°♓33'37	
morning max el	4588 Oct 14 16:17	5°♈39'15	18°01'17		4589 Oct 06 06:03	0°♈	
morning set	4588 Oct 30 10:29	0°♉		morning set	4589 Oct 14 03:21	14°♈33'44	
	4588 Oct 30 03:21	0°♊			4589 Oct 22 04:31	0°♉	
superior conj	4588 Nov 09 10:51	18°♊47'46	1°01'04	superior conj	4589 Oct 22 23:53	1°♊30'37	1°24'54
minimum elong	4588 Nov 09 14:54	19°♊05'38	1°00'34	minimum elong	4589 Oct 23 03:18	1°♊46'29	1°24'35
	4588 Nov 15 22:56	0°♋		max. Earth dist.	4589 Oct 30 08:39	14°♊47'18	1.40044 AU
max. Earth dist.	4588 Nov 17 01:58	1°♋52'57	1.42062 AU	evening rise	4589 Nov 03 13:45	21°♊58'25	
desc. node	4588 Nov 18 11:50	4°♋13'09		desc. node	4589 Nov 05 08:52	24°♊57'09	
evening rise	4588 Nov 22 19:23	11°♋12'43			4589 Nov 08 11:36	0°♋	
	4588 Dec 05 01:40	0°♌			4589 Nov 29 02:32	0°♋	

evening max el	4589 Dec 08 10:14	10°  52'15	23°49'30		4590 Nov 01 13:28	0° 	
retrograde	4589 Dec 19 07:16	17°  17'06		evening max el	4590 Nov 20 22:51	24°  34'32	25°06'29
evening set	4589 Dec 24 11:09	15°  08'20			4590 Nov 27 20:18	0° 	
asc. node	4589 Dec 26 15:46	12°  54'57		retrograde	4590 Dec 02 20:08	1°  27'24	
inferior conj	4589 Dec 29 21:33	8°  42'31	1°04'48		4590 Dec 07 08:08	30°  R 	
minimum elong	4589 Dec 29 20:06	8°  47'29	1°04'13	evening set	4590 Dec 08 13:33	29°  04'15	
min. Earth dist.	4589 Dec 29 06:48	9°  32'42	0.67921 AU	min. Earth dist.	4590 Dec 13 01:28	24°  02'42	0.67429 AU
morning rise	4590 Jan 04 05:03	2°  37'38		asc. node	4590 Dec 13 12:48	23°  25'45	
direct	4590 Jan 08 06:02	1°  30'52		inferior conj	4590 Dec 14 03:00	22°  39'11	0°12'06
morning max el	4590 Jan 16 09:06	5°  34'39	20°42'17	minimum elong	4590 Dec 14 02:42	22°  40'11	0°11'59
desc. node	4590 Feb 01 08:06	26°  34'26		transit middle	4590 Dec 14 02:42	22°  40'11	0°11'59
	4590 Feb 03 13:54	0° 		transit begin	4590 Dec 14 00:50	22°  46'18	
morning set	4590 Feb 14 16:57	16°  56'05		transit end	4590 Dec 14 04:34	22°  34'05	
	4590 Feb 22 22:53	0° 		morning rise	4590 Dec 19 16:04	16°  41'10	
max. Earth dist.	4590 Feb 23 10:13	0°  45'48	1.43099 AU	direct	4590 Dec 23 04:38	15°  29'34	
				morning max el	4590 Dec 30 11:22	19°  35'09	19°35'37
superior conj	4590 Mar 02 02:58	11°  48'11	-2°08'21		4591 Jan 07 19:40	0° 	
minimum elong	4590 Mar 02 02:49	11°  47'31	2°08'21	greatest brilliancy	4591 Jan 12 13:24	6°  53'11	-0.7m
	4590 Mar 12 15:55	0° 		desc. node	4591 Jan 19 05:07	16°  36'25	
evening rise	4590 Mar 14 04:06	2°  40'05		morning set	4591 Jan 24 13:35	25°  09'55	
asc. node	4590 Mar 24 15:04	20°  03'40			4591 Jan 27 16:32	0° 	
evening max el	4590 Mar 31 04:55	29°  01'8	18°06'43	max. Earth dist.	4591 Feb 05 22:15	14°  28'45	1.44494 AU
	4590 Mar 31 22:37	0° 					
retrograde	4590 Apr 06 17:42	2°  40'44		superior conj	4591 Feb 10 05:12	21°  19'18	-1°58'30
evening set	4590 Apr 09 11:04	2°  05'08		minimum elong	4591 Feb 09 22:52	20°  53'53	1°58'08
	4590 Apr 12 17:09	30°  R 			4591 Feb 15 13:36	0° 	
inferior conj	4590 Apr 15 21:28	27°  01'40	3°17'00	evening rise	4591 Feb 24 01:04	14°  05'57	
minimum elong	4590 Apr 15 23:43	26°  01'56	3°16'40		4591 Mar 05 13:43	0° 	
min. Earth dist.	4590 Apr 18 22:47	23°  05'58	0.61679 AU	asc. node	4591 Mar 11 12:05	8°  05'40	
morning rise	4590 Apr 22 10:36	21°  02'34		evening max el	4591 Mar 14 17:44	12°  03'18	18°17'35
direct	4590 Apr 29 05:47	18°  03'39		retrograde	4591 Mar 21 03:59	16°  05'00	
desc. node	4590 Apr 30 07:17	18°  04'21		evening set	4591 Mar 24 03:28	15°  07'26	
morning max el	4590 May 13 10:06	26°  03'38	27°51'51	inferior conj	4591 Mar 30 02:50	9°  54'54	3°33'31
	4590 May 16 13:59	0° 		minimum elong	4591 Mar 30 03:23	9°  53'21	3°33'30
	4590 Jun 06 01:10	0° 		min. Earth dist.	4591 Apr 01 14:02	7°  08'56	0.63707 AU
morning set	4590 Jun 15 16:30	18°  02'23	47	morning rise	4591 Apr 05 02:21	3°  46'28	
asc. node	4590 Jun 20 14:21	28°  02'43	50	direct	4591 Apr 11 22:58	1°  02'32	
	4590 Jun 21 04:27	0° 		desc. node	4591 Apr 17 04:18	2°  03'27	
max. Earth dist.	4590 Jun 21 11:24	0°  37'37	1.32251 AU	morning max el	4591 Apr 25 18:12	9°  00'49	27°39'53
					4591 May 12 01:26	0° 	
superior conj	4590 Jun 23 02:29	4°  05'10	28		4591 May 29 07:59	0° 	
minimum elong	4590 Jun 23 01:18	4°  04'05	0°25'42	morning set	4591 May 30 12:46	2°  02'22	00
evening rise	4590 Jun 29 23:06	19°  06'19		max. Earth dist.	4591 Jun 04 14:26	12°  04'50	1.32963 AU
	4590 Jul 05 06:37	0° 					
evening max el	4590 Jul 25 10:48	29°  05'41	18	superior conj	4591 Jun 07 09:21	18°  04'52	-0°00'53
	4590 Jul 25 13:10	0° 		minimum elong	4591 Jun 07 09:24	18°  04'07	0°00'53
desc. node	4590 Jul 27 06:33	1°  03'33	28	behind sun begin	4591 Jun 07 04:04	18°  02'32	
retrograde	4590 Aug 08 08:14	6°  05'55	04	behind sun end	4591 Jun 07 14:44	19°  09'44	
evening set	4590 Aug 13 10:57	5°  06'22		asc. node	4591 Jun 07 11:23	18°  05'14	
min. Earth dist.	4590 Aug 18 22:02	3°  06'29	0.56882 AU		4591 Jun 12 15:18	0° 	
inferior conj	4590 Aug 21 16:12	1°  02'00	-5°13'50	evening rise	4591 Jun 14 10:50	3°  05'21	19
minimum elong	4590 Aug 21 15:10	1°  02'14	5°13'48		4591 Jun 28 15:04	0° 	
	4590 Aug 23 18:56	30°  R 		evening max el	4591 Jul 06 23:51	10°  01'18	41
morning rise	4590 Aug 29 21:53	27°  01'15		desc. node	4591 Jul 14 03:32	15°  03'41	
direct	4590 Sep 01 13:03	26°  01'56	10	retrograde	4591 Jul 20 08:42	16°  05'58	49
	4590 Sep 09 09:19	0° 		evening set	4591 Jul 23 22:55	16°  03'30	37
morning max el	4590 Sep 10 22:23	1°  02'20	01	min. Earth dist.	4591 Jul 31 08:42	13°  01'11	40
asc. node	4590 Sep 16 13:35	8°  06'08		inferior conj	4591 Aug 01 23:05	12°  01'16	10
morning set	4590 Sep 28 04:32	28°  08'58	04	minimum elong	4591 Aug 01 16:03	12°  02'26	22
	4590 Sep 28 16:54	0° 		morning rise	4591 Aug 10 11:25	8°  02'24	46
				direct	4591 Aug 13 10:29	8°  04'02	
superior conj	4590 Oct 06 05:33	15°  01'51	59	morning max el	4591 Aug 24 09:03	13°  09'15	20°40'21
minimum elong	4590 Oct 06 07:27	15°  01'11	15	asc. node	4591 Sep 03 10:37	26°  02'27	00
max. Earth dist.	4590 Oct 12 12:56	27°  01'14	1.37946 AU		4591 Sep 05 11:29	0° 	
	4590 Oct 14 04:11	0° 		morning set	4591 Sep 12 11:18	13°  08'38	46
evening rise	4590 Oct 16 07:09	3°  04'47	15				
desc. node	4590 Oct 23 05:52	15°  03'33	53	superior conj	4591 Sep 19 23:13	29°  09'04	1°43'48



































































minimum elong	4591 Sep 19 23:30	29° \mathbb{M} 10'33	1°43'47	superior conj	4592 Sep 03 01:09	13° \mathbb{M} 39'58	1°41'40
	4591 Sep 20 09:12	0° \mathbb{L}		minimum elong	4592 Sep 03 00:07	13° \mathbb{M} 34'35	1°41'37
max. Earth dist.	4591 Sep 24 20:45	8° \mathbb{L} 56'05	1.36009 AU	max. Earth dist.	4592 Sep 06 12:14	20° \mathbb{M} 52'59	1.34391 AU
evening rise	4591 Sep 28 20:41	16° \mathbb{L} 32'19		evening rise	4592 Sep 11 01:58	0° \mathbb{L} 01'15	
	4591 Oct 06 11:28	0° \mathbb{M}			4592 Sep 11 01:42	0° \mathbb{L}	
desc. node	4591 Oct 10 02:53	5° \mathbb{M} 58'55		desc. node	4592 Sep 25 23:54	26° \mathbb{L} 05'37	
	4591 Oct 26 23:47	0° \mathbb{J}			4592 Sep 28 13:16	0° \mathbb{M}	
evening max el	4591 Nov 03 11:33	8° \mathbb{J} 17'50	26°13'00	evening max el	4592 Oct 16 00:14	21° \mathbb{M} 53'16	27°01'41
retrograde	4591 Nov 16 03:54	15° \mathbb{J} 27'32		retrograde	4592 Oct 29 06:04	29° \mathbb{M} 10'19	
evening set	4591 Nov 22 10:51	12° \mathbb{J} 52'57		evening set	4592 Nov 05 00:54	26° \mathbb{M} 29'44	
min. Earth dist.	4591 Nov 26 15:46	8° \mathbb{J} 26'42	0.66595 AU	min. Earth dist.	4592 Nov 08 23:18	22° \mathbb{M} 39'11	0.65405 AU
inferior conj	4591 Nov 28 04:31	6° \mathbb{J} 33'35	-0°45'33	inferior conj	4592 Nov 10 23:56	20° \mathbb{M} 21'00	-1°46'46
minimum elong	4591 Nov 28 05:44	6° \mathbb{J} 29'48	0°45'01	minimum elong	4592 Nov 11 02:58	20° \mathbb{M} 12'22	1°45'31
asc. node	4591 Nov 30 09:49	3° \mathbb{J} 55'26		asc. node	4592 Nov 16 06:53	15° \mathbb{M} 17'44	
morning rise	4591 Dec 04 01:09	0° \mathbb{J} 45'01		morning rise	4592 Nov 17 05:58	14° \mathbb{M} 44'57	
	4591 Dec 05 20:45	30° \mathbb{R} \mathbb{M}		direct	4592 Nov 19 23:34	14° \mathbb{M} 04'31	
direct	4591 Dec 07 03:11	29° \mathbb{M} 50'52		morning max el	4592 Nov 26 11:21	17° \mathbb{M} 33'27	18°09'34
	4591 Dec 08 10:02	0° \mathbb{J}			4592 Dec 05 16:07	0° \mathbb{J}	
morning max el	4591 Dec 13 20:50	3° \mathbb{J} 32'55	18°44'19	morning set	4592 Dec 14 22:56	15° \mathbb{J} 03'48	
	4592 Jan 01 08:58	0° \mathbb{Z}		desc. node	4592 Dec 22 23:12	28° \mathbb{J} 04'43	
morning set	4592 Jan 04 03:39	4° \mathbb{Z} 22'35			4592 Dec 24 03:56	0° \mathbb{Z}	
desc. node	4592 Jan 06 02:09	7° \mathbb{Z} 25'42					
max. Earth dist.	4592 Jan 19 15:49	28° \mathbb{Z} 43'45	1.45221 AU	superior conj	4592 Dec 29 16:00	8° \mathbb{Z} 45'12	-0°45'06
				minimum elong	4592 Dec 29 10:22	8° \mathbb{Z} 22'58	0°44'21
superior conj	4592 Jan 20 11:40	0° \approx 01'38	-1°29'00	max. Earth dist.	4593 Jan 01 11:30	13° \mathbb{Z} 11'08	1.45199 AU
minimum elong	4592 Jan 20 02:20	29° \mathbb{Z} 24'59	1°28'02		4593 Jan 12 05:57	0° \approx	
	4592 Jan 20 11:15	0° \approx		evening rise	4593 Jan 14 23:12	4° \approx 13'33	
evening rise	4592 Feb 04 23:02	24° \approx 34'40		greatest brilliancy	4593 Jan 27 11:32	23° \approx 29'46	-0.7m
	4592 Feb 08 07:57	0° \mathbb{H}			4593 Jan 31 21:34	0° \mathbb{H}	
greatest brilliancy	4592 Feb 12 03:14	6° \mathbb{H} 06'25	-0.9m	evening max el	4593 Feb 08 12:13	9° \mathbb{H} 38'09	19°32'20
evening max el	4592 Feb 26 04:52	26° \mathbb{H} 06'20	18°46'32	asc. node	4593 Feb 12 06:08	12° \mathbb{H} 43'40	
asc. node	4592 Feb 26 09:06	26° \mathbb{H} 16'59		retrograde	4593 Feb 15 18:26	13° \mathbb{H} 48'56	
retrograde	4592 Mar 03 21:17	29° \mathbb{H} 49'43		evening set	4593 Feb 19 07:40	12° \mathbb{H} 35'01	
evening set	4592 Mar 07 03:13	28° \mathbb{H} 49'21		inferior conj	4593 Feb 24 18:45	6° \mathbb{H} 39'28	3°16'36
inferior conj	4592 Mar 12 19:00	23° \mathbb{H} 09'15	3°31'57	minimum elong	4593 Feb 24 16:51	6° \mathbb{H} 45'44	3°16'18
minimum elong	4592 Mar 12 18:06	23° \mathbb{H} 12'05	3°31'54	min. Earth dist.	4593 Feb 25 23:15	5° \mathbb{H} 05'53	0.66668 AU
min. Earth dist.	4592 Mar 14 14:29	20° \mathbb{H} 55'37	0.65396 AU	morning rise	4593 Mar 02 01:47	0° \mathbb{H} 25'08	
morning rise	4592 Mar 18 08:32	16° \mathbb{H} 56'26			4593 Mar 02 13:21	30° \mathbb{R} \approx	
direct	4592 Mar 24 23:08	14° \mathbb{H} 06'08		direct	4593 Mar 08 05:26	27° \approx 40'52	
desc. node	4592 Apr 03 01:20	18° \mathbb{H} 08'24			4593 Mar 14 15:42	0° \mathbb{H}	
morning max el	4592 Apr 07 04:07	21° \mathbb{H} 52'43	26°55'05	morning max el	4593 Mar 20 13:46	5° \mathbb{H} 02'30	25°45'32
	4592 Apr 14 06:29	0° \mathbb{Y}		desc. node	4593 Mar 20 22:23	5° \mathbb{H} 24'29	
	4592 May 04 06:28	0° \mathbb{B}			4593 Apr 08 17:52	0° \mathbb{Y}	
morning set	4592 May 12 22:52	15° \mathbb{B} 46'31		morning set	4593 Apr 25 18:46	28° \mathbb{Y} 26'25	
max. Earth dist.	4592 May 17 07:49	24° \mathbb{B} 22'25	1.34141 AU		4593 Apr 26 15:05	0° \mathbb{B}	
	4592 May 20 01:59	0° \mathbb{I}		max. Earth dist.	4593 Apr 29 14:01	5° \mathbb{B} 33'20	1.35774 AU
superior conj	4592 May 21 10:46	2° \mathbb{I} 50'12	-0°29'44	superior conj	4593 May 05 04:10	16° \mathbb{B} 31'37	-0°59'13
minimum elong	4592 May 21 12:21	2° \mathbb{I} 58'26	0°29'25	minimum elong	4593 May 05 07:23	16° \mathbb{B} 47'53	0°58'39
asc. node	4592 May 24 08:24	8° \mathbb{I} 56'15		asc. node	4593 May 11 05:27	28° \mathbb{B} 53'46	
evening rise	4592 May 28 21:00	18° \mathbb{I} 28'55			4593 May 11 18:20	0° \mathbb{I}	
	4592 Jun 03 14:36	0° \mathbb{E}		evening rise	4593 May 13 03:34	2° \mathbb{I} 50'10	
evening max el	4592 Jun 17 18:33	20° \mathbb{E} 51'00	21°26'17		4593 May 29 04:21	0° \mathbb{E}	
retrograde	4592 Jun 29 22:56	26° \mathbb{E} 51'27		evening max el	4593 May 31 00:43	1° \mathbb{E} 57'34	20°07'16
desc. node	4592 Jun 30 00:34	26° \mathbb{E} 51'26		retrograde	4593 Jun 10 13:15	7° \mathbb{E} 06'04	
evening set	4592 Jul 02 08:43	26° \mathbb{E} 38'10		evening set	4593 Jun 12 11:52	6° \mathbb{E} 56'18	
inferior conj	4592 Jul 11 17:31	22° \mathbb{E} 38'31	-3°18'45	desc. node	4593 Jun 16 21:34	5° \mathbb{E} 30'19	
minimum elong	4592 Jul 11 09:09	22° \mathbb{E} 50'13	3°16'12	inferior conj	4593 Jun 21 13:18	2° \mathbb{E} 57'02	-1°23'07
min. Earth dist.	4592 Jul 11 19:05	22° \mathbb{E} 36'20	0.54822 AU	minimum elong	4593 Jun 21 09:25	3° \mathbb{E} 02'50	1°21'40
morning rise	4592 Jul 20 10:27	18° \mathbb{E} 44'20		min. Earth dist.	4593 Jun 23 07:21	1° \mathbb{E} 54'24	0.55146 AU
direct	4592 Jul 23 20:23	18° \mathbb{E} 19'06			4593 Jun 26 19:15	30° \mathbb{R} \mathbb{I}	
morning max el	4592 Aug 05 08:07	24° \mathbb{E} 12'58	22°13'36	morning rise	4593 Jun 30 05:25	28° \mathbb{I} 39'18	
	4592 Aug 10 13:34	0° \mathbb{O}		direct	4593 Jul 04 07:54	28° \mathbb{I} 02'43	
asc. node	4592 Aug 20 07:40	15° \mathbb{O} 23'48			4593 Jul 11 14:18	0° \mathbb{E}	
morning set	4592 Aug 26 21:25	28° \mathbb{O} 28'40		morning max el	4593 Jul 17 23:41	4° \mathbb{E} 44'16	23°56'53
	4592 Aug 27 14:49	0° \mathbb{M}			4593 Aug 04 17:05	0° \mathbb{O}	
				asc. node	4593 Aug 07 04:44	4° \mathbb{O} 47'28	

morning set	4593 Aug 11 09:04	13° Ω 22'18		asc. node	4594 Jul 25 01:47	24° \mathfrak{G} 30'22	
				morning set	4594 Jul 26 20:36	28° \mathfrak{G} 14'23	
superior conj	4593 Aug 18 08:32	28° Ω 26'10	1°33'27		4594 Jul 27 16:26	0° Ω	
minimum elong	4593 Aug 18 06:38	28° Ω 15'55	1°33'16				
	4593 Aug 19 01:54	0° \mathfrak{M}		superior conj	4594 Aug 02 19:06	13° Ω 20'06	1°20'01
max. Earth dist.	4593 Aug 20 12:23	3° \mathfrak{M} 05'00	1.33172 AU	minimum elong	4594 Aug 02 16:48	13° Ω 07'29	1°19'42
evening rise	4593 Aug 25 18:57	14° \mathfrak{M} 03'21		max. Earth dist.	4594 Aug 03 19:30	15° Ω 33'57	1.32376 AU
	4593 Sep 03 04:54	0° $\underline{\mathfrak{A}}$		evening rise	4594 Aug 09 20:19	28° Ω 28'57	
desc. node	4593 Sep 12 20:54	15° $\underline{\mathfrak{A}}$ 46'02			4594 Aug 10 13:59	0° \mathfrak{M}	
	4593 Sep 23 14:11	0° \mathfrak{M}			4594 Aug 27 09:58	0° $\underline{\mathfrak{A}}$	
evening max el	4593 Sep 28 11:45	5° \mathfrak{M} 09'40	27°25'32	desc. node	4594 Aug 30 17:55	4° $\underline{\mathfrak{A}}$ 49'21	
retrograde	4593 Oct 12 02:17	12° \mathfrak{M} 27'22		evening max el	4594 Sep 10 20:06	17° $\underline{\mathfrak{A}}$ 54'53	27°18'55
evening set	4593 Oct 19 05:02	9° \mathfrak{M} 49'23		retrograde	4594 Sep 24 15:53	25° $\underline{\mathfrak{A}}$ 09'17	
min. Earth dist.	4593 Oct 22 21:59	6° \mathfrak{M} 32'25	0.63868 AU	evening set	4594 Oct 01 19:44	22° $\underline{\mathfrak{A}}$ 45'37	
inferior conj	4593 Oct 25 10:47	3° \mathfrak{M} 55'54	-2°49'17	min. Earth dist.	4594 Oct 05 10:32	19° $\underline{\mathfrak{A}}$ 55'26	0.62026 AU
minimum elong	4593 Oct 25 15:37	3° \mathfrak{M} 43'28	2°47'32	inferior conj	4594 Oct 08 10:07	17° $\underline{\mathfrak{A}}$ 11'28	-3°49'18
	4593 Oct 29 17:09	30° \mathfrak{R} $\underline{\mathfrak{A}}$		minimum elong	4594 Oct 08 16:09	16° $\underline{\mathfrak{A}}$ 57'37	3°47'33
morning rise	4593 Nov 01 03:36	28° $\underline{\mathfrak{A}}$ 35'33		morning rise	4594 Oct 15 14:22	12° $\underline{\mathfrak{A}}$ 09'55	
asc. node	4593 Nov 03 03:57	28° $\underline{\mathfrak{A}}$ 06'11		direct	4594 Oct 17 22:42	11° $\underline{\mathfrak{A}}$ 45'58	
direct	4593 Nov 03 15:09	28° $\underline{\mathfrak{A}}$ 05'06		asc. node	4594 Oct 21 01:01	12° $\underline{\mathfrak{A}}$ 29'06	
	4593 Nov 08 11:20	0° \mathfrak{M}		morning max el	4594 Oct 24 20:00	15° $\underline{\mathfrak{A}}$ 15'24	17°52'21
morning max el	4593 Nov 10 04:07	1° \mathfrak{M} 30'06	17°51'56		4594 Nov 04 01:12	0° \mathfrak{M}	
morning set	4593 Nov 26 21:28	27° \mathfrak{M} 04'13		morning set	4594 Nov 09 17:01	10° \mathfrak{M} 05'09	
	4593 Nov 28 14:27	0° \mathfrak{X}					
superior conj	4593 Dec 09 13:46	18° \mathfrak{X} 23'12	0°01'53	superior conj	4594 Nov 20 13:52	29° \mathfrak{M} 18'44	0°42'23
minimum elong	4593 Dec 09 13:58	18° \mathfrak{X} 24'01	0°01'52	minimum elong	4594 Nov 20 17:24	29° \mathfrak{M} 33'50	0°41'54
behind sun begin	4593 Dec 09 04:09	17° \mathfrak{X} 43'55			4594 Nov 20 23:31	0° \mathfrak{X}	
behind sun end	4593 Dec 09 23:47	19° \mathfrak{X} 04'02		desc. node	4594 Nov 26 17:14	9° \mathfrak{X} 36'57	
desc. node	4593 Dec 09 20:14	18° \mathfrak{X} 49'34		max. Earth dist.	4594 Nov 27 20:14	11° \mathfrak{X} 27'29	1.43076 AU
max. Earth dist.	4593 Dec 15 05:46	27° \mathfrak{X} 31'02	1.44451 AU	evening rise	4594 Dec 04 23:12	22° \mathfrak{X} 49'43	
	4593 Dec 16 19:20	0° \mathfrak{Z}			4594 Dec 09 14:39	0° \mathfrak{Z}	
evening rise	4593 Dec 25 10:04	13° \mathfrak{Z} 25'15			4594 Dec 30 15:01	0° \approx	
	4594 Jan 05 08:48	0° \approx		evening max el	4595 Jan 05 11:06	6° \approx 45'20	21°44'50
evening max el	4594 Jan 22 14:22	23° \approx 10'52	20°32'54	retrograde	4595 Jan 14 14:05	12° \approx 10'41	
asc. node	4594 Jan 30 03:12	27° \approx 55'14		asc. node	4595 Jan 17 00:15	11° \approx 39'09	
retrograde	4594 Jan 30 16:42	27° \approx 56'57		evening set	4595 Jan 18 22:26	10° \approx 27'02	
evening set	4594 Feb 03 14:40	26° \approx 28'38		inferior conj	4595 Jan 24 06:38	4° \approx 09'08	2°15'13
inferior conj	4594 Feb 08 23:22	20° \approx 20'21	2°50'23	minimum elong	4595 Jan 24 04:15	4° \approx 17'26	2°14'27
minimum elong	4594 Feb 08 20:59	20° \approx 28'31	2°49'47	min. Earth dist.	4595 Jan 24 09:28	3° \approx 59'19	0.67978 AU
min. Earth dist.	4594 Feb 09 14:21	19° \approx 29'07	0.67522 AU		4595 Jan 27 10:18	30° \mathfrak{R} \mathfrak{Z}	
morning rise	4594 Feb 14 03:05	14° \approx 06'25		morning rise	4595 Jan 29 09:52	27° \mathfrak{Z} 57'22	
direct	4594 Feb 19 17:05	11° \approx 37'23		direct	4595 Feb 03 09:16	25° \mathfrak{Z} 49'02	
morning max el	4594 Mar 02 22:26	18° \approx 19'54	24°20'56		4595 Feb 11 13:02	0° \approx	
desc. node	4594 Mar 07 19:26	23° \approx 45'03		morning max el	4595 Feb 13 08:02	1° \approx 42'38	22°51'36
	4594 Mar 12 17:59	0° \mathfrak{X}		desc. node	4595 Feb 22 16:29	12° \approx 51'58	
	4594 Apr 01 19:55	0° \mathfrak{Y}			4595 Mar 06 17:35	0° \mathfrak{X}	
morning set	4594 Apr 07 18:58	10° \mathfrak{Y} 05'49		morning set	4595 Mar 19 17:24	20° \mathfrak{X} 28'59	
max. Earth dist.	4594 Apr 11 11:07	16° \mathfrak{Y} 36'43	1.37780 AU	max. Earth dist.	4595 Mar 24 06:13	28° \mathfrak{X} 07'24	1.39970 AU
					4595 Mar 25 08:21	0° \mathfrak{Y}	
superior conj	4594 Apr 18 10:09	29° \mathfrak{Y} 35'42	-1°27'20	superior conj	4595 Apr 01 00:33	11° \mathfrak{Y} 52'24	-1°51'00
minimum elong	4594 Apr 18 14:42	29° \mathfrak{Y} 57'40	1°26'42	minimum elong	4595 Apr 01 05:18	12° \mathfrak{Y} 14'09	1°50'34
	4594 Apr 18 15:12	0° \mathfrak{Z}		evening rise	4595 Apr 10 19:08	0° \mathfrak{Z} 14'37	
evening rise	4594 Apr 27 03:58	16° \mathfrak{Z} 47'58			4595 Apr 10 16:04	0° \mathfrak{Z}	
asc. node	4594 Apr 28 02:29	18° \mathfrak{Z} 39'10		asc. node	4595 Apr 14 23:31	8° \mathfrak{Z} 07'37	
	4594 May 04 02:16	0° \mathfrak{II}		evening max el	4595 Apr 26 22:59	26° \mathfrak{Z} 12'11	18°28'24
evening max el	4594 May 13 19:03	13° \mathfrak{II} 46'14	19°07'40	retrograde	4595 May 04 12:27	29° \mathfrak{Z} 56'22	
retrograde	4594 May 22 15:34	18° \mathfrak{II} 05'33		evening set	4595 May 06 19:39	29° \mathfrak{Z} 36'41	
evening set	4594 May 24 16:08	17° \mathfrak{II} 52'57		inferior conj	4595 May 14 07:27	25° \mathfrak{Z} 05'28	1°59'57
inferior conj	4594 Jun 01 23:50	13° \mathfrak{II} 41'09	0°31'14	minimum elong	4595 May 14 10:57	24° \mathfrak{Z} 58'28	1°58'54
minimum elong	4594 Jun 02 01:06	13° \mathfrak{II} 39'00	0°30'47	min. Earth dist.	4595 May 17 17:38	22° \mathfrak{Z} 22'48	0.58253 AU
desc. node	4594 Jun 03 18:37	12° \mathfrak{II} 27'57		morning rise	4595 May 21 23:05	19° \mathfrak{Z} 39'26	
min. Earth dist.	4594 Jun 04 22:30	11° \mathfrak{II} 41'17	0.56375 AU	desc. node	4595 May 21 15:40	19° \mathfrak{Z} 49'00	
morning rise	4594 Jun 10 06:51	8° \mathfrak{II} 48'04		direct	4595 May 27 22:19	18° \mathfrak{Z} 07'22	
direct	4594 Jun 15 07:56	7° \mathfrak{II} 48'36		morning max el	4595 Jun 11 07:35	25° \mathfrak{Z} 48'47	26°55'06
morning max el	4594 Jun 29 13:46	15° \mathfrak{II} 07'11	25°36'01		4595 Jun 15 05:33	0° \mathfrak{II}	
	4594 Jul 11 11:42	0° \mathfrak{G}			4595 Jul 04 18:40	0° \mathfrak{G}	

morning set	4595 Jul 11 06:20	12°☿59'24		morning set	4596 Jun 09 14:22	0°♊	
asc. node	4595 Jul 11 22:48	14°☿26'24		morning set	4596 Jun 24 12:34	27°♊32'00	
					4596 Jun 25 16:55	0°☿	
superior conj	4595 Jul 18 06:53	28°☿15'00	1°02'03	asc. node	4596 Jun 27 19:49	4°☿30'41	
minimum elong	4595 Jul 18 04:40	28°☿02'44	1°01'40	max. Earth dist.	4596 Jun 30 17:38	10°☿50'15	1.32043 AU
max. Earth dist.	4595 Jul 18 06:27	28°☿12'36	1.32004 AU				
	4595 Jul 19 01:54	0°♊		superior conj	4596 Jul 01 18:10	13°☿05'08	0°40'09
evening rise	4595 Jul 25 03:18	13°♊09'19		minimum elong	4596 Jul 01 16:30	12°☿55'53	0°39'48
	4595 Aug 02 16:07	0°♊		evening rise	4596 Jul 08 13:41	27°☿57'17	
desc. node	4595 Aug 17 14:57	22°♊59'44			4596 Jul 09 12:52	0°♊	
evening max el	4595 Aug 23 22:41	29°♊56'33	26°38'47		4596 Jul 26 09:23	0°♊	
	4595 Aug 24 00:09	0°♊		desc. node	4596 Aug 03 11:57	9°♊55'43	
retrograde	4595 Sep 06 21:15	7°♊06'14		evening max el	4596 Aug 04 17:42	11°♊09'15	25°27'40
evening set	4595 Sep 13 16:18	5°♊09'31		retrograde	4596 Aug 18 16:34	18°♊14'06	
min. Earth dist.	4595 Sep 17 12:33	2°♊33'33	0.59989 AU	evening set	4596 Aug 24 14:00	16°♊53'29	
inferior conj	4595 Sep 20 18:23	29°♊57'38	-4°40'14	min. Earth dist.	4596 Aug 29 05:31	14°♊14'13	0.57955 AU
minimum elong	4595 Sep 21 00:00	29°♊46'20	4°39'11	inferior conj	4596 Sep 01 08:11	12°♊04'40	-5°11'07
	4595 Sep 20 17:13	30°♊		minimum elong	4596 Sep 01 10:29	12°♊00'38	5°10'58
morning rise	4595 Sep 28 09:45	25°♊17'43		morning rise	4596 Sep 09 09:13	7°♊47'50	
direct	4595 Sep 30 18:11	24°♊57'18		direct	4596 Sep 11 21:17	7°♊28'38	
asc. node	4595 Oct 07 22:03	28°♊17'02		morning max el	4596 Sep 20 11:39	11°♊33'34	18°52'36
morning max el	4595 Oct 08 07:37	28°♊39'37	18°12'04	asc. node	4596 Sep 23 19:04	15°♊15'36	
	4595 Oct 09 14:29	0°♊			4596 Oct 02 20:41	0°♊	
morning set	4595 Oct 24 03:29	23°♊48'11		morning set	4596 Oct 07 00:18	8°♊00'22	
	4595 Oct 27 10:19	0°♊					
superior conj	4595 Nov 02 14:51	11°♊26'18	1°12'29	superior conj	4596 Oct 15 11:36	24°♊31'35	1°31'54
minimum elong	4595 Nov 02 18:49	11°♊44'11	1°12'01	minimum elong	4596 Oct 15 14:25	24°♊44'58	1°31'40
max. Earth dist.	4595 Nov 10 05:53	24°♊47'37	1.41236 AU		4596 Oct 18 09:28	0°♊	
	4595 Nov 13 08:37	0°♊		max. Earth dist.	4596 Oct 22 11:32	7°♊25'33	1.39156 AU
desc. node	4595 Nov 13 14:15	0°♊23'14		evening rise	4596 Oct 26 09:07	14°♊13'45	
evening rise	4595 Nov 15 04:48	3°♊00'54		desc. node	4596 Oct 30 11:16	21°♊04'35	
	4595 Dec 02 23:09	0°♊			4596 Nov 05 01:30	0°♊	
evening max el	4595 Dec 19 03:19	20°♊22'28	23°03'30		4596 Nov 26 21:45	0°♊	
retrograde	4595 Dec 29 08:56	26°♊26'20		evening max el	4596 Nov 30 16:40	4°♊02'59	24°22'58
evening set	4596 Jan 03 05:21	24°♊26'46		retrograde	4596 Dec 12 00:11	10°♊40'13	
asc. node	4596 Jan 03 21:17	23°♊51'15		evening set	4596 Dec 17 09:53	8°♊24'58	
inferior conj	4596 Jan 08 14:35	18°♊02'53	1°32'27	asc. node	4596 Dec 20 18:19	4°♊47'50	
minimum elong	4596 Jan 08 12:40	18°♊09'31	1°31'44	min. Earth dist.	4596 Dec 22 02:07	3°♊03'57	0.67764 AU
min. Earth dist.	4596 Jan 08 06:09	18°♊31'58	0.68054 AU	inferior conj	4596 Dec 22 21:28	1°♊59'07	0°43'06
morning rise	4596 Jan 13 19:52	11°♊55'00		minimum elong	4596 Dec 22 20:27	2°♊02'32	0°42'42
direct	4596 Jan 18 04:51	10°♊09'36			4596 Dec 24 09:38	30°♊	
morning max el	4596 Jan 26 22:16	15°♊14'02	21°26'34	morning rise	4596 Dec 28 07:05	25°♊57'06	
	4596 Feb 07 18:22	0°♊		direct	4597 Jan 01 02:40	24°♊33'55	
desc. node	4596 Feb 09 13:31	2°♊32'08		morning max el	4597 Jan 08 20:02	28°♊57'31	20°12'07
morning set	4596 Feb 27 11:07	29°♊31'11			4597 Jan 09 20:08	0°♊	
	4596 Feb 27 18:23	0°♊		desc. node	4597 Jan 26 10:32	22°♊36'22	
max. Earth dist.	4596 Mar 05 06:57	10°♊32'38	1.42060 AU		4597 Jan 31 08:07	0°♊	
				morning set	4597 Feb 05 08:59	7°♊43'23	
superior conj	4596 Mar 12 18:25	23°♊10'12	-2°05'52	max. Earth dist.	4597 Feb 15 15:37	23°♊52'35	1.43770 AU
minimum elong	4596 Mar 12 20:59	23°♊21'18	2°05'48		4597 Feb 19 10:36	0°♊	
	4596 Mar 16 15:59	0°♊		superior conj	4597 Feb 21 11:18	3°♊19'22	-2°06'32
evening rise	4596 Mar 23 21:20	13°♊01'25		minimum elong	4597 Feb 21 08:34	3°♊08'07	2°06'28
asc. node	4596 Mar 31 20:33	27°♊13'07		evening rise	4597 Mar 06 06:13	24°♊59'07	
	4596 Apr 02 13:04	0°♊			4597 Mar 09 03:38	0°♊	
evening max el	4596 Apr 09 08:54	9°♊05'57	18°09'04	asc. node	4597 Mar 18 17:34	15°♊47'42	
retrograde	4596 Apr 16 03:21	12°♊31'49		evening max el	4597 Mar 23 21:26	22°♊17'52	18°09'02
evening set	4596 Apr 18 17:17	12°♊02'22		retrograde	4597 Mar 30 07:59	25°♊40'40	
inferior conj	4596 Apr 25 11:46	7°♊10'15	2°57'01	evening set	4597 Apr 02 03:58	25°♊00'01	
minimum elong	4596 Apr 25 14:51	7°♊03'04	2°56'23	inferior conj	4597 Apr 08 09:10	19°♊47'56	3°26'34
min. Earth dist.	4596 Apr 28 18:55	4°♊07'53	0.60423 AU	minimum elong	4597 Apr 08 10:42	19°♊43'53	3°26'25
morning rise	4596 May 02 10:10	1°♊20'30		min. Earth dist.	4597 Apr 11 04:43	16°♊50'11	0.62570 AU
	4596 May 05 01:14	30°♊		morning rise	4597 Apr 14 16:04	13°♊44'00	
desc. node	4596 May 07 12:41	29°♊20'41		direct	4597 Apr 21 12:44	11°♊10'32	
direct	4596 May 09 00:39	29°♊14'17		desc. node	4597 Apr 24 09:44	11°♊34'58	
	4596 May 13 03:41	0°♊		morning max el	4597 May 05 13:54	19°♊10'05	27°51'20
morning max el	4596 May 23 07:49	7°♊08'24	27°42'01		4597 May 14 18:14	0°♊	

	4597 Jun 02 11:57	0°♊		morning rise	4598 Mar 28 14:25	26°♋40'19	
morning set	4597 Jun 08 13:10	11°♊44'32		direct	4598 Apr 04 09:05	23°♋51'59	
max. Earth dist.	4597 Jun 14 00:51	23°♊12'08	1.32500 AU	desc. node	4598 Apr 11 06:46	26°♋12'58	
asc. node	4597 Jun 14 16:50	24°♊38'00			4598 Apr 16 02:41	0°♌	
				morning max el	4598 Apr 17 23:20	1°♌47'35	27°24'25
superior conj	4597 Jun 16 03:09	27°♊43'43	0°14'55		4598 May 08 22:47	0°♍	
minimum elong	4597 Jun 16 02:27	27°♊39'55	0°14'44	morning set	4598 May 23 05:31	25°♍29'27	
behind sun begin	4597 Jun 16 00:28	27°♊29'09			4598 May 25 12:01	0°♎	
behind sun end	4597 Jun 16 04:26	27°♊50'40		max. Earth dist.	4598 May 28 00:09	5°♎06'52	1.33405 AU
	4597 Jun 17 04:12	0°♏					
evening rise	4597 Jun 23 01:25	12°♏45'08		superior conj	4598 May 31 07:58	12°♎05'20	-0°12'57
	4597 Jul 01 18:14	0°♐		minimum elong	4598 May 31 08:38	12°♎08'52	0°12'50
evening max el	4597 Jul 17 06:48	21°♐42'03	23°55'49	behind sun begin	4598 May 31 05:20	11°♎51'24	
desc. node	4597 Jul 21 08:57	25°♐07'38		behind sun end	4598 May 31 11:55	12°♎26'21	
retrograde	4597 Jul 31 00:20	28°♐36'30		asc. node	4598 Jun 01 13:52	14°♎44'34	
evening set	4597 Aug 04 11:55	27°♐52'08		evening rise	4598 Jun 07 12:42	27°♎27'11	
min. Earth dist.	4597 Aug 10 17:06	24°♐51'37	0.56199 AU		4598 Jun 08 17:52	0°♏	
inferior conj	4597 Aug 13 01:39	23°♐25'20	-5°06'25		4598 Jun 26 21:19	0°♐	
minimum elong	4597 Aug 12 21:54	23°♐31'06	5°06'05	evening max el	4598 Jun 28 21:04	2°♐04'30	22°18'43
morning rise	4597 Aug 21 10:26	19°♐28'07		desc. node	4598 Jul 08 05:59	8°♐00'57	
direct	4597 Aug 24 04:44	19°♐08'34		retrograde	4598 Jul 11 20:10	8°♐30'48	
morning max el	4597 Sep 03 05:12	23°♐48'06	19°54'59	evening set	4598 Jul 14 20:12	8°♐10'53	
	4597 Sep 08 12:38	0°♑		min. Earth dist.	4598 Jul 23 03:29	4°♐35'19	0.55068 AU
asc. node	4597 Sep 10 16:05	3°♑09'48		inferior conj	4598 Jul 24 01:50	4°♐03'45	-4°12'17
morning set	4597 Sep 21 04:09	22°♑32'23		minimum elong	4598 Jul 23 17:25	4°♐15'40	4°10'18
	4597 Sep 24 20:00	0°♒		morning rise	4598 Aug 01 16:30	0°♐13'34	
					4598 Aug 02 21:31	30°♑♏	
superior conj	4597 Sep 28 22:53	8°♒19'43	1°41'49	direct	4598 Aug 04 19:22	29°♑51'39	
minimum elong	4597 Sep 29 00:05	8°♒25'41	1°41'46		4598 Aug 06 16:29	0°♓	
max. Earth dist.	4597 Oct 04 16:40	19°♒28'35	1.37091 AU	morning max el	4598 Aug 16 10:48	5°♓17'26	21°18'12
evening rise	4597 Oct 08 11:32	26°♒27'18		asc. node	4598 Aug 28 13:08	21°♓46'43	
	4597 Oct 10 11:18	0°♔			4598 Sep 01 22:23	0°♔	
desc. node	4597 Oct 17 08:16	11°♔36'51		morning set	4598 Sep 05 12:32	7°♔17'09	
	4597 Oct 29 13:12	0°♕					
evening max el	4597 Nov 13 05:01	17°♕45'45	25°36'24	superior conj	4598 Sep 12 20:27	22°♔37'58	1°43'42
retrograde	4597 Nov 25 11:00	24°♕47'25		minimum elong	4598 Sep 12 20:08	22°♔36'21	1°43'42
evening set	4597 Dec 01 10:23	22°♕18'35			4598 Sep 16 11:00	0°♖	
min. Earth dist.	4597 Dec 05 19:09	17°♕32'12	0.67118 AU	max. Earth dist.	4598 Sep 17 02:56	1°♖19'42	1.35267 AU
inferior conj	4597 Dec 07 01:29	15°♕55'17	-0°11'50	evening rise	4598 Sep 21 08:15	9°♖32'06	
minimum elong	4597 Dec 07 01:47	15°♕54'19	0°11'41		4598 Oct 03 00:37	0°♗	
transit middle	4597 Dec 07 01:47	15°♕54'19	0°11'41	desc. node	4598 Oct 04 05:16	1°♗54'42	
transit begin	4597 Dec 06 23:51	16°♕00'31			4598 Oct 25 06:53	0°♘	
transit end	4597 Dec 07 03:44	15°♕48'06		evening max el	4598 Oct 26 17:36	1°♘26'17	26°36'21
asc. node	4597 Dec 07 15:20	15°♕11'12		retrograde	4598 Nov 08 16:42	8°♘41'06	
morning rise	4597 Dec 12 17:34	10°♘01'13		evening set	4598 Nov 15 04:55	6°♘03'00	
direct	4597 Dec 16 01:21	8°♘57'40		min. Earth dist.	4598 Nov 19 06:54	1°♘51'58	0.66125 AU
morning max el	4597 Dec 23 01:42	12°♘51'50	19°11'52		4598 Nov 20 20:26	30°♙♗	
	4598 Jan 04 20:51	0°♚		inferior conj	4598 Nov 21 00:42	29°♙47'15	-1°11'13
greatest brilliancy	4598 Jan 05 19:58	1°♚27'28	-0.7m	minimum elong	4598 Nov 21 02:40	29°♙41'21	1°10'22
desc. node	4598 Jan 13 07:33	12°♚58'07		asc. node	4598 Nov 24 12:24	25°♙57'19	
morning set	4598 Jan 15 10:33	16°♚15'53		morning rise	4598 Nov 27 01:09	24°♙03'40	
	4598 Jan 24 06:10	0°♛		direct	4598 Nov 29 23:11	23°♙15'58	
max. Earth dist.	4598 Jan 29 06:26	7°♛51'50	1.44888 AU	morning max el	4598 Dec 06 13:40	26°♙51'39	18°27'27
					4598 Dec 09 08:21	0°♜	
superior conj	4598 Feb 01 03:43	12°♛25'37	-1°48'17	morning set	4598 Dec 26 12:33	26°♜04'58	
minimum elong	4598 Jan 31 19:20	11°♛52'25	1°47'37		4598 Dec 28 23:24	0°♞	
	4598 Feb 12 01:43	0°♞		desc. node	4598 Dec 31 04:33	3°♞31'40	
evening rise	4598 Feb 15 17:44	6°♞01'23					
	4598 Mar 02 18:24	0°♟		superior conj	4599 Jan 11 06:41	21°♞01'29	-1°11'32
asc. node	4598 Mar 05 14:37	3°♟42'30		minimum elong	4599 Jan 10 22:15	20°♞28'22	1°10'32
evening max el	4598 Mar 07 09:47	5°♟41'44	18°27'41	max. Earth dist.	4599 Jan 12 00:44	22°♞12'15	1.45300 AU
retrograde	4598 Mar 13 21:50	9°♟14'31			4599 Jan 17 00:07	0°♠	
evening set	4598 Mar 16 23:53	8°♟21'45		evening rise	4599 Jan 27 05:52	16°♠06'37	
inferior conj	4598 Mar 22 19:38	2°♟51'25	3°34'46		4599 Feb 05 01:09	0°♡	
minimum elong	4598 Mar 22 19:30	2°♟51'46	3°34'46	greatest brilliancy	4599 Feb 06 00:39	1°♡31'40	-0.8m
min. Earth dist.	4598 Mar 25 00:09	0°♟17'39	0.64470 AU	evening max el	4599 Feb 18 19:33	19°♡11'40	19°04'05
	4598 Mar 25 06:22	30°♡♠		asc. node	4599 Feb 20 11:40	20°♡45'07	

retrograde	4599 Feb 25 17:06	23° H 05'39		evening set	4600 Feb 13 07:41	5° H 48'52	
evening set	4599 Mar 01 01:55	21° H 59'48		inferior conj	4600 Feb 18 17:32	29° \approx 47'48	3°06'38
inferior conj	4599 Mar 06 15:25	16° H 13'04	3°26'54	minimum elong	4600 Feb 18 15:21	29° \approx 55'05	3°06'12
minimum elong	4599 Mar 06 14:01	16° H 17'30	3°26'45		4600 Feb 18 13:53	30° R \approx	
min. Earth dist.	4599 Mar 08 04:29	14° H 15'32	0.65992 AU	min. Earth dist.	4600 Feb 19 16:08	28° \approx 32'06	0.67092 AU
morning rise	4599 Mar 12 01:45	9° H 59'10		morning rise	4600 Feb 23 22:48	23° \approx 33'36	
direct	4599 Mar 18 12:13	7° H 09'44		direct	4600 Mar 01 21:00	20° \approx 54'43	
desc. node	4599 Mar 29 03:48	12° H 39'56		morning max el	4600 Mar 13 18:11	28° \approx 00'42	25°10'35
morning max el	4599 Mar 31 09:16	14° H 48'05	26°27'48		4600 Mar 15 15:30	0° H	
	4599 Apr 12 19:34	0° Y		desc. node	4600 Mar 16 00:50	0° H 25'39	
	4599 May 01 17:18	0° B			4600 Apr 06 12:52	0° Y	
morning set	4599 May 06 10:10	8° B 36'33		morning set	4600 Apr 18 22:22	20° Y 52'09	
max. Earth dist.	4599 May 10 12:26	16° B 29'48	1.34779 AU	max. Earth dist.	4600 Apr 22 13:55	27° Y 32'39	1.36594 AU
					4600 Apr 23 21:20	0° B	
superior conj	4599 May 15 06:20	26° B 03'41	-0°42'17	superior conj	4600 Apr 28 19:20	9° B 30'25	-1°11'29
minimum elong	4599 May 15 08:37	26° B 15'25	0°41'50	minimum elong	4600 Apr 28 23:13	9° B 49'33	1°10'51
	4599 May 17 04:01	0° II		asc. node	4600 May 06 08:00	24° B 39'27	
asc. node	4599 May 19 10:56	4° II 46'36		evening rise	4600 May 07 01:51	26° B 09'38	
evening rise	4599 May 22 21:36	11° II 57'41			4600 May 08 23:52	0° II	
	4599 Jun 01 07:37	0° B		evening max el	4600 May 24 08:01	24° II 14'27	19°39'26
evening max el	4599 Jun 10 20:25	12° B 49'51	20°50'33	retrograde	4600 Jun 03 02:30	29° II 00'19	
retrograde	4599 Jun 22 08:45	18° B 28'26		evening set	4600 Jun 05 01:08	28° II 49'51	
evening set	4599 Jun 24 11:29	18° B 17'47		desc. node	4600 Jun 12 00:03	25° II 53'45	
desc. node	4599 Jun 25 03:01	18° B 10'26		inferior conj	4600 Jun 13 19:45	24° II 46'33	-0°32'29
inferior conj	4599 Jul 03 19:03	14° B 20'41	-2°31'47	minimum elong	4600 Jun 13 18:16	24° II 48'51	0°31'57
minimum elong	4599 Jul 03 12:06	14° B 30'33	2°29'24	min. Earth dist.	4600 Jun 16 04:00	23° II 18'40	0.55572 AU
min. Earth dist.	4599 Jul 04 14:51	13° B 52'32	0.54836 AU	morning rise	4600 Jun 22 09:02	20° II 14'47	
morning rise	4599 Jul 12 12:27	10° B 18'24		direct	4600 Jun 26 21:01	19° II 29'46	
direct	4599 Jul 16 04:41	9° B 49'18		morning max el	4600 Jul 10 19:53	26° II 28'09	24°40'35
morning max el	4599 Jul 29 05:59	16° B 05'03	22°57'04		4600 Jul 14 05:09	0° B	
	4599 Aug 09 04:55	0° Ω		asc. node	4600 Aug 02 07:14	0° Ω 28'19	
asc. node	4599 Aug 15 10:11	10° Ω 55'56			4600 Aug 02 01:37	0° Ω	
morning set	4599 Aug 20 23:32	22° Ω 09'16		morning set	4600 Aug 05 11:19	7° Ω 02'30	
	4599 Aug 24 15:46	0° M					
superior conj	4599 Aug 28 01:03	7° M 16'32	1°38'52	superior conj	4600 Aug 12 10:00	22° Ω 06'18	1°28'20
minimum elong	4599 Aug 27 23:36	7° M 08'48	1°38'47	minimum elong	4600 Aug 12 07:53	21° Ω 54'43	1°28'06
max. Earth dist.	4599 Aug 30 22:08	13° M 22'03	1.33817 AU	max. Earth dist.	4600 Aug 14 01:45	25° Ω 42'14	1.32784 AU
evening rise	4599 Sep 04 19:02	23° M 17'00			4600 Aug 16 01:45	0° M	
	4599 Sep 08 06:39	0° $\underline{\Omega}$		evening rise	4600 Aug 19 15:57	7° M 29'57	
desc. node	4599 Sep 21 02:18	21° $\underline{\Omega}$ 51'34			4600 Aug 31 18:09	0° $\underline{\Omega}$	
	4599 Sep 26 16:06	0° M		desc. node	4600 Sep 07 23:20	11° $\underline{\Omega}$ 17'30	
evening max el	4599 Oct 09 06:11	14° M 56'02	27°15'21	evening max el	4600 Sep 21 16:52	28° $\underline{\Omega}$ 01'03	27°26'46
retrograde	4599 Oct 22 16:31	22° M 14'04			4600 Sep 23 22:10	0° M	
evening set	4599 Oct 29 15:10	19° M 33'41		retrograde	4600 Oct 05 09:44	5° M 16'42	
min. Earth dist.	4599 Nov 02 11:07	15° M 57'33	0.64790 AU	evening set	4600 Oct 12 14:00	2° M 43'34	
inferior conj	4599 Nov 04 16:51	13° M 30'41	-2°13'16		4600 Oct 15 20:42	30° R $\underline{\Omega}$	
minimum elong	4599 Nov 04 20:40	13° M 20'14	2°11'46	min. Earth dist.	4600 Oct 16 05:36	29° $\underline{\Omega}$ 39'02	0.63120 AU
morning rise	4599 Nov 11 03:18	8° M 00'36		inferior conj	4600 Oct 18 23:10	26° $\underline{\Omega}$ 58'07	-3°15'19
asc. node	4599 Nov 11 09:26	7° M 54'01		minimum elong	4600 Oct 19 04:38	26° $\underline{\Omega}$ 44'41	3°13'31
direct	4599 Nov 13 17:59	7° M 24'51		morning rise	4600 Oct 25 20:47	21° $\underline{\Omega}$ 45'07	
morning max el	4599 Nov 20 05:28	10° M 51'19	17°59'50	direct	4600 Oct 28 06:43	21° $\underline{\Omega}$ 17'40	
	4599 Dec 03 10:10	0° J		asc. node	4600 Oct 29 06:28	21° $\underline{\Omega}$ 22'23	
morning set	4599 Dec 07 20:10	7° J 22'23		morning max el	4600 Nov 03 22:10	24° $\underline{\Omega}$ 43'24	17°49'50
desc. node	4599 Dec 18 01:35	24° J 13'27			4600 Nov 08 05:49	0° M	
				morning set	4600 Nov 20 04:29	19° M 51'05	
superior conj	4599 Dec 21 16:32	0° B 03'01	-0°24'53		4600 Nov 26 00:22	0° J	
minimum elong	4599 Dec 21 13:29	29° J 50'53	0°24'27	superior conj	4600 Dec 02 01:08	10° J 12'50	0°20'12
	4599 Dec 21 15:46	0° B		minimum elong	4600 Dec 02 03:09	10° J 21'14	0°19'55
max. Earth dist.	4599 Dec 25 20:02	6° B 37'59	1.44974 AU	desc. node	4600 Dec 04 22:38	14° J 59'39	
evening rise	4600 Jan 06 22:47	25° B 29'44		max. Earth dist.	4600 Dec 08 13:28	20° J 51'39	1.43942 AU
	4600 Jan 09 21:04	0° \approx			4600 Dec 14 07:57	0° B	
greatest brilliancy	4600 Jan 21 03:06	17° \approx 02'09	-0.6m	evening rise	4600 Dec 17 08:40	4° B 42'21	
	4600 Jan 30 14:01	0° H			4601 Jan 03 07:31	0° \approx	
evening max el	4600 Feb 02 00:53	2° H 44'14	19°56'31	evening max el	4601 Jan 16 00:46	16° \approx 17'59	21°02'20
asc. node	4600 Feb 07 08:44	6° H 41'32		retrograde	4601 Jan 24 12:55	21° \approx 20'03	
retrograde	4600 Feb 09 14:52	7° H 08'48					

asc. node	4601 Jan 25 05:45	21°  17'23	asc. node	4602 Jan 12 02:46	4°  21'53
evening set	4601 Jan 28 15:13	19°  45'06	evening set	4602 Jan 12 22:49	3°  44'29
inferior conj	4601 Feb 02 23:30	13°  32'20 2°36'27			
minimum elong	4601 Feb 02 21:03	13°  40'46 2°35'46			
min. Earth dist.	4601 Feb 03 09:06	12°  59'12 0.67770 AU			
morning rise	4601 Feb 08 02:43	7°  19'23			
direct	4601 Feb 13 10:34	4°  58'51			
morning max el	4601 Feb 24 02:55	11°  20'29 23°42'57			
desc. node	4601 Mar 02 21:53	19°  07'48			
	4601 Mar 10 23:54	0° 			
	4601 Mar 30 07:49	0° 			
morning set	4601 Mar 31 12:20	2°  00'55			
max. Earth dist.	4601 Apr 04 09:47	8°  46'10 1.38710 AU			
superior conj	4601 Apr 11 19:18	22°  16'02 -1°38'08			
minimum elong	4601 Apr 12 00:09	22°  38'54 1°37'33			
	4601 Apr 15 20:28	0° 			
evening rise	4601 Apr 20 22:47	9°  55'43			
asc. node	4601 Apr 23 05:03	14°  18'37			
	4601 May 02 04:12	0° 			
evening max el	4601 May 07 06:48	6°  19'45 18°48'24			
retrograde	4601 May 15 12:41	10°  22'24			
evening set	4601 May 17 15:55	10°  07'10			
inferior conj	4601 May 25 14:58	5°  47'06 1°12'44			
minimum elong	4601 May 25 17:35	5°  42'19 1°11'50			
min. Earth dist.	4601 May 28 20:24	3°  26'55 0.57116 AU			
desc. node	4601 May 29 21:05	2°  45'07			
morning rise	4601 Jun 02 15:59	0°  39'10			
	4601 Jun 04 10:45	30° 			
direct	4601 Jun 08 02:48	29°  27'02			
	4601 Jun 11 19:41	0° 			
morning max el	4601 Jun 22 11:09	6°  56'09 26°13'03			
	4601 Jul 09 12:52	0° 			
asc. node	4601 Jul 20 04:17	20°  51'26			
morning set	4601 Jul 20 22:16	21°  52'04			
	4601 Jul 24 16:48	0° 			
superior conj	4601 Jul 27 21:17	7°  00'50 1°12'55			
minimum elong	4601 Jul 27 18:57	6°  48'02 1°12'33			
max. Earth dist.	4601 Jul 28 11:05	8°  16'54 1.32170 AU			
evening rise	4601 Aug 03 19:59	22°  02'12			
	4601 Aug 07 17:58	0° 			
desc. node	4601 Aug 25 20:21	0°  00'02			
	4601 Aug 25 20:21	0° 			
evening max el	4601 Sep 03 22:56	10°  27'50 27°05'49			
retrograde	4601 Sep 17 19:42	17°  39'55			
evening set	4601 Sep 24 21:30	15°  25'59			
min. Earth dist.	4601 Sep 28 13:16	12°  44'05 0.61177 AU			
inferior conj	4601 Oct 01 16:26	10°  21'24 -4°12'35			
minimum elong	4601 Oct 01 22:35	9°  48'04 4°11'03			
morning rise	4601 Oct 09 01:33	5°  28'57			
direct	4601 Oct 11 09:37	4°  46'45			
asc. node	4601 Oct 16 03:30	6°  22'19			
morning max el	4601 Oct 18 12:36	8°  20'09 17°58'23			
	4601 Nov 01 13:20	0° 			
morning set	4601 Nov 03 06:57	3°  11'03			
superior conj	4601 Nov 13 12:18	21°  40'10 0°56'30			
minimum elong	4601 Nov 13 16:17	21°  57'38 0°55'59			
	4601 Nov 18 08:28	0° 			
max. Earth dist.	4601 Nov 21 02:11	4°  34'40 1.42334 AU			
desc. node	4601 Nov 21 19:38	5°  46'40			
evening rise	4601 Nov 27 03:21	14°  22'31			
	4601 Dec 07 07:22	0° 			
	4601 Dec 29 22:09	0° 			
evening max el	4601 Dec 29 19:16	29°  52'42 22°17'45			
retrograde	4602 Jan 08 09:28	5°  35'06			