

conjunction	4101 Sep 14 10:42	23° \mathbb{M} 09'10	1°05'29		4106 Jul 24 01:06	0° \mathbb{I}	
minimum elong	4101 Sep 14 11:19	23° \mathbb{M} 10'09	1°05'29		4106 Sep 04 11:41	0° \mathfrak{S}	
max. Earth dist.	4101 Sep 19 16:23	26° \mathbb{M} 29'36	2.67021 AU	asc. node	4106 Oct 07 06:13	20° \mathfrak{S} 38'58	
	4101 Sep 25 04:28	0° \mathfrak{L}			4106 Oct 24 08:14	0° \mathcal{O}	
morning rise	4101 Oct 29 10:11	21° \mathfrak{L} 45'35		retrograde	4106 Dec 19 17:05	16° \mathcal{O} 57'13	
	4101 Nov 11 09:39	0° \mathbb{M}		min. Earth dist.	4107 Jan 21 18:15	9° \mathcal{O} 37'28	0.57881 AU
	4101 Dec 28 13:58	0° \mathfrak{A}		opposition	4107 Jan 27 23:49	7° \mathcal{O} 11'07	4°20'57
	4102 Feb 13 14:58	0° \mathfrak{Z}		greatest brilliancy	4107 Jan 27 00:08	7° \mathcal{O} 34'22	-1.7m
desc. node	4102 Feb 25 06:17	7° \mathfrak{Z} 24'55			4107 Feb 20 05:07	30° \mathfrak{R} \mathfrak{S}	
	4102 Apr 01 21:43	0° \approx		direct	4107 Mar 05 18:47	28° \mathfrak{S} 47'09	
	4102 May 20 16:52	0° \mathfrak{H}			4107 Mar 20 01:14	0° \mathcal{O}	
	4102 Jul 16 17:26	0° \mathcal{Y}			4107 Jun 04 18:00	0° \mathbb{M}	
retrograde	4102 Aug 27 21:14	9° \mathcal{Y} 56'15			4107 Jul 28 16:01	0° \mathfrak{L}	
opposition	4102 Sep 26 23:16	4° \mathcal{Y} 58'08	-6°00'03		4107 Sep 16 03:54	0° \mathbb{M}	
greatest brilliancy	4102 Sep 27 05:34	4° \mathcal{Y} 53'57	-3.0m	desc. node	4107 Oct 18 02:05	20° \mathbb{M} 23'32	
min. Earth dist.	4102 Sep 27 07:35	4° \mathcal{Y} 52'37	0.37068 AU		4107 Nov 01 16:29	0° \mathfrak{A}	
direct	4102 Oct 26 17:26	0° \mathcal{Y} 01'19		evening set	4107 Nov 19 07:15	11° \mathfrak{A} 50'07	
asc. node	4103 Jan 02 06:30	23° \mathcal{Y} 07'33		max. Earth dist.	4107 Dec 04 15:54	22° \mathfrak{A} 22'51	2.51805 AU
	4103 Jan 14 07:08	0° \mathfrak{B}			4107 Dec 15 13:50	0° \mathfrak{Z}	
	4103 Mar 03 10:46	0° \mathbb{I}					
	4103 Apr 18 17:05	0° \mathfrak{S}		conjunction	4108 Jan 08 05:15	16° \mathfrak{Z} 52'19	-0°43'51
	4103 Jun 04 05:50	0° \mathcal{O}		minimum elong	4108 Jan 08 03:39	16° \mathfrak{Z} 49'24	0°43'50
	4103 Jul 21 10:37	0° \mathbb{M}			4108 Jan 26 03:57	0° \approx	
evening set	4103 Sep 05 12:08	29° \mathbb{M} 04'26		morning rise	4108 Mar 03 15:03	28° \approx 12'30	
	4103 Sep 06 23:19	0° \mathfrak{L}			4108 Mar 05 23:10	0° \mathfrak{H}	
max. Earth dist.	4103 Oct 12 15:00	22° \mathfrak{L} 36'49	2.67221 AU		4108 Apr 13 15:41	0° \mathcal{Y}	
					4108 May 22 00:34	0° \mathfrak{B}	
conjunction	4103 Oct 20 19:22	27° \mathfrak{L} 50'21	0°42'25		4108 Jun 29 23:29	0° \mathbb{I}	
minimum elong	4103 Oct 20 20:24	27° \mathfrak{L} 52'01	0°42'24		4108 Aug 09 13:02	0° \mathfrak{S}	
	4103 Oct 24 04:23	0° \mathbb{M}		asc. node	4108 Aug 24 04:39	10° \mathfrak{S} 23'37	
morning rise	4103 Dec 03 22:43	26° \mathbb{M} 22'14			4108 Sep 22 01:47	0° \mathcal{O}	
	4103 Dec 09 11:39	0° \mathfrak{A}			4108 Nov 10 17:28	0° \mathbb{M}	
desc. node	4104 Jan 13 04:30	23° \mathfrak{A} 01'49		retrograde	4109 Jan 24 07:39	24° \mathbb{M} 52'39	
	4104 Jan 23 12:52	0° \mathfrak{Z}		min. Earth dist.	4109 Mar 03 05:16	15° \mathbb{M} 54'41	0.66042 AU
	4104 Mar 07 06:38	0° \approx		opposition	4109 Mar 05 15:01	14° \mathbb{M} 56'56	4°31'57
	4104 Apr 18 20:17	0° \mathfrak{H}		greatest brilliancy	4109 Mar 05 05:37	15° \mathbb{M} 06'21	-1.4m
	4104 May 30 15:38	0° \mathcal{Y}		direct	4109 Apr 14 08:23	5° \mathbb{M} 31'12	
	4104 Jul 11 17:57	0° \mathfrak{B}			4109 Jul 01 19:45	0° \mathfrak{L}	
	4104 Aug 26 05:48	0° \mathbb{I}			4109 Aug 25 09:49	0° \mathbb{M}	
retrograde	4104 Nov 03 18:22	25° \mathbb{I} 47'56		desc. node	4109 Sep 04 00:48	5° \mathbb{M} 46'44	
asc. node	4104 Nov 19 06:30	24° \mathbb{I} 02'26			4109 Oct 12 10:15	0° \mathfrak{A}	
min. Earth dist.	4104 Dec 01 07:01	20° \mathbb{I} 36'46	0.44871 AU		4109 Nov 25 14:30	0° \mathfrak{Z}	
opposition	4104 Dec 09 14:02	17° \mathbb{I} 45'39	1°12'47	evening set	4110 Jan 05 16:20	29° \mathfrak{Z} 47'37	
greatest brilliancy	4104 Dec 09 03:47	17° \mathbb{I} 54'29	-2.5m		4110 Jan 05 22:58	0° \approx	
direct	4105 Jan 10 21:00	11° \mathbb{I} 14'23		max. Earth dist.	4110 Jan 30 18:41	18° \approx 46'43	2.38926 AU
	4105 Mar 15 05:46	0° \mathfrak{S}			4110 Feb 14 07:45	0° \mathfrak{H}	
	4105 May 10 01:14	0° \mathcal{O}					
	4105 Jun 29 22:29	0° \mathbb{M}		conjunction	4110 Mar 07 05:42	16° \mathfrak{H} 20'27	-1°03'40
	4105 Aug 18 04:19	0° \mathfrak{L}		minimum elong	4110 Mar 07 06:52	16° \mathfrak{H} 22'43	1°03'40
	4105 Oct 05 00:07	0° \mathbb{M}			4110 Mar 24 13:44	0° \mathcal{Y}	
evening set	4105 Oct 11 02:37	3° \mathbb{M} 54'11			4110 May 01 14:23	0° \mathfrak{B}	
max. Earth dist.	4105 Nov 04 17:00	19° \mathbb{M} 50'22	2.62001 AU	morning rise	4110 May 16 18:13	11° \mathfrak{B} 51'07	
	4105 Nov 20 02:44	0° \mathfrak{A}			4110 Jun 09 07:05	0° \mathbb{I}	
				asc. node	4110 Jul 12 03:39	24° \mathbb{I} 37'48	
conjunction	4105 Nov 25 20:30	3° \mathfrak{A} 49'30	0°02'26		4110 Jul 19 11:51	0° \mathfrak{S}	
minimum elong	4105 Nov 25 20:37	3° \mathfrak{A} 49'41	0°02'26		4110 Aug 30 23:00	0° \mathcal{O}	
behind sun begin	4105 Nov 25 01:26	3° \mathfrak{A} 17'41			4110 Oct 15 14:59	0° \mathbb{M}	
behind sun end	4105 Nov 26 15:47	4° \mathfrak{A} 21'43			4110 Dec 05 20:23	0° \mathfrak{L}	
desc. node	4105 Nov 30 03:06	6° \mathfrak{A} 41'12		retrograde	4111 Feb 27 14:50	28° \mathfrak{L} 17'33	
	4106 Jan 03 06:59	0° \mathfrak{Z}		opposition	4111 Apr 08 15:29	18° \mathfrak{L} 46'44	3°19'37
morning rise	4106 Jan 11 14:33	5° \mathfrak{Z} 47'50		greatest brilliancy	4111 Apr 08 19:44	18° \mathfrak{L} 42'32	-1.3m
	4106 Feb 14 14:05	0° \approx		min. Earth dist.	4111 Apr 10 02:48	18° \mathfrak{L} 11'48	0.67710 AU
	4106 Mar 27 06:51	0° \mathfrak{H}		direct	4111 May 19 22:54	8° \mathfrak{L} 49'38	
	4106 May 05 21:10	0° \mathcal{Y}		desc. node	4111 Jul 22 23:29	26° \mathfrak{L} 51'28	
	4106 Jun 14 02:32	0° \mathfrak{B}			4111 Jul 29 12:29	0° \mathbb{M}	

	4111 Sep 20 21:14	0°♊			4116 Aug 16 07:36	0°♎		
	4111 Nov 05 11:34	0°♊						
	4111 Dec 17 03:43	0°♊		conjunction	4116 Aug 30 12:15	9°♎12'09	1°08'08	
	4112 Jan 25 11:26	0°♊		minimum elong	4116 Aug 30 12:20	9°♎12'17	1°08'08	
	4112 Mar 03 14:55	0°♊		max. Earth dist.	4116 Sep 10 16:07	16°♎23'18	2.65456 AU	
evening set	4112 Mar 11 20:05	6°♊30'11			4116 Oct 01 22:56	0°♎		
	4112 Apr 10 14:58	0°♊		morning rise	4116 Oct 15 16:04	8°♎43'00		
					4116 Nov 18 08:10	0°♎		
conjunction	4112 May 19 16:27	0°♊12'46	-0°06'26		4117 Jan 05 03:50	0°♊		
minimum elong	4112 May 19 17:03	0°♊13'55	0°06'26		4117 Feb 22 15:54	0°♊		
behind sun begin	4112 May 18 14:36	29°♊23'38		desc. node	4117 Mar 13 20:32	11°♊37'07		
behind sun end	4112 May 20 19:30	1°♊04'09			4117 Apr 14 05:18	0°♊		
	4112 May 19 09:43	0°♊			4117 Jun 12 22:01	0°♊		
asc. node	4112 May 29 03:09	7°♊21'35		retrograde	4117 Jul 26 05:42	9°♊45'01		
	4112 Jun 28 17:26	0°♊		opposition	4117 Aug 25 20:49	4°♊31'41	-6°35'00	
max. Earth dist.	4112 Jul 08 12:15	7°♊04'04	2.45143 AU	greatest brilliancy	4117 Aug 27 04:06	4°♊09'39	-2.8m	
morning rise	4112 Jul 23 00:09	17°♊22'46		min. Earth dist.	4117 Aug 31 09:15	2°♊58'47	0.39258 AU	
	4112 Aug 10 02:46	0°♊			4117 Sep 12 19:56	30°♊		
	4112 Sep 23 22:01	0°♊		direct	4117 Sep 27 00:44	28°♊38'48		
	4112 Nov 10 13:08	0°♊			4117 Oct 11 04:25	0°♊		
	4113 Jan 01 17:03	0°♊			4117 Dec 15 14:42	0°♊		
	4113 Mar 15 14:51	0°♊		asc. node	4118 Jan 19 00:13	22°♊27'19		
retrograde	4113 Apr 04 13:12	2°♊12'55			4118 Jan 30 02:50	0°♊		
	4113 Apr 23 07:26	30°♊			4118 Mar 14 18:11	0°♊		
opposition	4113 May 13 02:14	23°♊30'04	1°01'24		4118 Apr 27 20:52	0°♊		
greatest brilliancy	4113 May 13 07:26	23°♊25'04	-1.5m		4118 Jun 12 03:47	0°♊		
min. Earth dist.	4113 May 18 08:11	21°♊29'02	0.62785 AU		4118 Jul 28 14:54	0°♊		
desc. node	4113 Jun 08 22:40	14°♊53'51		evening set	4118 Aug 21 22:22	15°♊29'44		
direct	4113 Jun 23 10:57	13°♊31'22			4118 Sep 13 18:31	0°♊		
	4113 Aug 20 20:04	0°♊		max. Earth dist.	4118 Oct 03 16:00	12°♊38'01	2.67795 AU	
	4113 Oct 12 02:10	0°♊						
	4113 Nov 24 12:47	0°♊		conjunction	4118 Oct 06 20:52	14°♊40'10	0°53'46	
	4114 Jan 03 11:40	0°♊		minimum elong	4118 Oct 06 21:55	14°♊41'50	0°53'45	
	4114 Feb 10 23:10	0°♊			4118 Oct 30 22:08	0°♊		
	4114 Mar 21 06:57	0°♊		morning rise	4118 Nov 19 23:32	12°♊51'43		
asc. node	4114 Apr 16 01:00	19°♊49'41			4118 Dec 16 11:24	0°♊		
	4114 Apr 29 11:24	0°♊		desc. node	4119 Jan 29 19:20	29°♊07'49		
evening set	4114 May 20 22:12	15°♊57'04			4119 Jan 31 02:46	0°♊		
	4114 Jun 09 06:08	0°♊			4119 Mar 16 19:53	0°♊		
					4119 Apr 29 19:28	0°♊		
conjunction	4114 Jul 18 10:20	27°♊31'56	0°52'17		4119 Jun 12 17:13	0°♊		
minimum elong	4114 Jul 18 08:30	27°♊28'46	0°52'16		4119 Jul 28 20:17	0°♊		
	4114 Jul 22 00:40	0°♊		retrograde	4119 Oct 12 14:36	29°♊11'20		
max. Earth dist.	4114 Aug 16 02:12	16°♊56'15	2.57691 AU	min. Earth dist.	4119 Nov 08 00:54	24°♊38'11	0.40121 AU	
	4114 Sep 04 20:28	0°♊		opposition	4119 Nov 14 20:38	22°♊32'46	-1°28'50	
morning rise	4114 Sep 08 14:04	2°♊26'32		greatest brilliancy	4119 Nov 14 12:49	22°♊38'47	-2.8m	
	4114 Oct 21 13:04	0°♊		asc. node	4119 Dec 06 23:24	17°♊26'20		
	4114 Dec 09 01:40	0°♊		direct	4119 Dec 15 09:02	16°♊57'51		
	4115 Jan 29 09:14	0°♊			4120 Feb 03 04:25	0°♊		
	4115 Mar 30 12:45	0°♊			4120 Mar 30 19:16	0°♊		
desc. node	4115 Apr 26 21:28	9°♊09'42			4120 May 19 23:02	0°♊		
retrograde	4115 May 20 17:30	12°♊15'40			4120 Jul 07 21:59	0°♊		
opposition	4115 Jun 25 03:27	4°♊56'01	-2°37'00		4120 Aug 25 07:26	0°♊		
greatest brilliancy	4115 Jun 25 21:44	4°♊39'46	-2.0m	evening set	4120 Sep 26 20:31	20°♊28'11		
min. Earth dist.	4115 Jul 03 09:05	2°♊00'29	0.51872 AU		4120 Oct 11 19:38	0°♊		
	4115 Jul 09 11:17	30°♊		max. Earth dist.	4120 Oct 26 03:23	9°♊12'18	2.64669 AU	
direct	4115 Aug 03 03:12	25°♊57'06						
	4115 Aug 28 11:40	0°♊		conjunction	4120 Nov 11 01:41	19°♊33'21	0°19'23	
	4115 Oct 27 09:19	0°♊		minimum elong	4120 Nov 11 02:17	19°♊34'20	0°19'23	
	4115 Dec 09 20:08	0°♊			4120 Nov 26 22:50	0°♊		
	4116 Jan 18 22:48	0°♊		desc. node	4120 Dec 16 17:37	13°♊12'25		
	4116 Feb 27 10:17	0°♊		morning rise	4120 Dec 26 07:12	19°♊40'25		
asc. node	4116 Mar 03 00:13	3°♊27'36			4121 Jan 10 09:41	0°♊		
	4116 Apr 07 15:22	0°♊			4121 Feb 22 03:50	0°♊		
	4116 May 19 09:07	0°♊			4121 Apr 04 10:05	0°♊		
	4116 Jul 01 23:19	0°♊			4121 May 14 14:52	0°♊		
evening set	4116 Jul 11 16:00	6°♊30'15			4121 Jun 23 12:01	0°♊		

	4121 Aug 03 09:29	0°♈			4126 Sep 29 10:55	0°♈
	4121 Sep 17 04:57	0°♈			4126 Nov 13 07:20	0°♈
asc. node	4121 Oct 23 21:44	19°♈36'52			4126 Dec 24 18:50	0°♈
retrograde	4121 Dec 03 12:20	29°♈31'56			4127 Feb 02 01:50	0°♈
min. Earth dist.	4122 Jan 03 08:14	23°♈00'42	0.53149 AU	evening set	4127 Feb 12 19:04	8°♈22'19
opposition	4122 Jan 10 20:40	20°♈09'26	3°38'43		4127 Mar 12 05:13	0°♈
greatest brilliancy	4122 Jan 09 19:53	20°♈33'03	-2.0m		4127 Apr 19 04:26	0°♈
direct	4122 Feb 15 02:32	12°♈22'01				
	4122 Apr 18 14:04	0°♈		conjunction	4127 Apr 21 20:47	2°♈06'18 -0°35'52
	4122 Jun 15 05:36	0°♈		minimum elong	4127 Apr 21 23:56	2°♈12'28 0°35'50
	4122 Aug 05 15:57	0°♈			4127 May 27 21:10	0°♈
	4122 Sep 23 07:59	0°♈		max. Earth dist.	4127 Jun 11 18:57	11°♈16'51 2.39737 AU
evening set	4122 Nov 03 09:43	26°♈32'09		asc. node	4127 Jun 15 18:23	14°♈15'35
desc. node	4122 Nov 03 16:48	26°♈43'51		morning rise	4127 Jun 30 11:06	25°♈09'04
	4122 Nov 08 15:07	0°♈			4127 Jul 07 02:14	0°♈
max. Earth dist.	4122 Nov 21 19:11	8°♈49'32	2.56330 AU		4127 Aug 18 10:14	0°♈
					4127 Oct 02 09:17	0°♈
conjunction	4122 Dec 21 02:39	28°♈57'50	-0°26'24		4127 Nov 19 20:11	0°♈
minimum elong	4122 Dec 21 01:39	28°♈56'05	0°26'23		4128 Jan 14 13:22	0°♈
	4122 Dec 22 14:12	0°♈		retrograde	4128 Mar 20 13:19	18°♈51'39
	4123 Feb 02 10:05	0°♈		opposition	4128 Apr 28 20:04	9°♈47'01 2°03'05
morning rise	4123 Feb 10 02:13	5°♈39'13		greatest brilliancy	4128 Apr 29 03:13	9°♈40'02 -1.4m
	4123 Mar 14 12:32	0°♈		min. Earth dist.	4128 May 02 15:11	8°♈18'12 0.65496 AU
	4123 Apr 22 12:02	0°♈			4128 Jun 03 00:27	30°♈
	4123 May 31 02:50	0°♈		direct	4128 Jun 09 09:19	29°♈44'27
	4123 Jul 09 07:18	0°♈			4128 Jun 15 21:09	0°♈
asc. node	4123 Aug 19 06:07	0°♈		desc. node	4128 Jun 25 13:15	1°♈16'34
	4123 Sep 10 21:38	15°♈39'40			4128 Sep 03 09:23	0°♈
	4123 Oct 02 21:24	0°♈			4128 Oct 21 15:14	0°♈
	4123 Nov 27 00:14	0°♈			4128 Dec 03 02:34	0°♈
retrograde	4124 Jan 11 16:19	11°♈11'51			4129 Jan 11 16:53	0°♈
min. Earth dist.	4124 Feb 16 20:06	2°♈47'51	0.63601 AU		4129 Feb 18 23:30	0°♈
opposition	4124 Feb 20 18:16	1°♈13'53	4°40'18		4129 Mar 29 02:44	0°♈
greatest brilliancy	4124 Feb 20 02:30	1°♈29'37	-1.5m	evening set	4129 Apr 25 07:38	21°♈03'08
	4124 Feb 23 20:47	30°♈		asc. node	4129 May 02 18:30	26°♈44'15
direct	4124 Mar 30 11:59	22°♈07'48			4129 May 07 01:43	0°♈
	4124 May 09 06:14	0°♈			4129 Jun 16 14:25	0°♈
	4124 Jul 12 17:17	0°♈				
	4124 Sep 02 13:14	0°♈		conjunction	4129 Jun 27 14:58	7°♈55'05 0°34'50
desc. node	4124 Sep 20 16:06	11°♈13'30		minimum elong	4129 Jun 27 12:57	7°♈51'29 0°34'48
	4124 Oct 19 19:33	0°♈			4129 Jul 29 03:36	0°♈
	4124 Dec 02 19:32	0°♈		max. Earth dist.	4129 Aug 03 14:57	3°♈45'05 2.53230 AU
evening set	4124 Dec 16 03:49	9°♈29'11		morning rise	4129 Aug 22 18:06	16°♈41'01
max. Earth dist.	4124 Dec 31 01:14	20°♈16'52	2.43848 AU		4129 Sep 11 20:57	0°♈
	4125 Jan 13 05:22	0°♈			4129 Oct 28 18:18	0°♈
					4129 Dec 17 04:31	0°♈
conjunction	4125 Feb 09 16:04	20°♈43'22	-1°03'11		4130 Feb 09 15:03	0°♈
minimum elong	4125 Feb 09 15:02	20°♈41'22	1°03'11	retrograde	4130 May 01 01:20	25°♈38'57
	4125 Feb 21 17:26	0°♈		desc. node	4130 May 13 12:08	24°♈40'58
	4125 Apr 01 02:44	0°♈		opposition	4130 Jun 06 22:35	17°♈41'05 -1°01'37
morning rise	4125 Apr 15 19:31	11°♈34'48		greatest brilliancy	4130 Jun 07 05:00	17°♈35'10 -1.8m
	4125 May 09 05:44	0°♈		min. Earth dist.	4130 Jun 14 05:32	14°♈59'05 0.56749 AU
	4125 Jun 16 23:33	0°♈		direct	4130 Jul 17 06:06	8°♈07'13
	4125 Jul 27 05:28	0°♈			4130 Sep 21 22:59	0°♈
asc. node	4125 Jul 28 20:02	1°♈09'57			4130 Nov 08 16:14	0°♈
	4125 Sep 07 21:36	0°♈			4130 Dec 20 00:21	0°♈
	4125 Oct 24 09:30	0°♈			4131 Jan 28 04:46	0°♈
	4125 Dec 18 13:14	0°♈			4131 Mar 08 01:20	0°♈
retrograde	4126 Feb 14 05:51	15°♈40'32		asc. node	4131 Mar 20 17:44	9°♈41'30
opposition	4126 Mar 26 12:28	5°♈57'11	3°55'23		4131 Apr 16 17:38	0°♈
min. Earth dist.	4126 Mar 26 11:32	5°♈58'07	0.67860 AU		4131 May 27 23:46	0°♈
greatest brilliancy	4126 Mar 26 12:14	5°♈57'25	-1.3m	evening set	4131 Jun 23 22:48	18°♈53'23
	4126 Apr 11 17:51	30°♈			4131 Jul 10 04:08	0°♈
direct	4126 May 06 08:48	26°♈09'11				
	4126 Jun 02 04:41	0°♈		conjunction	4131 Aug 15 12:55	24°♈17'55 1°06'18
desc. node	4126 Aug 08 14:50	29°♈12'04		minimum elong	4131 Aug 15 12:16	24°♈16'51 1°06'18
	4126 Aug 10 01:55	0°♈			4131 Aug 24 05:36	0°♈

max. Earth dist.	4131 Sep 02 01:21	5° \cap 44'59	2.63038 AU	opposition	4136 Dec 22 04:23	0° \ominus 39'32	2°19'50
morning rise	4131 Oct 02 11:45	25° \cap 20'21			4136 Dec 24 00:39	30° \mathbb{R} II	
	4131 Oct 09 19:18	0° $\underline{\mathbf{L}}$		direct	4137 Jan 24 14:29	23° \mathbb{I} 38'27	
	4131 Nov 26 11:30	0° \mathbb{M}			4137 Feb 27 13:15	0° \ominus	
	4132 Jan 14 05:19	0° \mathbb{A}			4137 May 02 18:42	0° Ω	
	4132 Mar 05 01:15	0° \mathbb{B}			4137 Jun 24 08:00	0° \cap	
desc. node	4132 Mar 30 11:13	13° \mathbb{B} 59'38			4137 Aug 13 05:24	0° $\underline{\mathbf{L}}$	
	4132 May 02 04:56	0° \approx			4137 Sep 30 07:56	0° \mathbb{M}	
retrograde	4132 Jun 26 09:50	14° \approx 19'55		evening set	4137 Oct 19 09:07	12° \mathbb{M} 12'53	
opposition	4132 Jul 29 00:10	8° \approx 16'34	-5°22'51	max. Earth dist.	4137 Nov 10 15:35	26° \mathbb{M} 46'36	2.60199 AU
greatest brilliancy	4132 Jul 30 11:51	7° \approx 48'16	-2.5m		4137 Nov 15 12:21	0° \mathbb{A}	
min. Earth dist.	4132 Aug 06 00:28	5° \approx 45'21	0.43671 AU	desc. node	4137 Nov 20 08:14	3° \mathbb{A} 12'57	
direct	4132 Sep 02 07:40	0° \approx 58'15					
	4132 Nov 16 15:31	0° \mathbb{H}		conjunction	4137 Dec 04 15:30	12° \mathbb{A} 50'20	-0°08'03
	4132 Dec 31 02:53	0° \mathbb{Y}		minimum elong	4137 Dec 04 15:13	12° \mathbb{A} 49'51	0°08'03
asc. node	4133 Feb 04 16:00	25° \mathbb{Y} 35'03		behind sun begin	4137 Dec 03 21:50	12° \mathbb{A} 20'26	
	4133 Feb 10 18:16	0° \mathbb{B}		behind sun end	4137 Dec 05 08:36	13° \mathbb{A} 19'17	
	4133 Mar 24 10:48	0° \mathbb{I}			4137 Dec 29 15:02	0° \mathbb{B}	
	4133 May 06 07:32	0° \ominus		morning rise	4138 Jan 21 14:33	16° \mathbb{B} 11'53	
	4133 Jun 19 18:14	0° Ω			4138 Feb 09 18:13	0° \approx	
	4133 Aug 04 16:13	0° \cap			4138 Mar 22 05:34	0° \mathbb{H}	
evening set	4133 Aug 06 16:41	1° \cap 18'07			4138 Apr 30 13:47	0° \mathbb{Y}	
	4133 Sep 20 13:11	0° $\underline{\mathbf{L}}$			4138 Jun 08 12:43	0° \mathbb{B}	
					4138 Jul 18 02:22	0° \mathbb{I}	
conjunction	4133 Sep 22 17:25	1° $\underline{\mathbf{L}}$ 23'06	1°02'09		4138 Aug 28 18:28	0° \ominus	
minimum elong	4133 Sep 22 18:15	1° $\underline{\mathbf{L}}$ 24'27	1°02'08	asc. node	4138 Sep 27 12:55	19° \ominus 39'43	
max. Earth dist.	4133 Sep 24 20:55	2° $\underline{\mathbf{L}}$ 45'01	2.67521 AU		4138 Oct 14 17:07	0° Ω	
morning rise	4133 Nov 06 06:26	29° $\underline{\mathbf{L}}$ 42'57		retrograde	4138 Dec 28 09:12	26° Ω 29'18	
	4133 Nov 06 17:09	0° \mathbb{M}		min. Earth dist.	4139 Jan 31 14:16	18° Ω 44'35	0.60193 AU
	4133 Dec 23 15:04	0° \mathbb{A}		greatest brilliancy	4139 Feb 05 02:49	16° Ω 57'18	-1.6m
	4134 Feb 08 02:00	0° \mathbb{B}		opposition	4139 Feb 06 00:14	16° Ω 36'04	4°33'49
desc. node	4134 Feb 15 10:11	4° \mathbb{B} 45'49		direct	4139 Mar 15 13:12	7° Ω 55'06	
	4134 Mar 26 05:40	0° \approx			4139 May 27 15:47	0° \cap	
	4134 May 11 15:57	0° \mathbb{H}			4139 Jul 22 23:33	0° $\underline{\mathbf{L}}$	
	4134 Jun 29 12:07	0° \mathbb{Y}			4139 Sep 11 04:42	0° \mathbb{M}	
retrograde	4134 Sep 14 16:16	28° \mathbb{Y} 21'29		desc. node	4139 Oct 08 07:04	17° \mathbb{M} 08'21	
min. Earth dist.	4134 Oct 12 13:55	23° \mathbb{Y} 47'59	0.37296 AU		4139 Oct 27 23:31	0° \mathbb{A}	
opposition	4134 Oct 15 08:47	23° \mathbb{Y} 02'47	-4°38'54	evening set	4139 Nov 28 21:11	21° \mathbb{A} 35'51	
greatest brilliancy	4134 Oct 15 02:26	23° \mathbb{Y} 07'05	-3.0m		4139 Dec 10 22:15	0° \mathbb{B}	
direct	4134 Nov 13 16:52	18° \mathbb{Y} 07'40		max. Earth dist.	4139 Dec 13 04:42	1° \mathbb{B} 35'50	2.49088 AU
asc. node	4134 Dec 23 15:46	27° \mathbb{Y} 17'05					
	4134 Dec 29 23:51	0° \mathbb{B}		conjunction	4140 Jan 19 10:28	28° \mathbb{B} 29'31	-0°52'35
	4135 Feb 23 00:51	0° \mathbb{I}		minimum elong	4140 Jan 19 08:44	28° \mathbb{B} 26'19	0°52'34
	4135 Apr 12 07:12	0° \ominus			4140 Jan 21 11:25	0° \approx	
	4135 May 29 18:40	0° Ω			4140 Mar 01 04:23	0° \mathbb{H}	
	4135 Jul 16 11:35	0° \cap		morning rise	4140 Mar 17 23:40	12° \mathbb{H} 59'41	
	4135 Sep 02 06:32	0° $\underline{\mathbf{L}}$			4140 Apr 08 18:12	0° \mathbb{Y}	
evening set	4135 Sep 13 16:06	7° $\underline{\mathbf{L}}$ 11'03			4140 May 17 00:30	0° \mathbb{B}	
max. Earth dist.	4135 Oct 17 20:42	28° $\underline{\mathbf{L}}$ 54'08	2.66533 AU		4140 Jun 24 20:31	0° \mathbb{I}	
	4135 Oct 19 13:51	0° \mathbb{M}			4140 Aug 04 05:21	0° \ominus	
				asc. node	4140 Aug 14 13:00	7° \ominus 23'58	
conjunction	4135 Oct 28 19:46	5° \mathbb{M} 56'10	0°34'35		4140 Sep 16 06:59	0° Ω	
minimum elong	4135 Oct 28 20:43	5° \mathbb{M} 57'40	0°34'35		4140 Nov 03 06:57	0° \cap	
	4135 Dec 04 19:26	0° \mathbb{A}			4141 Jan 09 18:19	0° $\underline{\mathbf{L}}$	
morning rise	4135 Dec 12 04:57	4° \mathbb{A} 52'58		retrograde	4141 Feb 01 00:23	2° $\underline{\mathbf{L}}$ 53'46	
desc. node	4136 Jan 03 09:07	19° \mathbb{A} 40'49			4141 Feb 21 20:04	30° \mathbb{R} \cap	
	4136 Jan 18 15:04	0° \mathbb{B}		min. Earth dist.	4141 Mar 11 19:03	23° \cap 38'39	0.66974 AU
	4136 Mar 01 23:29	0° \approx		opposition	4141 Mar 13 08:27	23° \cap 01'15	4°21'36
	4136 Apr 13 00:08	0° \mathbb{H}		greatest brilliancy	4141 Mar 13 02:32	23° \cap 07'11	-1.3m
	4136 May 24 02:32	0° \mathbb{Y}		direct	4141 Apr 22 12:29	13° \cap 26'22	
	4136 Jul 04 03:12	0° \mathbb{B}			4141 Jun 23 03:38	0° $\underline{\mathbf{L}}$	
	4136 Aug 16 01:53	0° \mathbb{I}			4141 Aug 19 15:25	0° \mathbb{M}	
	4136 Oct 07 18:27	0° \ominus		desc. node	4141 Aug 25 05:31	3° \mathbb{M} 16'02	
asc. node	4136 Nov 09 15:02	9° \ominus 03'38			4141 Oct 07 09:08	0° \mathbb{A}	
retrograde	4136 Nov 15 06:40	9° \ominus 17'32			4141 Nov 20 19:00	0° \mathbb{B}	
min. Earth dist.	4136 Dec 13 20:53	3° \ominus 38'42	0.47858 AU		4142 Jan 01 04:54	0° \approx	
greatest brilliancy	4136 Dec 21 09:44	0° \ominus 56'20	-2.3m	evening set	4142 Jan 18 12:33	13° \approx 03'08	

	4142 Feb 09 13:20	0°♄			4146 Aug 31 03:57	0°♄	
max. Earth dist.	4142 Mar 08 17:21	21°♄16'42	2.37060 AU	morning rise	4146 Sep 17 13:32	11°♄19'19	
	4142 Mar 19 18:25	0°♄			4146 Oct 16 18:19	0°♄	
					4146 Dec 03 21:25	0°♄	
conjunction	4142 Mar 23 02:31	2°♄38'17	-0°57'40		4147 Jan 23 00:22	0°♄	
minimum elong	4142 Mar 23 05:10	2°♄43'32	0°57'40		4147 Mar 19 03:07	0°♄	
	4142 Apr 26 18:24	0°♄		desc. node	4147 Apr 17 02:03	12°♄55'36	
morning rise	4142 Jun 02 18:41	28°♄43'52		retrograde	4147 Jun 02 07:28	23°♄16'13	
	4142 Jun 04 10:32	0°♄		opposition	4147 Jul 06 18:01	16°♄21'36	-3°37'15
asc. node	4142 Jul 02 12:36	21°♄07'49		greatest brilliancy	4147 Jul 07 19:48	15°♄59'22	-2.2m
	4142 Jul 14 14:16	0°♄		min. Earth dist.	4147 Jul 15 04:41	13°♄27'24	0.48947 AU
	4142 Aug 25 22:38	0°♄		direct	4147 Aug 13 15:34	7°♄51'42	
	4142 Oct 10 05:16	0°♄			4147 Oct 17 10:14	0°♄	
	4142 Nov 29 01:12	0°♄			4147 Dec 02 14:45	0°♄	
retrograde	4143 Feb 01 13:29	0°♄			4148 Jan 12 16:15	0°♄	
	4143 Mar 07 10:39	6°♄00'52			4148 Feb 21 16:44	0°♄	
	4143 Apr 07 11:01	30°♄♄		asc. node	4148 Feb 22 09:26	0°♄31'12	
opposition	4143 Apr 16 06:10	26°♄38'22	2°54'11		4148 Apr 02 07:13	0°♄	
greatest brilliancy	4143 Apr 16 12:06	26°♄32'31	-1.3m		4148 May 14 08:05	0°♄	
min. Earth dist.	4143 Apr 18 13:34	25°♄43'47	0.67202 AU		4148 Jun 27 03:49	0°♄	
direct	4143 May 27 17:08	16°♄37'49		evening set	4148 Jul 21 11:23	16°♄09'23	
desc. node	4143 Jul 13 04:11	27°♄10'02			4148 Aug 11 15:33	0°♄	
	4143 Jul 20 00:52	0°♄					
	4143 Sep 14 20:49	0°♄		conjunction	4148 Sep 08 03:15	17°♄43'51	1°07'04
	4143 Oct 31 05:29	0°♄		minimum elong	4148 Sep 08 03:41	17°♄44'31	1°07'04
	4143 Dec 12 03:48	0°♄		max. Earth dist.	4148 Sep 16 01:15	22°♄47'53	2.66423 AU
	4144 Jan 20 13:36	0°♄			4148 Sep 27 08:01	0°♄	
	4144 Feb 27 17:47	0°♄		morning rise	4148 Oct 23 13:46	16°♄40'31	
evening set	4144 Mar 28 03:30	23°♄13'42			4148 Nov 13 14:35	0°♄	
	4144 Apr 05 18:27	0°♄			4148 Dec 31 01:00	0°♄	
	4144 May 14 14:00	0°♄			4149 Feb 16 15:44	0°♄	
asc. node	4144 May 19 10:35	3°♄40'59		desc. node	4149 Mar 04 01:41	9°♄38'11	
					4149 Apr 06 02:38	0°♄	
conjunction	4144 Jun 03 16:49	15°♄07'35	0°10'13		4149 May 27 19:29	0°♄	
minimum elong	4144 Jun 03 15:58	15°♄06'00	0°10'12	retrograde	4149 Aug 13 12:39	26°♄43'11	
behind sun begin	4144 Jun 02 18:42	14°♄26'26		opposition	4149 Sep 12 13:53	21°♄45'35	-6°32'51
behind sun end	4144 Jun 04 13:15	15°♄45'31		greatest brilliancy	4149 Sep 13 08:51	21°♄32'49	-2.9m
	4144 Jun 23 22:31	0°♄		min. Earth dist.	4149 Sep 15 10:54	20°♄59'11	0.37660 AU
max. Earth dist.	4144 Jul 19 06:03	18°♄05'56	2.48157 AU	direct	4149 Oct 13 05:16	16°♄31'02	
morning rise	4144 Aug 03 21:02	28°♄59'23			4149 Nov 30 14:28	0°♄	
	4144 Aug 05 08:11	0°♄		asc. node	4150 Jan 09 07:16	22°♄25'32	
	4144 Sep 19 01:08	0°♄			4150 Jan 21 07:14	0°♄	
	4144 Nov 05 07:14	0°♄			4150 Mar 07 22:30	0°♄	
	4144 Dec 26 03:25	0°♄			4150 Apr 22 01:39	0°♄	
	4145 Feb 25 06:22	0°♄			4150 Jun 06 23:13	0°♄	
retrograde	4145 Apr 13 16:45	10°♄42'07			4150 Jul 23 18:56	0°♄	
opposition	4145 May 21 17:21	2°♄13'34	0°19'53	evening set	4150 Aug 30 07:47	23°♄47'31	
greatest brilliancy	4145 May 21 19:24	2°♄11'38	-1.6m		4150 Sep 09 03:06	0°♄	
	4145 May 27 13:44	30°♄♄		max. Earth dist.	4150 Oct 08 20:03	18°♄50'48	2.67587 AU
min. Earth dist.	4145 May 27 17:39	29°♄56'18	0.60889 AU				
desc. node	4145 May 30 02:45	29°♄03'08		conjunction	4150 Oct 14 20:21	22°♄40'34	0°47'28
direct	4145 Jul 01 19:41	22°♄20'28		minimum elong	4150 Oct 14 21:26	22°♄42'16	0°47'27
	4145 Aug 08 04:01	0°♄			4150 Oct 26 07:41	0°♄	
	4145 Oct 05 06:33	0°♄		morning rise	4150 Nov 27 21:55	20°♄59'33	
	4145 Nov 18 18:29	0°♄			4150 Dec 11 17:54	0°♄	
	4145 Dec 29 02:45	0°♄		desc. node	4151 Jan 20 00:04	25°♄56'09	
	4146 Feb 05 18:52	0°♄			4151 Jan 26 01:46	0°♄	
	4146 Mar 16 05:58	0°♄			4151 Mar 11 05:42	0°♄	
asc. node	4146 Apr 06 09:50	16°♄16'29			4151 Apr 23 09:12	0°♄	
	4146 Apr 24 13:16	0°♄			4151 Jun 04 23:00	0°♄	
evening set	4146 Jun 02 23:50	28°♄57'41			4151 Jul 18 07:06	0°♄	
	4146 Jun 04 10:35	0°♄			4151 Sep 05 12:01	0°♄	
	4146 Jul 17 07:23	0°♄		retrograde	4151 Oct 26 04:30	15°♄14'15	
conjunction	4146 Jul 29 03:24	8°♄02'29	0°59'11	min. Earth dist.	4151 Nov 22 00:30	10°♄23'32	0.42587 AU
minimum elong	4146 Jul 29 01:57	8°♄00'02	0°59'10	asc. node	4151 Nov 27 06:50	8°♄40'17	
max. Earth dist.	4146 Aug 22 14:15	24°♄21'47	2.59817 AU	opposition	4151 Nov 29 23:03	7°♄47'14	0°10'12
				greatest brilliancy	4151 Nov 29 21:39	7°♄48'23	-2.7m

direct	4151 Dec 31 09:16	1° Π 41'27		conjunction	4157 Feb 23 14:57	5° H 09'39	-1°05'03
	4152 Mar 21 21:04	0° G		minimum elong	4157 Feb 23 15:01	5° H 09'45	1°05'03
	4152 May 13 16:03	0° Ω			4157 Mar 27 07:03	0° Υ	
	4152 Jul 02 14:48	0° M		morning rise	4157 May 03 03:22	29° Υ 02'57	
	4152 Aug 20 11:21	0° L			4157 May 04 08:26	0° B	
evening set	4152 Oct 04 23:50	28° L 36'18			4157 Jun 12 00:51	0° Π	
	4152 Oct 07 04:19	0° M		asc. node	4157 Jul 19 04:04	27° Π 47'32	
max. Earth dist.	4152 Oct 31 16:33	15° M 47'30	2.63296 AU		4157 Jul 22 04:37	0° G	
					4157 Sep 02 15:56	0° Ω	
conjunction	4152 Nov 19 10:15	28° M 04'45	0°09'43		4157 Oct 18 12:45	0° M	
minimum elong	4152 Nov 19 10:34	28° M 05'17	0°09'42		4157 Dec 09 21:02	0° L	
behind sun begin	4152 Nov 18 19:04	27° M 39'41		retrograde	4158 Feb 21 22:01	23° L 24'03	
behind sun end	4152 Nov 20 02:04	28° M 30'53		opposition	4158 Apr 03 01:29	13° L 47'16	3°35'34
	4152 Nov 22 07:55	0° J		greatest brilliancy	4158 Apr 03 03:55	13° L 44'50	-1.3m
desc. node	4152 Dec 06 22:34	9° J 44'51		min. Earth dist.	4158 Apr 03 20:46	13° L 28'07	0.67901 AU
morning rise	4153 Jan 04 09:27	29° J 07'14		direct	4158 May 14 03:57	3° L 53'41	
	4153 Jan 05 16:00	0° B		desc. node	4158 Jul 29 18:45	27° L 53'49	
	4153 Feb 17 04:44	0° \approx			4158 Aug 02 21:31	0° M	
	4153 Mar 30 04:01	0° H			4158 Sep 23 21:58	0° J	
	4153 May 09 00:38	0° Υ			4158 Nov 08 05:58	0° B	
	4153 Jun 17 12:12	0° B			4158 Dec 19 21:22	0° \approx	
	4153 Jul 27 18:14	0° Π			4159 Jan 28 05:42	0° H	
	4153 Sep 08 21:17	0° G		evening set	4159 Feb 28 07:45	24° H 24'29	
asc. node	4153 Oct 14 06:56	21° G 14'23			4159 Mar 07 09:23	0° Υ	
	4153 Nov 01 06:51	0° Ω			4159 Apr 14 08:47	0° B	
retrograde	4153 Dec 12 23:49	10° Ω 11'44					
min. Earth dist.	4154 Jan 14 01:11	3° Ω 12'43	0.55845 AU	conjunction	4159 May 08 08:35	18° B 42'05	-0°19'27
opposition	4154 Jan 20 20:55	0° Ω 34'13	4°07'03	minimum elong	4159 May 08 10:27	18° B 45'41	0°19'26
greatest brilliancy	4154 Jan 19 20:02	0° Ω 58'24	-1.8m		4159 May 23 01:52	0° Π	
	4154 Jan 22 08:21	30° R G		asc. node	4159 Jun 06 03:46	10° Π 39'28	
direct	4154 Feb 25 23:43	22° G 25'30		max. Earth dist.	4159 Jun 29 07:49	27° Π 50'01	2.42671 AU
	4154 Apr 05 05:07	0° Ω			4159 Jul 02 07:02	0° G	
	4154 Jun 08 13:27	0° M		morning rise	4159 Jul 14 05:09	8° G 37'11	
	4154 Jul 31 07:56	0° L			4159 Aug 13 14:13	0° Ω	
	4154 Sep 18 11:55	0° M			4159 Sep 27 09:04	0° M	
desc. node	4154 Oct 24 21:41	23° M 21'35			4159 Nov 14 05:46	0° L	
	4154 Nov 03 23:16	0° J			4160 Jan 06 11:47	0° M	
evening set	4154 Nov 12 07:53	5° J 34'36		retrograde	4160 Mar 29 00:05	26° M 53'12	
max. Earth dist.	4154 Nov 28 21:40	16° J 48'34	2.53907 AU	opposition	4160 May 06 21:32	18° M 00'09	1°28'27
	4154 Dec 17 22:37	0° B		greatest brilliancy	4160 May 07 03:58	17° M 53'55	-1.5m
				min. Earth dist.	4160 May 11 12:07	16° M 13'04	0.64111 AU
conjunction	4154 Dec 31 03:23	9° B 19'42	-0°36'41	desc. node	4160 Jun 15 18:17	7° M 59'41	
minimum elong	4154 Dec 31 02:01	9° B 17'14	0°36'39	direct	4160 Jun 17 08:51	7° M 58'41	
	4155 Jan 28 16:16	0° \approx			4160 Aug 26 09:01	0° J	
morning rise	4155 Feb 22 08:52	18° \approx 24'22			4160 Oct 15 16:25	0° B	
	4155 Mar 09 15:25	0° H			4160 Nov 27 17:14	0° \approx	
	4155 Apr 17 11:12	0° Υ			4161 Jan 06 12:57	0° H	
	4155 May 25 22:26	0° B			4161 Feb 13 22:15	0° Υ	
	4155 Jul 03 22:56	0° Π			4161 Mar 24 03:34	0° B	
	4155 Aug 13 14:29	0° G		asc. node	4161 Apr 23 02:02	23° B 05'19	
asc. node	4155 Sep 01 05:33	13° G 06'18			4161 May 02 04:47	0° Π	
	4155 Sep 26 10:30	0° Ω		evening set	4161 May 10 04:07	5° Π 59'43	
	4155 Nov 16 13:00	0° M			4161 Jun 11 19:33	0° G	
retrograde	4156 Jan 19 14:16	19° M 36'33					
min. Earth dist.	4156 Feb 25 17:23	10° M 52'58	0.65072 AU	conjunction	4161 Jul 09 18:15	19° G 50'19	0°45'44
opposition	4156 Feb 28 19:11	9° M 39'08	4°37'10	minimum elong	4161 Jul 09 16:13	19° G 46'48	0°45'42
greatest brilliancy	4156 Feb 28 06:57	9° M 51'23	-1.4m		4161 Jul 24 10:24	0° Ω	
direct	4156 Apr 08 01:51	0° M 21'36		max. Earth dist.	4161 Aug 10 23:28	11° Ω 56'15	2.55789 AU
	4156 Jul 05 19:41	0° L		morning rise	4161 Sep 01 12:59	26° Ω 18'37	
	4156 Aug 28 04:14	0° M			4161 Sep 07 03:37	0° M	
desc. node	4156 Sep 10 20:16	8° M 19'16			4161 Oct 23 20:53	0° L	
	4156 Oct 14 22:05	0° J			4161 Dec 11 16:36	0° M	
	4156 Nov 28 02:00	0° B			4162 Feb 02 01:03	0° J	
evening set	4156 Dec 27 10:35	21° B 05'01			4162 Apr 09 23:54	0° B	
	4157 Jan 08 12:19	0° \approx		desc. node	4162 May 03 17:16	4° B 53'53	
max. Earth dist.	4157 Jan 14 21:46	4° \approx 46'32	2.41028 AU	retrograde	4162 May 11 21:03	5° B 17'12	
	4157 Feb 16 23:24	0° H			4162 Jun 10 06:41	30° R J	

opposition	4162 Jun 16 23:18	27° ♊ 39'18	-1°54'44	max. Earth dist.	4167 Oct 23 05:31	5° ♍ 17'47	2.65613 AU
greatest brilliancy	4162 Jun 17 12:06	27° ♊ 27'40	-1.9m				
min. Earth dist.	4162 Jun 24 19:39	24° ♊ 48'12	0.54139 AU	conjunction	4167 Nov 05 22:19	14° ♍ 08'33	0°25'58
direct	4162 Jul 26 14:44	18° ♊ 22'05		minimum elong	4167 Nov 05 23:05	14° ♍ 09'48	0°25'58
	4162 Sep 10 05:29	0° ♋			4167 Nov 30 04:10	0° ♊	
	4162 Nov 01 11:44	0° ♌		morning rise	4167 Dec 20 16:44	13° ♊ 39'14	
	4162 Dec 13 21:03	0° ♍		desc. node	4167 Dec 24 13:27	16° ♊ 14'59	
	4163 Jan 22 12:31	0° ♎			4168 Jan 13 19:45	0° ♋	
	4163 Mar 02 16:03	0° ♏			4168 Feb 25 20:40	0° ♌	
asc. node	4163 Mar 11 00:56	6° ♏ 21'44			4168 Apr 07 11:16	0° ♍	
	4163 Apr 11 14:05	0° ♐			4168 May 18 00:54	0° ♎	
	4163 May 23 01:03	0° ♑			4168 Jun 27 08:07	0° ♏	
evening set	4163 Jul 04 20:46	29° ♑ 38'21			4168 Aug 07 21:05	0° ♐	
	4163 Jul 05 09:34	0° ♒			4168 Sep 23 14:16	0° ♑	
	4163 Aug 19 13:36	0° ♓		asc. node	4168 Oct 30 22:41	17° ♑ 10'28	
				retrograde	4168 Nov 25 23:19	21° ♑ 38'10	
conjunction	4163 Aug 24 19:46	3° ♓ 25'30	1°07'57	min. Earth dist.	4168 Dec 25 18:18	15° ♑ 30'02	0.50825 AU
minimum elong	4163 Aug 24 19:33	3° ♓ 25'09	1°07'57	opposition	4169 Jan 02 17:14	12° ♑ 32'36	3°10'48
max. Earth dist.	4163 Sep 07 17:25	12° ♓ 25'48	2.64493 AU	greatest brilliancy	4169 Jan 01 17:52	12° ♑ 54'25	-2.1m
	4163 Oct 05 03:28	0° ♈		direct	4169 Feb 06 04:33	5° ♑ 04'29	
morning rise	4163 Oct 10 16:31	3° ♈ 31'40			4169 Apr 24 08:34	0° ♒	
	4163 Nov 21 15:00	0° ♉			4169 Jun 18 09:53	0° ♓	
	4164 Jan 08 19:06	0° ♊			4169 Aug 08 03:25	0° ♈	
	4164 Feb 27 03:46	0° ♋			4169 Sep 25 14:04	0° ♉	
desc. node	4164 Mar 20 15:58	13° ♋ 10'50		evening set	4169 Oct 27 21:07	20° ♋ 46'38	
	4164 Apr 20 00:39	0° ♌		desc. node	4169 Nov 10 12:25	29° ♋ 45'51	
retrograde	4164 Jul 12 13:52	28° ♌ 28'39			4169 Nov 10 20:56	0° ♊	
opposition	4164 Aug 13 01:20	22° ♌ 54'35	-6°11'35	max. Earth dist.	4169 Nov 16 24:00	4° ♊ 04'55	2.58154 AU
greatest brilliancy	4164 Aug 14 13:26	22° ♌ 27'48	-2.6m				
min. Earth dist.	4164 Aug 20 01:26	20° ♌ 50'38	0.41052 AU	conjunction	4169 Dec 13 20:34	22° ♊ 18'29	-0°18'40
direct	4164 Sep 15 15:53	16° ♌ 23'44		minimum elong	4169 Dec 13 19:52	22° ♊ 17'17	0°18'40
	4164 Nov 02 16:22	0° ♍			4169 Dec 24 22:51	0° ♋	
	4164 Dec 22 13:25	0° ♎		morning rise	4170 Feb 01 07:57	27° ♋ 21'28	
asc. node	4165 Jan 26 00:52	23° ♎ 46'27			4170 Feb 04 22:55	0° ♌	
	4165 Feb 03 21:05	0° ♏			4170 Mar 17 06:07	0° ♍	
	4165 Mar 18 11:19	0° ♐			4170 Apr 25 09:45	0° ♎	
	4165 Apr 30 21:56	0° ♑			4170 Jun 03 03:44	0° ♏	
	4165 Jun 14 18:05	0° ♒			4170 Jul 12 11:07	0° ♐	
	4165 Jul 30 22:06	0° ♓			4170 Aug 22 14:32	0° ♑	
evening set	4165 Aug 15 12:32	9° ♓ 59'39		asc. node	4170 Sep 17 22:22	17° ♑ 56'22	
	4165 Sep 15 22:17	0° ♈			4170 Oct 06 21:29	0° ♒	
					4170 Dec 06 02:59	0° ♓	
conjunction	4165 Sep 30 21:00	9° ♈ 29'59	0°57'37	retrograde	4171 Jan 05 16:37	5° ♓ 31'13	
minimum elong	4165 Sep 30 22:00	9° ♈ 31'34	0°57'37		4171 Feb 03 03:38	30° ♈ 00	
max. Earth dist.	4165 Sep 30 01:02	8° ♈ 58'16	2.67782 AU	min. Earth dist.	4171 Feb 09 23:53	27° ♈ 23'50	0.62188 AU
	4165 Nov 02 01:57	0° ♉		opposition	4171 Feb 14 13:54	25° ♈ 34'15	4°39'55
morning rise	4165 Nov 14 02:36	7° ♉ 41'09		greatest brilliancy	4171 Feb 13 19:26	25° ♈ 52'41	-1.5m
	4165 Dec 18 19:05	0° ♊		direct	4171 Mar 24 18:46	16° ♈ 38'42	
	4166 Feb 02 18:59	0° ♋			4171 May 17 18:04	0° ♉	
desc. node	4166 Feb 05 15:01	1° ♋ 51'54			4171 Jul 16 22:55	0° ♊	
	4166 Mar 20 02:03	0° ♌			4171 Sep 06 02:14	0° ♋	
	4166 May 03 23:42	0° ♍		desc. node	4171 Sep 28 11:44	13° ♋ 59'47	
	4166 Jun 18 10:55	0° ♎			4171 Oct 23 04:39	0° ♌	
	4166 Aug 07 19:28	0° ♏			4171 Dec 06 05:29	0° ♍	
retrograde	4166 Oct 01 01:07	16° ♏ 32'34		evening set	4171 Dec 09 00:45	1° ♍ 58'26	
min. Earth dist.	4166 Oct 27 17:10	12° ♏ 05'51	0.38519 AU	max. Earth dist.	4171 Dec 23 04:16	12° ♍ 03'15	2.46199 AU
opposition	4166 Nov 02 01:05	10° ♏ 33'35	-2°52'26		4172 Jan 16 17:47	0° ♎	
greatest brilliancy	4166 Nov 01 14:31	10° ♏ 41'15	-2.9m				
direct	4166 Dec 01 21:45	5° ♏ 20'58		conjunction	4172 Jan 31 15:00	11° ♎ 07'42	-0°59'36
asc. node	4166 Dec 14 00:15	6° ♏ 18'16		minimum elong	4172 Jan 31 13:29	11° ♎ 04'51	0°59'35
	4167 Feb 12 13:34	0° ♐			4172 Feb 25 08:50	0° ♍	
	4167 Apr 05 07:31	0° ♑		morning rise	4172 Apr 02 18:34	29° ♍ 09'10	
	4167 May 24 02:12	0° ♒			4172 Apr 03 20:27	0° ♎	
	4167 Jul 11 10:14	0° ♓			4172 May 12 00:41	0° ♏	
	4167 Aug 28 12:56	0° ♈			4172 Jun 19 18:50	0° ♐	
evening set	4167 Sep 21 19:18	15° ♈ 16'12			4172 Jul 30 00:37	0° ♑	
	4167 Oct 14 23:17	0° ♉		asc. node	4172 Aug 04 21:18	4° ♑ 14'25	

	4172 Sep 10 18:25	0°♏			4177 Dec 23 12:14	0°♐		
	4172 Oct 27 16:15	0°♑			4178 Jan 31 10:57	0°♑		
	4172 Dec 24 13:58	0°♒			4178 Mar 11 02:29	0°♒		
retrograde	4173 Feb 08 15:09	10°♒44'10		asc. node	4178 Mar 27 18:52	12°♒47'43		
opposition	4173 Mar 20 22:27	0°♒56'17	4°07'30		4178 Apr 19 13:41	0°♒		
min. Earth dist.	4173 Mar 20 05:17	1°♒13'25	0.67588 AU		4178 May 30 14:27	0°♓		
greatest brilliancy	4173 Mar 20 19:48	0°♒58'55	-1.3m	evening set	4178 Jun 15 04:25	11°♓02'23		
	4173 Mar 23 06:55	30°♑♑			4178 Jul 12 13:56	0°♏		
direct	4173 Apr 30 11:30	21°♑13'41						
	4173 Jun 11 22:11	0°♒		conjunction	4178 Aug 08 06:07	17°♏57'45	1°04'00	
	4173 Aug 13 12:01	0°♓		minimum elong	4178 Aug 08 05:07	17°♏56'05	1°03'59	
desc. node	4173 Aug 15 10:32	1°♓05'32			4178 Aug 26 11:52	0°♑		
	4173 Oct 02 04:38	0°♑		max. Earth dist.	4178 Aug 28 17:16	1°♑27'25	2.61690 AU	
	4173 Nov 15 22:00	0°♓		morning rise	4178 Sep 26 05:05	19°♑54'11		
	4173 Dec 27 09:54	0°♑			4178 Oct 12 00:46	0°♒		
evening set	4174 Feb 01 08:42	27°♑21'42			4178 Nov 28 20:30	0°♓		
	4174 Feb 04 18:18	0°♐			4179 Jan 17 02:27	0°♑		
	4174 Mar 14 22:36	0°♑			4179 Mar 10 08:54	0°♓		
				desc. node	4179 Apr 07 06:49	14°♓22'48		
conjunction	4174 Apr 08 18:34	19°♑38'55	-0°46'48		4179 May 15 19:22	0°♑		
minimum elong	4174 Apr 08 21:59	19°♑45'41	0°46'47	retrograde	4179 Jun 15 21:24	5°♑09'41		
	4174 Apr 21 21:43	0°♒			4179 Jul 15 08:58	30°♑♓		
max. Earth dist.	4174 May 18 00:51	20°♒22'45	2.37711 AU	opposition	4179 Jul 19 08:39	28°♓42'31	-4°38'07	
	4174 May 30 13:23	0°♒		greatest brilliancy	4179 Jul 20 17:02	28°♓15'43	-2.3m	
morning rise	4174 Jun 18 21:44	14°♒38'04		min. Earth dist.	4179 Jul 27 18:21	25°♓56'50	0.45998 AU	
asc. node	4174 Jun 22 19:14	17°♒32'36		direct	4179 Aug 24 21:51	20°♓49'17		
	4174 Jul 09 16:37	0°♓			4179 Oct 02 16:29	0°♑		
	4174 Aug 20 23:05	0°♏			4179 Nov 24 06:33	0°♐		
	4174 Oct 04 23:11	0°♑			4180 Jan 05 20:53	0°♑		
	4174 Nov 22 19:51	0°♒		asc. node	4180 Feb 12 17:09	27°♑50'14		
	4175 Jan 19 20:15	0°♓			4180 Feb 15 15:34	0°♒		
retrograde	4175 Mar 15 10:47	13°♓48'04			4180 Mar 27 18:12	0°♒		
opposition	4175 Apr 23 23:29	4°♓35'03	2°25'28		4180 May 09 04:16	0°♓		
greatest brilliancy	4175 Apr 24 06:22	4°♓28'18	-1.4m		4180 Jun 22 06:43	0°♏		
min. Earth dist.	4175 Apr 27 02:41	3°♓21'19	0.66391 AU	evening set	4180 Jul 30 20:59	25°♏24'12		
	4175 May 06 01:19	30°♑♒			4180 Aug 06 22:59	0°♑		
direct	4175 Jun 04 11:58	24°♒32'38						
desc. node	4175 Jul 03 08:59	29°♒04'01		conjunction	4180 Sep 16 13:30	26°♑04'31	1°04'38	
	4175 Jul 06 11:28	0°♓		minimum elong	4180 Sep 16 14:12	26°♑05'38	1°04'38	
	4175 Sep 08 08:13	0°♑		max. Earth dist.	4180 Sep 21 07:07	29°♑05'35	2.67132 AU	
	4175 Oct 25 18:40	0°♓			4180 Sep 22 17:17	0°♒		
	4175 Dec 07 01:16	0°♑		morning rise	4180 Oct 31 10:34	24°♒37'01		
	4176 Jan 15 14:23	0°♐			4180 Nov 08 21:56	0°♓		
	4176 Feb 22 20:02	0°♑			4180 Dec 26 01:05	0°♑		
	4176 Mar 31 21:34	0°♒			4181 Feb 10 23:20	0°♓		
evening set	4176 Apr 13 05:33	9°♒37'08		desc. node	4181 Feb 22 05:32	7°♓12'09		
asc. node	4176 May 09 19:07	0°♒01'56			4181 Mar 29 23:52	0°♑		
	4176 May 09 18:06	0°♒			4181 May 17 03:42	0°♐		
					4181 Jul 10 03:41	0°♑		
conjunction	4176 Jun 17 15:41	28°♒54'50	0°25'08	retrograde	4181 Aug 31 20:01	14°♑42'39		
minimum elong	4176 Jun 17 13:57	28°♒51'40	0°25'06	opposition	4181 Sep 30 22:53	9°♑42'25	-5°44'43	
	4176 Jun 19 03:35	0°♓		greatest brilliancy	4181 Oct 01 02:25	9°♑40'05	-3.0m	
max. Earth dist.	4176 Jul 28 13:25	27°♓55'19	2.51022 AU	min. Earth dist.	4181 Sep 30 16:34	9°♑46'35	0.37038 AU	
	4176 Jul 31 13:39	0°♏		direct	4181 Oct 30 11:51	4°♑47'34		
morning rise	4176 Aug 14 21:57	9°♏48'21		asc. node	4181 Dec 30 16:05	24°♑17'11		
	4176 Sep 14 05:14	0°♑			4182 Jan 10 03:02	0°♒		
	4176 Oct 31 04:31	0°♒			4182 Feb 28 09:06	0°♒		
	4176 Dec 20 01:41	0°♓			4182 Apr 15 23:26	0°♓		
	4177 Feb 14 11:17	0°♑			4182 Jun 01 15:19	0°♏		
retrograde	4177 Apr 23 08:28	19°♑31'15			4182 Jul 18 21:34	0°♑		
desc. node	4177 May 20 07:51	15°♑00'09			4182 Sep 04 11:22	0°♒		
opposition	4177 May 30 18:21	11°♑18'52	-0°25'37	evening set	4182 Sep 07 13:46	1°♒57'26		
greatest brilliancy	4177 May 30 20:51	11°♑16'31	-1.7m	max. Earth dist.	4182 Oct 14 00:25	25°♒04'20	2.67107 AU	
min. Earth dist.	4177 Jun 06 11:49	8°♑47'09	0.58709 AU		4182 Oct 21 17:31	0°♓		
direct	4177 Jul 10 11:13	1°♑34'40						
	4177 Sep 27 12:06	0°♓		conjunction	4182 Oct 22 20:16	0°♓42'48	0°40'14	
	4177 Nov 12 14:55	0°♑		minimum elong	4182 Oct 22 21:17	0°♓44'26	0°40'14	

morning rise	4182 Dec 06 00:36	29° \mathbb{M} 19'02		opposition	4188 Mar 07 15:38	17° \mathbb{M} 52'15	4°29'34
	4182 Dec 07 01:35	0° \mathbb{A}		greatest brilliancy	4188 Mar 07 06:56	18° \mathbb{M} 00'58	-1.3m
desc. node	4183 Jan 10 04:36	22° \mathbb{A} 38'15		direct	4188 Apr 16 10:21	8° \mathbb{M} 24'34	
	4183 Jan 21 03:00	0° \mathbb{S}			4188 Jun 28 00:19	0° \mathbb{A}	
	4183 Mar 05 20:04	0° \approx			4188 Aug 22 13:45	0° \mathbb{M}	
	4183 Apr 17 08:03	0° \mathbb{H}		desc. node	4188 Sep 01 00:55	5° \mathbb{M} 37'52	
	4183 May 29 00:11	0° \mathbb{Y}			4188 Oct 09 22:20	0° \mathbb{A}	
	4183 Jul 09 19:37	0° \mathbb{B}			4188 Nov 23 07:08	0° \mathbb{S}	
	4183 Aug 23 10:13	0° \mathbb{I}			4189 Jan 03 18:27	0° \approx	
retrograde	4183 Nov 07 13:14	29° \mathbb{I} 47'34		evening set	4189 Jan 08 12:51	3° \approx 33'30	
asc. node	4183 Nov 17 15:54	29° \mathbb{I} 02'23		max. Earth dist.	4189 Feb 04 15:39	24° \approx 09'52	2.38496 AU
min. Earth dist.	4183 Dec 05 05:14	24° \mathbb{I} 31'56	0.45447 AU		4189 Feb 12 04:55	0° \mathbb{H}	
opposition	4183 Dec 13 13:58	21° \mathbb{I} 38'12	1°31'24				
greatest brilliancy	4183 Dec 13 01:15	21° \mathbb{I} 49'14	-2.5m	conjunction	4189 Mar 10 16:14	20° \mathbb{H} 41'37	-1°02'42
direct	4184 Jan 15 03:16	15° \mathbb{I} 01'00		minimum elong	4189 Mar 10 17:47	20° \mathbb{H} 44'40	1°02'42
	4184 Mar 10 10:45	0° \mathbb{S}			4189 Mar 22 11:33	0° \mathbb{Y}	
	4184 May 06 21:33	0° \mathbb{Q}			4189 Apr 29 11:54	0° \mathbb{B}	
	4184 Jun 27 04:11	0° \mathbb{M}		morning rise	4189 May 20 14:06	16° \mathbb{B} 28'35	
	4184 Aug 15 14:15	0° \mathbb{A}			4189 Jun 07 03:19	0° \mathbb{I}	
	4184 Oct 02 12:56	0° \mathbb{M}		asc. node	4189 Jul 09 13:13	24° \mathbb{I} 21'30	
evening set	4184 Oct 13 03:56	6° \mathbb{M} 47'30			4189 Jul 17 05:45	0° \mathbb{S}	
max. Earth dist.	4184 Nov 06 10:16	22° \mathbb{M} 32'11	2.61681 AU		4189 Aug 28 13:16	0° \mathbb{Q}	
	4184 Nov 17 17:51	0° \mathbb{A}			4189 Oct 12 22:58	0° \mathbb{M}	
					4189 Dec 02 12:23	0° \mathbb{A}	
conjunction	4184 Nov 27 23:43	6° \mathbb{A} 49'38	-0°00'29		4190 Feb 15 19:54	0° \mathbb{M}	
minimum elong	4184 Nov 27 23:42	6° \mathbb{A} 49'37	0°00'28	retrograde	4190 Mar 01 15:37	1° \mathbb{M} 07'00	
behind sun begin	4184 Nov 27 04:24	6° \mathbb{A} 17'20			4190 Mar 14 20:02	30° \mathbb{R} \mathbb{A}	
behind sun end	4184 Nov 28 19:00	7° \mathbb{A} 21'55		opposition	4190 Apr 10 14:50	21° \mathbb{A} 37'42	3°12'24
desc. node	4184 Nov 27 03:42	6° \mathbb{A} 16'09		greatest brilliancy	4190 Apr 10 19:25	21° \mathbb{A} 33'10	-1.3m
	4184 Dec 31 23:52	0° \mathbb{S}		min. Earth dist.	4190 Apr 12 06:05	20° \mathbb{A} 58'51	0.67643 AU
morning rise	4185 Jan 13 22:43	9° \mathbb{S} 02'29		direct	4190 May 21 22:14	11° \mathbb{A} 39'39	
	4185 Feb 12 07:59	0° \approx		desc. node	4190 Jul 19 23:35	27° \mathbb{A} 25'06	
	4185 Mar 25 00:59	0° \mathbb{H}			4190 Jul 25 13:56	0° \mathbb{M}	
	4185 May 03 14:41	0° \mathbb{Y}			4190 Sep 18 02:43	0° \mathbb{A}	
	4185 Jun 11 18:23	0° \mathbb{B}			4190 Nov 03 01:53	0° \mathbb{S}	
	4185 Jul 21 13:24	0° \mathbb{I}			4190 Dec 14 22:20	0° \approx	
	4185 Sep 01 15:45	0° \mathbb{S}			4191 Jan 23 08:13	0° \mathbb{H}	
asc. node	4185 Oct 04 13:53	21° \mathbb{S} 06'24			4191 Mar 02 12:25	0° \mathbb{Y}	
	4185 Oct 20 05:57	0° \mathbb{Q}		evening set	4191 Mar 16 10:43	11° \mathbb{Y} 01'34	
retrograde	4185 Dec 21 23:29	20° \mathbb{Q} 11'11			4191 Apr 09 12:06	0° \mathbb{B}	
min. Earth dist.	4186 Jan 24 06:02	12° \mathbb{Q} 45'37	0.58364 AU		4191 May 18 05:42	0° \mathbb{I}	
greatest brilliancy	4186 Jan 29 07:35	10° \mathbb{Q} 46'16	-1.7m				
opposition	4186 Jan 30 07:00	10° \mathbb{Q} 23'12	4°25'45	conjunction	4191 May 24 04:03	4° \mathbb{I} 30'16	-0°02'17
direct	4186 Mar 08 04:53	1° \mathbb{Q} 55'41		minimum elong	4191 May 24 04:13	4° \mathbb{I} 30'35	0°02'18
	4186 Jun 01 04:21	0° \mathbb{M}		behind sun begin	4191 May 23 00:09	3° \mathbb{I} 37'27	
	4186 Jul 25 19:35	0° \mathbb{A}		behind sun end	4191 May 25 08:17	5° \mathbb{I} 23'40	
	4186 Sep 13 14:13	0° \mathbb{M}		asc. node	4191 May 27 11:34	7° \mathbb{I} 00'31	
desc. node	4186 Oct 15 02:37	20° \mathbb{M} 02'48			4191 Jun 27 11:34	0° \mathbb{S}	
	4186 Oct 30 06:58	0° \mathbb{A}		max. Earth dist.	4191 Jul 12 04:17	10° \mathbb{S} 36'26	2.45723 AU
evening set	4186 Nov 21 13:27	14° \mathbb{A} 57'42		morning rise	4191 Jul 26 21:17	21° \mathbb{S} 01'36	
max. Earth dist.	4186 Dec 06 17:10	25° \mathbb{A} 23'52	2.51319 AU		4191 Aug 08 18:31	0° \mathbb{Q}	
	4186 Dec 13 07:21	0° \mathbb{S}			4191 Sep 22 10:33	0° \mathbb{M}	
					4191 Nov 08 20:17	0° \mathbb{A}	
conjunction	4187 Jan 10 18:09	20° \mathbb{S} 18'53	-0°46'14		4191 Dec 30 10:31	0° \mathbb{M}	
minimum elong	4187 Jan 10 16:31	20° \mathbb{S} 15'54	0°46'12		4192 Mar 06 08:11	0° \mathbb{A}	
	4187 Jan 23 23:35	0° \approx		retrograde	4192 Apr 06 19:41	5° \mathbb{A} 09'42	
	4187 Mar 04 20:01	0° \mathbb{H}			4192 May 05 16:00	30° \mathbb{R} \mathbb{M}	
morning rise	4187 Mar 07 17:28	2° \mathbb{H} 13'09		opposition	4192 May 15 05:55	26° \mathbb{M} 29'36	0°49'57
	4187 Apr 12 12:46	0° \mathbb{Y}		greatest brilliancy	4192 May 15 10:19	26° \mathbb{M} 25'22	-1.5m
	4187 May 20 20:49	0° \mathbb{B}		min. Earth dist.	4192 May 20 15:07	24° \mathbb{M} 25'29	0.62451 AU
	4187 Jun 28 17:47	0° \mathbb{I}		desc. node	4192 Jun 05 22:29	19° \mathbb{M} 02'45	
	4187 Aug 08 03:46	0° \mathbb{S}		direct	4192 Jun 25 12:50	16° \mathbb{M} 31'34	
asc. node	4187 Aug 22 13:19	10° \mathbb{S} 16'08			4192 Aug 16 09:22	0° \mathbb{A}	
	4187 Sep 20 09:44	0° \mathbb{Q}			4192 Oct 09 06:49	0° \mathbb{S}	
	4187 Nov 08 06:29	0° \mathbb{M}			4192 Nov 22 03:21	0° \approx	
retrograde	4188 Jan 27 08:51	27° \mathbb{M} 47'38			4193 Jan 01 06:25	0° \mathbb{H}	
min. Earth dist.	4188 Mar 05 10:02	18° \mathbb{M} 45'56	0.66255 AU		4193 Feb 08 19:32	0° \mathbb{Y}	

	4193 Mar 19 03:23	0°♄		desc. node	4198 Jan 26 19:48	28°♄46'09	
asc. node	4193 Apr 13 10:33	19°♄29'59			4198 Jan 28 16:15	0°♄	
	4193 Apr 27 06:51	0°♄			4198 Mar 14 07:48	0°♄	
evening set	4193 May 24 00:17	19°♄50'57			4198 Apr 27 03:50	0°♄	
	4193 Jun 06 23:57	0°♄			4198 Jun 09 17:56	0°♄	
	4193 Jul 19 16:34	0°♄			4198 Jul 24 23:48	0°♄	
					4198 Sep 22 11:03	0°♄	
conjunction	4193 Jul 21 01:20	0°♄56'10 0°54'19		retrograde	4198 Oct 15 19:07	3°♄42'49	
minimum elong	4193 Jul 20 23:35	0°♄53'09 0°54'17			4198 Nov 08 07:47	30°♄	
max. Earth dist.	4193 Aug 17 20:37	19°♄42'28 2.58108 AU		min. Earth dist.	4198 Nov 11 06:20	29°♄07'56	0.40522 AU
	4193 Sep 02 10:21	0°♄		opposition	4198 Nov 18 09:24	26°♄55'03	-1°03'38
morning rise	4193 Sep 10 20:29	5°♄30'32		greatest brilliancy	4198 Nov 18 03:22	26°♄59'45	-2.8m
	4193 Oct 19 00:35	0°♄		asc. node	4198 Dec 04 07:19	22°♄42'08	
	4193 Dec 06 09:07	0°♄		direct	4198 Dec 18 23:54	21°♄14'51	
	4194 Jan 26 06:32	0°♄			4199 Jan 27 17:36	0°♄	
	4194 Mar 25 11:03	0°♄			4199 Mar 28 09:02	0°♄	
desc. node	4194 Apr 23 21:27	10°♄59'24			4199 May 18 02:01	0°♄	
retrograde	4194 May 23 14:43	15°♄39'33			4199 Jul 06 06:05	0°♄	
opposition	4194 Jun 27 19:57	8°♄24'19 -2°52'10			4199 Aug 23 18:25	0°♄	
greatest brilliancy	4194 Jun 28 16:00	8°♄06'32 -2.1m		evening set	4199 Sep 29 21:53	23°♄20'41	
min. Earth dist.	4194 Jul 06 01:46	5°♄29'22 0.51326 AU			4199 Oct 10 08:45	0°♄	
	4194 Jul 28 04:45	30°♄		max. Earth dist.	4199 Oct 28 16:15	11°♄45'58	2.64442 AU
direct	4194 Aug 05 13:41	29°♄30'26					
	4194 Aug 14 02:23	0°♄		conjunction	4199 Nov 14 03:24	22°♄28'50	0°16'43
	4194 Oct 24 01:06	0°♄		minimum elong	4199 Nov 14 03:56	22°♄29'43	0°16'43
	4194 Dec 07 04:41	0°♄			4199 Nov 25 13:43	0°♄	
	4195 Jan 16 13:08	0°♄		desc. node	4199 Dec 14 18:24	12°♄47'36	
	4195 Feb 25 02:48	0°♄		morning rise	4199 Dec 29 11:27	22°♄44'42	
asc. node	4195 Mar 01 10:20	3°♄15'20			4200 Jan 09 01:53	0°♄	
	4195 Apr 06 08:17	0°♄			4200 Feb 20 20:47	0°♄	
	4195 May 18 01:24	0°♄			4200 Apr 03 03:08	0°♄	
	4195 Jun 30 14:30	0°♄			4200 May 13 07:13	0°♄	
evening set	4195 Jul 15 02:09	9°♄42'30			4200 Jun 22 02:12	0°♄	
	4195 Aug 14 21:42	0°♄			4200 Aug 01 18:16	0°♄	
					4200 Sep 14 21:32	0°♄	
conjunction	4195 Sep 02 16:35	12°♄10'29 1°07'57		asc. node	4200 Oct 22 07:49	20°♄51'08	
minimum elong	4195 Sep 02 16:45	12°♄10'45 1°07'57			4200 Nov 15 18:20	0°♄	
max. Earth dist.	4195 Sep 13 05:37	18°♄57'16 2.65665 AU		retrograde	4200 Dec 06 22:25	2°♄57'49	
	4195 Sep 30 12:09	0°♄			4200 Dec 27 01:56	30°♄	
morning rise	4195 Oct 18 16:37	11°♄33'44		min. Earth dist.	4201 Jan 06 23:27	26°♄20'37	0.53661 AU
	4195 Nov 16 20:20	0°♄		greatest brilliancy	4201 Jan 13 06:49	23°♄56'15	-2.0m
	4196 Jan 03 13:47	0°♄		opposition	4201 Jan 14 08:00	23°♄32'07	3°47'53
	4196 Feb 20 20:21	0°♄		direct	4201 Feb 18 17:28	15°♄40'26	
desc. node	4196 Mar 10 20:56	11°♄36'57			4201 Apr 14 21:06	0°♄	
	4196 Apr 10 19:05	0°♄			4201 Jun 13 02:36	0°♄	
	4196 Jun 06 11:44	0°♄			4201 Aug 03 22:31	0°♄	
retrograde	4196 Jul 30 06:07	14°♄14'47			4201 Sep 21 19:27	0°♄	
opposition	4196 Aug 29 17:08	9°♄05'41 -6°37'44		desc. node	4201 Nov 01 17:16	26°♄20'38	
greatest brilliancy	4196 Aug 30 22:42	8°♄45'02 -2.8m		evening set	4201 Nov 06 13:49	29°♄33'10	
min. Earth dist.	4196 Sep 03 18:20	7°♄41'16 0.38866 AU			4201 Nov 07 06:00	0°♄	
direct	4196 Sep 30 14:30	3°♄21'19		max. Earth dist.	4201 Nov 24 16:28	11°♄40'57	2.55895 AU
	4196 Dec 11 12:47	0°♄			4201 Dec 21 07:35	0°♄	
asc. node	4197 Jan 16 08:10	22°♄48'25					
	4197 Jan 27 01:47	0°♄		conjunction	4201 Dec 24 11:14	2°♄12'22	-0°29'11
	4197 Mar 12 01:21	0°♄		minimum elong	4201 Dec 24 10:07	2°♄10'26	0°29'10
	4197 Apr 25 07:28	0°♄			4202 Feb 01 05:07	0°♄	
	4197 Jun 09 15:44	0°♄		morning rise	4202 Feb 13 20:01	9°♄18'44	
	4197 Jul 26 03:24	0°♄			4202 Mar 13 08:24	0°♄	
evening set	4197 Aug 24 01:24	18°♄24'59			4202 Apr 21 07:58	0°♄	
	4197 Sep 11 07:27	0°♄			4202 May 29 21:55	0°♄	
max. Earth dist.	4197 Oct 05 04:27	15°♄09'26 2.67781 AU			4202 Jul 08 00:21	0°♄	
					4202 Aug 17 19:00	0°♄	
conjunction	4197 Oct 08 21:18	17°♄30'37 0°52'02		asc. node	4202 Sep 09 06:44	15°♄39'51	
minimum elong	4197 Oct 08 22:21	17°♄32'18 0°52'02			4202 Oct 01 00:34	0°♄	
	4197 Oct 28 11:34	0°♄			4202 Nov 23 07:24	0°♄	
morning rise	4197 Nov 21 23:05	15°♄42'12		retrograde	4203 Jan 14 18:08	14°♄10'12	
	4197 Dec 14 01:12	0°♄		min. Earth dist.	4203 Feb 20 01:44	5°♄42'11	0.63898 AU

opposition	4203 Feb 23 19:49	4° \cap 12'06	4°40'15	asc. node	4208 May 01 03:20	26° ♄ 23'37	
greatest brilliancy	4203 Feb 23 04:43	4° \cap 27'14	-1.5m		4208 May 05 21:17	0° ♄	
	4203 Mar 06 22:27	30° ♄			4208 Jun 15 08:34	0° ♄	
direct	4203 Apr 03 14:59	25° ♄ 03'54					
	4203 May 04 07:46	0° \cap		conjunction	4208 Jul 01 12:56	11° ♄ 36'34	0°37'49
	4203 Jul 11 11:08	0° ♄		minimum elong	4208 Jul 01 10:52	11° ♄ 32'53	0°37'48
	4203 Sep 01 20:17	0° ♄			4208 Jul 27 19:50	0° ♄	
desc. node	4203 Sep 19 15:57	10° ♄ 57'59		max. Earth dist.	4208 Aug 06 13:39	6° ♄ 40'31	2.53740 AU
	4203 Oct 19 08:50	0° ♄		morning rise	4208 Aug 26 04:02	19° ♄ 53'13	
	4203 Dec 02 12:48	0° ♄			4208 Sep 10 10:50	0° \cap	
evening set	4203 Dec 20 17:39	12° ♄ 56'46			4208 Oct 27 04:58	0° ♄	
max. Earth dist.	4204 Jan 05 05:23	24° ♄ 13'06	2.43318 AU		4208 Dec 15 09:04	0° ♄	
	4204 Jan 13 01:14	0° \approx			4209 Feb 07 00:42	0° ♄	
				retrograde	4209 May 04 13:52	28° ♄ 44'43	
conjunction	4204 Feb 14 16:56	24° \approx 40'43	-1°04'01	desc. node	4209 May 11 13:02	28° ♄ 26'39	
minimum elong	4204 Feb 14 16:06	24° \approx 39'07	1°04'00	opposition	4209 Jun 10 06:48	20° ♄ 50'19	-1°15'13
	4204 Feb 21 14:44	0° ♄		greatest brilliancy	4209 Jun 10 14:43	20° ♄ 43'00	-1.8m
	4204 Mar 31 00:25	0° ♄		min. Earth dist.	4209 Jun 17 15:32	18° ♄ 06'52	0.56279 AU
morning rise	4204 Apr 20 12:51	16° ♄ 10'20		direct	4209 Jul 20 10:44	11° ♄ 18'51	
	4204 May 08 02:48	0° ♄			4209 Sep 19 01:39	0° ♄	
	4204 Jun 15 19:03	0° ♄			4209 Nov 06 22:57	0° \approx	
	4204 Jul 25 22:22	0° ♄			4209 Dec 18 14:43	0° ♄	
asc. node	4204 Jul 27 04:57	0° ♄ 55'40			4210 Jan 26 22:00	0° ♄	
	4204 Sep 06 10:14	0° ♄			4210 Mar 06 19:16	0° ♄	
	4204 Oct 22 13:40	0° \cap		asc. node	4210 Mar 19 01:51	9° ♄ 22'56	
	4204 Dec 15 10:20	0° ♄			4210 Apr 15 11:06	0° ♄	
retrograde	4205 Feb 17 06:33	18° ♄ 30'18			4210 May 26 16:10	0° ♄	
opposition	4205 Mar 29 11:44	8° ♄ 48'09	3°49'57	evening set	4210 Jun 27 15:44	22° ♄ 22'33	
greatest brilliancy	4205 Mar 29 12:03	8° ♄ 47'50	-1.3m		4210 Jul 08 19:13	0° ♄	
min. Earth dist.	4205 Mar 29 14:35	8° ♄ 45'19	0.67883 AU				
	4205 Apr 26 17:47	30° ♄		conjunction	4210 Aug 18 21:07	27° ♄ 25'30	1°06'55
direct	4205 May 09 08:19	28° ♄ 59'05		minimum elong	4210 Aug 18 20:35	27° ♄ 24'38	1°06'54
	4205 May 22 15:22	0° ♄			4210 Aug 22 19:26	0° \cap	
desc. node	4205 Aug 06 14:27	29° ♄ 21'54		max. Earth dist.	4210 Sep 04 13:24	8° ♄ 18'25	2.63353 AU
	4205 Aug 07 18:54	0° ♄		morning rise	4210 Oct 05 13:47	28° ♄ 14'46	
	4205 Sep 27 19:14	0° ♄			4210 Oct 08 07:51	0° ♄	
	4205 Nov 11 22:17	0° ♄			4210 Nov 24 22:10	0° ♄	
	4205 Dec 23 13:34	0° \approx			4211 Jan 12 11:59	0° ♄	
	4206 Jan 31 22:45	0° ♄			4211 Mar 03 21:21	0° ♄	
evening set	4206 Feb 17 04:17	12° ♄ 40'56		desc. node	4211 Mar 29 11:31	14° ♄ 20'59	
	4206 Mar 11 03:05	0° ♄			4211 Apr 29 04:20	0° \approx	
	4206 Apr 18 02:06	0° ♄		retrograde	4211 Jul 01 20:07	18° \approx 12'19	
				opposition	4211 Aug 03 05:34	12° \approx 14'36	-5°35'03
conjunction	4206 Apr 26 12:23	6° ♄ 36'45	-0°32'11	greatest brilliancy	4211 Aug 04 18:07	11° \approx 46'02	-2.5m
minimum elong	4206 Apr 26 15:19	6° ♄ 42'30	0°32'09	min. Earth dist.	4211 Aug 11 03:56	9° \approx 46'56	0.43162 AU
	4206 May 26 17:39	0° ♄		direct	4211 Sep 07 05:58	5° \approx 05'02	
asc. node	4206 Jun 14 04:41	13° ♄ 58'08			4211 Nov 14 19:11	0° ♄	
max. Earth dist.	4206 Jun 17 01:13	16° ♄ 06'19	2.40263 AU		4211 Dec 30 05:55	0° ♄	
morning rise	4206 Jul 04 15:42	29° ♄ 07'05		asc. node	4212 Feb 04 01:36	25° ♄ 35'19	
	4206 Jul 05 20:41	0° ♄			4212 Feb 10 04:22	0° ♄	
	4206 Aug 17 01:48	0° ♄			4212 Mar 22 23:27	0° ♄	
	4206 Sep 30 20:50	0° \cap			4212 May 04 20:52	0° ♄	
	4206 Nov 18 00:11	0° ♄			4212 Jun 18 07:24	0° ♄	
	4207 Jan 11 15:44	0° ♄			4212 Aug 03 05:07	0° \cap	
retrograde	4207 Mar 24 16:18	21° ♄ 42'31		evening set	4212 Aug 09 22:37	4° \cap 20'08	
opposition	4207 May 02 20:47	12° ♄ 40'04	1°53'25		4212 Sep 19 02:01	0° ♄	
greatest brilliancy	4207 May 03 03:44	12° ♄ 33'18	-1.4m				
min. Earth dist.	4207 May 06 19:26	11° ♄ 07'44	0.65247 AU	conjunction	4212 Sep 25 19:38	4° ♄ 17'02	1°00'57
direct	4207 Jun 13 08:55	2° ♄ 37'21		minimum elong	4212 Sep 25 20:32	4° ♄ 18'26	1°00'57
desc. node	4207 Jun 24 13:54	3° ♄ 22'45		max. Earth dist.	4212 Sep 27 12:06	5° ♄ 21'20	2.67603 AU
	4207 Sep 02 01:13	0° ♄			4212 Nov 05 06:02	0° ♄	
	4207 Oct 21 00:39	0° ♄		morning rise	4212 Nov 09 06:24	2° ♄ 33'31	
	4207 Dec 02 18:27	0° \approx			4212 Dec 22 03:33	0° ♄	
	4208 Jan 11 11:49	0° ♄			4213 Feb 06 12:48	0° ♄	
	4208 Feb 18 19:43	0° ♄		desc. node	4213 Feb 13 10:30	4° ♄ 29'30	
	4208 Mar 27 23:03	0° ♄			4213 Mar 24 12:25	0° \approx	
evening set	4208 Apr 29 18:28	25° ♄ 21'01			4213 May 09 13:54	0° ♄	

	4213 Jun 26 09:49	0°♄			4218 May 24 14:08	0°♎	
	4213 Aug 28 03:29	0°♄			4218 Jul 21 00:37	0°♊	
retrograde	4213 Sep 19 10:37	3°♄11'34			4218 Sep 09 14:06	0°♎	
	4213 Oct 11 23:23	30°♋♄		desc. node	4218 Oct 06 07:01	16°♎48'38	
min. Earth dist.	4213 Oct 17 00:58	28°♄40'01	0.37457 AU		4218 Oct 26 13:29	0°♊	
opposition	4213 Oct 20 07:38	27°♄46'16	-4°15'38	evening set	4218 Dec 02 07:05	24°♊52'30	
greatest brilliancy	4213 Oct 20 00:03	27°♄51'27	-3.0m		4218 Dec 09 15:17	0°♊	
direct	4213 Nov 18 18:33	22°♄48'50		max. Earth dist.	4218 Dec 16 15:21	4°♊56'03	2.48527 AU
asc. node	4213 Dec 22 01:00	29°♄23'38			4219 Jan 20 06:29	0°♊	
	4213 Dec 23 16:40	0°♄					
	4214 Feb 20 12:34	0°♊		conjunction	4219 Jan 23 05:33	2°♊11'31	-0°54'36
	4214 Apr 10 10:00	0°♋		minimum elong	4219 Jan 23 03:52	2°♊08'23	0°54'35
	4214 May 28 02:41	0°♋			4219 Mar 01 00:39	0°♋	
	4214 Jul 14 21:55	0°♎		morning rise	4219 Mar 23 11:14	17°♋22'19	
	4214 Aug 31 18:24	0°♊			4219 Apr 08 14:52	0°♄	
evening set	4214 Sep 16 17:54	10°♊03'55			4219 May 16 20:45	0°♄	
	4214 Oct 18 03:11	0°♎			4219 Jun 24 15:23	0°♊	
max. Earth dist.	4214 Oct 20 07:18	1°♎23'23	2.66392 AU		4219 Aug 03 21:31	0°♋	
				asc. node	4219 Aug 13 22:14	7°♋13'18	
conjunction	4214 Oct 31 21:09	8°♎49'27	0°32'10		4219 Sep 15 17:57	0°♋	
minimum elong	4214 Oct 31 22:03	8°♎50'53	0°32'11		4219 Nov 02 04:58	0°♎	
	4214 Dec 03 10:08	0°♊			4220 Jan 03 18:46	0°♊	
morning rise	4214 Dec 15 07:24	7°♊51'09		retrograde	4220 Feb 05 00:20	5°♊43'55	
desc. node	4215 Jan 01 09:11	19°♊15'07			4220 Mar 05 15:34	30°♋♎	
	4215 Jan 17 06:40	0°♊		min. Earth dist.	4220 Mar 14 21:54	26°♎25'46	0.67115 AU
	4215 Mar 01 15:13	0°♊		opposition	4220 Mar 16 07:31	25°♎52'06	4°17'58
	4215 Apr 12 15:04	0°♋		greatest brilliancy	4220 Mar 16 02:15	25°♎57'23	-1.3m
	4215 May 23 15:24	0°♄		direct	4220 Apr 25 12:37	16°♎15'49	
	4215 Jul 03 11:32	0°♄			4220 Jun 19 16:12	0°♊	
	4215 Aug 14 22:35	0°♊			4220 Aug 17 16:56	0°♎	
	4215 Oct 04 02:50	0°♋		desc. node	4220 Aug 23 05:56	3°♎12'09	
asc. node	4215 Nov 08 23:38	12°♋13'17			4220 Oct 05 20:37	0°♊	
retrograde	4215 Nov 19 22:53	13°♋04'24			4220 Nov 19 11:32	0°♊	
min. Earth dist.	4215 Dec 18 17:29	7°♋19'48	0.48427 AU		4220 Dec 31 00:25	0°♊	
opposition	4215 Dec 26 23:37	4°♋20'34	2°34'54	evening set	4221 Jan 22 14:09	17°♊01'42	
greatest brilliancy	4215 Dec 26 03:22	4°♋38'59	-2.3m		4221 Feb 08 10:23	0°♋	
	4216 Jan 09 07:29	30°♋♊			4221 Mar 18 15:53	0°♄	
direct	4216 Jan 29 15:28	27°♊13'51		max. Earth dist.	4221 Mar 23 13:14	3°♄51'58	2.36876 AU
	4216 Feb 20 04:53	0°♋					
	4216 Apr 30 07:19	0°♋		conjunction	4221 Mar 27 19:47	7°♄14'45	-0°55'29
	4216 Jun 22 11:19	0°♎		minimum elong	4221 Mar 27 22:43	7°♄20'35	0°55'27
	4216 Aug 11 14:19	0°♊			4221 Apr 25 15:19	0°♄	
	4216 Sep 28 20:11	0°♎			4221 Jun 03 06:04	0°♊	
evening set	4216 Oct 22 12:19	15°♎10'30		morning rise	4221 Jun 07 13:35	3°♊17'37	
max. Earth dist.	4216 Nov 13 12:06	29°♎35'02	2.59828 AU	asc. node	4221 Jun 30 20:01	20°♊47'58	
	4216 Nov 14 03:10	0°♊			4221 Jul 13 07:39	0°♋	
desc. node	4216 Nov 18 07:53	2°♊47'17			4221 Aug 24 12:56	0°♋	
					4221 Oct 08 14:36	0°♎	
conjunction	4216 Dec 07 21:27	15°♊57'07	-0°10'59		4221 Nov 26 23:10	0°♊	
minimum elong	4216 Dec 07 21:03	15°♊56'26	0°10'58		4222 Jan 27 09:55	0°♎	
behind sun begin	4216 Dec 07 06:16	15°♊31'19		retrograde	4222 Mar 10 12:12	8°♎49'55	
behind sun end	4216 Dec 08 11:51	16°♊21'34			4222 Apr 17 22:23	30°♋♊	
	4216 Dec 28 07:54	0°♊		opposition	4222 Apr 19 05:42	29°♊29'11	2°46'00
morning rise	4217 Jan 25 02:25	19°♊35'43		greatest brilliancy	4222 Apr 19 11:47	29°♊23'12	-1.3m
	4217 Feb 08 12:35	0°♊		min. Earth dist.	4222 Apr 21 16:32	28°♊31'10	0.67081 AU
	4217 Mar 21 00:46	0°♋		direct	4222 May 30 16:06	19°♊28'11	
	4217 Apr 29 09:04	0°♄		desc. node	4222 Jul 11 04:30	28°♊06'50	
	4217 Jun 07 07:00	0°♄			4222 Jul 16 02:45	0°♎	
	4217 Jul 16 17:59	0°♊			4222 Sep 12 22:48	0°♊	
	4217 Aug 27 04:02	0°♋			4222 Oct 29 18:33	0°♊	
asc. node	4217 Sep 25 23:04	19°♋54'45			4222 Dec 10 21:58	0°♊	
	4217 Oct 12 08:53	0°♋			4223 Jan 19 10:19	0°♋	
retrograde	4217 Dec 31 12:46	29°♋35'10			4223 Feb 26 15:24	0°♄	
min. Earth dist.	4218 Feb 03 22:45	21°♋45'42	0.60584 AU	evening set	4223 Apr 02 17:52	27°♄42'58	
greatest brilliancy	4218 Feb 08 07:40	20°♋01'40	-1.6m		4223 Apr 05 15:42	0°♄	
opposition	4218 Feb 09 04:40	19°♋40'48	4°36'39		4223 May 14 09:54	0°♊	
direct	4218 Mar 18 19:43	10°♋57'06		asc. node	4223 May 18 19:45	3°♊21'05	

conjunction	4223 Jun 09 00:06	19° Π 13'22	0°14'06		4228 May 24 16:00	0° H	
minimum elong	4223 Jun 08 22:58	19° Π 11'16	0°14'05		4228 Aug 03 16:28	0° Υ	
behind sun begin	4223 Jun 08 10:10	18° Π 47'34		retrograde	4228 Aug 18 10:41	1° Υ 21'48	
behind sun end	4223 Jun 09 11:46	19° Π 34'57			4228 Sep 02 07:16	30° R H	
	4223 Jun 23 16:22	0° E		opposition	4228 Sep 17 12:01	26° H 25'17	-6°25'36
max. Earth dist.	4223 Jul 23 20:44	21° E 33'55	2.48699 AU	greatest brilliancy	4228 Sep 18 04:05	26° H 14'33	-2.9m
	4223 Aug 04 23:33	0° Ω		min. Earth dist.	4228 Sep 19 19:13	25° H 48'28	0.37466 AU
morning rise	4223 Aug 08 14:42	2° Ω 30'14		direct	4228 Oct 17 19:56	21° H 16'02	
	4223 Sep 18 13:33	0° M			4228 Nov 24 20:36	0° Υ	
	4223 Nov 04 15:17	0° E		asc. node	4229 Jan 07 16:33	23° Υ 08'38	
	4223 Dec 25 01:42	0° M			4229 Jan 18 19:40	0° B	
	4224 Feb 22 04:45	0° A			4229 Mar 06 01:37	0° Π	
retrograde	4224 Apr 17 01:33	13° A 42'05			4229 Apr 20 10:03	0° E	
opposition	4224 May 24 22:38	5° A 16'34	0°07'37		4229 Jun 05 09:43	0° Ω	
greatest brilliancy	4224 May 24 23:30	5° A 15'45	-1.6m		4229 Jul 22 06:26	0° M	
desc. node	4224 May 28 03:22	4° A 03'25		evening set	4229 Sep 02 10:08	26° M 41'51	
min. Earth dist.	4224 May 31 01:30	2° A 56'55	0.60496 AU		4229 Sep 07 15:24	0° E	
	4224 Jun 08 08:49	30° R M		max. Earth dist.	4229 Oct 11 07:29	21° E 21'20	2.67509 AU
direct	4224 Jul 04 22:28	25° M 24'52					
	4224 Aug 02 03:29	0° A		conjunction	4229 Oct 17 21:20	25° E 32'43	0°45'28
	4224 Oct 03 04:59	0° E		minimum elong	4229 Oct 17 22:24	25° E 34'25	0°45'27
	4224 Nov 17 06:18	0° \approx			4229 Oct 24 20:46	0° M	
	4224 Dec 27 19:42	0° H		morning rise	4229 Nov 30 23:02	23° M 54'14	
	4225 Feb 04 13:57	0° Υ			4229 Dec 10 07:33	0° A	
	4225 Mar 15 01:31	0° B		desc. node	4230 Jan 18 00:07	25° A 33'29	
asc. node	4225 Apr 04 19:44	15° B 58'33			4230 Jan 24 15:19	0° E	
	4225 Apr 23 08:08	0° Π			4230 Mar 09 18:14	0° \approx	
	4225 Jun 03 04:01	0° E			4230 Apr 21 19:26	0° H	
evening set	4225 Jun 06 21:53	2° E 40'59			4230 Jun 03 04:51	0° Υ	
	4225 Jul 15 22:57	0° Ω			4230 Jul 16 02:45	0° B	
					4230 Sep 01 14:50	0° Π	
conjunction	4225 Aug 01 15:46	11° Ω 20'26	1°00'39	retrograde	4230 Oct 30 03:53	19° Π 25'49	
minimum elong	4225 Aug 01 14:26	11° Ω 18'11	1°00'39	asc. node	4230 Nov 25 16:45	14° Π 38'24	
max. Earth dist.	4225 Aug 25 06:50	27° Ω 04'32	2.60178 AU	min. Earth dist.	4230 Nov 26 01:28	14° Π 31'25	0.43117 AU
	4225 Aug 29 17:33	0° M		opposition	4230 Dec 04 03:55	11° Π 50'34	0°31'47
morning rise	4225 Sep 20 18:32	14° M 20'36		greatest brilliancy	4230 Dec 03 23:28	11° Π 54'16	-2.6m
	4225 Oct 15 05:47	0° E		direct	4231 Jan 04 19:35	5° Π 38'50	
	4225 Dec 02 05:47	0° M			4231 Mar 19 22:05	0° E	
	4226 Jan 21 01:45	0° A			4231 May 12 16:14	0° Ω	
	4226 Mar 16 04:45	0° E			4231 Jul 01 22:02	0° M	
desc. node	4226 Apr 15 02:13	14° E 00'21			4231 Aug 19 22:04	0° E	
retrograde	4226 Jun 06 05:53	26° E 46'45			4231 Oct 06 17:34	0° M	
opposition	4226 Jul 10 13:20	19° E 56'54	-3°52'05	evening set	4231 Oct 09 00:33	1° M 27'39	
greatest brilliancy	4226 Jul 11 16:45	19° E 33'23	-2.2m	max. Earth dist.	4231 Nov 04 06:10	18° M 22'17	2.63016 AU
min. Earth dist.	4226 Jul 19 00:51	17° E 03'30	0.48396 AU		4231 Nov 21 23:16	0° A	
direct	4226 Aug 17 04:14	11° E 33'28					
	4226 Oct 14 06:06	0° \approx		conjunction	4231 Nov 23 12:31	1° A 01'39	0°06'55
	4226 Nov 30 17:32	0° H		minimum elong	4231 Nov 23 12:45	1° A 02'01	0°06'56
	4227 Jan 11 03:14	0° Υ		behind sun begin	4231 Nov 22 19:12	0° A 32'59	
asc. node	4227 Feb 20 18:02	0° B 21'02		behind sun end	4231 Nov 24 06:18	1° A 31'05	
	4227 Feb 20 06:45	0° B		desc. node	4231 Dec 05 23:26	9° A 19'36	
	4227 Apr 01 22:06	0° Π			4232 Jan 05 08:54	0° E	
	4227 May 13 22:48	0° E		morning rise	4232 Jan 08 15:45	2° E 16'20	
	4227 Jun 26 17:51	0° Ω			4232 Feb 16 22:27	0° \approx	
evening set	4227 Jul 25 20:00	19° Ω 18'29			4232 Mar 28 21:46	0° H	
	4227 Aug 11 04:51	0° M			4232 May 07 17:37	0° Υ	
					4232 Jun 16 03:20	0° B	
conjunction	4227 Sep 12 07:19	20° M 41'56	1°06'29		4232 Jul 26 05:17	0° Π	
minimum elong	4227 Sep 12 07:49	20° M 42'44	1°06'29		4232 Sep 06 22:05	0° E	
max. Earth dist.	4227 Sep 19 13:57	25° M 21'13	2.66581 AU	asc. node	4232 Oct 12 15:08	21° E 56'22	
	4227 Sep 26 20:38	0° E			4232 Oct 28 05:06	0° Ω	
morning rise	4227 Oct 27 14:46	19° E 33'03		retrograde	4232 Dec 16 06:41	13° Ω 29'43	
	4227 Nov 13 02:27	0° M		min. Earth dist.	4233 Jan 17 14:10	6° Ω 24'41	0.56363 AU
	4227 Dec 30 11:18	0° A		greatest brilliancy	4233 Jan 23 04:41	4° Ω 13'51	-1.8m
	4228 Feb 15 22:23	0° E		opposition	4233 Jan 24 05:34	3° Ω 49'33	4°13'32
desc. node	4228 Mar 02 00:46	9° E 29'24			4233 Feb 03 17:14	30° R E	
	4228 Apr 04 00:43	0° \approx		direct	4233 Mar 01 11:18	25° E 37'02	

	4233 Mar 29 17:45	0°♏			4238 May 21 22:02	0°♐	
	4233 Jun 06 05:47	0°♍		asc. node	4238 Jun 04 12:52	10°♐19'44	
	4233 Jul 29 13:31	0°♌			4238 Jul 01 01:22	0°♏	
	4233 Sep 16 23:17	0°♍		max. Earth dist.	4238 Jul 03 09:54	1°♏43'02	2.43248 AU
desc. node	4233 Oct 22 22:05	22°♍58'40		morning rise	4238 Jul 18 05:31	12°♏24'14	
	4233 Nov 02 14:27	0°♌			4238 Aug 12 06:01	0°♏	
evening set	4233 Nov 15 12:26	8°♌37'00			4238 Sep 25 21:20	0°♍	
max. Earth dist.	4233 Dec 01 22:09	19°♌45'52	2.53452 AU		4238 Nov 12 11:53	0°♌	
	4233 Dec 16 16:38	0°♎			4239 Jan 04 00:45	0°♍	
				retrograde	4239 Apr 02 04:56	29°♍47'07	
conjunction	4234 Jan 03 13:42	12°♎38'29	-0°39'15	opposition	4239 May 10 23:29	20°♍56'24	1°17'42
minimum elong	4234 Jan 03 12:14	12°♎35'52	0°39'14	greatest brilliancy	4239 May 11 05:21	20°♍50'42	-1.5m
	4234 Jan 27 12:18	0°♍		min. Earth dist.	4239 May 15 16:57	19°♍06'28	0.63828 AU
morning rise	4234 Feb 26 06:53	22°♍13'14		desc. node	4239 Jun 14 18:15	11°♍12'28	
	4234 Mar 08 12:31	0°♌		direct	4239 Jun 21 09:08	10°♍55'20	
	4234 Apr 16 08:24	0°♍			4239 Aug 24 12:53	0°♌	
	4234 May 24 18:44	0°♎			4239 Oct 14 23:32	0°♎	
	4234 Jul 02 17:06	0°♐			4239 Nov 27 08:43	0°♍	
	4234 Aug 12 04:48	0°♏			4240 Jan 06 08:03	0°♌	
asc. node	4234 Aug 30 13:58	13°♏00'37			4240 Feb 13 18:45	0°♍	
	4234 Sep 24 17:05	0°♏			4240 Mar 23 00:02	0°♎	
	4234 Nov 13 18:45	0°♍		asc. node	4240 Apr 21 11:27	22°♎45'35	
retrograde	4235 Jan 22 15:04	22°♍32'30			4240 May 01 00:14	0°♐	
min. Earth dist.	4235 Feb 28 22:03	13°♍45'16	0.65334 AU	evening set	4240 May 14 09:30	10°♐03'14	
opposition	4235 Mar 03 20:09	12°♍35'01	4°35'40		4240 Jun 10 13:21	0°♏	
greatest brilliancy	4235 Mar 03 08:34	12°♍46'38	-1.4m				
direct	4235 Apr 12 04:57	3°♍15'32		conjunction	4240 Jul 13 12:05	23°♏21'56	0°48'11
	4235 Jul 04 07:24	0°♌		minimum elong	4240 Jul 13 10:05	23°♏18'28	0°48'10
	4235 Aug 27 10:05	0°♍			4240 Jul 23 02:14	0°♏	
desc. node	4235 Sep 09 20:35	8°♍06'58		max. Earth dist.	4240 Aug 13 22:35	14°♏51'36	2.56244 AU
	4235 Oct 14 11:06	0°♌		morning rise	4240 Sep 04 20:58	29°♏26'37	
	4235 Nov 27 19:12	0°♎			4240 Sep 05 17:16	0°♍	
evening set	4236 Jan 01 03:40	24°♎41'08			4240 Oct 22 07:48	0°♌	
	4236 Jan 08 08:14	0°♍			4240 Dec 09 22:38	0°♍	
max. Earth dist.	4236 Jan 20 16:55	9°♍14'48	2.40532 AU		4241 Jan 30 18:05	0°♌	
	4236 Feb 16 20:55	0°♌			4241 Apr 03 20:37	0°♎	
				desc. node	4241 May 01 16:56	7°♎27'58	
conjunction	4236 Feb 28 20:38	9°♌18'47	-1°04'55	retrograde	4241 May 15 13:55	8°♎34'06	
minimum elong	4236 Feb 28 21:00	9°♌19'30	1°04'55	opposition	4241 Jun 20 12:06	1°♎00'06	-2°09'19
	4236 Mar 26 05:11	0°♍		greatest brilliancy	4241 Jun 21 02:35	0°♎46'58	-1.9m
	4236 May 03 06:15	0°♎			4241 Jun 23 06:11	30°♎♌	
morning rise	4236 May 07 22:54	3°♎40'59		min. Earth dist.	4241 Jun 28 09:35	28°♌08'40	0.53622 AU
	4236 Jun 10 21:18	0°♐		direct	4241 Jul 29 22:28	21°♌47'00	
asc. node	4236 Jul 17 14:03	27°♐32'25			4241 Sep 05 11:24	0°♎	
	4236 Jul 20 22:38	0°♏			4241 Oct 30 10:55	0°♍	
	4236 Sep 01 06:02	0°♏			4241 Dec 12 08:21	0°♌	
	4236 Oct 16 19:49	0°♍			4242 Jan 21 04:19	0°♍	
	4236 Dec 07 08:06	0°♌			4242 Mar 01 09:26	0°♎	
retrograde	4237 Feb 24 22:29	26°♌13'00		asc. node	4242 Mar 09 11:09	6°♎07'57	
opposition	4237 Apr 06 00:34	16°♌37'26	3°29'02		4242 Apr 10 07:28	0°♐	
greatest brilliancy	4237 Apr 06 03:25	16°♌34'36	-1.3m		4242 May 21 17:29	0°♏	
min. Earth dist.	4237 Apr 06 23:16	16°♌14'52	0.67879 AU		4242 Jul 04 00:39	0°♏	
direct	4237 May 17 03:28	6°♌42'59		evening set	4242 Jul 08 08:32	2°♏55'43	
desc. node	4237 Jul 27 19:23	28°♌15'58			4242 Aug 18 03:22	0°♍	
	4237 Jul 31 07:15	0°♍					
	4237 Sep 22 05:08	0°♌		conjunction	4242 Aug 28 00:49	6°♍26'35	1°08'05
	4237 Nov 06 20:48	0°♎		minimum elong	4242 Aug 28 00:44	6°♍26'26	1°08'04
	4237 Dec 18 16:10	0°♍		max. Earth dist.	4242 Sep 10 04:45	14°♍57'31	2.64733 AU
	4238 Jan 27 02:32	0°♌			4242 Oct 03 16:05	0°♌	
evening set	4238 Mar 04 20:08	28°♌51'07		morning rise	4242 Oct 13 17:06	6°♌23'30	
	4238 Mar 06 06:57	0°♍			4242 Nov 20 02:14	0°♍	
	4238 Apr 13 06:05	0°♎			4243 Jan 07 03:23	0°♌	
					4243 Feb 25 04:47	0°♎	
conjunction	4238 May 12 22:45	23°♎07'19	-0°15'20	desc. node	4243 Mar 19 16:24	13°♎19'20	
minimum elong	4238 May 13 00:14	23°♎10'10	0°15'19		4243 Apr 18 03:32	0°♍	
behind sun begin	4238 May 12 15:30	22°♎53'23			4243 Jun 26 14:11	0°♌	
behind sun end	4238 May 13 08:57	23°♎26'56		retrograde	4243 Jul 18 11:53	2°♌44'44	

	4243 Aug 08 16:33	30° \approx			4248 Nov 09 11:59	0° \nearrow	
opposition	4243 Aug 18 16:24	27° \approx 16'18 -6°19'50	max. Earth dist.		4248 Nov 19 20:30	6° \nearrow 53'50	2.57747 AU
greatest brilliancy	4243 Aug 20 04:05	26° \approx 50'08 -2.7m					
min. Earth dist.	4243 Aug 25 08:31	25° \approx 19'19 0.40564 AU	conjunction		4248 Dec 17 03:20	25° \nearrow 28'00 -0°21'32	
direct	4243 Sep 20 23:55	20° \approx 54'55	minimum elong		4248 Dec 17 02:32	25° \nearrow 26'36 0°21'30	
	4243 Oct 29 05:38	0° \mathcal{H}			4248 Dec 23 16:10	0° \mathcal{Z}	
	4243 Dec 21 03:10	0° Υ			4249 Feb 03 17:45	0° \approx	
asc. node	4244 Jan 25 09:22	23° Υ 57'33	morning rise		4249 Feb 04 22:16	0° \approx 52'02	
	4244 Feb 03 01:06	0° \mathcal{B}			4249 Mar 16 01:44	0° \mathcal{H}	
	4244 Mar 16 20:47	0° \mathcal{H}			4249 Apr 24 05:25	0° Υ	
	4244 Apr 29 09:38	0° \mathcal{E}			4249 Jun 01 22:37	0° \mathcal{B}	
	4244 Jun 13 06:32	0° \mathcal{O}			4249 Jul 11 03:51	0° \mathcal{H}	
	4244 Jul 29 10:42	0° \mathcal{M}			4249 Aug 21 02:36	0° \mathcal{E}	
evening set	4244 Aug 18 15:52	12° \mathcal{M} 56'24	asc. node		4249 Sep 16 07:56	18° \mathcal{E} 01'23	
	4244 Sep 14 11:02	0° \mathcal{L}			4249 Oct 04 21:36	0° \mathcal{O}	
					4249 Nov 30 19:37	0° \mathcal{M}	
conjunction	4244 Oct 03 21:27	12° \mathcal{L} 20'51 0°56'07	retrograde		4250 Jan 08 18:40	8° \mathcal{M} 32'22	
minimum elong	4244 Oct 03 22:27	12° \mathcal{L} 22'28 0°56'06	min. Earth dist.		4250 Feb 13 06:07	0° \mathcal{M} 21'09 0.62525 AU	
max. Earth dist.	4244 Oct 02 15:36	11° \mathcal{L} 33'27 2.67809 AU			4250 Feb 14 03:24	30° \mathcal{R} \mathcal{O}	
	4244 Oct 31 15:00	0° \mathcal{M}	opposition		4250 Feb 17 16:40	28° \mathcal{O} 34'50 4°40'59	
morning rise	4244 Nov 17 01:42	10° \mathcal{M} 30'49	greatest brilliancy		4250 Feb 16 22:43	28° \mathcal{O} 52'46 -1.5m	
	4244 Dec 17 08:13	0° \nearrow	direct		4250 Mar 27 23:44	19° \mathcal{O} 37'04	
	4245 Feb 01 07:21	0° \mathcal{Z}			4250 May 13 14:21	0° \mathcal{M}	
desc. node	4245 Feb 03 15:28	1° \mathcal{Z} 32'25			4250 Jul 14 20:14	0° \mathcal{L}	
	4245 Mar 18 12:03	0° \approx			4250 Sep 04 10:32	0° \mathcal{M}	
	4245 May 02 04:28	0° \mathcal{H}	desc. node		4250 Sep 26 11:23	13° \mathcal{M} 41'28	
	4245 Jun 16 03:45	0° Υ			4250 Oct 21 18:34	0° \nearrow	
	4245 Aug 03 17:08	0° \mathcal{B}			4250 Dec 04 23:06	0° \mathcal{Z}	
retrograde	4245 Oct 05 10:57	21° \mathcal{B} 16'21	evening set		4250 Dec 12 11:59	5° \mathcal{Z} 18'41	
min. Earth dist.	4245 Nov 01 00:57	16° \mathcal{B} 49'55 0.38816 AU	max. Earth dist.		4250 Dec 26 21:07	15° \mathcal{Z} 35'45 2.45668 AU	
opposition	4245 Nov 06 19:15	15° \mathcal{B} 08'34 -2°26'12			4251 Jan 15 13:51	0° \approx	
greatest brilliancy	4245 Nov 06 09:09	15° \mathcal{B} 16'00 -2.9m					
direct	4245 Dec 06 17:45	9° \mathcal{B} 51'32	conjunction		4251 Feb 04 12:02	14° \approx 54'47 -1°00'59	
asc. node	4245 Dec 12 07:58	10° \mathcal{B} 04'05	minimum elong		4251 Feb 04 10:40	14° \approx 52'12 1°00'58	
	4246 Feb 09 00:13	0° \mathcal{H}			4251 Feb 24 06:15	0° \mathcal{H}	
	4246 Apr 03 03:19	0° \mathcal{E}			4251 Apr 03 18:11	0° Υ	
	4246 May 22 07:13	0° \mathcal{O}	morning rise		4251 Apr 08 08:34	3° Υ 36'59	
	4246 Jul 09 19:11	0° \mathcal{M}			4251 May 11 21:49	0° \mathcal{B}	
	4246 Aug 27 00:13	0° \mathcal{L}			4251 Jun 19 14:25	0° \mathcal{H}	
evening set	4246 Sep 24 20:26	18° \mathcal{L} 08'13			4251 Jul 29 17:32	0° \mathcal{E}	
	4246 Oct 13 12:26	0° \mathcal{M}	asc. node		4251 Aug 04 05:45	4° \mathcal{E} 00'00	
max. Earth dist.	4246 Oct 25 15:50	7° \mathcal{M} 47'02 2.65425 AU			4251 Sep 10 06:47	0° \mathcal{O}	
					4251 Oct 26 18:46	0° \mathcal{M}	
conjunction	4246 Nov 08 23:30	17° \mathcal{M} 02'24 0°23'24			4251 Dec 21 19:35	0° \mathcal{L}	
minimum elong	4246 Nov 09 00:13	17° \mathcal{M} 03'32 0°23'24	retrograde		4252 Feb 12 15:22	13° \mathcal{L} 34'05	
	4246 Nov 28 18:53	0° \nearrow	opposition		4252 Mar 23 21:41	3° \mathcal{L} 47'05 4°02'46	
desc. node	4246 Dec 22 14:10	15° \nearrow 50'17	min. Earth dist.		4252 Mar 23 07:55	4° \mathcal{L} 00'51 0.67662 AU	
morning rise	4246 Dec 23 19:46	16° \nearrow 40'02	greatest brilliancy		4252 Mar 23 19:38	3° \mathcal{L} 49'09 -1.3m	
	4247 Jan 12 11:39	0° \mathcal{Z}			4252 Apr 02 16:39	30° \mathcal{R} \mathcal{M}	
	4247 Feb 24 13:09	0° \approx	direct		4252 May 03 11:50	24° \mathcal{M} 03'23	
	4247 Apr 07 03:37	0° \mathcal{H}			4252 Jun 06 14:57	0° \mathcal{L}	
	4247 May 17 16:08	0° Υ			4252 Aug 11 08:55	0° \mathcal{M}	
	4247 Jun 26 20:32	0° \mathcal{B}	desc. node		4252 Aug 13 09:56	1° \mathcal{M} 07'58	
	4247 Aug 07 02:19	0° \mathcal{H}			4252 Sep 30 14:21	0° \nearrow	
	4247 Sep 21 18:54	0° \mathcal{E}			4252 Nov 14 13:45	0° \mathcal{Z}	
asc. node	4247 Oct 30 08:34	19° \mathcal{E} 01'29			4252 Dec 26 05:14	0° \approx	
retrograde	4247 Nov 30 11:25	25° \mathcal{E} 12'29			4253 Feb 03 15:45	0° \mathcal{H}	
min. Earth dist.	4247 Dec 30 12:00	18° \mathcal{E} 58'06 0.51354 AU	evening set		4253 Feb 05 14:35	1° \mathcal{H} 30'54	
greatest brilliancy	4248 Jan 06 07:14	16° \mathcal{E} 25'20 -2.1m			4253 Mar 13 20:55	0° Υ	
opposition	4248 Jan 07 07:31	16° \mathcal{E} 02'28 3°22'20					
direct	4248 Feb 10 22:32	8° \mathcal{E} 29'42	conjunction		4253 Apr 13 10:54	24° Υ 11'30 -0°43'41	
	4248 Apr 21 07:43	0° \mathcal{O}	minimum elong		4253 Apr 13 14:19	24° Υ 18'14 0°43'38	
	4248 Jun 16 09:49	0° \mathcal{M}			4253 Apr 20 19:49	0° \mathcal{B}	
	4248 Aug 06 11:08	0° \mathcal{L}	max. Earth dist.		4253 May 27 02:54	28° \mathcal{B} 14'01 2.38112 AU	
	4248 Sep 24 02:04	0° \mathcal{M}			4253 May 29 10:15	0° \mathcal{H}	
evening set	4248 Oct 31 00:25	23° \mathcal{M} 45'03	asc. node		4253 Jun 21 05:19	17° \mathcal{H} 14'39	
desc. node	4248 Nov 08 12:45	29° \mathcal{M} 21'33	morning rise		4253 Jun 23 07:28	18° \mathcal{H} 48'11	

	4253 Jul 08 11:19	0°☾			4258 Sep 26 08:14	0°♊		
	4253 Aug 19 14:45	0°♊			4258 Nov 21 23:59	0°♋		
	4253 Oct 03 10:24	0°♎			4259 Jan 04 04:12	0°♌		
	4253 Nov 20 22:13	0°♋		asc. node	4259 Feb 11 02:00	27°♌44'55		
	4254 Jan 16 10:55	0°♌			4259 Feb 14 03:30	0°♉		
retrograde	4254 Mar 18 13:17	16°♌38'02			4259 Mar 27 07:40	0°♊		
opposition	4254 Apr 26 23:44	7°♌26'54	2°16'23		4259 May 08 17:49	0°☾		
greatest brilliancy	4254 Apr 27 06:34	7°♌20'12	-1.4m		4259 Jun 21 19:49	0°♊		
min. Earth dist.	4254 Apr 30 06:05	6°♌10'01	0.66186 AU	evening set	4259 Aug 04 04:38	28°♊30'54		
	4254 May 18 10:43	30°♋♋			4259 Aug 06 11:36	0°♎		
direct	4254 Jun 07 11:26	27°♋24'20						
	4254 Jun 28 22:26	0°♌		conjunction	4259 Sep 20 16:53	29°♎01'23	1°03'41	
desc. node	4254 Jul 01 09:13	0°♌35'10		minimum elong	4259 Sep 20 17:39	29°♎02'36	1°03'40	
	4254 Sep 06 04:46	0°♌			4259 Sep 22 05:40	0°♋		
	4254 Oct 24 05:29	0°♋		max. Earth dist.	4259 Sep 24 20:44	1°♋40'26	2.67262 AU	
	4254 Dec 05 17:53	0°♊		morning rise	4259 Nov 04 11:01	27°♋28'57		
	4255 Jan 14 09:52	0°♋			4259 Nov 08 10:07	0°♌		
	4255 Feb 21 16:44	0°♌			4259 Dec 25 12:26	0°♌		
	4255 Mar 31 18:21	0°♉			4260 Feb 10 08:16	0°♋		
evening set	4255 Apr 18 19:07	14°♉02'46		desc. node	4260 Feb 21 05:47	6°♋59'46		
asc. node	4255 May 09 04:33	29°♉41'54			4260 Mar 28 03:13	0°♊		
	4255 May 09 14:05	0°♊			4260 May 14 17:47	0°♋		
	4255 Jun 18 22:00	0°☾			4260 Jul 05 14:44	0°♌		
				retrograde	4260 Sep 05 20:18	19°♌32'56		
conjunction	4255 Jun 22 16:55	2°☾44'50	0°28'31	opposition	4260 Oct 05 23:33	14°♌29'37	-5°27'04	
minimum elong	4255 Jun 22 15:02	2°☾41'26	0°28'29	min. Earth dist.	4260 Oct 05 04:10	14°♌42'26	0.37039 AU	
	4255 Jul 31 06:00	0°♊		greatest brilliancy	4260 Oct 06 00:42	14°♌28'51	-3.0m	
max. Earth dist.	4255 Aug 01 18:17	1°♊02'37	2.51556 AU	direct	4260 Nov 04 10:51	9°♌35'50		
morning rise	4255 Aug 19 09:58	13°♊05'41		asc. node	4260 Dec 29 01:47	25°♌38'43		
	4255 Sep 13 18:58	0°♎			4261 Jan 06 12:25	0°♉		
	4255 Oct 30 14:36	0°♋			4261 Feb 26 04:50	0°♊		
	4255 Dec 19 04:27	0°♌			4261 Apr 14 04:37	0°☾		
	4256 Feb 12 12:06	0°♌			4261 May 31 00:04	0°♊		
retrograde	4256 Apr 26 18:49	22°♌33'33			4261 Jul 17 07:55	0°♎		
desc. node	4256 May 18 08:28	19°♌37'22			4261 Sep 02 22:53	0°♋		
opposition	4256 Jun 03 00:55	14°♌24'14	-0°38'40	evening set	4261 Sep 10 16:00	4°♋52'02		
greatest brilliancy	4256 Jun 03 04:43	14°♌20'40	-1.7m	max. Earth dist.	4261 Oct 16 12:33	27°♋36'49	2.67001 AU	
min. Earth dist.	4256 Jun 09 20:26	11°♌50'48	0.58268 AU		4261 Oct 20 06:14	0°♌		
direct	4256 Jul 13 14:32	4°♌42'04						
	4256 Sep 25 01:46	0°♋		conjunction	4261 Oct 25 21:24	3°♌36'12	0°37'59	
	4256 Nov 11 00:04	0°♊		minimum elong	4261 Oct 25 22:23	3°♌37'47	0°37'59	
	4256 Dec 22 03:36	0°♋			4261 Dec 05 15:26	0°♌		
	4257 Jan 30 04:39	0°♌		morning rise	4261 Dec 09 02:01	2°♌15'31		
	4257 Mar 09 20:42	0°♉		desc. node	4262 Jan 08 04:53	22°♌14'34		
asc. node	4257 Mar 26 02:34	12°♉27'53			4262 Jan 19 17:31	0°♋		
	4257 Apr 18 07:22	0°♊			4262 Mar 04 10:21	0°♊		
	4257 May 29 06:59	0°☾			4262 Apr 15 21:04	0°♋		
evening set	4257 Jun 19 00:16	14°☾39'28			4262 May 27 10:19	0°♌		
	4257 Jul 11 05:04	0°♊			4262 Jul 07 23:32	0°♉		
					4262 Aug 20 20:10	0°♊		
conjunction	4257 Aug 11 16:16	21°♊10'14	1°04'58		4262 Oct 18 18:12	0°☾		
minimum elong	4257 Aug 11 15:25	21°♊08'49	1°04'58	retrograde	4262 Nov 11 09:26	3°☾47'07		
	4257 Aug 25 01:33	0°♎		asc. node	4262 Nov 16 00:41	3°☾37'31		
max. Earth dist.	4257 Aug 31 07:40	4°♎05'39	2.62042 AU		4262 Dec 04 08:32	30°♋♋		
morning rise	4257 Sep 29 08:09	22°♎51'12		min. Earth dist.	4262 Dec 09 04:55	28°♋25'52	0.46010 AU	
	4257 Oct 10 12:53	0°♋		opposition	4262 Dec 17 13:44	25°♋30'27	1°49'24	
	4257 Nov 27 06:16	0°♌		greatest brilliancy	4262 Dec 16 22:44	25°♋43'38	-2.4m	
	4258 Jan 15 07:12	0°♌		direct	4263 Jan 19 09:00	18°♋47'13		
	4258 Mar 07 23:19	0°♋			4263 Mar 06 23:44	0°☾		
desc. node	4258 Apr 05 06:52	14°♋58'41			4263 May 05 15:08	0°♊		
	4258 May 09 04:01	0°♊			4263 Jun 26 08:35	0°♎		
retrograde	4258 Jun 20 01:23	8°♊50'37			4263 Aug 14 23:16	0°♋		
opposition	4258 Jul 23 08:45	2°♊28'48	-4°51'57		4263 Oct 02 00:57	0°♌		
greatest brilliancy	4258 Jul 24 18:34	2°♊01'10	-2.4m	evening set	4263 Oct 17 06:18	9°♌43'41		
	4258 Jul 30 23:36	30°♋♋		max. Earth dist.	4263 Nov 10 02:50	25°♌14'01	2.61359 AU	
min. Earth dist.	4258 Jul 31 18:45	29°♋44'51	0.45466 AU		4263 Nov 17 08:16	0°♌		
direct	4258 Aug 28 16:11	24°♋43'18		desc. node	4263 Nov 26 03:26	5°♌50'51		

conjunction	4263 Dec 02 04:19	9°♊53'17	-0°03'25		4268 Nov 30 07:56	0°♊	
minimum elong	4263 Dec 02 04:09	9°♊53'02	0°03'24		4269 Feb 05 22:07	0°♊	
behind sun begin	4263 Dec 01 08:59	9°♊20'52		retrograde	4269 Mar 04 16:14	3°♊54'16	
behind sun end	4263 Dec 02 23:20	10°♊25'13			4269 Mar 29 07:21	30°♊	
	4263 Dec 31 16:18	0°♊		opposition	4269 Apr 13 13:47	24°♊26'22	3°04'55
morning rise	4264 Jan 18 07:59	12°♊20'05		greatest brilliancy	4269 Apr 13 18:36	24°♊21'35	-1.3m
	4264 Feb 12 01:49	0°♊		min. Earth dist.	4269 Apr 15 07:58	23°♊44'34	0.67569 AU
	4264 Mar 23 19:35	0°♊		direct	4269 May 24 21:19	14°♊27'51	
	4264 May 02 09:13	0°♊		desc. node	4269 Jul 18 00:25	28°♊03'54	
	4264 Jun 10 11:43	0°♊			4269 Jul 22 10:04	0°♊	
	4264 Jul 20 03:40	0°♊			4269 Sep 16 07:40	0°♊	
	4264 Aug 30 22:38	0°♊			4269 Nov 01 16:17	0°♊	
asc. node	4264 Oct 02 23:48	21°♊30'56			4269 Dec 13 17:18	0°♊	
	4264 Oct 17 11:56	0°♊			4270 Jan 22 05:31	0°♊	
retrograde	4264 Dec 25 03:19	23°♊21'50			4270 Mar 01 10:30	0°♊	
min. Earth dist.	4265 Jan 27 15:14	15°♊51'41	0.58796 AU	evening set	4270 Mar 21 00:58	15°♊30'55	
opposition	4265 Feb 02 12:51	13°♊32'07	4°30'05		4270 Apr 08 09:46	0°♊	
greatest brilliancy	4265 Feb 01 13:36	13°♊55'03	-1.7m		4270 May 17 02:03	0°♊	
direct	4265 Mar 11 13:20	5°♊01'35		asc. node	4270 May 25 20:34	6°♊39'53	
	4265 May 29 11:24	0°♊					
	4265 Jul 23 22:18	0°♊		conjunction	4270 May 28 15:10	8°♊45'38	0°01'55
	4265 Sep 12 00:04	0°♊		minimum elong	4270 May 28 15:00	8°♊45'19	0°01'55
desc. node	4265 Oct 13 02:14	19°♊41'28		behind sun begin	4270 May 27 11:08	7°♊52'46	
	4265 Oct 28 20:59	0°♊		behind sun end	4270 May 29 18:51	9°♊37'48	
evening set	4265 Nov 24 21:37	18°♊09'40			4270 Jun 26 05:54	0°♊	
max. Earth dist.	4265 Dec 10 00:57	28°♊37'16	2.50789 AU	max. Earth dist.	4270 Jul 16 04:12	14°♊22'10	2.46287 AU
	4265 Dec 12 00:19	0°♊		morning rise	4270 Jul 30 18:03	24°♊39'19	
					4270 Aug 07 10:22	0°♊	
conjunction	4266 Jan 14 10:08	23°♊52'37	-0°48'34		4270 Sep 20 23:20	0°♊	
minimum elong	4266 Jan 14 08:27	23°♊49'34	0°48'33		4270 Nov 07 04:16	0°♊	
	4266 Jan 22 18:34	0°♊			4270 Dec 28 06:43	0°♊	
	4266 Mar 03 16:15	0°♊			4271 Mar 01 15:04	0°♊	
morning rise	4266 Mar 11 23:56	6°♊23'19		retrograde	4271 Apr 11 02:02	8°♊05'02	
	4266 Apr 11 09:27	0°♊			4271 May 17 23:08	30°♊	
	4266 May 19 17:08	0°♊		opposition	4271 May 19 09:08	29°♊27'30	0°38'22
	4266 Jun 27 12:41	0°♊		greatest brilliancy	4271 May 19 12:39	29°♊24'07	-1.6m
	4266 Aug 06 19:43	0°♊		min. Earth dist.	4271 May 24 20:48	27°♊21'04	0.62110 AU
asc. node	4266 Aug 20 23:13	10°♊08'07		desc. node	4271 Jun 04 22:57	23°♊27'49	
	4266 Sep 18 19:47	0°♊		direct	4271 Jun 29 14:03	19°♊30'32	
	4266 Nov 06 00:27	0°♊			4271 Aug 13 11:34	0°♊	
	4267 Jan 20 04:46	0°♊			4271 Oct 08 10:01	0°♊	
retrograde	4267 Jan 30 08:05	0°♊38'33			4271 Nov 21 17:16	0°♊	
	4267 Feb 09 02:09	30°♊			4272 Jan 01 00:47	0°♊	
min. Earth dist.	4267 Mar 09 12:26	21°♊33'59	0.66439 AU		4272 Feb 08 15:45	0°♊	
opposition	4267 Mar 11 14:50	20°♊43'29	4°26'48		4272 Mar 17 23:54	0°♊	
greatest brilliancy	4267 Mar 11 06:46	20°♊51'34	-1.3m	asc. node	4272 Apr 11 20:34	19°♊10'41	
direct	4267 Apr 20 11:30	11°♊14'17			4272 Apr 26 02:36	0°♊	
	4267 Jun 26 01:22	0°♊		evening set	4272 May 28 01:33	23°♊41'57	
	4267 Aug 21 17:33	0°♊			4272 Jun 05 18:10	0°♊	
desc. node	4267 Aug 31 01:36	5°♊29'58			4272 Jul 18 08:49	0°♊	
	4267 Oct 09 10:43	0°♊					
	4267 Nov 23 00:08	0°♊		conjunction	4272 Jul 24 16:10	4°♊19'08	0°56'11
	4268 Jan 03 14:09	0°♊		minimum elong	4272 Jul 24 14:29	4°♊16'16	0°56'10
evening set	4268 Jan 13 11:04	7°♊22'35		max. Earth dist.	4272 Aug 20 17:50	22°♊32'47	2.58505 AU
	4268 Feb 12 02:03	0°♊			4272 Sep 01 00:29	0°♊	
max. Earth dist.	4268 Feb 13 02:09	0°♊46'39	2.38041 AU	morning rise	4272 Sep 14 02:47	8°♊33'54	
					4272 Oct 17 12:20	0°♊	
conjunction	4268 Mar 15 05:57	25°♊09'47	-1°01'25		4272 Dec 04 17:09	0°♊	
minimum elong	4268 Mar 15 07:51	25°♊13'32	1°01'25		4273 Jan 24 05:48	0°♊	
	4268 Mar 21 09:05	0°♊			4273 Mar 21 22:18	0°♊	
	4268 Apr 28 08:57	0°♊		desc. node	4273 Apr 21 21:46	12°♊32'57	
morning rise	4268 May 25 11:44	21°♊10'00		retrograde	4273 May 27 09:05	19°♊00'54	
	4268 Jun 05 23:07	0°♊		opposition	4273 Jul 01 11:16	11°♊50'03	-3°06'52
asc. node	4268 Jul 07 21:06	24°♊02'25		greatest brilliancy	4273 Jul 02 09:03	11°♊30'51	-2.1m
	4268 Jul 15 23:29	0°♊		min. Earth dist.	4273 Jul 09 19:13	8°♊54'37	0.50783 AU
	4268 Aug 27 03:52	0°♊		direct	4273 Aug 08 23:55	3°♊01'36	
	4268 Oct 11 08:09	0°♊			4273 Oct 21 13:35	0°♊	

	4273 Dec 05 12:09	0° H		behind sun begin	4278 Nov 16 20:15	25° M 10'09	
	4274 Jan 15 02:38	0° Y		behind sun end	4278 Nov 17 15:07	25° M 41'06	
	4274 Feb 23 18:29	0° B			4278 Nov 24 04:27	0° A	
asc. node	4274 Feb 27 19:02	3° B 01'59		desc. node	4278 Dec 12 19:05	12° A 22'58	
	4274 Apr 05 00:25	0° II		morning rise	4279 Jan 01 16:32	25° A 51'02	
	4274 May 16 17:03	0° E			4279 Jan 07 17:56	0° Z	
	4274 Jun 29 05:12	0° Q			4279 Feb 19 13:24	0° \approx	
evening set	4274 Jul 18 11:57	12° Q 54'38			4279 Apr 01 19:35	0° H	
	4274 Aug 13 11:21	0° M			4279 May 11 22:41	0° Y	
					4279 Jun 20 15:28	0° B	
conjunction	4274 Sep 05 20:58	15° M 09'30	1°07'39		4279 Jul 31 02:38	0° II	
minimum elong	4274 Sep 05 21:15	15° M 09'57	1°07'39		4279 Sep 12 16:08	0° E	
max. Earth dist.	4274 Sep 15 16:03	21° M 27'07	2.65857 AU	asc. node	4279 Oct 20 16:27	21° E 55'45	
	4274 Sep 29 00:52	0° E			4279 Nov 08 07:35	0° Q	
morning rise	4274 Oct 21 17:21	14° E 25'42		retrograde	4279 Dec 10 06:00	6° Q 22'31	
	4274 Nov 15 07:58	0° M			4280 Jan 09 15:39	30° R E	
	4275 Jan 01 23:22	0° A		min. Earth dist.	4280 Jan 10 13:47	29° E 39'19	0.54206 AU
	4275 Feb 19 01:13	0° Z		opposition	4280 Jan 17 18:41	26° E 53'19	3°56'15
desc. node	4275 Mar 09 20:27	11° Z 33'53		greatest brilliancy	4280 Jan 16 17:07	27° E 17'56	-1.9m
	4275 Apr 09 11:47	0° \approx		direct	4280 Feb 22 07:07	18° E 57'31	
	4275 Jun 03 02:40	0° H			4280 Apr 09 16:15	0° Q	
retrograde	4275 Aug 05 01:40	18° H 41'12			4280 Jun 09 22:26	0° M	
opposition	4275 Sep 04 11:29	13° H 35'32	-6°38'14		4280 Aug 01 04:49	0° E	
greatest brilliancy	4275 Sep 05 14:49	13° H 16'34	-2.8m		4280 Sep 19 06:46	0° M	
min. Earth dist.	4275 Sep 09 00:44	12° H 20'05	0.38533 AU	desc. node	4280 Oct 29 17:34	25° M 57'28	
direct	4275 Oct 06 00:31	7° H 58'47			4280 Nov 04 20:47	0° A	
	4275 Dec 09 03:58	0° Y		evening set	4280 Nov 08 17:10	2° A 33'07	
asc. node	4276 Jan 15 17:26	23° Y 14'05		max. Earth dist.	4280 Nov 26 14:44	14° A 34'11	2.55464 AU
	4276 Jan 25 23:18	0° B			4280 Dec 19 01:01	0° Z	
	4276 Mar 10 07:46	0° II					
	4276 Apr 23 17:19	0° E		conjunction	4280 Dec 26 19:14	5° Z 26'05	-0°31'54
	4276 Jun 08 02:55	0° Q		minimum elong	4280 Dec 26 18:02	5° Z 23'59	0°31'52
	4276 Jul 24 15:10	0° M			4281 Jan 30 00:22	0° \approx	
evening set	4276 Aug 27 04:12	21° M 20'42		morning rise	4281 Feb 16 13:59	12° \approx 58'35	
	4276 Sep 09 19:44	0° E			4281 Mar 11 04:37	0° H	
max. Earth dist.	4276 Oct 07 18:10	17° E 43'47	2.67745 AU		4281 Apr 19 04:12	0° Y	
					4281 May 27 17:11	0° B	
conjunction	4276 Oct 11 22:17	20° E 22'57	0°50'14		4281 Jul 05 17:25	0° II	
minimum elong	4276 Oct 11 23:21	20° E 24'39	0°50'13		4281 Aug 15 07:53	0° E	
	4276 Oct 27 00:20	0° M		asc. node	4281 Sep 06 14:48	15° E 37'58	
morning rise	4276 Nov 24 23:38	18° M 35'41			4281 Sep 28 04:22	0° Q	
	4276 Dec 12 14:13	0° A			4281 Nov 18 23:54	0° M	
desc. node	4277 Jan 24 19:40	28° A 24'58		retrograde	4282 Jan 16 18:51	17° M 09'29	
	4277 Jan 27 04:51	0° Z		min. Earth dist.	4282 Feb 22 06:54	8° M 37'57	0.64210 AU
	4277 Mar 12 18:50	0° \approx		opposition	4282 Feb 25 21:48	7° M 10'58	4°39'46
	4277 Apr 25 11:43	0° H		greatest brilliancy	4282 Feb 25 07:17	7° M 25'30	-1.4m
	4277 Jun 07 19:28	0° Y			4282 Mar 19 08:20	30° R Q	
	4277 Jul 22 08:44	0° B		direct	4282 Apr 05 20:05	28° Q 00'40	
	4277 Sep 14 08:33	0° II			4282 Apr 24 16:43	0° M	
retrograde	4277 Oct 19 22:47	8° II 06'19			4282 Jul 08 03:02	0° E	
min. Earth dist.	4277 Nov 15 08:56	3° II 29'18	0.40978 AU		4282 Aug 30 02:51	0° M	
opposition	4277 Nov 22 18:50	1° II 09'48	-0°39'25	desc. node	4282 Sep 16 16:05	10° M 43'38	
greatest brilliancy	4277 Nov 22 14:56	1° II 12'52	-2.8m		4282 Oct 16 21:50	0° A	
	4277 Nov 26 13:15	30° R B			4282 Nov 30 05:47	0° Z	
asc. node	4277 Dec 02 17:38	28° B 15'11		evening set	4282 Dec 23 07:34	16° Z 25'08	
direct	4277 Dec 23 13:29	25° B 23'56		max. Earth dist.	4283 Jan 08 08:20	28° Z 08'03	2.42800 AU
	4278 Jan 20 11:28	0° II			4283 Jan 10 20:53	0° \approx	
	4278 Mar 25 20:43	0° E					
	4278 May 16 04:33	0° Q		conjunction	4283 Feb 17 18:16	28° \approx 39'32	-1°04'36
	4278 Jul 04 13:54	0° M		minimum elong	4283 Feb 17 17:41	28° \approx 38'26	1°04'36
	4278 Aug 22 05:06	0° E			4283 Feb 19 12:01	0° H	
evening set	4278 Oct 02 22:30	26° E 12'17			4283 Mar 29 22:20	0° Y	
	4278 Oct 08 21:37	0° M		morning rise	4283 Apr 25 06:50	20° Y 46'25	
max. Earth dist.	4278 Oct 31 02:30	14° M 15'40	2.64194 AU		4283 May 07 00:20	0° B	
					4283 Jun 14 15:10	0° II	
conjunction	4278 Nov 17 05:14	25° M 24'53	0°14'01		4283 Jul 24 15:55	0° E	
minimum elong	4278 Nov 17 05:41	25° M 25'37	0°14'00	asc. node	4283 Jul 25 14:41	0° E 41'35	

	4283 Sep 04 23:34	0°♏			4289 Mar 04 13:49	0°♄	
	4283 Oct 20 19:00	0°♍		asc. node	4289 Mar 16 11:43	9°♄06'21	
	4283 Dec 12 13:30	0°♌			4289 Apr 13 05:21	0°♊	
retrograde	4284 Feb 20 06:22	21°♌19'58			4289 May 24 09:17	0°♏	
opposition	4284 Mar 31 10:43	11°♌38'41	3°44'08	evening set	4289 Jun 30 06:09	25°♏45'58	
greatest brilliancy	4284 Mar 31 11:30	11°♌37'54	-1.3m		4289 Jul 06 10:50	0°♏	
min. Earth dist.	4284 Mar 31 16:40	11°♌32'44	0.67912 AU		4289 Aug 20 09:35	0°♍	
direct	4284 May 11 08:37	1°♌48'38					
desc. node	4284 Aug 03 14:56	29°♌34'57		conjunction	4289 Aug 21 04:02	0°♍30'13	1°07'22
	4284 Aug 04 10:03	0°♍		minimum elong	4289 Aug 21 03:37	0°♍29'33	1°07'23
	4284 Sep 25 03:34	0°♎		max. Earth dist.	4289 Sep 06 02:55	10°♍53'44	2.63629 AU
	4284 Nov 09 13:30	0°♎			4289 Oct 05 20:38	0°♌	
	4284 Dec 21 08:29	0°♎		morning rise	4289 Oct 07 15:33	1°♌08'23	
	4285 Jan 29 19:41	0°♎			4289 Nov 22 09:10	0°♍	
evening set	4285 Feb 20 14:19	17°♎01'33			4290 Jan 09 19:16	0°♎	
	4285 Mar 09 00:49	0°♎			4290 Feb 28 18:59	0°♎	
	4285 Apr 15 23:37	0°♎		desc. node	4290 Mar 26 11:39	14°♎38'52	
conjunction	4285 Apr 30 05:06	11°♎09'09	-0°28'18	retrograde	4290 Apr 24 13:56	0°♎	
minimum elong	4285 Apr 30 07:45	11°♎14'20	0°28'16	opposition	4290 Jul 05 12:36	22°♎13'44	
	4285 May 24 14:06	0°♊		greatest brilliancy	4290 Aug 06 14:49	16°♎22'07	-5°46'53
asc. node	4285 Jun 11 13:57	13°♊38'35		min. Earth dist.	4290 Aug 08 04:05	15°♎53'22	-2.5m
max. Earth dist.	4285 Jun 20 19:36	20°♊32'42	2.40814 AU	direct	4290 Aug 14 08:49	13°♎59'17	0.42623 AU
	4285 Jul 03 15:16	0°♏			4290 Sep 10 08:53	9°♎21'44	
morning rise	4285 Jul 07 20:44	3°♏05'09			4290 Nov 10 11:34	0°♎	
	4285 Aug 14 17:42	0°♏		asc. node	4290 Dec 27 05:09	0°♎	
	4285 Sep 28 08:50	0°♍			4291 Feb 01 10:24	25°♎37'49	
	4285 Nov 15 05:04	0°♌			4291 Feb 07 12:39	0°♎	
	4286 Jan 07 22:31	0°♍			4291 Mar 21 11:19	0°♊	
retrograde	4286 Mar 26 19:55	24°♍34'36			4291 May 03 10:04	0°♏	
opposition	4286 May 04 21:48	15°♍34'02	1°43'20		4291 Jun 16 20:47	0°♏	
greatest brilliancy	4286 May 05 04:23	15°♍27'37	-1.4m	evening set	4291 Aug 01 18:20	0°♍	
min. Earth dist.	4286 May 08 23:10	13°♍59'05	0.65012 AU		4291 Aug 13 03:18	7°♍19'22	
direct	4286 Jun 15 09:01	5°♍31'31			4291 Sep 17 15:09	0°♌	
desc. node	4286 Jun 21 13:43	5°♍45'39		conjunction	4291 Sep 28 20:58	7°♌09'01	0°59'39
	4286 Aug 29 14:07	0°♎		minimum elong	4291 Sep 28 21:54	7°♌10'31	0°59'39
	4286 Oct 18 10:04	0°♎		max. Earth dist.	4291 Sep 30 01:24	7°♌54'13	2.67672 AU
	4286 Nov 30 11:02	0°♎			4291 Nov 03 19:11	0°♍	
	4287 Jan 09 07:37	0°♎		morning rise	4291 Nov 12 05:53	5°♍23'01	
	4287 Feb 16 16:44	0°♎			4291 Dec 20 16:25	0°♎	
	4287 Mar 26 19:55	0°♎			4292 Feb 05 00:16	0°♎	
asc. node	4287 Apr 29 12:22	26°♎02'47		desc. node	4292 Feb 11 10:57	4°♎12'07	
evening set	4287 May 04 03:24	29°♎34'01			4292 Mar 21 20:21	0°♎	
	4287 May 04 17:05	0°♊			4292 May 06 14:07	0°♎	
	4287 Jun 14 02:42	0°♏			4292 Jun 22 14:00	0°♎	
conjunction	4287 Jul 05 10:02	15°♏16'04	0°40'43	retrograde	4292 Aug 17 17:10	0°♎	
minimum elong	4287 Jul 05 07:56	15°♏12'21	0°40'41	min. Earth dist.	4292 Sep 23 02:27	8°♎04'26	
	4287 Jul 26 11:57	0°♏		opposition	4292 Oct 20 11:33	3°♎35'33	0.37617 AU
max. Earth dist.	4287 Aug 09 17:36	9°♏44'53	2.54233 AU	greatest brilliancy	4292 Oct 24 06:58	2°♎32'04	-3°50'57
morning rise	4287 Aug 29 14:03	23°♏05'34			4292 Oct 23 22:11	2°♎38'11	-3.0m
	4287 Sep 09 00:39	0°♍		direct	4292 Nov 03 00:03	30°♎♎	
	4287 Oct 25 15:43	0°♌			4292 Nov 22 19:31	27°♎32'09	
	4287 Dec 13 14:03	0°♍		asc. node	4292 Dec 12 11:42	0°♎	
	4288 Feb 04 12:52	0°♎			4292 Dec 19 08:53	1°♎52'18	
	4288 Apr 18 13:20	0°♎			4293 Feb 16 17:59	0°♊	
retrograde	4288 May 07 03:42	1°♎55'44			4293 Apr 07 10:19	0°♏	
desc. node	4288 May 08 12:11	1°♎55'04			4293 May 25 09:30	0°♏	
	4288 May 24 14:28	30°♎♎			4293 Jul 12 07:41	0°♍	
opposition	4288 Jun 12 17:14	24°♎04'46	-1°29'20	evening set	4293 Aug 29 05:57	0°♌	
greatest brilliancy	4288 Jun 13 02:41	23°♎56'03	-1.8m		4293 Sep 18 19:09	12°♌56'10	
min. Earth dist.	4288 Jun 20 03:57	21°♎20'08	0.55798 AU	max. Earth dist.	4293 Oct 15 16:14	0°♍	
direct	4288 Jul 22 17:16	14°♎36'40			4293 Oct 21 18:42	3°♍54'16	2.66238 AU
	4288 Sep 14 18:25	0°♎		conjunction	4293 Nov 02 21:48	11°♍42'02	0°29'45
	4288 Nov 04 03:33	0°♎		minimum elong	4293 Nov 02 22:39	11°♍43'24	0°29'44
	4288 Dec 16 04:34	0°♎			4293 Dec 01 00:32	0°♎	
	4289 Jan 24 15:26	0°♎		morning rise	4293 Dec 17 09:13	10°♎48'58	

desc. node	4293 Dec 29 09:45	18°♄50'47		retrograde	4299 Feb 06 23:35	8°♌35'07	
	4294 Jan 14 22:01	0°♈			4299 Mar 16 02:35	30°♏♏	
	4294 Feb 27 06:55	0°♈		min. Earth dist.	4299 Mar 18 00:08	29°♏14'32	0.67240 AU
	4294 Apr 10 06:18	0°♏		opposition	4299 Mar 19 06:42	28°♏43'57	4°14'03
	4294 May 21 05:02	0°♏		greatest brilliancy	4299 Mar 19 02:02	28°♏48'37	-1.3m
	4294 Jun 30 21:16	0°♏		direct	4299 Apr 28 13:57	19°♏06'24	
	4294 Aug 11 22:17	0°♏			4299 Jun 15 17:11	0°♌	
	4294 Sep 29 06:36	0°♌			4299 Aug 15 16:13	0°♏	
asc. node	4294 Nov 06 09:11	15°♌00'33		desc. node	4299 Aug 21 05:42	3°♏10'22	
retrograde	4294 Nov 22 13:41	16°♌49'42			4299 Oct 04 06:54	0°♏	
min. Earth dist.	4294 Dec 21 14:00	10°♌58'59	0.48968 AU		4299 Nov 18 03:23	0°♈	
opposition	4294 Dec 29 17:53	8°♌00'08	2°49'04		4299 Dec 29 19:39	0°♈	
greatest brilliancy	4294 Dec 28 20:08	8°♌20'06	-2.2m	evening set	4300 Jan 26 15:59	21°♈01'10	
direct	4295 Feb 01 13:22	0°♌48'21			4300 Feb 07 07:35	0°♏	
	4295 Apr 27 15:37	0°♏			4300 Mar 17 13:53	0°♏	
	4295 Jun 20 12:59	0°♏					
	4295 Aug 09 22:23	0°♌		conjunction	4300 Apr 01 10:14	11°♏44'44	-0°53'07
	4295 Sep 27 08:00	0°♏		minimum elong	4300 Apr 01 13:23	11°♏50'57	0°53'06
evening set	4295 Oct 25 14:49	18°♏07'23		max. Earth dist.	4300 Apr 08 13:20	17°♏23'09	2.36865 AU
	4295 Nov 12 17:47	0°♏			4300 Apr 24 12:59	0°♏	
max. Earth dist.	4295 Nov 16 04:42	2°♏17'23	2.59461 AU		4300 Jun 02 02:26	0°♏	
desc. node	4295 Nov 16 08:14	2°♏23'14		morning rise	4300 Jun 12 03:16	7°♏39'15	
				asc. node	4300 Jun 29 06:04	20°♏31'25	
conjunction	4295 Dec 11 02:46	19°♏03'18	-0°13'52		4300 Jul 12 01:52	0°♌	
minimum elong	4295 Dec 11 02:16	19°♏02'25	0°13'51		4300 Aug 23 04:00	0°♏	
behind sun begin	4295 Dec 10 15:52	18°♏44'43			4300 Oct 07 00:51	0°♏	
behind sun end	4295 Dec 11 12:39	19°♏20'08			4300 Nov 24 23:00	0°♌	
	4295 Dec 27 00:36	0°♈			4301 Jan 23 03:44	0°♏	
morning rise	4296 Jan 28 13:59	22°♈59'48		retrograde	4301 Mar 13 13:43	11°♏39'29	
	4296 Feb 07 06:42	0°♈		opposition	4301 Apr 22 05:26	2°♏20'15	2°37'39
	4296 Mar 18 19:37	0°♏		greatest brilliancy	4301 Apr 22 11:35	2°♏14'12	-1.3m
	4296 Apr 27 03:59	0°♏		min. Earth dist.	4301 Apr 24 19:13	1°♏19'20	0.66927 AU
	4296 Jun 05 01:04	0°♏			4301 Apr 28 04:39	30°♏♌	
	4296 Jul 14 09:42	0°♏		direct	4301 Jun 02 15:51	22°♌19'04	
	4296 Aug 24 14:18	0°♌		desc. node	4301 Jul 09 04:50	29°♌12'18	
asc. node	4296 Sep 23 08:53	20°♌06'50			4301 Jul 11 11:51	0°♏	
	4296 Oct 09 03:45	0°♏			4301 Sep 10 22:32	0°♏	
	4296 Dec 13 01:00	0°♏			4301 Oct 28 06:13	0°♈	
retrograde	4297 Jan 02 14:52	2°♏40'11			4301 Dec 09 14:57	0°♈	
	4297 Jan 22 01:08	30°♏♏			4302 Jan 18 06:03	0°♏	
min. Earth dist.	4297 Feb 06 05:27	24°♏47'02	0.60963 AU		4302 Feb 25 12:23	0°♏	
greatest brilliancy	4297 Feb 10 11:43	23°♏05'27	-1.6m	greatest brilliancy	4302 Mar 30 17:19	26°♏13'13	1.2m
opposition	4297 Feb 11 08:21	22°♏44'56	4°38'59		4302 Apr 04 12:47	0°♏	
direct	4297 Mar 21 02:41	13°♏58'47		evening set	4302 Apr 07 08:40	2°♏13'06	
	4297 May 20 05:02	0°♏			4302 May 13 06:08	0°♏	
	4297 Jul 17 23:55	0°♌		asc. node	4302 May 17 05:46	3°♏01'57	
	4297 Sep 06 22:41	0°♏					
desc. node	4297 Oct 03 06:47	16°♏29'32		conjunction	4302 Jun 13 04:37	23°♏12'22	0°17'50
	4297 Oct 24 03:12	0°♏		minimum elong	4302 Jun 13 03:14	23°♏09'48	0°17'49
evening set	4297 Dec 04 16:18	28°♏07'59			4302 Jun 22 11:00	0°♌	
	4297 Dec 07 08:29	0°♈		max. Earth dist.	4302 Jul 27 07:01	24°♌52'12	2.49254 AU
max. Earth dist.	4297 Dec 19 00:47	8°♈13'57	2.48005 AU		4302 Aug 03 15:58	0°♏	
	4298 Jan 18 02:00	0°♈		morning rise	4302 Aug 12 05:00	5°♏53'17	
					4302 Sep 17 03:12	0°♏	
conjunction	4298 Jan 25 23:20	5°♈50'52	-0°56'26		4302 Nov 03 00:52	0°♌	
minimum elong	4298 Jan 25 21:42	5°♈47'49	0°56'25		4302 Dec 23 02:35	0°♏	
	4298 Feb 26 21:24	0°♏			4303 Feb 18 16:18	0°♏	
morning rise	4298 Mar 26 21:08	21°♏41'28		retrograde	4303 Apr 21 08:56	16°♏39'58	
	4298 Apr 06 11:56	0°♏		desc. node	4303 May 27 03:57	9°♏01'24	
	4298 May 14 17:11	0°♏		opposition	4303 May 29 02:55	8°♏17'05	-0°04'42
greatest brilliancy	4298 May 25 05:21	8°♏12'43	1.2m	greatest brilliancy	4303 May 29 03:24	8°♏16'37	-1.7m
	4298 Jun 22 10:13	0°♏		min. Earth dist.	4303 Jun 04 08:26	5°♏55'10	0.60096 AU
	4298 Aug 01 13:35	0°♌			4303 Jun 23 19:30	30°♏♏	
asc. node	4298 Aug 11 06:45	7°♌01'28		direct	4303 Jul 09 00:18	28°♏26'56	
	4298 Sep 13 04:58	0°♏			4303 Jul 24 23:02	0°♏	
	4298 Oct 30 04:16	0°♏			4303 Oct 02 01:45	0°♈	
	4298 Dec 28 14:18	0°♌			4303 Nov 16 17:37	0°♈	

	4303 Dec 27 12:11	0° H		minimum elong	4308 Oct 20 23:17	28° A 26'10	0°43'23
	4304 Feb 04 08:29	0° Y			4308 Oct 23 10:03	0° M	
	4304 Mar 13 20:29	0° B		morning rise	4308 Dec 03 23:43	26° M 47'43	
asc. node	4304 Apr 03 03:29	15° B 37'29			4308 Dec 08 21:41	0° A	
	4304 Apr 22 02:34	0° II		desc. node	4309 Jan 16 00:31	25° A 10'03	
	4304 Jun 01 21:20	0° E			4309 Jan 23 05:43	0° Z	
evening set	4304 Jun 10 20:44	6° E 25'14			4309 Mar 08 07:57	0° \approx	
	4304 Jul 14 14:49	0° O			4309 Apr 20 07:10	0° H	
					4309 Jun 01 12:34	0° Y	
conjunction	4304 Aug 05 03:46	14° O 36'41	1°02'00		4309 Jul 14 01:24	0° B	
minimum elong	4304 Aug 05 02:33	14° O 34'37	1°02'00		4309 Aug 29 06:00	0° II	
max. Earth dist.	4304 Aug 28 00:50	29° O 48'28	2.60566 AU	retrograde	4309 Nov 03 03:25	23° II 35'57	
	4304 Aug 28 07:51	0° M		asc. node	4309 Nov 24 01:56	20° II 27'21	
morning rise	4304 Sep 23 22:23	17° M 18'42		min. Earth dist.	4309 Nov 30 03:15	18° II 36'40	0.43649 AU
	4304 Oct 13 18:14	0° A		opposition	4309 Dec 08 07:52	15° II 52'16	0°52'52
	4304 Nov 30 15:25	0° M		greatest brilliancy	4309 Dec 08 00:30	15° II 58'29	-2.6m
	4305 Jan 19 05:08	0° A		direct	4310 Jan 09 06:06	9° II 34'12	
	4305 Mar 13 12:20	0° Z			4310 Mar 16 15:46	0° E	
desc. node	4305 Apr 13 02:28	14° Z 54'41			4310 May 10 14:31	0° O	
	4305 Jun 03 12:53	0° \approx			4310 Jun 30 04:16	0° M	
retrograde	4305 Jun 10 04:36	0° \approx 16'01			4310 Aug 18 08:02	0° A	
	4305 Jun 16 17:49	30° R Z			4310 Oct 05 06:07	0° M	
opposition	4305 Jul 14 08:29	23° Z 31'05	-4°06'29	evening set	4310 Oct 12 02:30	4° M 21'57	
greatest brilliancy	4305 Jul 15 13:38	23° Z 06'21	-2.2m	max. Earth dist.	4310 Nov 06 19:02	20° M 56'52	2.62734 AU
min. Earth dist.	4305 Jul 22 21:54	20° Z 37'51	0.47858 AU		4310 Nov 20 14:03	0° A	
direct	4305 Aug 20 18:53	15° Z 14'07					
	4305 Oct 10 17:11	0° \approx		conjunction	4310 Nov 26 16:04	4° A 01'43	0°04'05
	4305 Nov 28 19:29	0° H		minimum elong	4310 Nov 26 16:12	4° A 01'57	0°04'05
	4306 Jan 09 14:17	0° Y		behind sun begin	4310 Nov 25 21:27	3° A 30'51	
	4306 Feb 18 20:57	0° B		behind sun end	4310 Nov 27 10:58	4° A 33'05	
asc. node	4306 Feb 19 02:38	0° B 10'34		desc. node	4310 Dec 03 22:59	8° A 53'09	
	4306 Mar 31 13:07	0° II			4311 Jan 04 01:27	0° Z	
	4306 May 12 13:33	0° E		morning rise	4311 Jan 11 23:03	5° Z 28'01	
	4306 Jun 25 07:53	0° O			4311 Feb 15 16:13	0° \approx	
evening set	4306 Jul 29 04:43	22° O 27'18			4311 Mar 28 16:02	0° H	
	4306 Aug 09 18:14	0° M			4311 May 07 11:34	0° Y	
					4311 Jun 15 19:46	0° B	
conjunction	4306 Sep 15 10:50	23° M 38'41	1°05'48		4311 Jul 25 18:00	0° II	
minimum elong	4306 Sep 15 11:25	23° M 39'38	1°05'48		4311 Sep 06 01:34	0° E	
max. Earth dist.	4306 Sep 22 00:43	27° M 50'58	2.66750 AU	asc. node	4311 Oct 12 00:38	22° E 33'33	
	4306 Sep 25 09:35	0° A			4311 Oct 25 17:49	0° O	
morning rise	4306 Oct 30 14:50	22° A 23'24		retrograde	4311 Dec 20 11:29	16° O 45'42	
	4306 Nov 11 14:55	0° M		min. Earth dist.	4312 Jan 22 00:39	9° O 36'07	0.56833 AU
	4306 Dec 28 22:32	0° A		opposition	4312 Jan 28 13:19	7° O 03'11	4°19'27
	4307 Feb 14 06:23	0° Z		greatest brilliancy	4312 Jan 27 12:22	7° O 27'35	-1.8m
desc. node	4307 Mar 01 01:30	9° Z 20'42			4312 Feb 20 11:10	30° R E	
	4307 Apr 03 01:05	0° \approx		direct	4312 Mar 04 22:21	28° E 47'19	
	4307 May 22 19:14	0° H			4312 Mar 19 06:01	0° O	
	4307 Jul 23 02:54	0° Y			4312 Jun 03 19:03	0° M	
retrograde	4307 Aug 24 12:22	6° Y 03'03			4312 Jul 27 17:42	0° A	
opposition	4307 Sep 23 11:15	1° Y 06'57	-6°15'53		4312 Sep 15 09:32	0° M	
greatest brilliancy	4307 Sep 24 00:31	0° Y 58'10	-2.9m	desc. node	4312 Oct 20 21:33	22° M 36'16	
min. Earth dist.	4307 Sep 25 05:35	0° Y 38'58	0.37312 AU		4312 Nov 01 04:27	0° A	
	4307 Sep 27 17:08	30° R H		evening set	4312 Nov 18 19:02	11° A 44'58	
direct	4307 Oct 23 12:34	26° H 02'18		max. Earth dist.	4312 Dec 05 01:46	22° A 50'48	2.52954 AU
	4307 Nov 17 11:52	0° Y			4312 Dec 15 09:21	0° Z	
asc. node	4308 Jan 07 02:50	23° Y 59'26					
	4308 Jan 17 03:58	0° B		conjunction	4313 Jan 07 02:33	16° Z 04'34	-0°41'50
	4308 Mar 04 03:40	0° II		minimum elong	4313 Jan 07 01:02	16° Z 01'51	0°41'48
	4308 Apr 18 18:06	0° E			4313 Jan 26 06:59	0° \approx	
	4308 Jun 03 20:06	0° O		morning rise	4313 Mar 02 08:05	26° \approx 11'00	
	4308 Jul 20 17:55	0° M			4313 Mar 07 08:25	0° H	
evening set	4308 Sep 05 12:39	29° M 36'10			4313 Apr 15 04:48	0° Y	
	4308 Sep 06 03:44	0° A			4313 May 23 14:45	0° B	
max. Earth dist.	4308 Oct 13 22:07	23° A 56'36	2.67443 AU		4313 Jul 01 11:36	0° II	
					4313 Aug 10 20:03	0° E	
conjunction	4308 Oct 20 22:14	28° A 24'30	0°43'23	asc. node	4313 Aug 29 00:15	12° E 55'59	

	4313 Sep 23 01:27	0°♈			4319 Jan 05 02:51	0°♏	
	4313 Nov 11 06:12	0°♐			4319 Feb 12 15:11	0°♑	
retrograde	4314 Jan 25 14:16	25°♐26'05			4319 Mar 22 20:37	0°♒	
min. Earth dist.	4314 Mar 04 00:54	16°♐36'08	0.65563 AU	asc. node	4319 Apr 20 21:20	22°♒26'24	
opposition	4314 Mar 06 20:11	15°♐28'45	4°33'49		4319 Apr 30 19:50	0°♓	
greatest brilliancy	4314 Mar 06 09:13	15°♐39'44	-1.4m	evening set	4319 May 19 14:16	14°♓04'36	
direct	4314 Apr 15 07:51	6°♐07'33			4319 Jun 10 07:15	0°♈	
	4314 Jul 01 15:39	0°♑					
	4314 Aug 25 14:48	0°♒		conjunction	4319 Jul 18 05:46	26°♓52'54	0°50'29
desc. node	4314 Sep 07 21:01	7°♒56'30		minimum elong	4319 Jul 18 03:50	26°♓49'32	0°50'28
	4314 Oct 12 23:23	0°♓			4319 Jul 22 18:02	0°♈	
	4314 Nov 26 11:43	0°♔		max. Earth dist.	4319 Aug 17 23:48	17°♈50'34	2.56680 AU
evening set	4315 Jan 04 22:42	28°♔22'36			4319 Sep 05 06:47	0°♐	
	4315 Jan 07 03:22	0°♑		morning rise	4319 Sep 09 05:08	2°♐35'03	
max. Earth dist.	4315 Jan 25 10:32	13°♑42'41	2.39991 AU		4319 Oct 21 18:40	0°♑	
	4315 Feb 15 17:27	0°♒			4319 Dec 09 05:09	0°♒	
					4320 Jan 29 13:26	0°♓	
conjunction	4315 Mar 05 06:25	13°♓38'21	-1°04'31		4320 Mar 30 01:04	0°♔	
minimum elong	4315 Mar 05 07:10	13°♓39'49	1°04'31	desc. node	4320 Apr 29 17:00	9°♔42'22	
	4315 Mar 26 02:09	0°♑		retrograde	4320 May 19 05:28	11°♔50'23	
	4315 May 03 02:50	0°♒		opposition	4320 Jun 24 01:03	4°♔20'23	-2°23'50
morning rise	4315 May 13 22:11	8°♒28'34		greatest brilliancy	4320 Jun 24 17:13	4°♔05'48	-2.0m
	4315 Jun 10 16:41	0°♓		min. Earth dist.	4320 Jul 02 01:23	1°♔27'35	0.53100 AU
asc. node	4315 Jul 16 22:13	27°♓15'10			4320 Jul 06 08:36	30°♒♓	
	4315 Jul 20 15:57	0°♈		direct	4320 Aug 02 07:45	25°♓11'49	
	4315 Aug 31 20:02	0°♈			4320 Aug 30 07:44	0°♔	
	4315 Oct 16 03:40	0°♐			4320 Oct 28 07:48	0°♑	
	4315 Dec 05 22:52	0°♑			4320 Dec 10 18:38	0°♒	
retrograde	4316 Feb 28 21:56	29°♑00'47			4321 Jan 19 19:18	0°♑	
opposition	4316 Apr 08 23:03	19°♑26'24	3°22'15		4321 Feb 28 02:07	0°♒	
greatest brilliancy	4316 Apr 09 02:13	19°♑23'15	-1.3m	asc. node	4321 Mar 07 20:00	5°♒52'51	
min. Earth dist.	4316 Apr 10 00:34	19°♑01'03	0.67853 AU		4321 Apr 09 00:18	0°♓	
direct	4316 May 20 03:11	9°♑31'20			4321 May 20 09:36	0°♈	
desc. node	4316 Jul 25 19:58	28°♑42'13			4321 Jul 02 15:35	0°♈	
	4316 Jul 28 12:50	0°♒		evening set	4321 Jul 11 20:35	6°♈13'28	
	4316 Sep 20 11:21	0°♓			4321 Aug 16 17:02	0°♐	
	4316 Nov 05 11:19	0°♔					
	4316 Dec 17 10:56	0°♑		conjunction	4321 Aug 31 06:38	9°♐28'59	1°08'05
	4317 Jan 25 23:28	0°♒		minimum elong	4321 Aug 31 06:39	9°♐29'00	1°08'05
	4317 Mar 05 04:36	0°♑		max. Earth dist.	4321 Sep 12 17:15	17°♐31'18	2.64958 AU
evening set	4317 Mar 09 09:44	3°♑20'07			4321 Oct 02 04:34	0°♑	
	4317 Apr 12 03:18	0°♒		morning rise	4321 Oct 16 18:44	9°♑17'16	
					4321 Nov 18 13:21	0°♒	
conjunction	4317 May 17 14:20	27°♒35'16	-0°11'06		4322 Jan 05 11:55	0°♓	
minimum elong	4317 May 17 15:24	27°♒37'19	0°11'06		4322 Feb 23 07:06	0°♔	
behind sun begin	4317 May 16 18:08	26°♒56'31		desc. node	4322 Mar 17 15:58	13°♔23'17	
behind sun end	4317 May 18 12:40	28°♒18'04			4322 Apr 15 11:57	0°♑	
	4317 May 20 17:54	0°♓			4322 Jun 17 04:32	0°♒	
asc. node	4317 Jun 02 21:14	9°♓59'14		retrograde	4322 Jul 23 04:28	6°♒57'34	
	4317 Jun 29 19:12	0°♈		opposition	4322 Aug 23 05:45	1°♒33'56	-6°26'24
max. Earth dist.	4317 Jul 07 23:10	5°♈56'43	2.43820 AU	greatest brilliancy	4322 Aug 24 16:32	1°♒08'36	-2.7m
morning rise	4317 Jul 22 06:44	16°♈13'26			4322 Aug 28 15:05	30°♒♑	
	4317 Aug 10 21:17	0°♈		min. Earth dist.	4322 Aug 29 13:13	29°♑44'14	0.40131 AU
	4317 Sep 24 09:15	0°♐		direct	4322 Sep 25 05:24	25°♑21'08	
	4317 Nov 10 18:14	0°♑			4322 Oct 21 19:50	0°♒	
	4318 Jan 01 16:21	0°♒			4322 Dec 18 14:26	0°♑	
	4318 Mar 14 05:16	0°♓		asc. node	4323 Jan 23 18:19	24°♑10'26	
retrograde	4318 Apr 05 09:28	2°♓41'22			4323 Feb 01 04:31	0°♒	
	4318 Apr 25 22:58	30°♒♒			4323 Mar 16 05:54	0°♓	
opposition	4318 May 14 01:36	23°♒52'48	1°06'49		4323 Apr 28 20:57	0°♈	
greatest brilliancy	4318 May 14 06:51	23°♒47'44	-1.5m		4323 Jun 12 18:37	0°♈	
min. Earth dist.	4318 May 18 21:41	22°♒00'30	0.63538 AU		4323 Jul 28 23:04	0°♐	
desc. node	4318 Jun 12 18:14	14°♒46'06		evening set	4323 Aug 22 20:04	15°♐54'35	
direct	4318 Jun 24 10:14	13°♒52'33			4323 Sep 13 23:39	0°♑	
	4318 Aug 21 10:12	0°♓		max. Earth dist.	4323 Oct 06 04:47	14°♑06'39	2.67816 AU
	4318 Oct 13 05:16	0°♔					
	4318 Nov 25 23:32	0°♑		conjunction	4323 Oct 07 23:14	15°♑14'07	0°54'30

minimum elong	4323 Oct 08 00:17	15°♌15'46	0°54'30	opposition	4329 Feb 20 19:26	1°♏35'33	4°41'33
	4323 Oct 31 03:53	0°♍		greatest brilliancy	4329 Feb 20 02:03	1°♏52'54	-1.5m
morning rise	4323 Nov 21 02:31	13°♍23'47			4329 Feb 24 20:29	30°♏	
	4323 Dec 16 21:01	0°♌		direct	4329 Mar 31 06:26	22°♏35'21	
	4324 Jan 31 19:18	0°♍			4329 May 08 16:43	0°♏	
desc. node	4324 Feb 02 14:58	1°♍12'02			4329 Jul 12 16:06	0°♌	
	4324 Mar 16 21:46	0°♍			4329 Sep 02 18:22	0°♍	
	4324 Apr 30 09:41	0°♌		desc. node	4329 Sep 24 11:35	13°♍24'45	
	4324 Jun 13 23:20	0°♏			4329 Oct 20 08:10	0°♌	
	4324 Jul 31 05:24	0°♌			4329 Dec 03 16:26	0°♍	
retrograde	4324 Oct 09 19:29	25°♌51'34		evening set	4329 Dec 15 23:21	8°♍39'44	
min. Earth dist.	4324 Nov 05 06:06	21°♌24'49	0.39170 AU	max. Earth dist.	4329 Dec 30 13:27	19°♍08'02	2.45147 AU
opposition	4324 Nov 11 10:14	19°♌35'09	-2°00'30		4330 Jan 14 09:45	0°♍	
greatest brilliancy	4324 Nov 11 01:05	19°♌41'56	-2.9m				
asc. node	4324 Dec 10 18:31	14°♌13'30		conjunction	4330 Feb 08 09:33	18°♍43'24	-1°02'11
direct	4324 Dec 11 10:32	14°♌13'19		minimum elong	4330 Feb 08 08:20	18°♍41'04	1°02'10
	4325 Feb 05 01:35	0°♏			4330 Feb 23 03:41	0°♌	
	4325 Mar 31 22:25	0°♌			4330 Apr 02 16:08	0°♏	
	4325 May 20 12:20	0°♏		morning rise	4330 Apr 12 23:28	8°♏06'24	
	4325 Jul 08 04:15	0°♏			4330 May 10 19:16	0°♌	
	4325 Aug 25 11:33	0°♌			4330 Jun 18 10:19	0°♏	
evening set	4325 Sep 27 21:16	20°♌59'30			4330 Jul 28 10:40	0°♌	
	4325 Oct 12 01:38	0°♍		asc. node	4330 Aug 02 15:22	3°♌47'14	
max. Earth dist.	4325 Oct 28 02:25	10°♍16'32	2.65206 AU		4330 Sep 08 19:20	0°♏	
					4330 Oct 24 22:05	0°♏	
conjunction	4325 Nov 12 00:56	19°♍56'38	0°20'48		4330 Dec 18 10:49	0°♌	
minimum elong	4325 Nov 12 01:34	19°♍57'41	0°20'47	retrograde	4331 Feb 15 14:15	16°♌24'13	
	4325 Nov 27 09:39	0°♌		opposition	4331 Mar 27 20:40	6°♌37'55	3°57'43
desc. node	4325 Dec 20 14:25	15°♌24'53		min. Earth dist.	4331 Mar 27 09:59	6°♌48'35	0.67746 AU
morning rise	4325 Dec 26 23:46	19°♌42'48		greatest brilliancy	4331 Mar 27 19:08	6°♌39'26	-1.3m
	4326 Jan 11 03:26	0°♍			4331 Apr 15 11:01	30°♏	
	4326 Feb 23 05:16	0°♍		direct	4331 May 07 13:06	26°♏53'01	
	4326 Apr 05 19:21	0°♌			4331 May 31 13:29	0°♌	
	4326 May 16 06:38	0°♏			4331 Aug 10 04:12	0°♍	
	4326 Jun 25 08:24	0°♌		desc. node	4331 Aug 12 10:37	1°♍14'10	
	4326 Aug 05 07:56	0°♏			4331 Sep 29 23:44	0°♌	
	4326 Sep 19 04:39	0°♌			4331 Nov 14 05:17	0°♍	
asc. node	4326 Oct 28 17:34	20°♌37'51			4331 Dec 26 00:13	0°♍	
retrograde	4326 Dec 03 20:42	28°♌44'19			4332 Feb 03 12:38	0°♌	
min. Earth dist.	4327 Jan 03 04:22	22°♌24'05	0.51924 AU	evening set	4332 Feb 10 20:44	5°♌42'10	
opposition	4327 Jan 10 21:10	19°♌29'52	3°32'51		4332 Mar 12 18:33	0°♏	
greatest brilliancy	4327 Jan 09 20:05	19°♌53'36	-2.1m				
direct	4327 Feb 14 15:24	11°♌52'35		conjunction	4332 Apr 18 03:31	28°♏45'42	-0°40'19
	4327 Apr 19 01:22	0°♏		minimum elong	4332 Apr 18 06:53	28°♏52'19	0°40'17
	4327 Jun 15 09:08	0°♏			4332 Apr 19 17:16	0°♌	
	4327 Aug 05 18:46	0°♌			4332 May 28 06:37	0°♏	
	4327 Sep 23 14:06	0°♍		max. Earth dist.	4332 Jun 03 21:26	5°♏03'24	2.38581 AU
evening set	4327 Nov 04 02:50	26°♍41'46		asc. node	4332 Jun 19 15:05	16°♏56'39	
desc. node	4327 Nov 07 13:02	28°♍57'03		morning rise	4332 Jun 27 16:44	22°♏57'33	
	4327 Nov 09 03:11	0°♌			4332 Jul 07 05:45	0°♌	
max. Earth dist.	4327 Nov 23 13:48	9°♌37'07	2.57347 AU		4332 Aug 18 06:22	0°♏	
					4332 Oct 01 21:43	0°♏	
conjunction	4327 Dec 21 09:42	28°♌36'35	-0°24'20		4332 Nov 19 01:17	0°♌	
minimum elong	4327 Dec 21 08:48	28°♌35'00	0°24'19		4333 Jan 13 08:22	0°♍	
	4327 Dec 23 09:46	0°♍		retrograde	4333 Mar 21 15:11	19°♍28'54	
	4328 Feb 03 12:58	0°♍		opposition	4333 Apr 29 23:54	10°♍19'21	2°07'03
morning rise	4328 Feb 09 13:13	4°♍23'33		greatest brilliancy	4333 Apr 30 06:32	10°♍12'51	-1.4m
	4328 Mar 14 21:44	0°♌		min. Earth dist.	4333 May 03 09:01	8°♍59'50	0.66002 AU
	4328 Apr 23 01:19	0°♏		direct	4333 Jun 10 11:44	0°♍16'49	
	4328 May 31 17:28	0°♌		desc. node	4333 Jun 29 09:26	2°♍19'10	
	4328 Jul 09 20:23	0°♏			4333 Sep 03 23:09	0°♌	
	4328 Aug 19 14:31	0°♌			4333 Oct 22 16:06	0°♍	
asc. node	4328 Sep 14 15:32	18°♌02'48			4333 Dec 04 10:46	0°♍	
	4328 Oct 02 22:41	0°♏			4334 Jan 13 05:41	0°♌	
	4328 Nov 26 12:08	0°♏			4334 Feb 20 13:37	0°♏	
retrograde	4329 Jan 11 19:19	11°♏33'39			4334 Mar 30 15:03	0°♌	
min. Earth dist.	4329 Feb 16 11:54	3°♏18'51	0.62889 AU	evening set	4334 Apr 23 06:48	18°♌24'37	

asc. node	4334 May 07 13:25	29°♄21'23		4339 Mar 27 08:23	0°♁
	4334 May 08 09:42	0°♂		4339 May 13 11:21	0°♂
	4334 Jun 17 15:55	0°♄		4339 Jul 02 17:40	0°♂
			retrograde	4339 Sep 11 18:38	24°♂28'10
conjunction	4334 Jun 26 17:26	6°♄33'53 0°31'49	min. Earth dist.	4339 Oct 10 16:10	19°♂43'26 0.37045 AU
minimum elong	4334 Jun 26 15:26	6°♄30'17 0°31'48	opposition	4339 Oct 12 01:52	19°♂20'55 -5°07'22
	4334 Jul 29 21:51	0°♂	greatest brilliancy	4339 Oct 12 00:33	19°♂21'47 -3.0m
max. Earth dist.	4334 Aug 05 00:27	4°♂12'48 2.52088 AU	direct	4339 Nov 10 13:32	14°♂27'39
morning rise	4334 Aug 22 22:11	16°♂23'54	asc. node	4339 Dec 28 10:10	27°♂14'07
	4334 Sep 12 08:20	0°♄		4340 Jan 03 05:16	0°♄
	4334 Oct 29 00:33	0°♄		4340 Feb 24 20:58	0°♂
	4334 Dec 17 07:34	0°♂		4340 Apr 12 08:33	0°♄
	4335 Feb 09 16:51	0°♄		4340 May 29 08:37	0°♂
retrograde	4335 May 01 04:47	25°♄39'11		4340 Jul 15 18:38	0°♄
desc. node	4335 May 17 07:38	24°♄00'26		4340 Sep 01 10:59	0°♄
opposition	4335 Jun 07 08:18	17°♄32'55 -0°51'59	evening set	4340 Sep 13 17:14	7°♄43'53
greatest brilliancy	4335 Jun 07 13:26	17°♄28'07 -1.8m		4340 Oct 18 19:35	0°♂
min. Earth dist.	4335 Jun 14 06:40	14°♄57'27 0.57835 AU	max. Earth dist.	4340 Oct 19 02:29	0°♂11'00 2.66886 AU
direct	4335 Jul 17 19:35	7°♄53'19			
	4335 Sep 23 09:55	0°♄	conjunction	4340 Oct 28 21:28	6°♂26'57 0°35'42
	4335 Nov 10 07:58	0°♁	minimum elong	4340 Oct 28 22:25	6°♂28'29 0°35'42
	4335 Dec 21 18:54	0°♂		4340 Dec 04 05:53	0°♄
	4336 Jan 29 22:50	0°♂	morning rise	4340 Dec 12 02:48	5°♄10'06
	4336 Mar 08 15:40	0°♄	desc. node	4341 Jan 06 05:14	21°♄49'58
asc. node	4336 Mar 24 12:27	12°♄10'43		4341 Jan 18 08:42	0°♄
	4336 Apr 17 01:49	0°♂		4341 Mar 03 01:34	0°♁
	4336 May 28 00:08	0°♄		4341 Apr 14 11:23	0°♂
evening set	4336 Jun 22 17:32	18°♄10'35		4341 May 25 22:17	0°♂
	4336 Jul 09 20:35	0°♂		4341 Jul 06 06:06	0°♄
				4341 Aug 18 11:47	0°♂
conjunction	4336 Aug 15 00:58	24°♂19'41 1°05'47		4341 Oct 11 10:43	0°♄
minimum elong	4336 Aug 15 00:13	24°♂18'27 1°05'46	asc. node	4341 Nov 14 09:54	7°♄42'19
	4336 Aug 23 15:26	0°♄	retrograde	4341 Nov 15 02:33	7°♄42'32
max. Earth dist.	4336 Sep 03 01:03	6°♄48'21 2.62356 AU	min. Earth dist.	4341 Dec 13 03:56	2°♄15'23 0.46545 AU
morning rise	4336 Oct 02 10:47	25°♄47'15		4341 Dec 19 13:31	30°♄♂
	4336 Oct 09 01:09	0°♄	opposition	4341 Dec 21 11:45	29°♂18'48 2°06'33
	4336 Nov 25 16:18	0°♂	greatest brilliancy	4341 Dec 20 18:35	29°♂34'04 -2.4m
	4337 Jan 13 12:30	0°♄	direct	4342 Jan 23 11:02	22°♂30'02
	4337 Mar 05 15:44	0°♄		4342 Mar 01 13:01	0°♄
desc. node	4337 Apr 03 07:07	15°♄30'32		4342 May 03 06:32	0°♂
	4337 May 03 23:05	0°♁		4342 Jun 24 12:34	0°♄
retrograde	4337 Jun 24 11:38	12°♁39'11		4342 Aug 13 08:32	0°♄
opposition	4337 Jul 27 12:12	6°♁23'20 -5°05'37		4342 Sep 30 13:31	0°♂
greatest brilliancy	4337 Jul 28 23:25	5°♁54'53 -2.4m	evening set	4342 Oct 20 08:19	12°♂38'12
min. Earth dist.	4337 Aug 04 20:20	3°♁42'22 0.44905 AU	max. Earth dist.	4342 Nov 12 15:35	27°♂48'30 2.61027 AU
	4337 Aug 19 05:39	30°♄♄		4342 Nov 15 23:21	0°♄
direct	4337 Sep 01 13:58	28°♄45'58	desc. node	4342 Nov 24 03:41	5°♄25'28
	4337 Sep 14 23:55	0°♁			
	4337 Nov 19 11:27	0°♂	conjunction	4342 Dec 05 08:24	12°♄55'10 -0°06'17
	4338 Jan 02 09:18	0°♂	minimum elong	4342 Dec 05 08:09	12°♄54'46 0°06'17
asc. node	4338 Feb 09 11:40	27°♂42'41	behind sun begin	4342 Dec 04 13:54	12°♄24'05
	4338 Feb 12 14:41	0°♄	behind sun end	4342 Dec 06 02:24	13°♄25'29
	4338 Mar 25 21:13	0°♂		4342 Dec 30 09:17	0°♄
	4338 May 07 07:56	0°♄	morning rise	4343 Jan 21 17:11	15°♄37'01
	4338 Jun 20 09:38	0°♂		4343 Feb 10 20:03	0°♁
	4338 Aug 05 00:55	0°♄		4343 Mar 23 14:28	0°♂
evening set	4338 Aug 07 09:57	1°♄32'21		4343 May 02 04:02	0°♂
	4338 Sep 20 18:39	0°♄		4343 Jun 10 05:33	0°♄
				4343 Jul 19 18:49	0°♂
conjunction	4338 Sep 23 18:06	1°♄53'50 1°02'38		4343 Aug 30 07:17	0°♄
minimum elong	4338 Sep 23 18:55	1°♄55'08 1°02'38	asc. node	4343 Oct 02 09:49	21°♄51'00
max. Earth dist.	4338 Sep 27 06:57	4°♄08'57 2.67366 AU		4343 Oct 15 23:48	0°♂
	4338 Nov 06 22:53	0°♂	retrograde	4343 Dec 29 06:03	26°♂30'07
morning rise	4338 Nov 07 10:05	0°♂17'48	min. Earth dist.	4344 Jan 31 23:06	18°♂56'10 0.59212 AU
	4338 Dec 24 00:34	0°♄	opposition	4344 Feb 06 18:00	16°♂39'10 4°33'45
	4339 Feb 08 18:22	0°♄	greatest brilliancy	4344 Feb 05 19:01	17°♂01'51 -1.7m
desc. node	4339 Feb 19 06:47	6°♄46'26	direct	4344 Mar 14 22:38	8°♂05'49

	4344 May 26 14:25	0°♎	conjunction	4349 Jun 01 23:47	12°♊55'10	0°05'56
	4344 Jul 22 00:18	0°♊	minimum elong	4349 Jun 01 23:16	12°♊54'12	0°05'54
	4344 Sep 10 09:56	0°♌	behind sun begin	4349 May 31 21:08	12°♊05'07	
desc. node	4344 Oct 11 02:18	19°♌20'32	behind sun end	4349 Jun 03 01:23	13°♊43'14	
	4344 Oct 27 11:25	0°♈		4349 Jun 25 00:44	0°♊	
evening set	4344 Nov 28 04:55	21°♈19'16	max. Earth dist.	4349 Jul 19 21:06	17°♊54'07	2.46851 AU
	4344 Dec 10 17:55	0°♉	morning rise	4349 Aug 03 11:43	28°♊10'22	
max. Earth dist.	4344 Dec 13 03:58	1°♉41'27		4349 Aug 06 02:47	0°♊	
				4349 Sep 19 12:38	0°♊	
conjunction	4345 Jan 18 00:32	27°♉22'41		4349 Nov 05 12:54	0°♊	
minimum elong	4345 Jan 17 22:52	27°♉19'38		4349 Dec 26 04:38	0°♌	
	4345 Jan 21 14:16	0°♈		4350 Feb 25 00:27	0°♈	
	4345 Mar 02 13:06	0°♈	retrograde	4350 Apr 14 07:33	11°♈01'12	
morning rise	4345 Mar 16 04:50	10°♈30'00	opposition	4350 May 22 12:20	2°♈26'01	0°26'42
	4345 Apr 10 06:34	0°♎	greatest brilliancy	4350 May 22 14:53	2°♈23'35	-1.6m
	4345 May 18 13:39	0°♏	min. Earth dist.	4350 May 28 03:16	0°♈16'49	0.61748 AU
	4345 Jun 26 07:40	0°♊		4350 May 28 21:04	30°♌	
	4345 Aug 05 11:48	0°♊	desc. node	4350 Jun 02 23:07	28°♌08'42	
asc. node	4345 Aug 19 08:01	9°♊57'47	direct	4350 Jul 02 15:58	22°♌30'15	
	4345 Sep 17 06:18	0°♊		4350 Aug 08 19:25	0°♈	
	4345 Nov 03 20:41	0°♎		4350 Oct 06 10:53	0°♉	
	4346 Jan 08 17:18	0°♊		4350 Nov 20 05:45	0°♈	
retrograde	4346 Feb 02 06:55	3°♊30'28		4350 Dec 30 17:48	0°♈	
	4346 Feb 25 04:07	30°♌		4351 Feb 07 10:35	0°♎	
min. Earth dist.	4346 Mar 12 15:18	24°♌23'14		4351 Mar 17 19:04	0°♏	
opposition	4346 Mar 14 14:34	23°♌35'56	asc. node	4351 Apr 11 04:36	18°♏49'57	
greatest brilliancy	4346 Mar 14 07:09	23°♌43'21		4351 Apr 25 21:11	0°♊	
direct	4346 Apr 23 14:11	14°♌05'15	evening set	4351 Jun 02 03:26	27°♊35'06	
	4346 Jun 22 19:10	0°♊		4351 Jun 05 11:30	0°♊	
	4346 Aug 19 19:25	0°♌		4351 Jul 18 00:34	0°♊	
desc. node	4346 Aug 29 01:12	5°♌23'10				
	4346 Oct 07 22:04	0°♈	conjunction	4351 Jul 29 06:11	7°♊41'13	0°57'56
	4346 Nov 21 16:37	0°♉	minimum elong	4351 Jul 29 04:38	7°♊38'34	0°57'55
	4347 Jan 02 09:51	0°♈	max. Earth dist.	4351 Aug 24 14:35	25°♊22'42	2.58930 AU
evening set	4347 Jan 17 09:01	11°♈11'21		4351 Aug 31 14:24	0°♎	
	4347 Feb 10 23:37	0°♈	morning rise	4351 Sep 18 07:57	11°♎35'38	
max. Earth dist.	4347 Feb 21 01:15	7°♈48'57		4351 Oct 17 00:07	0°♊	
				4351 Dec 04 01:31	0°♌	
conjunction	4347 Mar 20 17:30	29°♈32'44		4352 Jan 23 06:17	0°♈	
minimum elong	4347 Mar 20 19:46	29°♈37'11		4352 Mar 18 17:26	0°♉	
	4347 Mar 21 07:19	0°♎	desc. node	4352 Apr 19 21:49	13°♉54'35	
	4347 Apr 28 06:48	0°♏	retrograde	4352 May 31 04:15	22°♉23'50	
morning rise	4347 May 31 05:06	25°♏41'17	opposition	4352 Jul 05 03:23	15°♉17'33	-3°21'30
	4347 Jun 05 19:39	0°♊	greatest brilliancy	4352 Jul 06 03:02	14°♉56'53	-2.1m
asc. node	4347 Jul 07 06:47	23°♊45'27	min. Earth dist.	4352 Jul 13 13:57	12°♉21'16	0.50248 AU
	4347 Jul 15 17:48	0°♊	direct	4352 Aug 12 12:34	6°♉34'25	
	4347 Aug 26 18:56	0°♊		4352 Oct 18 21:09	0°♈	
	4347 Oct 10 17:53	0°♎		4352 Dec 03 18:20	0°♈	
	4347 Nov 29 05:10	0°♊		4353 Jan 13 15:21	0°♎	
	4348 Jan 31 16:01	0°♌		4353 Feb 22 09:26	0°♏	
retrograde	4348 Mar 07 16:28	6°♌43'14	asc. node	4353 Feb 26 03:16	2°♏49'10	
	4348 Apr 09 12:43	30°♌		4353 Apr 03 15:46	0°♊	
opposition	4348 Apr 16 13:05	27°♊16'42		4353 May 15 07:50	0°♊	
greatest brilliancy	4348 Apr 16 18:06	27°♊11'44		4353 Jun 27 19:04	0°♊	
min. Earth dist.	4348 Apr 18 10:29	26°♊31'48	evening set	4353 Jul 21 22:43	16°♊09'15	
direct	4348 May 27 21:39	17°♊17'50		4353 Aug 12 00:21	0°♎	
desc. node	4348 Jul 16 00:02	28°♊49'16				
	4348 Jul 18 20:19	0°♌	conjunction	4353 Sep 09 01:37	18°♎09'44	1°07'15
	4348 Sep 14 10:01	0°♈	minimum elong	4353 Sep 09 02:00	18°♎10'19	1°07'15
	4348 Oct 31 04:54	0°♉	max. Earth dist.	4353 Sep 18 03:46	23°♎59'42	2.66063 AU
	4348 Dec 12 10:51	0°♈		4353 Sep 27 13:12	0°♊	
	4349 Jan 21 01:45	0°♈	morning rise	4353 Oct 24 18:08	17°♊18'11	
	4349 Feb 28 07:57	0°♎		4353 Nov 13 19:29	0°♌	
evening set	4349 Mar 25 16:22	20°♎03'04		4353 Dec 31 09:08	0°♈	
	4349 Apr 07 07:17	0°♏		4354 Feb 17 06:42	0°♉	
	4349 May 15 22:39	0°♊	desc. node	4354 Mar 07 20:54	11°♉30'43	
asc. node	4349 May 24 06:43	6°♊20'42		4354 Apr 07 06:32	0°♈	

	4354 May 30 07:19	0°♄			4359 Apr 05 15:36	0°♈	
retrograde	4354 Aug 10 00:08	23°♄11'26			4359 Jun 08 16:06	0°♊	
opposition	4354 Sep 09 06:59	18°♄08'47 -6°36'31			4359 Jul 31 10:11	0°♈	
greatest brilliancy	4354 Sep 10 08:06	17°♄51'37 -2.9m			4359 Sep 18 17:26	0°♌	
min. Earth dist.	4354 Sep 13 09:37	17°♄01'37 0.38246 AU	desc. node		4359 Oct 28 16:56	25°♌33'57	
direct	4354 Oct 10 11:04	12°♄39'19			4359 Nov 04 10:56	0°♊	
	4354 Dec 05 06:55	0°♊	evening set		4359 Nov 12 22:36	5°♊37'35	
asc. node	4355 Jan 14 03:35	23°♊45'35	max. Earth dist.		4359 Nov 30 12:42	17°♊28'02 2.55004 AU	
	4355 Jan 23 18:18	0°♉			4359 Dec 18 17:47	0°♉	
	4355 Mar 09 13:10	0°♌					
	4355 Apr 23 02:35	0°♌	conjunction		4359 Dec 31 05:45	8°♌45'42 -0°34'37	
	4355 Jun 07 13:38	0°♈	minimum elong		4359 Dec 31 04:28	8°♌43'26 0°34'37	
	4355 Jul 24 02:32	0°♊			4360 Jan 29 19:02	0°♌	
evening set	4355 Aug 31 08:00	24°♊18'17	morning rise		4360 Feb 21 11:01	16°♌45'36	
	4355 Sep 09 07:42	0°♈			4360 Mar 10 00:30	0°♄	
max. Earth dist.	4355 Oct 11 08:47	20°♈19'50 2.67720 AU			4360 Apr 18 00:34	0°♊	
					4360 May 26 13:06	0°♉	
conjunction	4355 Oct 15 23:46	23°♈16'22 0°48'19			4360 Jul 04 11:41	0°♌	
minimum elong	4355 Oct 16 00:50	23°♈18'04 0°48'20			4360 Aug 13 22:32	0°♌	
	4355 Oct 26 13:02	0°♌	asc. node		4360 Sep 05 00:55	15°♌35'51	
morning rise	4355 Nov 29 00:23	21°♌29'26			4360 Sep 26 10:57	0°♈	
	4355 Dec 12 03:28	0°♊			4360 Nov 16 01:57	0°♊	
desc. node	4356 Jan 23 19:49	28°♊03'24	retrograde		4361 Jan 19 18:05	20°♊05'03	
	4356 Jan 26 17:56	0°♉	min. Earth dist.		4361 Feb 25 10:43	11°♊30'29 0.64488 AU	
	4356 Mar 11 06:37	0°♌	opposition		4361 Feb 28 22:40	10°♊06'35 4°38'50	
	4356 Apr 23 20:36	0°♄	greatest brilliancy		4361 Feb 28 08:47	10°♊20'27 -1.4m	
	4356 Jun 05 22:31	0°♊	direct		4361 Apr 09 00:29	0°♊54'10	
	4356 Jul 19 21:33	0°♉			4361 Jul 05 17:07	0°♈	
	4356 Sep 08 16:39	0°♌			4361 Aug 28 09:07	0°♌	
retrograde	4356 Oct 24 03:12	12°♌31'02	desc. node		4361 Sep 14 16:24	10°♌30'00	
min. Earth dist.	4356 Nov 19 13:52	7°♌50'06 0.41458 AU			4361 Oct 15 10:47	0°♊	
opposition	4356 Nov 27 04:31	5°♌25'10 -0°15'27			4361 Nov 28 22:42	0°♉	
greatest brilliancy	4356 Nov 27 02:58	5°♌26'25 -2.7m	evening set		4361 Dec 27 00:01	19°♉58'42	
asc. node	4356 Dec 01 03:03	4°♌11'05			4362 Jan 09 16:15	0°♌	
	4356 Dec 20 00:44	30°♌♂	max. Earth dist.		4362 Jan 12 09:10	2°♌00'11 2.42228 AU	
direct	4356 Dec 28 05:43	29°♌33'04			4362 Feb 18 08:47	0°♄	
	4357 Jan 05 13:28	0°♌					
	4357 Mar 23 03:55	0°♌	conjunction		4362 Feb 22 00:08	2°♄48'31 -1°04'59	
	4357 May 14 05:38	0°♈	minimum elong		4362 Feb 21 23:50	2°♄47'56 1°04'59	
	4357 Jul 02 20:56	0°♊			4362 Mar 28 19:35	0°♊	
	4357 Aug 20 15:10	0°♈	morning rise		4362 Apr 30 05:33	25°♊33'13	
evening set	4357 Oct 06 00:16	29°♈06'25			4362 May 05 21:12	0°♉	
	4357 Oct 07 09:58	0°♌			4362 Jun 13 10:53	0°♌	
max. Earth dist.	4357 Nov 02 15:03	16°♌49'46 2.63945 AU	asc. node		4362 Jul 23 23:29	0°♌25'37	
					4362 Jul 23 09:31	0°♌	
conjunction	4357 Nov 20 07:50	28°♌22'56 0°11'14			4362 Sep 03 13:35	0°♈	
minimum elong	4357 Nov 20 08:12	28°♌23'32 0°11'14			4362 Oct 19 02:04	0°♊	
behind sun begin	4357 Nov 19 18:23	28°♌00'51			4362 Dec 09 22:50	0°♈	
behind sun end	4357 Nov 20 22:00	28°♌46'13	retrograde		4363 Feb 23 04:27	24°♈06'50	
	4357 Nov 22 18:49	0°♊	opposition		4363 Apr 04 08:58	14°♈26'36 3°38'02	
desc. node	4357 Dec 10 18:21	11°♊56'27	greatest brilliancy		4363 Apr 04 10:12	14°♈25'23 -1.3m	
morning rise	4358 Jan 04 22:08	28°♊58'39	min. Earth dist.		4363 Apr 04 18:07	14°♈17'30 0.67936 AU	
	4358 Jan 06 09:56	0°♉	direct		4363 May 15 09:09	4°♈35'38	
	4358 Feb 18 06:25	0°♌	desc. node		4363 Aug 02 15:39	29°♈50'23	
	4358 Mar 31 12:55	0°♄			4363 Aug 02 23:11	0°♌	
	4358 May 10 15:25	0°♊			4363 Sep 24 11:52	0°♊	
	4358 Jun 19 06:16	0°♉			4363 Nov 09 05:05	0°♉	
	4358 Jul 29 12:52	0°♌			4363 Dec 21 03:52	0°♌	
	4358 Sep 10 14:11	0°♌			4364 Jan 29 17:01	0°♄	
asc. node	4358 Oct 19 01:16	22°♌51'56	evening set		4364 Feb 26 01:11	21°♄23'33	
	4358 Nov 03 01:29	0°♈			4364 Mar 07 22:45	0°♊	
retrograde	4358 Dec 13 12:52	9°♈46'07			4364 Apr 14 21:04	0°♉	
min. Earth dist.	4359 Jan 14 02:30	2°♈58'18 0.54721 AU					
greatest brilliancy	4359 Jan 20 03:24	0°♈38'47 -1.9m	conjunction		4364 May 04 23:18	15°♈44'18 -0°24'13	
opposition	4359 Jan 21 05:19	0°♈13'46 4°04'03	minimum elong		4364 May 05 01:38	15°♈48'50 0°24'12	
	4359 Jan 21 19:39	30°♌♂			4364 May 23 10:14	0°♌	
direct	4359 Feb 25 22:00	22°♌14'07	asc. node		4364 Jun 09 22:02	13°♌17'25	

max. Earth dist.	4364 Jun 26 05:01	25° Π 26'48	2.41372 AU	direct	4369 Sep 14 09:04	13° \approx 34'29	
	4364 Jul 02 09:27	0° \ominus			4369 Nov 06 18:25	0° H	
morning rise	4364 Jul 12 02:29	7° \ominus 04'50			4369 Dec 25 02:43	0° Υ	
	4364 Aug 13 09:19	0° Ω		asc. node	4370 Jan 30 19:34	25° Υ 42'33	
	4364 Sep 26 20:57	0° M			4370 Feb 05 20:02	0° B	
	4364 Nov 13 10:54	0° $\underline{\text{L}}$			4370 Mar 19 22:23	0° Π	
	4365 Jan 05 09:44	0° M			4370 May 01 22:25	0° \ominus	
retrograde	4365 Mar 29 22:19	27° M 25'57			4370 Jun 15 09:21	0° Ω	
opposition	4365 May 07 22:55	18° M 27'16	1°33'07		4370 Jul 31 06:49	0° M	
greatest brilliancy	4365 May 08 05:05	18° M 21'16	-1.4m	evening set	4370 Aug 16 07:59	10° M 19'27	
min. Earth dist.	4365 May 12 03:21	16° M 49'34	0.64774 AU		4370 Sep 16 03:34	0° $\underline{\text{L}}$	
direct	4365 Jun 18 10:13	8° M 25'18					
desc. node	4365 Jun 19 13:53	8° M 25'47		conjunction	4370 Oct 01 22:30	10° $\underline{\text{L}}$ 02'29	0°58'16
	4365 Aug 26 23:07	0° J		minimum elong	4370 Oct 01 23:28	10° $\underline{\text{L}}$ 04'02	0°58'16
	4365 Oct 16 18:33	0° B		max. Earth dist.	4370 Oct 02 11:33	10° $\underline{\text{L}}$ 23'13	2.67719 AU
	4365 Nov 29 03:15	0° \approx			4370 Nov 02 07:35	0° M	
	4366 Jan 08 03:25	0° H		morning rise	4370 Nov 15 06:07	8° M 15'03	
	4366 Feb 15 13:58	0° Υ			4370 Dec 19 04:28	0° J	
	4366 Mar 25 17:07	0° B			4371 Feb 03 11:01	0° B	
asc. node	4366 Apr 27 22:05	25° B 42'33		desc. node	4371 Feb 09 10:41	3° B 54'35	
	4366 May 03 13:13	0° Π			4371 Mar 21 04:02	0° \approx	
evening set	4366 May 08 11:30	3° Π 44'10			4371 May 05 15:21	0° H	
	4366 Jun 12 21:02	0° \ominus			4371 Jun 20 23:27	0° Υ	
					4371 Aug 12 15:16	0° B	
conjunction	4366 Jul 09 06:57	18° \ominus 54'36	0°43'27	retrograde	4371 Sep 28 15:46	12° B 48'39	
minimum elong	4366 Jul 09 04:50	18° \ominus 50'53	0°43'26	min. Earth dist.	4371 Oct 25 18:07	8° B 22'15	0.37839 AU
	4366 Jul 25 04:05	0° Ω		opposition	4371 Oct 30 02:31	7° B 09'02	-3°26'06
max. Earth dist.	4366 Aug 12 19:51	12° Ω 46'21	2.54712 AU	greatest brilliancy	4371 Oct 29 17:05	7° B 15'40	-2.9m
morning rise	4366 Sep 02 00:19	26° Ω 18'18		direct	4371 Nov 28 14:58	2° B 06'00	
	4366 Sep 07 14:25	0° M		asc. node	4371 Dec 18 19:29	4° B 39'32	
	4366 Oct 24 02:35	0° $\underline{\text{L}}$			4372 Feb 14 19:35	0° Π	
	4366 Dec 11 19:48	0° M			4372 Apr 05 09:57	0° \ominus	
	4367 Feb 02 04:20	0° J			4372 May 23 16:00	0° Ω	
	4367 Apr 10 11:04	0° B			4372 Jul 10 17:08	0° M	
desc. node	4367 May 07 12:28	4° B 59'00			4372 Aug 27 17:13	0° $\underline{\text{L}}$	
retrograde	4367 May 11 15:35	5° B 05'11		evening set	4372 Sep 21 20:07	15° $\underline{\text{L}}$ 48'13	
	4367 Jun 09 11:12	30° R J			4372 Oct 14 05:02	0° M	
opposition	4367 Jun 17 03:03	27° J 17'55	-1°43'12	max. Earth dist.	4372 Oct 24 07:48	6° M 28'10	2.66054 AU
greatest brilliancy	4367 Jun 17 14:04	27° J 07'47	-1.9m				
min. Earth dist.	4367 Jun 24 17:13	24° J 31'07	0.55311 AU	conjunction	4372 Nov 05 22:43	14° M 35'33	0°27'15
direct	4367 Jul 27 00:46	17° J 53'21		minimum elong	4372 Nov 05 23:31	14° M 36'49	0°27'15
	4367 Sep 12 00:32	0° B			4372 Nov 29 14:38	0° J	
	4367 Nov 03 06:21	0° \approx		morning rise	4372 Dec 20 12:11	13° J 49'29	
	4367 Dec 15 17:22	0° H		desc. node	4372 Dec 27 09:38	18° J 25'56	
	4368 Jan 24 08:02	0° Υ			4373 Jan 13 12:56	0° B	
	4368 Mar 03 07:42	0° B			4373 Feb 25 21:56	0° \approx	
asc. node	4368 Mar 14 21:13	8° B 50'12			4373 Apr 08 20:40	0° H	
	4368 Apr 11 23:10	0° Π			4373 May 19 17:51	0° Υ	
	4368 May 23 02:10	0° \ominus			4373 Jun 29 06:43	0° B	
evening set	4368 Jul 03 20:33	29° \ominus 09'13			4373 Aug 09 23:24	0° Π	
	4368 Jul 05 02:18	0° Ω			4373 Sep 25 22:57	0° \ominus	
	4368 Aug 18 23:32	0° M		asc. node	4373 Nov 04 18:45	17° \ominus 25'19	
				retrograde	4373 Nov 26 00:41	20° \ominus 29'44	
conjunction	4368 Aug 24 11:09	3° M 35'31	1°07'43	min. Earth dist.	4373 Dec 25 08:10	14° \ominus 33'13	0.49541 AU
minimum elong	4368 Aug 24 10:52	3° M 35'03	1°07'42	greatest brilliancy	4374 Jan 01 11:00	11° \ominus 56'05	-2.2m
max. Earth dist.	4368 Sep 08 19:14	13° M 33'54	2.63888 AU	opposition	4374 Jan 02 10:07	11° \ominus 34'44	3°02'05
	4368 Oct 04 09:07	0° $\underline{\text{L}}$		direct	4374 Feb 05 09:08	4° \ominus 18'04	
morning rise	4368 Oct 10 17:41	4° $\underline{\text{L}}$ 03'05			4374 Apr 24 21:11	0° Ω	
	4368 Nov 20 19:54	0° M			4374 Jun 18 14:26	0° M	
	4369 Jan 08 02:42	0° J			4374 Aug 08 06:35	0° $\underline{\text{L}}$	
	4369 Feb 26 18:15	0° B			4374 Sep 25 20:03	0° M	
desc. node	4369 Mar 24 11:47	14° B 52'25		evening set	4374 Oct 28 16:41	21° M 02'39	
	4369 Apr 21 09:11	0° \approx			4374 Nov 11 08:45	0° J	
retrograde	4369 Jul 10 01:29	26° \approx 12'38		desc. node	4374 Nov 14 08:34	1° J 58'40	
opposition	4369 Aug 10 22:30	20° \approx 26'24	-5°57'21	max. Earth dist.	4374 Nov 18 17:39	4° J 53'01	2.59087 AU
greatest brilliancy	4369 Aug 12 12:02	19° \approx 57'39	-2.6m				
min. Earth dist.	4369 Aug 18 10:40	18° \approx 09'08	0.42121 AU	conjunction	4374 Dec 14 07:48	22° J 08'27	-0°16'43

minimum elong	4374 Dec 14 07:11	22°♂07'24	0°16'41		4379 Nov 23 00:28	0°♂	
	4374 Dec 25 17:47	0°♂			4380 Jan 19 11:05	0°♂	
morning rise	4375 Feb 01 02:11	26°♂24'37		retrograde	4380 Mar 15 13:50	14°♂28'49	
	4375 Feb 06 01:19	0°♂		opposition	4380 Apr 24 04:58	5°♂11'03	2°28'55
	4375 Mar 18 14:48	0°♂		greatest brilliancy	4380 Apr 24 11:06	5°♂05'01	-1.3m
	4375 Apr 26 22:57	0°♂		min. Earth dist.	4380 Apr 26 22:02	4°♂07'03	0.66788 AU
	4375 Jun 04 18:51	0°♂			4380 May 08 01:11	30°♂♂	
	4375 Jul 14 01:00	0°♂		direct	4380 Jun 04 16:45	25°♂09'35	
	4375 Aug 24 00:26	0°♂			4380 Jul 04 18:05	0°♂	
asc. node	4375 Sep 22 16:32	20°♂14'33		desc. node	4380 Jul 06 04:43	0°♂26'05	
	4375 Oct 08 00:24	0°♂			4380 Sep 07 21:21	0°♂	
	4375 Dec 06 14:45	0°♂			4380 Oct 25 18:18	0°♂	
retrograde	4376 Jan 06 16:04	5°♂44'46			4380 Dec 07 08:39	0°♂	
	4376 Feb 04 17:58	30°♂♂			4381 Jan 16 02:27	0°♂	
min. Earth dist.	4376 Feb 10 12:23	27°♂47'46	0.61372 AU		4381 Feb 23 09:50	0°♂	
opposition	4376 Feb 15 12:16	25°♂48'46	4°40'43	greatest brilliancy	4381 Mar 05 16:29	8°♂07'17	1.2m
greatest brilliancy	4376 Feb 14 16:12	26°♂08'42	-1.6m		4381 Apr 02 10:04	0°♂	
direct	4376 Mar 24 10:57	16°♂59'45		evening set	4381 Apr 10 22:46	6°♂41'06	
	4376 May 16 11:47	0°♂			4381 May 11 02:22	0°♂	
	4376 Jul 15 22:34	0°♂		asc. node	4381 May 14 14:24	2°♂40'08	
	4376 Sep 05 07:17	0°♂					
desc. node	4376 Oct 01 07:16	16°♂11'37		conjunction	4381 Jun 16 09:12	27°♂10'55	0°21'32
	4376 Oct 22 17:01	0°♂		minimum elong	4381 Jun 16 07:36	27°♂07'58	0°21'29
	4376 Dec 06 01:49	0°♂			4381 Jun 20 05:35	0°♂	
evening set	4376 Dec 08 01:07	1°♂22'34		max. Earth dist.	4381 Jul 29 14:23	28°♂05'16	2.49808 AU
max. Earth dist.	4376 Dec 22 08:09	11°♂28'04	2.47494 AU		4381 Aug 01 08:21	0°♂	
	4377 Jan 16 21:48	0°♂		morning rise	4381 Aug 14 19:58	9°♂17'10	
					4381 Sep 14 16:54	0°♂	
conjunction	4377 Jan 29 16:45	9°♂29'19	-0°58'06		4381 Oct 31 10:37	0°♂	
minimum elong	4377 Jan 29 15:11	9°♂26'24	0°58'06		4381 Dec 20 04:10	0°♂	
	4377 Feb 25 18:41	0°♂			4382 Feb 14 10:47	0°♂	
morning rise	4377 Mar 31 07:09	26°♂00'03		retrograde	4382 Apr 23 16:14	19°♂41'20	
	4377 Apr 05 09:42	0°♂		desc. node	4382 May 24 02:58	14°♂00'12	
greatest brilliancy	4377 May 04 08:27	22°♂44'34	1.2m	opposition	4382 May 31 08:34	11°♂21'11	-0°17'24
	4377 May 13 14:23	0°♂		greatest brilliancy	4382 May 31 10:12	11°♂19'39	-1.7m
	4377 Jun 21 05:48	0°♂		min. Earth dist.	4382 Jun 06 17:32	8°♂56'36	0.59703 AU
	4377 Jul 31 06:16	0°♂		direct	4382 Jul 11 05:08	1°♂32'56	
asc. node	4377 Aug 09 16:15	6°♂50'13			4382 Sep 28 19:12	0°♂	
	4377 Sep 11 16:38	0°♂			4382 Nov 14 04:28	0°♂	
	4377 Oct 28 05:08	0°♂			4382 Dec 25 05:05	0°♂	
	4377 Dec 24 08:02	0°♂			4383 Feb 02 03:49	0°♂	
retrograde	4378 Feb 09 22:03	11°♂26'20			4383 Mar 12 16:18	0°♂	
min. Earth dist.	4378 Mar 21 03:02	2°♂02'56	0.67376 AU	asc. node	4383 Apr 01 13:14	15°♂18'43	
opposition	4378 Mar 22 06:13	1°♂35'47	4°09'42		4383 Apr 20 21:40	0°♂	
greatest brilliancy	4378 Mar 22 02:11	1°♂39'49	-1.3m		4383 May 31 15:01	0°♂	
	4378 Mar 26 06:51	30°♂♂		evening set	4383 Jun 14 16:52	10°♂03'31	
direct	4378 May 01 16:24	21°♂56'41			4383 Jul 13 06:46	0°♂	
	4378 Jun 11 03:27	0°♂					
	4378 Aug 13 14:38	0°♂		conjunction	4383 Aug 08 14:26	17°♂50'29	1°03'12
desc. node	4378 Aug 19 06:01	3°♂10'22		minimum elong	4383 Aug 08 13:21	17°♂48'39	1°03'12
	4378 Oct 02 17:12	0°♂			4383 Aug 26 22:03	0°♂	
	4378 Nov 16 19:20	0°♂		max. Earth dist.	4383 Aug 30 20:35	2°♂35'21	2.60922 AU
	4378 Dec 28 14:56	0°♂		morning rise	4383 Sep 27 02:24	20°♂17'11	
evening set	4379 Jan 30 18:07	25°♂01'41			4383 Oct 12 06:35	0°♂	
	4379 Feb 06 04:47	0°♂			4383 Nov 29 01:02	0°♂	
	4379 Mar 16 11:54	0°♂			4384 Jan 17 08:50	0°♂	
					4384 Mar 09 22:16	0°♂	
conjunction	4379 Apr 06 01:10	16°♂15'33	-0°50'30	desc. node	4384 Apr 10 02:13	15°♂43'40	
minimum elong	4379 Apr 06 04:29	16°♂22'05	0°50'28		4384 May 17 14:21	0°♂	
	4379 Apr 23 10:51	0°♂		retrograde	4384 Jun 13 09:40	3°♂54'45	
max. Earth dist.	4379 Apr 27 22:09	3°♂31'05	2.37002 AU		4384 Jul 08 16:45	30°♂♂	
	4379 May 31 23:13	0°♂		opposition	4384 Jul 17 07:56	27°♂15'26	-4°21'10
morning rise	4379 Jun 16 16:55	11°♂59'22		greatest brilliancy	4384 Jul 18 14:52	26°♂49'27	-2.3m
asc. node	4379 Jun 27 16:05	20°♂13'39		min. Earth dist.	4384 Jul 25 20:55	24°♂23'51	0.47290 AU
	4379 Jul 10 20:41	0°♂		direct	4384 Aug 23 13:35	19°♂05'26	
	4379 Aug 21 19:48	0°♂			4384 Oct 05 07:59	0°♂	
	4379 Oct 05 11:58	0°♂			4384 Nov 25 17:08	0°♂	

	4385 Jan 06 23:32	0°♄		desc. node	4389 Nov 30 22:59	8°♂28'07	
asc. node	4385 Feb 16 12:42	0°♂03'59			4390 Jan 01 17:37	0°♂	
	4385 Feb 16 10:33	0°♂		morning rise	4390 Jan 14 06:13	8°♂40'30	
	4385 Mar 29 04:12	0°♂			4390 Feb 13 09:35	0°♂	
	4385 May 10 04:41	0°♂			4390 Mar 26 09:56	0°♂	
	4385 Jun 22 22:20	0°♂			4390 May 05 05:18	0°♂	
evening set	4385 Jul 31 11:40	25°♂32'22			4390 Jun 13 12:14	0°♂	
	4385 Aug 07 07:53	0°♂			4390 Jul 23 07:11	0°♂	
					4390 Sep 03 06:33	0°♂	
conjunction	4385 Sep 17 12:59	26°♂33'00	1°05'00	asc. node	4390 Oct 09 10:22	23°♂06'22	
minimum elong	4385 Sep 17 13:39	26°♂34'03	1°05'00		4390 Oct 21 15:44	0°♂	
	4385 Sep 22 22:37	0°♂		retrograde	4390 Dec 22 16:09	20°♂01'13	
max. Earth dist.	4385 Sep 23 11:17	0°♂20'12	2.66886 AU	min. Earth dist.	4391 Jan 24 10:38	12°♂47'40	0.57297 AU
morning rise	4385 Nov 01 14:35	25°♂13'10		opposition	4391 Jan 30 20:57	10°♂16'56	4°24'45
	4385 Nov 09 03:28	0°♂		greatest brilliancy	4391 Jan 29 20:05	10°♂41'15	-1.8m
	4385 Dec 26 10:00	0°♂		direct	4391 Mar 08 10:45	1°♂57'42	
	4386 Feb 11 14:54	0°♂			4391 Jun 01 04:35	0°♂	
desc. node	4386 Feb 26 02:08	9°♂10'42			4391 Jul 25 20:38	0°♂	
	4386 Mar 31 02:37	0°♂		desc. node	4391 Sep 13 19:20	0°♂	
	4386 May 19 02:29	0°♂			4391 Oct 18 21:48	22°♂15'26	
	4386 Jul 14 20:20	0°♂			4391 Oct 30 18:28	0°♂	
retrograde	4386 Aug 28 16:17	10°♂54'36		evening set	4391 Nov 22 01:06	14°♂51'49	
opposition	4386 Sep 27 13:59	5°♂58'15	-6°03'34	max. Earth dist.	4391 Dec 07 23:07	25°♂44'45	2.52469 AU
greatest brilliancy	4386 Sep 28 00:25	5°♂51'22	-3.0m		4391 Dec 14 02:20	0°♂	
min. Earth dist.	4386 Sep 28 18:39	5°♂39'19	0.37161 AU				
direct	4386 Oct 27 12:15	0°♂57'45		conjunction	4392 Jan 10 14:32	19°♂29'01	-0°44'16
asc. node	4387 Jan 04 11:04	24°♂59'50		minimum elong	4392 Jan 10 12:58	19°♂26'11	0°44'15
	4387 Jan 13 03:30	0°♂			4392 Jan 25 01:58	0°♂	
	4387 Mar 02 02:22	0°♂		morning rise	4392 Mar 05 08:54	0°♂08'25	
	4387 Apr 17 00:36	0°♂			4392 Mar 05 04:29	0°♂	
	4387 Jun 02 05:49	0°♂			4392 Apr 13 01:09	0°♂	
	4387 Jul 19 05:09	0°♂			4392 May 21 10:33	0°♂	
	4387 Sep 04 15:56	0°♂			4392 Jun 29 05:48	0°♂	
evening set	4387 Sep 08 14:47	2°♂29'49			4392 Aug 08 11:08	0°♂	
max. Earth dist.	4387 Oct 16 12:38	26°♂31'53	2.67367 AU	asc. node	4392 Aug 26 09:04	12°♂48'47	
	4387 Oct 21 23:11	0°♂			4392 Sep 20 10:10	0°♂	
					4392 Nov 07 20:42	0°♂	
conjunction	4387 Oct 23 22:33	1°♂15'37	0°41'15	retrograde	4393 Jan 27 13:02	28°♂20'29	
minimum elong	4387 Oct 23 23:34	1°♂17'15	0°41'15	min. Earth dist.	4393 Mar 06 04:47	19°♂27'23	0.65787 AU
morning rise	4387 Dec 07 00:12	29°♂41'19		opposition	4393 Mar 08 20:30	18°♂23'42	4°31'31
	4387 Dec 07 11:39	0°♂		greatest brilliancy	4393 Mar 08 10:16	18°♂33'55	-1.4m
desc. node	4388 Jan 14 00:26	24°♂45'59		direct	4393 Apr 17 11:33	9°♂00'37	
	4388 Jan 21 20:04	0°♂			4393 Jun 27 18:47	0°♂	
	4388 Mar 05 21:52	0°♂			4393 Aug 22 17:59	0°♂	
	4388 Apr 17 19:27	0°♂		desc. node	4393 Sep 04 20:42	7°♂46'57	
	4388 May 29 21:20	0°♂			4393 Oct 10 11:01	0°♂	
	4388 Jul 11 02:12	0°♂			4393 Nov 24 04:10	0°♂	
	4388 Aug 25 05:32	0°♂			4394 Jan 04 22:55	0°♂	
retrograde	4388 Nov 06 01:00	27°♂46'29		evening set	4394 Jan 07 17:26	2°♂03'07	
asc. node	4388 Nov 21 10:26	26°♂01'15		max. Earth dist.	4394 Jan 29 18:51	18°♂38'04	2.39508 AU
min. Earth dist.	4388 Dec 03 06:14	22°♂41'36	0.44168 AU		4394 Feb 13 14:45	0°♂	
opposition	4388 Dec 11 11:30	19°♂54'19	1°13'16				
greatest brilliancy	4388 Dec 11 01:17	20°♂03'02	-2.5m	conjunction	4394 Mar 08 14:38	17°♂53'40	-1°03'52
direct	4389 Jan 12 14:06	13°♂30'21		minimum elong	4394 Mar 08 15:43	17°♂55'47	1°03'52
	4389 Mar 11 22:19	0°♂			4394 Mar 24 00:03	0°♂	
	4389 May 07 10:04	0°♂			4394 May 01 00:16	0°♂	
	4389 Jun 27 09:14	0°♂		morning rise	4394 May 17 17:46	13°♂07'10	
	4389 Aug 15 17:19	0°♂			4394 Jun 08 12:42	0°♂	
	4389 Oct 02 18:17	0°♂		asc. node	4394 Jul 14 07:37	26°♂59'21	
evening set	4389 Oct 14 04:08	7°♂16'12			4394 Jul 18 09:41	0°♂	
max. Earth dist.	4389 Nov 08 07:14	23°♂30'51	2.62436 AU		4394 Aug 29 10:18	0°♂	
	4389 Nov 18 04:28	0°♂			4394 Oct 13 12:00	0°♂	
					4394 Dec 02 15:58	0°♂	
conjunction	4389 Nov 28 18:57	7°♂01'26	0°01'14		4395 Feb 13 01:41	0°♂	
minimum elong	4389 Nov 28 19:02	7°♂01'33	0°01'14	retrograde	4395 Mar 02 20:59	1°♂49'52	
behind sun begin	4389 Nov 27 23:53	6°♂29'42			4395 Mar 19 15:47	30°♂	
behind sun end	4389 Nov 29 14:10	7°♂33'25		opposition	4395 Apr 11 22:10	22°♂16'48	3°15'11

greatest brilliancy	4395 Apr 12 01:42	22°♌13'18	-1.3m	asc. node	4400 Mar 05 04:18	5°♊37'02	
min. Earth dist.	4395 Apr 13 03:28	21°♌47'46	0.67802 AU		4400 Apr 06 16:57	0°♊	
direct	4395 May 23 04:16	12°♌21'01			4400 May 18 01:34	0°♊	
desc. node	4395 Jul 23 19:25	29°♌12'55			4400 Jun 30 06:32	0°♊	
	4395 Jul 25 12:17	0°♌		evening set	4400 Jul 14 09:28	9°♌32'04	
	4395 Sep 18 15:45	0°♌			4400 Aug 14 06:58	0°♌	
	4395 Nov 04 00:42	0°♌					
	4395 Dec 16 04:56	0°♌		conjunction	4400 Sep 02 12:14	12°♌30'22	1°07'59
	4396 Jan 24 20:01	0°♌		minimum elong	4400 Sep 02 12:22	12°♌30'35	1°07'59
	4396 Mar 03 02:20	0°♌		max. Earth dist.	4400 Sep 14 08:09	20°♌08'11	2.65200 AU
evening set	4396 Mar 12 23:25	7°♌48'58			4400 Sep 29 17:34	0°♌	
	4396 Apr 10 01:03	0°♌		morning rise	4400 Oct 18 19:39	12°♌09'00	
	4396 May 18 14:39	0°♌			4400 Nov 16 01:13	0°♌	
					4401 Jan 02 21:28	0°♌	
conjunction	4396 May 21 02:11	1°♌53'56	-0°07'00		4401 Feb 20 11:05	0°♌	
minimum elong	4396 May 21 02:51	1°♌55'12	0°07'00	desc. node	4401 Mar 14 16:34	13°♌25'24	
behind sun begin	4396 May 20 00:37	1°♌05'03			4401 Apr 12 00:37	0°♌	
behind sun end	4396 May 22 05:05	2°♌45'18			4401 Jun 09 22:49	0°♌	
asc. node	4396 May 31 07:35	9°♌40'34		retrograde	4401 Jul 26 20:56	11°♌11'50	
	4396 Jun 27 14:07	0°♌		opposition	4401 Aug 26 19:39	5°♌52'35	-6°31'09
max. Earth dist.	4396 Jul 11 02:28	9°♌49'48	2.44387 AU	greatest brilliancy	4401 Aug 28 05:07	5°♌28'31	-2.7m
morning rise	4396 Jul 25 04:06	19°♌53'26		min. Earth dist.	4401 Sep 01 19:02	4°♌10'12	0.39736 AU
	4396 Aug 08 13:41	0°♌			4401 Sep 23 03:53	30°♌	
	4396 Sep 21 22:21	0°♌		direct	4401 Sep 28 09:20	29°♌48'23	
	4396 Nov 08 02:05	0°♌			4401 Oct 03 15:23	0°♌	
	4396 Dec 29 11:06	0°♌			4401 Dec 14 21:22	0°♌	
	4397 Mar 05 16:13	0°♌		asc. node	4402 Jan 21 04:29	24°♌27'13	
retrograde	4397 Apr 07 13:00	5°♌35'06			4402 Jan 29 07:00	0°♌	
	4397 May 07 14:05	30°♌			4402 Mar 13 14:47	0°♌	
opposition	4397 May 16 03:51	26°♌48'42	0°55'46		4402 Apr 26 08:12	0°♌	
greatest brilliancy	4397 May 16 08:24	26°♌44'19	-1.5m		4402 Jun 10 06:37	0°♌	
min. Earth dist.	4397 May 21 03:48	24°♌53'01	0.63220 AU		4402 Jul 26 11:20	0°♌	
desc. node	4397 Jun 09 18:36	18°♌39'22		evening set	4402 Aug 25 00:13	18°♌52'29	
direct	4397 Jun 26 12:31	16°♌49'12			4402 Sep 11 12:14	0°♌	
	4397 Aug 16 23:21	0°♌		max. Earth dist.	4402 Oct 07 16:10	16°♌36'53	2.67834 AU
	4397 Oct 10 09:31	0°♌					
	4397 Nov 23 13:24	0°♌		conjunction	4402 Oct 10 00:23	18°♌06'12	0°52'49
	4398 Jan 02 20:46	0°♌		minimum elong	4402 Oct 10 01:26	18°♌07'52	0°52'48
	4398 Feb 10 10:49	0°♌			4402 Oct 28 16:58	0°♌	
	4398 Mar 20 16:37	0°♌		morning rise	4402 Nov 23 02:33	16°♌15'04	
asc. node	4398 Apr 18 05:51	22°♌05'10			4402 Dec 14 10:21	0°♌	
	4398 Apr 28 15:13	0°♌			4403 Jan 29 08:03	0°♌	
evening set	4398 May 22 19:15	18°♌05'42		desc. node	4403 Jan 30 15:27	0°♌51'50	
	4398 Jun 08 01:23	0°♌			4403 Mar 15 08:32	0°♌	
					4403 Apr 28 16:16	0°♌	
conjunction	4398 Jul 20 22:09	0°♌20'09	0°52'38		4403 Jun 11 21:15	0°♌	
minimum elong	4398 Jul 20 20:16	0°♌16'55	0°52'37		4403 Jul 28 02:16	0°♌	
	4398 Jul 20 10:29	0°♌			4403 Oct 06 03:57	0°♌	
max. Earth dist.	4398 Aug 19 19:49	20°♌39'20	2.57141 AU	retrograde	4403 Oct 14 05:24	0°♌27'19	
	4398 Sep 02 21:17	0°♌			4403 Oct 22 04:53	30°♌	
morning rise	4398 Sep 11 11:48	5°♌39'19		min. Earth dist.	4403 Nov 09 12:35	25°♌58'47	0.39563 AU
	4398 Oct 19 06:46	0°♌		opposition	4403 Nov 16 01:10	24°♌01'36	-1°34'35
	4398 Dec 06 13:17	0°♌		greatest brilliancy	4403 Nov 15 17:27	24°♌07'24	-2.8m
	4399 Jan 26 11:46	0°♌		asc. node	4403 Dec 09 04:17	18°♌54'19	
	4399 Mar 26 00:50	0°♌		direct	4403 Dec 16 06:39	18°♌34'15	
desc. node	4399 Apr 27 17:27	11°♌38'13			4404 Jan 31 08:30	0°♌	
retrograde	4399 May 22 20:42	15°♌04'34			4404 Mar 28 14:43	0°♌	
opposition	4399 Jun 27 13:25	7°♌38'48	-2°38'06		4404 May 17 16:20	0°♌	
greatest brilliancy	4399 Jun 28 07:26	7°♌22'41	-2.0m		4404 Jul 05 12:40	0°♌	
min. Earth dist.	4399 Jul 05 17:09	4°♌44'07	0.52582 AU		4404 Aug 22 22:22	0°♌	
	4399 Jul 22 07:24	30°♌		evening set	4404 Sep 29 22:48	23°♌52'26	
direct	4399 Aug 05 17:45	28°♌34'19			4404 Oct 09 14:24	0°♌	
	4399 Aug 20 12:47	0°♌		max. Earth dist.	4404 Oct 29 17:09	12°♌53'11	2.64997 AU
	4399 Oct 26 02:50	0°♌					
	4399 Dec 09 04:37	0°♌		conjunction	4404 Nov 14 02:34	22°♌51'48	0°18'07
	4400 Jan 18 10:11	0°♌		minimum elong	4404 Nov 14 03:07	22°♌52'43	0°18'07
	4400 Feb 26 18:40	0°♌			4404 Nov 25 00:12	0°♌	

desc. node	4404 Dec 17 13:43	14°♊58'02		retrograde	4410 Feb 17 11:49	19°♑12'25	
morning rise	4404 Dec 29 03:47	22°♊45'49		opposition	4410 Mar 29 19:09	9°♑27'09	3°52'19
	4405 Jan 08 19:25	0°♊		greatest brilliancy	4410 Mar 29 18:12	9°♑28'06	-1.3m
	4405 Feb 20 22:01	0°♊		min. Earth dist.	4410 Mar 29 12:07	9°♑34'09	0.67814 AU
	4405 Apr 03 12:05	0°♊			4410 May 02 10:41	30°♑	
	4405 May 13 22:23	0°♊		direct	4410 May 09 14:21	29°♑40'58	
	4405 Jun 22 21:40	0°♊			4410 May 16 22:17	0°♑	
	4405 Aug 02 15:23	0°♊			4410 Aug 06 21:22	0°♑	
	4405 Sep 15 18:59	0°♊		desc. node	4410 Aug 09 11:00	1°♑22'22	
asc. node	4405 Oct 26 02:16	22°♑02'12			4410 Sep 27 08:31	0°♊	
	4405 Nov 18 02:08	0°♑			4410 Nov 11 20:37	0°♊	
retrograde	4405 Dec 06 05:29	2°♑14'52			4410 Dec 23 19:10	0°♊	
	4405 Dec 23 18:18	30°♑			4411 Feb 01 09:27	0°♊	
min. Earth dist.	4406 Jan 05 18:52	25°♑50'01	0.52466 AU	evening set	4411 Feb 14 04:26	9°♊57'03	
greatest brilliancy	4406 Jan 12 08:22	23°♑21'01	-2.0m		4411 Mar 11 15:58	0°♊	
opposition	4406 Jan 13 10:13	22°♑56'31	3°42'49		4411 Apr 18 14:16	0°♊	
direct	4406 Feb 17 09:13	15°♑14'58					
	4406 Apr 14 09:24	0°♑		conjunction	4411 Apr 22 22:48	3°♊25'42	-0°36'40
	4406 Jun 12 06:15	0°♑		minimum elong	4411 Apr 23 02:02	3°♊32'02	0°36'38
	4406 Aug 03 01:09	0°♑			4411 May 27 02:24	0°♑	
	4406 Sep 21 01:05	0°♑		max. Earth dist.	4411 Jun 10 12:15	10°♑59'21	2.39077 AU
desc. node	4406 Nov 04 12:30	28°♑33'01		asc. node	4411 Jun 17 22:56	16°♑36'08	
evening set	4406 Nov 06 07:21	29°♑43'29		morning rise	4411 Jul 02 03:27	27°♑10'10	
	4406 Nov 06 17:22	0°♊			4411 Jul 05 23:37	0°♑	
max. Earth dist.	4406 Nov 25 07:13	12°♊22'17	2.56923 AU		4411 Aug 16 21:39	0°♑	
	4406 Dec 21 02:25	0°♊			4411 Sep 30 09:10	0°♑	
					4411 Nov 17 05:27	0°♑	
conjunction	4406 Dec 23 18:08	1°♊50'41	-0°27'10		4412 Jan 10 11:57	0°♑	
minimum elong	4406 Dec 23 17:08	1°♊48'56	0°27'08	retrograde	4412 Mar 23 15:48	22°♑19'12	
	4407 Feb 01 07:27	0°♊		opposition	4412 May 02 00:06	13°♑11'28	1°57'27
morning rise	4407 Feb 12 06:09	8°♊00'32		greatest brilliancy	4412 May 02 06:33	13°♑05'10	-1.4m
	4407 Mar 13 17:20	0°♊		min. Earth dist.	4412 May 05 12:58	11°♑48'32	0.65807 AU
	4407 Apr 21 21:15	0°♊		direct	4412 Jun 12 13:09	3°♑09'03	
	4407 May 30 12:50	0°♊		desc. node	4412 Jun 26 09:13	4°♑16'33	
	4407 Jul 08 13:50	0°♑			4412 Aug 31 14:40	0°♊	
	4407 Aug 18 03:49	0°♑			4412 Oct 20 01:55	0°♊	
asc. node	4407 Sep 13 01:50	18°♑05'39			4412 Dec 02 03:29	0°♊	
	4407 Oct 01 02:17	0°♑			4413 Jan 11 01:41	0°♊	
	4407 Nov 22 20:47	0°♑			4413 Feb 18 10:56	0°♊	
retrograde	4408 Jan 14 19:30	14°♑32'41			4413 Mar 28 12:18	0°♊	
min. Earth dist.	4408 Feb 19 17:11	6°♑14'25	0.63209 AU	evening set	4413 Apr 26 18:23	22°♊44'40	
opposition	4408 Feb 23 21:26	4°♑34'33	4°41'43	asc. node	4413 May 04 22:43	29°♊00'43	
greatest brilliancy	4408 Feb 23 04:43	4°♑51'12	-1.5m		4413 May 06 05:48	0°♑	
	4408 Mar 07 04:13	30°♑			4413 Jun 15 10:08	0°♑	
direct	4408 Apr 02 12:16	25°♑31'52					
	4408 May 01 11:50	0°♑		conjunction	4413 Jun 29 18:10	10°♑22'21	0°35'01
	4408 Jul 09 09:45	0°♑		minimum elong	4413 Jun 29 16:05	10°♑18'37	0°34'59
	4408 Aug 31 01:08	0°♑			4413 Jul 27 13:46	0°♑	
desc. node	4408 Sep 21 11:54	13°♑09'52		max. Earth dist.	4413 Aug 07 02:39	7°♑16'02	2.52595 AU
	4408 Oct 17 20:53	0°♊		morning rise	4413 Aug 25 10:48	19°♑42'32	
	4408 Dec 01 08:48	0°♊			4413 Sep 09 21:43	0°♑	
evening set	4408 Dec 18 12:59	12°♊06'46			4413 Oct 26 10:41	0°♑	
max. Earth dist.	4409 Jan 02 03:24	22°♊38'21	2.44575 AU		4413 Dec 14 11:38	0°♑	
	4409 Jan 12 04:33	0°♊			4414 Feb 06 02:04	0°♊	
				retrograde	4414 May 03 14:24	28°♊44'44	
conjunction	4409 Feb 11 10:44	22°♊41'39	-1°03'13	desc. node	4414 May 14 07:49	28°♊01'31	
minimum elong	4409 Feb 11 09:43	22°♊39'41	1°03'13	opposition	4414 Jun 09 16:12	20°♊41'52	-1°05'23
	4409 Feb 20 23:54	0°♊		greatest brilliancy	4414 Jun 09 22:44	20°♊35'46	-1.8m
	4409 Mar 31 12:55	0°♊		min. Earth dist.	4414 Jun 16 18:34	18°♊03'30	0.57379 AU
morning rise	4409 Apr 16 18:34	12°♊46'28		direct	4414 Jul 20 02:19	11°♊04'55	
	4409 May 08 15:49	0°♊			4414 Sep 19 12:20	0°♊	
	4409 Jun 16 05:43	0°♑			4414 Nov 07 14:28	0°♊	
	4409 Jul 26 03:49	0°♑			4414 Dec 19 09:25	0°♊	
asc. node	4409 Jul 31 01:04	3°♑34'19			4415 Jan 27 16:33	0°♊	
	4409 Sep 06 08:33	0°♑			4415 Mar 07 10:24	0°♊	
	4409 Oct 22 03:10	0°♑		asc. node	4415 Mar 22 22:24	11°♊53'55	
	4409 Dec 14 10:35	0°♑			4415 Apr 15 20:17	0°♑	

	4415 May 26 17:27	0°☾		4420 Jul 03 12:48	0°♄
evening set	4415 Jun 26 10:15	21°☾39'56		4420 Aug 15 06:21	0°♁
	4415 Jul 08 12:21	0°♁		4420 Oct 05 06:28	0°☾
			asc. node	4420 Nov 11 19:40	11°☾17'49
conjunction	4415 Aug 18 09:37	27°♁28'37 1°06'27	retrograde	4420 Nov 17 16:59	11°☾33'10
minimum elong	4415 Aug 18 09:00	27°♁27'36 1°06'28	min. Earth dist.	4420 Dec 16 01:09	6°☾00'29 0.47116 AU
	4415 Aug 22 05:30	0°♁	opposition	4420 Dec 24 08:16	3°☾02'52 2°22'25
max. Earth dist.	4415 Sep 05 20:00	9°♁33'18 2.62656 AU	greatest brilliancy	4420 Dec 23 13:06	3°☾20'01 -2.3m
morning rise	4415 Oct 05 13:55	28°♁43'55		4421 Jan 02 10:31	30°♁♁
	4415 Oct 07 13:35	0°♁	direct	4421 Jan 26 11:02	26°♁08'50
	4415 Nov 24 02:39	0°♁		4421 Feb 21 05:43	0°☾
	4416 Jan 11 18:43	0°♁		4421 Apr 29 20:08	0°♁
	4416 Mar 02 11:00	0°♁		4421 Jun 21 16:13	0°♁
desc. node	4416 Mar 31 07:06	15°♁55'37		4421 Aug 10 17:37	0°♁
	4416 Apr 28 16:48	0°♁		4421 Sep 28 01:57	0°♁
retrograde	4416 Jun 27 20:58	16°♁27'10	evening set	4421 Oct 22 09:44	15°♁31'47
opposition	4416 Jul 30 15:39	10°♁16'50 -5°18'31		4421 Nov 13 14:22	0°♁
greatest brilliancy	4416 Aug 01 03:59	9°♁47'40 -2.4m	max. Earth dist.	4421 Nov 14 03:31	0°♁21'40 2.60679 AU
min. Earth dist.	4416 Aug 07 20:10	7°♁39'49 0.44359 AU	desc. node	4421 Nov 21 03:54	5°♁00'11
direct	4416 Sep 04 10:47	2°♁47'16			
	4416 Nov 15 18:44	0°♁	conjunction	4421 Dec 07 12:13	15°♁56'52 -0°09'08
	4416 Dec 30 13:10	0°♁	minimum elong	4421 Dec 07 11:53	15°♁56'19 0°09'07
asc. node	4417 Feb 06 20:39	27°♁40'38	behind sun begin	4421 Dec 06 19:27	15°♁28'35
	4417 Feb 10 01:06	0°♁	behind sun end	4421 Dec 08 04:20	16°♁24'04
	4417 Mar 23 10:09	0°♁		4421 Dec 28 02:17	0°♁
	4417 May 04 21:33	0°☾	morning rise	4422 Jan 24 03:14	18°♁55'53
	4417 Jun 17 23:09	0°♁		4422 Feb 08 14:16	0°♁
	4417 Aug 02 14:02	0°♁		4422 Mar 21 09:07	0°♁
evening set	4417 Aug 09 16:00	4°♁34'59		4422 Apr 29 22:19	0°♁
	4417 Sep 18 07:27	0°♁		4422 Jun 07 22:32	0°♁
				4422 Jul 17 09:02	0°♁
conjunction	4417 Sep 25 20:20	4°♁48'09 1°01'29		4422 Aug 27 15:27	0°☾
minimum elong	4417 Sep 25 21:12	4°♁49'33 1°01'28	asc. node	4422 Sep 29 17:26	22°☾06'25
max. Earth dist.	4417 Sep 28 16:51	6°♁37'13 2.67449 AU		4422 Oct 12 14:14	0°♁
	4417 Nov 04 11:26	0°♁	retrograde	4422 Dec 31 09:10	29°♁39'12
morning rise	4417 Nov 09 10:41	3°♁09'34	min. Earth dist.	4423 Feb 03 08:00	22°♁00'59 0.59674 AU
	4417 Dec 21 12:27	0°♁	opposition	4423 Feb 08 23:45	19°♁47'09 4°36'50
	4418 Feb 06 04:25	0°♁	greatest brilliancy	4423 Feb 08 01:15	20°♁09'21 -1.7m
desc. node	4418 Feb 16 05:56	6°♁29'58	direct	4423 Mar 18 08:56	11°♁10'26
	4418 Mar 24 14:10	0°♁		4423 May 23 11:58	0°♁
	4418 May 10 07:34	0°♁		4423 Jul 20 01:11	0°♁
	4418 Jun 28 09:05	0°♁		4423 Sep 08 19:15	0°♁
retrograde	4418 Sep 15 11:45	29°♁16'09	desc. node	4423 Oct 09 02:47	19°♁01'11
min. Earth dist.	4418 Oct 14 00:19	24°♁36'57 0.37108 AU		4423 Oct 26 01:27	0°♁
opposition	4418 Oct 16 00:46	24°♁04'17 -4°46'17	evening set	4423 Dec 01 12:03	24°♁29'05
greatest brilliancy	4418 Oct 15 21:14	24°♁06'40 -3.0m		4423 Dec 09 11:16	0°♁
direct	4418 Nov 14 10:48	19°♁10'36	max. Earth dist.	4423 Dec 16 04:08	4°♁41'09 2.49788 AU
asc. node	4418 Dec 25 19:55	29°♁01'23		4424 Jan 20 09:58	0°♁
	4418 Dec 28 02:33	0°♁			
	4419 Feb 21 11:11	0°♁	conjunction	4424 Jan 21 15:01	0°♁53'22 -0°52'48
	4419 Apr 10 12:03	0°☾	minimum elong	4424 Jan 21 13:21	0°♁50'17 0°52'47
	4419 May 27 16:57	0°♁		4424 Feb 29 10:11	0°♁
	4419 Jul 14 05:10	0°♁	morning rise	4424 Mar 19 10:39	14°♁38'33
	4419 Aug 30 22:56	0°♁		4424 Apr 08 04:01	0°♁
evening set	4419 Sep 16 19:11	10°♁36'50		4424 May 16 10:26	0°♁
	4419 Oct 17 08:46	0°♁		4424 Jun 24 02:43	0°♁
max. Earth dist.	4419 Oct 21 16:41	2°♁45'51 2.66739 AU		4424 Aug 03 03:42	0°☾
			asc. node	4424 Aug 16 16:53	9°☾47'47
conjunction	4419 Oct 31 22:37	9°♁19'48 0°33'21		4424 Sep 14 16:40	0°♁
minimum elong	4419 Oct 31 23:32	9°♁21'16 0°33'20		4424 Oct 31 17:58	0°♁
	4419 Dec 02 20:01	0°♁		4425 Jan 01 04:19	0°♁
morning rise	4419 Dec 15 05:17	8°♁08'16	retrograde	4425 Feb 04 05:41	6°♁23'33
desc. node	4420 Jan 04 04:34	21°♁24'27		4425 Mar 07 16:00	30°♁♁
	4420 Jan 16 23:20	0°♁	min. Earth dist.	4425 Mar 14 19:16	27°♁13'03 0.66803 AU
	4420 Feb 29 15:59	0°♁	opposition	4425 Mar 16 14:40	26°♁29'42 4°20'07
	4420 Apr 12 00:47	0°♁	greatest brilliancy	4425 Mar 16 07:59	26°♁36'22 -1.3m
	4420 May 23 09:30	0°♁	direct	4425 Apr 25 17:22	16°♁57'08

	4425 Jun 18 04:18	0°♄			4430 Jun 03 05:03	0°♄	
	4425 Aug 16 19:53	0°♍	evening set		4430 Jun 05 02:47	1°♄22'40	
desc. node	4425 Aug 26 01:19	5°♍18'54			4430 Jul 15 16:19	0°♍	
	4425 Oct 05 08:47	0°♊					
	4425 Nov 19 08:35	0°♋	conjunction		4430 Jul 31 19:12	11°♍01'18	0°59'31
	4425 Dec 31 05:02	0°♌	minimum elong		4430 Jul 31 17:45	10°♍58'50	0°59'31
evening set	4426 Jan 20 07:37	15°♌02'45	max. Earth dist.		4430 Aug 26 09:02	28°♍08'51	2.59334 AU
	4426 Feb 08 20:43	0°♋			4430 Aug 29 04:19	0°♎	
max. Earth dist.	4426 Feb 28 03:22	14°♋59'50	2.37366 AU	morning rise	4430 Sep 20 13:29	14°♎37'53	
	4426 Mar 19 05:12	0°♏			4430 Oct 14 11:59	0°♄	
					4430 Dec 01 10:09	0°♍	
conjunction	4426 Mar 24 05:52	3°♏58'17	-0°58'09		4431 Jan 20 07:34	0°♊	
minimum elong	4426 Mar 24 08:25	4°♏03'20	0°58'08		4431 Mar 15 17:41	0°♋	
	4426 Apr 26 04:28	0°♌		desc. node	4431 Apr 17 21:32	15°♋07'20	
morning rise	4426 Jun 03 22:17	0°♍11'45		retrograde	4431 Jun 04 03:58	25°♋52'31	
	4426 Jun 03 16:09	0°♍		opposition	4431 Jul 08 21:57	18°♋51'22	-3°36'17
asc. node	4426 Jul 04 17:03	23°♍29'28		greatest brilliancy	4431 Jul 09 23:31	18°♋29'12	-2.1m
	4426 Jul 13 12:08	0°♄		min. Earth dist.	4431 Jul 17 09:31	15°♋55'16	0.49694 AU
	4426 Aug 24 09:58	0°♍		direct	4431 Aug 16 03:22	10°♋13'48	
	4426 Oct 08 03:39	0°♎			4431 Oct 15 20:08	0°♌	
	4426 Nov 26 03:30	0°♄			4431 Dec 01 22:16	0°♋	
	4427 Jan 25 18:31	0°♍			4432 Jan 12 03:33	0°♏	
retrograde	4427 Mar 10 15:26	9°♍32'42			4432 Feb 21 00:44	0°♌	
opposition	4427 Apr 19 12:21	0°♍07'39	2°49'10	asc. node	4432 Feb 24 13:55	2°♌40'06	
	4427 Apr 19 20:07	30°♌♄			4432 Apr 01 07:58	0°♍	
greatest brilliancy	4427 Apr 19 17:34	0°♍02'31	-1.3m		4432 May 12 23:39	0°♄	
min. Earth dist.	4427 Apr 21 13:38	29°♄19'03	0.67372 AU		4432 Jun 25 09:57	0°♍	
direct	4427 May 30 23:05	20°♄08'08		evening set	4432 Jul 24 07:27	19°♍18'33	
desc. node	4427 Jul 14 00:02	29°♄42'00			4432 Aug 09 14:10	0°♎	
	4427 Jul 14 18:46	0°♍					
	4427 Sep 12 11:20	0°♊		conjunction	4432 Sep 11 04:36	21°♎05'58	1°06'44
	4427 Oct 29 17:26	0°♋		minimum elong	4432 Sep 11 05:04	21°♎06'43	1°06'44
	4427 Dec 11 04:25	0°♌		max. Earth dist.	4432 Sep 19 17:18	26°♎34'01	2.66232 AU
	4428 Jan 19 21:52	0°♋			4432 Sep 25 02:13	0°♄	
	4428 Feb 27 05:03	0°♏		morning rise	4432 Oct 26 18:00	20°♄08'14	
evening set	4428 Mar 29 06:54	24°♏34'15			4432 Nov 11 07:43	0°♍	
	4428 Apr 05 04:16	0°♌			4432 Dec 28 19:48	0°♊	
	4428 May 13 18:38	0°♍			4433 Feb 14 13:27	0°♋	
asc. node	4428 May 21 15:31	6°♍00'05		desc. node	4433 Mar 04 21:31	11°♋25'24	
					4433 Apr 04 03:36	0°♌	
conjunction	4428 Jun 05 08:06	17°♍04'37	0°09'54		4433 May 25 21:30	0°♋	
minimum elong	4428 Jun 05 07:15	17°♍03'01	0°09'53	retrograde	4433 Aug 14 04:30	27°♋51'01	
behind sun begin	4428 Jun 04 09:16	16°♍21'55		opposition	4433 Sep 13 06:26	22°♋51'18	-6°32'31
behind sun end	4428 Jun 06 05:13	17°♍44'04		greatest brilliancy	4433 Sep 14 05:08	22°♋35'58	-2.9m
	4428 Jun 22 19:01	0°♄		min. Earth dist.	4433 Sep 16 21:42	21°♋52'30	0.37950 AU
max. Earth dist.	4428 Jul 22 06:46	21°♄13'49	2.47426 AU	direct	4433 Oct 14 03:26	17°♋29'13	
	4428 Aug 03 18:48	0°♍			4433 Nov 29 11:25	0°♏	
morning rise	4428 Aug 06 05:49	1°♍42'31		asc. node	4434 Jan 11 12:15	24°♏22'30	
	4428 Sep 17 01:43	0°♎			4434 Jan 20 08:44	0°♌	
	4428 Nov 02 21:31	0°♄			4434 Mar 06 16:59	0°♍	
	4428 Dec 23 03:23	0°♍			4434 Apr 20 11:35	0°♄	
	4429 Feb 20 00:34	0°♊			4434 Jun 05 00:46	0°♍	
retrograde	4429 Apr 16 12:33	13°♊59'44			4434 Jul 21 14:35	0°♎	
opposition	4429 May 24 16:24	5°♊27'05	0°14'40	evening set	4434 Sep 02 10:03	27°♎11'38	
greatest brilliancy	4429 May 24 17:53	5°♊25'40	-1.6m		4434 Sep 06 20:24	0°♄	
min. Earth dist.	4429 May 30 11:14	3°♊14'38	0.61402 AU	max. Earth dist.	4434 Oct 12 20:06	22°♄49'28	2.67687 AU
desc. node	4429 May 30 22:37	3°♊03'55					
	4429 Jun 08 14:41	30°♌♍		conjunction	4434 Oct 17 23:30	26°♄05'50	0°46'23
direct	4429 Jul 04 20:22	25°♍32'31		minimum elong	4434 Oct 18 00:34	26°♄07'32	0°46'23
	4429 Aug 01 17:37	0°♊			4434 Oct 24 02:27	0°♍	
	4429 Oct 03 09:40	0°♋		morning rise	4434 Nov 30 23:59	24°♍20'15	
	4429 Nov 17 18:03	0°♌			4434 Dec 09 17:31	0°♊	
	4429 Dec 28 11:18	0°♋		desc. node	4435 Jan 20 20:00	27°♊40'09	
	4430 Feb 05 06:08	0°♏			4435 Jan 24 08:05	0°♋	
	4430 Mar 15 14:55	0°♌			4435 Mar 09 19:49	0°♌	
asc. node	4430 Apr 08 14:09	18°♌31'01			4435 Apr 22 07:20	0°♋	
	4430 Apr 23 16:14	0°♍			4435 Jun 04 04:05	0°♏	

	4435 Jul 17 14:53	0°♄		desc. node	4440 Sep 11 16:16	10°♑17'15	
	4435 Sep 04 05:38	0°♑			4440 Oct 12 23:13	0°♄	
retrograde	4435 Oct 28 05:35	16°♑54'23			4440 Nov 26 15:35	0°♄	
min. Earth dist.	4435 Nov 23 19:31	12°♑08'56	0.41932 AU	evening set	4440 Dec 29 15:22	23°♄30'07	
asc. node	4435 Nov 29 11:13	10°♑19'54			4441 Jan 07 12:00	0°♑	
opposition	4435 Dec 01 13:31	9°♑38'57	0°08'09	max. Earth dist.	4441 Jan 15 10:34	5°♑53'08	2.41703 AU
greatest brilliancy	4436 Aug 21 08:26	2°♑02'01	1.8m		4441 Feb 16 06:11	0°♄	
direct	4436 Jan 01 19:41	3°♑40'41					
	4436 Mar 19 05:39	0°♄		conjunction	4441 Feb 25 03:54	6°♄52'40	-1°05'07
	4436 May 11 05:29	0°♑		minimum elong	4441 Feb 25 03:54	6°♄52'42	1°05'08
	4436 Jun 30 03:53	0°♑			4441 Mar 26 17:31	0°♑	
	4436 Aug 18 01:39	0°♑			4441 May 03 18:40	0°♄	
	4436 Oct 04 22:54	0°♑		morning rise	4441 May 04 00:41	0°♄11'49	
evening set	4436 Oct 08 01:27	1°♑58'27			4441 Jun 11 06:59	0°♑	
max. Earth dist.	4436 Nov 04 05:31	19°♑25'54	2.63688 AU	asc. node	4441 Jul 21 08:50	0°♄10'12	
	4436 Nov 20 09:44	0°♄			4441 Jul 21 03:17	0°♄	
					4441 Sep 01 03:40	0°♑	
conjunction	4436 Nov 22 09:35	1°♄18'46	0°08'29		4441 Oct 16 09:28	0°♑	
minimum elong	4436 Nov 22 09:51	1°♄19'13	0°08'29		4441 Dec 06 11:08	0°♑	
behind sun begin	4436 Nov 21 17:26	0°♄52'11		retrograde	4442 Feb 25 03:06	26°♑55'45	
behind sun end	4436 Nov 23 02:17	1°♄46'16		opposition	4442 Apr 06 08:04	17°♑16'53	3°31'40
desc. node	4436 Dec 07 18:22	11°♄30'23		greatest brilliancy	4442 Apr 06 09:49	17°♑15'10	-1.3m
	4437 Jan 04 02:29	0°♄		min. Earth dist.	4442 Apr 06 21:27	17°♑03'37	0.67934 AU
morning rise	4437 Jan 07 03:24	2°♄05'04		direct	4442 May 17 10:17	7°♑24'52	
	4437 Feb 16 00:00	0°♑		desc. node	4442 Jul 30 14:38	0°♑09'27	
	4437 Mar 29 06:56	0°♄			4442 Jul 30 07:01	0°♑	
	4437 May 08 09:03	0°♑			4442 Sep 21 17:49	0°♄	
	4437 Jun 16 22:18	0°♄			4442 Nov 06 19:03	0°♄	
	4437 Jul 27 00:53	0°♑			4442 Dec 18 22:09	0°♑	
	4437 Sep 07 15:33	0°♄			4443 Jan 27 13:47	0°♄	
asc. node	4437 Oct 16 11:16	23°♄40'59		evening set	4443 Mar 01 12:16	25°♄46'28	
	4437 Oct 28 21:32	0°♑			4443 Mar 06 20:39	0°♑	
retrograde	4437 Dec 15 19:20	13°♑06'26			4443 Apr 13 18:56	0°♄	
min. Earth dist.	4438 Jan 16 14:07	6°♑14'33	0.55214 AU				
opposition	4438 Jan 23 14:55	3°♑31'47	4°11'10	conjunction	4443 May 09 13:49	20°♄10'50	-0°20'12
greatest brilliancy	4438 Jan 22 12:51	3°♑56'58	-1.9m	minimum elong	4443 May 09 15:47	20°♄14'38	0°20'11
	4438 Feb 02 07:40	30°♄			4443 May 22 07:04	0°♑	
direct	4438 Feb 28 12:36	25°♄28'18		asc. node	4443 Jun 08 08:22	12°♑59'03	
	4438 Mar 29 04:43	0°♑		max. Earth dist.	4443 Jul 01 03:10	29°♑57'48	2.41924 AU
	4438 Jun 05 07:45	0°♑			4443 Jul 01 04:22	0°♄	
	4438 Jul 28 15:14	0°♑		morning rise	4443 Jul 16 04:08	10°♄55'21	
	4438 Sep 16 04:23	0°♑			4443 Aug 12 01:35	0°♑	
desc. node	4438 Oct 25 17:24	25°♑11'29			4443 Sep 25 09:38	0°♑	
	4438 Nov 02 01:39	0°♄			4443 Nov 11 17:32	0°♑	
evening set	4438 Nov 15 03:40	8°♄40'22			4444 Jan 02 23:49	0°♑	
max. Earth dist.	4438 Dec 02 05:43	20°♄12'26	2.54543 AU		4444 Mar 24 20:36	0°♄	
	4438 Dec 16 11:12	0°♄		retrograde	4444 Apr 01 00:24	0°♄18'23	
					4444 Apr 08 00:10	30°♄	
conjunction	4439 Jan 02 15:31	12°♄03'14	-0°37'15	opposition	4444 May 10 00:17	21°♑21'56	1°22'43
minimum elong	4439 Jan 02 14:10	12°♄00'50	0°37'13	greatest brilliancy	4444 May 10 06:01	21°♑16'23	-1.4m
	4439 Jan 27 14:15	0°♑		min. Earth dist.	4444 May 14 09:04	19°♑40'18	0.64493 AU
morning rise	4439 Feb 24 07:20	20°♑31'09		desc. node	4444 Jun 16 13:47	11°♑26'12	
	4439 Mar 08 20:44	0°♄		direct	4444 Jun 20 12:24	11°♑20'18	
	4439 Apr 16 21:03	0°♑			4444 Aug 23 01:46	0°♄	
	4439 May 25 09:00	0°♄			4444 Oct 14 00:38	0°♄	
	4439 Jul 03 05:58	0°♑			4444 Nov 26 17:36	0°♑	
	4439 Aug 12 13:26	0°♄			4445 Jan 05 21:33	0°♄	
asc. node	4439 Sep 03 10:32	15°♄31'53			4445 Feb 13 09:47	0°♑	
	4439 Sep 24 18:34	0°♑			4445 Mar 23 13:17	0°♄	
	4439 Nov 13 09:35	0°♑		asc. node	4445 Apr 25 07:06	25°♄22'06	
retrograde	4440 Jan 22 17:49	23°♑00'34			4445 May 01 08:46	0°♑	
min. Earth dist.	4440 Feb 28 15:49	14°♑22'23	0.64752 AU	evening set	4445 May 11 19:57	7°♑55'15	
opposition	4440 Mar 02 23:42	13°♑02'38	4°37'32		4445 Jun 10 15:13	0°♄	
greatest brilliancy	4440 Mar 02 10:36	13°♑15'43	-1.4m				
direct	4440 Apr 11 04:45	3°♑48'03		conjunction	4445 Jul 12 01:59	22°♄29'18	0°46'02
	4440 Jul 02 03:37	0°♑		minimum elong	4445 Jul 11 23:55	22°♄25'40	0°46'00
	4440 Aug 25 14:11	0°♑			4445 Jul 22 20:23	0°♑	

max. Earth dist.	4445 Aug 14 14:24	15° Ω 34'19	2.55194 AU	min. Earth dist.	4450 Oct 29 02:01	13° \mathcal{B} 09'17	0.38105 AU
morning rise	4445 Sep 04 08:25	29° Ω 26'48		opposition	4450 Nov 02 22:25	11° \mathcal{B} 47'01	-3°00'08
	4445 Sep 05 04:30	0° \mathcal{M}		greatest brilliancy	4450 Nov 02 12:53	11° \mathcal{B} 53'47	-2.9m
	4445 Oct 21 13:52	0° \mathcal{L}		direct	4450 Dec 02 12:23	6° \mathcal{B} 40'11	
	4445 Dec 09 02:19	0° \mathcal{M}		asc. node	4450 Dec 16 04:59	7° \mathcal{B} 51'51	
	4446 Jan 29 22:16	0° \mathcal{A}			4451 Feb 10 13:36	0° \mathcal{I}	
	4446 Apr 03 09:05	0° \mathcal{B}			4451 Apr 03 07:43	0° \mathcal{G}	
desc. node	4446 May 04 12:58	7° \mathcal{B} 42'10			4451 May 21 21:46	0° Ω	
retrograde	4446 May 14 04:28	8° \mathcal{B} 14'58			4451 Jul 09 02:14	0° \mathcal{M}	
opposition	4446 Jun 19 13:01	0° \mathcal{B} 31'39	-1°57'10		4451 Aug 26 04:17	0° \mathcal{L}	
greatest brilliancy	4446 Jun 20 01:44	0° \mathcal{B} 20'03	-1.9m	evening set	4451 Sep 24 22:15	18° \mathcal{L} 42'04	
	4446 Jun 20 23:39	30° \mathcal{R} \mathcal{A}			4451 Oct 12 17:45	0° \mathcal{M}	
min. Earth dist.	4446 Jun 27 07:09	27° \mathcal{A} 42'08	0.54807 AU	max. Earth dist.	4451 Oct 27 00:04	9° \mathcal{M} 07'06	2.65884 AU
direct	4446 Jul 29 09:05	21° \mathcal{A} 10'13					
	4446 Sep 06 14:06	0° \mathcal{B}		conjunction	4451 Nov 09 00:09	17° \mathcal{M} 29'55	0°24'42
	4446 Oct 31 07:01	0° \approx		minimum elong	4451 Nov 09 00:53	17° \mathcal{M} 31'06	0°24'42
	4446 Dec 13 05:00	0° \mathcal{H}			4451 Nov 28 04:55	0° \mathcal{A}	
	4447 Jan 21 23:35	0° \mathcal{Y}		morning rise	4451 Dec 23 15:11	16° \mathcal{A} 49'47	
	4447 Mar 02 00:30	0° \mathcal{B}		desc. node	4451 Dec 25 08:57	17° \mathcal{A} 59'37	
asc. node	4447 Mar 13 05:23	8° \mathcal{B} 33'38			4452 Jan 12 04:22	0° \mathcal{B}	
	4447 Apr 10 15:52	0° \mathcal{I}			4452 Feb 24 13:50	0° \approx	
	4447 May 21 18:03	0° \mathcal{G}			4452 Apr 06 12:13	0° \mathcal{H}	
	4447 Jul 03 17:03	0° Ω			4452 May 17 07:59	0° \mathcal{Y}	
evening set	4447 Jul 07 11:28	2° Ω 34'04			4452 Jun 26 17:36	0° \mathcal{B}	
	4447 Aug 17 13:07	0° \mathcal{M}			4452 Aug 07 02:36	0° \mathcal{I}	
					4452 Sep 21 23:27	0° \mathcal{G}	
conjunction	4447 Aug 27 17:55	6° \mathcal{M} 40'35	1°07'56	asc. node	4452 Nov 02 03:19	19° \mathcal{G} 33'14	
minimum elong	4447 Aug 27 17:45	6° \mathcal{M} 40'19	1°07'56	retrograde	4452 Nov 28 12:39	24° \mathcal{G} 10'14	
max. Earth dist.	4447 Sep 11 12:09	16° \mathcal{M} 15'21	2.64175 AU	min. Earth dist.	4452 Dec 28 01:29	18° \mathcal{G} 09'11	0.50106 AU
	4447 Oct 02 21:33	0° \mathcal{L}		greatest brilliancy	4453 Jan 04 02:40	15° \mathcal{G} 32'50	-2.2m
morning rise	4447 Oct 13 19:13	6° \mathcal{L} 56'57		opposition	4453 Jan 05 02:59	15° \mathcal{G} 10'18	3°14'33
	4447 Nov 19 06:50	0° \mathcal{M}		direct	4453 Feb 08 07:02	7° \mathcal{G} 48'47	
	4448 Jan 06 10:39	0° \mathcal{A}			4453 Apr 20 21:03	0° Ω	
	4448 Feb 24 18:52	0° \mathcal{B}			4453 Jun 15 14:19	0° \mathcal{M}	
desc. node	4448 Mar 21 11:46	15° \mathcal{B} 02'36			4453 Aug 05 13:54	0° \mathcal{L}	
	4448 Apr 17 10:32	0° \approx			4453 Sep 23 07:24	0° \mathcal{M}	
	4448 Jul 07 04:55	0° \mathcal{H}		evening set	4453 Oct 30 20:17	24° \mathcal{M} 01'42	
retrograde	4448 Jul 13 13:24	0° \mathcal{H} 14'59			4453 Nov 08 23:03	0° \mathcal{A}	
	4448 Jul 19 20:20	30° \mathcal{R} \approx		desc. node	4453 Nov 11 07:54	1° \mathcal{A} 33'41	
opposition	4448 Aug 14 07:28	24° \approx 33'43	-6°06'40	max. Earth dist.	4453 Nov 20 09:39	7° \mathcal{A} 34'47	2.58701 AU
greatest brilliancy	4448 Aug 15 20:47	24° \approx 05'24	-2.6m				
min. Earth dist.	4448 Aug 21 14:06	22° \approx 22'15	0.41649 AU	conjunction	4453 Dec 16 14:23	25° \mathcal{A} 17'30	-0°19'35
direct	4448 Sep 17 08:44	17° \approx 50'30		minimum elong	4453 Dec 16 13:39	25° \mathcal{A} 16'16	0°19'35
	4448 Nov 01 08:24	0° \mathcal{H}			4453 Dec 23 10:28	0° \mathcal{B}	
	4448 Dec 21 21:37	0° \mathcal{Y}		morning rise	4454 Feb 03 15:54	29° \mathcal{B} 53'02	
asc. node	4449 Jan 28 05:05	25° \mathcal{Y} 49'53			4454 Feb 03 19:44	0° \approx	
	4449 Feb 03 02:23	0° \mathcal{B}			4454 Mar 16 10:18	0° \mathcal{H}	
	4449 Mar 17 08:50	0° \mathcal{I}			4454 Apr 24 18:42	0° \mathcal{Y}	
	4449 Apr 29 10:18	0° \mathcal{G}			4454 Jun 02 13:51	0° \mathcal{B}	
	4449 Jun 12 21:30	0° Ω			4454 Jul 11 17:49	0° \mathcal{I}	
	4449 Jul 28 18:55	0° \mathcal{M}			4454 Aug 21 12:29	0° \mathcal{G}	
evening set	4449 Aug 18 13:20	13° \mathcal{M} 20'46		asc. node	4454 Sep 20 02:31	20° \mathcal{G} 22'01	
	4449 Sep 13 15:48	0° \mathcal{L}			4454 Oct 05 00:25	0° Ω	
					4454 Nov 30 09:04	0° \mathcal{M}	
conjunction	4449 Oct 04 00:15	12° \mathcal{L} 56'23	0°56'47	retrograde	4455 Jan 08 18:20	8° \mathcal{M} 47'44	
minimum elong	4449 Oct 04 01:15	12° \mathcal{L} 57'59	0°56'47	min. Earth dist.	4455 Feb 12 19:52	0° \mathcal{M} 46'31	0.61745 AU
max. Earth dist.	4449 Oct 03 21:49	12° \mathcal{L} 52'32	2.67778 AU		4455 Feb 14 18:52	30° \mathcal{R} Ω	
	4449 Oct 30 20:05	0° \mathcal{M}		opposition	4455 Feb 17 15:56	28° Ω 51'20	4°42'03
morning rise	4449 Nov 17 06:23	11° \mathcal{M} 06'59		greatest brilliancy	4455 Feb 16 20:31	29° Ω 10'38	-1.6m
	4449 Dec 16 16:57	0° \mathcal{A}		direct	4455 Mar 27 18:28	19° Ω 59'20	
	4450 Jan 31 22:27	0° \mathcal{B}			4455 May 12 06:06	0° \mathcal{M}	
desc. node	4450 Feb 06 10:38	3° \mathcal{B} 36'12			4455 Jul 13 19:36	0° \mathcal{L}	
	4450 Mar 18 12:38	0° \approx			4455 Sep 03 15:11	0° \mathcal{M}	
	4450 May 02 18:01	0° \mathcal{H}		desc. node	4455 Sep 29 07:07	15° \mathcal{M} 53'50	
	4450 Jun 17 12:28	0° \mathcal{Y}			4455 Oct 21 06:15	0° \mathcal{A}	
	4450 Aug 06 20:11	0° \mathcal{B}			4455 Dec 04 18:31	0° \mathcal{B}	
retrograde	4450 Oct 02 07:09	17° \mathcal{B} 34'33		evening set	4455 Dec 11 12:47	4° \mathcal{B} 43'26	

max. Earth dist.	4455 Dec 25 15:21	14° ♁ 43'27	2.46933 AU		4460 Sep 12 06:14	0° ♁	
	4456 Jan 15 16:50	0° ♁			4460 Oct 28 20:19	0° ♁	
					4460 Dec 17 06:39	0° ♁	
conjunction	4456 Feb 02 14:20	13° ♁ 17'27	-0°59'41		4461 Feb 10 11:45	0° ♁	
minimum elong	4456 Feb 02 12:52	13° ♁ 14'42	0°59'40	retrograde	4461 Apr 25 23:59	22° ♁ 42'39	
	4456 Feb 24 15:10	0° ♁		desc. node	4461 May 21 03:22	18° ♁ 46'38	
morning rise	4456 Apr 03 22:10	0° ♁ 30'03		opposition	4461 Jun 02 14:35	14° ♁ 25'41	-0°30'08
	4456 Apr 03 06:50	0° ♁		greatest brilliancy	4461 Jun 02 17:24	14° ♁ 23'02	-1.7m
	4456 May 11 11:19	0° ♁		min. Earth dist.	4461 Jun 09 03:49	11° ♁ 57'42	0.59294 AU
	4456 Jun 19 01:35	0° ♁		direct	4461 Jul 13 10:30	4° ♁ 39'15	
	4456 Jul 28 23:41	0° ♁			4461 Sep 25 08:40	0° ♁	
asc. node	4456 Aug 07 02:13	6° ♁ 38'09			4461 Nov 11 13:46	0° ♁	
	4456 Sep 09 05:39	0° ♁			4461 Dec 22 21:00	0° ♁	
	4456 Oct 25 08:35	0° ♁			4462 Jan 30 22:26	0° ♁	
	4456 Dec 19 17:20	0° ♁			4462 Mar 10 11:41	0° ♁	
retrograde	4457 Feb 11 20:02	14° ♁ 14'53		asc. node	4462 Mar 29 23:26	15° ♁ 01'22	
min. Earth dist.	4457 Mar 23 06:06	4° ♁ 48'17	0.67488 AU		4462 Apr 18 16:33	0° ♁	
opposition	4457 Mar 24 05:03	4° ♁ 25'24	4°05'04		4462 May 29 08:35	0° ♁	
greatest brilliancy	4457 Mar 24 01:42	4° ♁ 28'44	-1.3m	evening set	4462 Jun 17 12:26	13° ♁ 40'33	
	4457 Apr 04 19:38	30° ♁			4462 Jul 10 22:34	0° ♁	
direct	4457 May 03 17:44	24° ♁ 44'42					
	4457 Jun 04 13:54	0° ♁		conjunction	4462 Aug 11 01:08	21° ♁ 04'28	1°04'15
	4457 Aug 10 11:45	0° ♁		minimum elong	4462 Aug 11 00:09	21° ♁ 02'50	1°04'14
desc. node	4457 Aug 16 06:10	3° ♁ 11'39			4462 Aug 24 12:02	0° ♁	
	4457 Sep 30 03:17	0° ♁		max. Earth dist.	4462 Sep 01 14:40	5° ♁ 19'51	2.61269 AU
	4457 Nov 14 11:19	0° ♁		morning rise	4462 Sep 29 06:47	23° ♁ 16'42	
	4457 Dec 26 10:14	0° ♁			4462 Oct 09 18:43	0° ♁	
evening set	4458 Feb 02 22:47	29° ♁ 07'48			4462 Nov 26 10:42	0° ♁	
	4458 Feb 04 01:49	0° ♁			4463 Jan 14 13:22	0° ♁	
	4458 Mar 14 09:31	0° ♁			4463 Mar 07 12:01	0° ♁	
				desc. node	4463 Apr 08 02:27	16° ♁ 24'41	
conjunction	4458 Apr 09 20:06	20° ♁ 55'16	-0°47'31		4463 May 10 03:41	0° ♁	
minimum elong	4458 Apr 09 23:31	21° ♁ 02'01	0°47'30	retrograde	4463 Jun 17 14:23	7° ♁ 31'34	
	4458 Apr 21 08:03	0° ♁		opposition	4463 Jul 21 06:14	0° ♁ 57'38	-4°35'09
max. Earth dist.	4458 May 11 17:56	16° ♁ 00'47	2.37245 AU	greatest brilliancy	4463 Jul 22 14:47	0° ♁ 30'26	-2.3m
	4458 May 29 19:14	0° ♁			4463 Jul 24 03:03	30° ♁	
morning rise	4458 Jun 20 08:22	16° ♁ 23'45		min. Earth dist.	4463 Jul 29 17:45	28° ♁ 08'15	0.46727 AU
asc. node	4458 Jun 24 23:57	19° ♁ 53'11		direct	4463 Aug 27 05:51	22° ♁ 54'25	
	4458 Jul 08 14:49	0° ♁			4463 Sep 29 21:20	0° ♁	
	4458 Aug 19 11:13	0° ♁			4463 Nov 23 12:06	0° ♁	
	4458 Oct 02 23:15	0° ♁			4464 Jan 05 07:23	0° ♁	
	4458 Nov 20 03:18	0° ♁		asc. node	4464 Feb 14 21:57	29° ♁ 58'06	
	4459 Jan 15 04:20	0° ♁			4464 Feb 14 22:59	0° ♁	
retrograde	4459 Mar 18 13:29	17° ♁ 17'17			4464 Mar 26 18:16	0° ♁	
opposition	4459 Apr 27 04:37	8° ♁ 01'24	2°20'01		4464 May 07 18:59	0° ♁	
greatest brilliancy	4459 Apr 27 10:46	7° ♁ 55'22	-1.3m		4464 Jun 20 12:09	0° ♁	
min. Earth dist.	4459 Apr 30 02:01	6° ♁ 53'19	0.66638 AU	evening set	4464 Aug 02 19:08	28° ♁ 38'49	
	4459 May 21 00:32	30° ♁			4464 Aug 04 21:00	0° ♁	
direct	4459 Jun 07 17:51	27° ♁ 59'37					
	4459 Jun 26 11:17	0° ♁		conjunction	4464 Sep 19 15:45	29° ♁ 29'06	1°04'06
desc. node	4459 Jul 04 04:38	1° ♁ 50'05		minimum elong	4464 Sep 19 16:28	29° ♁ 30'16	1°04'06
	4459 Sep 05 18:06	0° ♁			4464 Sep 20 11:06	0° ♁	
	4459 Oct 24 05:47	0° ♁		max. Earth dist.	4464 Sep 25 00:12	2° ♁ 54'02	2.67004 AU
	4459 Dec 06 02:08	0° ♁		morning rise	4464 Nov 03 14:57	28° ♁ 05'03	
	4460 Jan 14 22:53	0° ♁			4464 Nov 06 15:23	0° ♁	
	4460 Feb 22 07:25	0° ♁			4464 Dec 23 20:55	0° ♁	
	4460 Mar 31 07:27	0° ♁			4465 Feb 08 23:20	0° ♁	
evening set	4460 Apr 14 12:32	11° ♁ 07'54		desc. node	4465 Feb 23 01:17	8° ♁ 58'00	
	4460 May 08 22:33	0° ♁			4465 Mar 28 05:14	0° ♁	
asc. node	4460 May 11 23:21	2° ♁ 19'00			4465 May 15 14:32	0° ♁	
	4460 Jun 17 23:53	0° ♁			4465 Jul 08 13:41	0° ♁	
				retrograde	4465 Sep 01 12:41	15° ♁ 39'17	
conjunction	4460 Jun 19 14:05	1° ♁ 09'51	0°25'08	opposition	4465 Oct 01 13:12	10° ♁ 41'48	-5°49'29
minimum elong	4460 Jun 19 12:17	1° ♁ 06'33	0°25'07	greatest brilliancy	4465 Oct 01 20:42	10° ♁ 36'50	-3.0m
	4460 Jul 30 00:21	0° ♁		min. Earth dist.	4465 Oct 02 03:13	10° ♁ 32'31	0.37055 AU
max. Earth dist.	4460 Jul 31 18:33	1° ♁ 13'21	2.50350 AU	direct	4465 Oct 31 08:48	5° ♁ 44'16	
morning rise	4460 Aug 17 11:31	12° ♁ 42'31		asc. node	4466 Jan 01 20:33	26° ♁ 08'05	

	4466 Jan 08 21:03	0°♄		conjunction	4471 Jan 13 02:20	22°♄52'17 -0°46'36
	4466 Feb 26 23:45	0°♂		minimum elong	4471 Jan 13 00:44	22°♄49'24 0°46'34
	4466 Apr 14 06:22	0°♄			4471 Jan 22 21:39	0°♄
	4466 May 30 14:53	0°♂			4471 Mar 04 01:22	0°♄
	4466 Jul 16 15:46	0°♄		morning rise	4471 Mar 09 09:46	4°♄05'00
	4466 Sep 02 03:36	0°♄			4471 Apr 11 22:19	0°♄
evening set	4466 Sep 10 16:42	5°♄23'42			4471 May 20 07:00	0°♄
max. Earth dist.	4466 Oct 17 23:57	29°♄02'48 2.67267 AU			4471 Jun 28 00:27	0°♂
	4466 Oct 19 11:49	0°♂			4471 Aug 07 02:33	0°♄
				asc. node	4471 Aug 24 17:49	12°♄40'41
conjunction	4466 Oct 25 23:12	4°♂08'06 0°39'03			4471 Sep 18 19:29	0°♂
minimum elong	4466 Oct 26 00:12	4°♂09'42 0°39'03			4471 Nov 05 14:03	0°♄
	4466 Dec 05 01:05	0°♄			4472 Jan 16 09:34	0°♄
morning rise	4466 Dec 09 01:43	2°♄37'44		retrograde	4472 Jan 30 12:52	1°♄14'25
desc. node	4467 Jan 10 23:55	24°♄22'16			4472 Feb 13 02:42	30°♄♄
	4467 Jan 19 09:45	0°♄		min. Earth dist.	4472 Mar 08 09:45	22°♄17'30 0.66020 AU
	4467 Mar 04 11:04	0°♄		opposition	4472 Mar 10 21:07	21°♄18'12 4°28'51
	4467 Apr 16 07:11	0°♄		greatest brilliancy	4472 Mar 10 11:42	21°♄27'37 -1.4m
	4467 May 28 06:10	0°♄		direct	4472 Apr 19 14:46	11°♄52'57
	4467 Jul 09 04:37	0°♄			4472 Jun 23 17:37	0°♄
	4467 Aug 22 12:33	0°♂			4472 Aug 19 20:49	0°♂
	4467 Oct 24 20:26	0°♄		desc. node	4472 Sep 01 20:47	7°♂38'23
retrograde	4467 Nov 09 18:27	1°♄48'12			4472 Oct 07 22:40	0°♄
asc. node	4467 Nov 19 20:42	1°♄02'36			4472 Nov 21 20:38	0°♄
	4467 Nov 25 10:38	30°♄♄			4473 Jan 02 18:29	0°♄
min. Earth dist.	4467 Dec 07 05:31	26°♂38'25 0.44713 AU		evening set	4473 Jan 10 12:04	5°♄43'50
opposition	4467 Dec 15 11:53	23°♂48'15 1°32'15		max. Earth dist.	4473 Feb 03 22:11	24°♄10'33 2.39060 AU
greatest brilliancy	4467 Dec 14 23:03	23°♂59'19 -2.5m			4473 Feb 11 12:11	0°♄
direct	4468 Jan 16 17:51	17°♂18'36				
	4468 Mar 06 18:19	0°♄		conjunction	4473 Mar 11 22:50	22°♄08'52 -1°02'58
	4468 May 04 04:54	0°♂		minimum elong	4473 Mar 12 00:18	22°♄11'43 1°02'58
	4468 Jun 24 14:17	0°♄			4473 Mar 21 22:19	0°♄
	4468 Aug 13 02:47	0°♄			4473 Apr 28 22:21	0°♄
	4468 Sep 30 06:38	0°♂		morning rise	4473 May 21 12:36	17°♄42'31
evening set	4468 Oct 16 05:06	10°♂08'51			4473 Jun 06 09:34	0°♂
max. Earth dist.	4468 Nov 09 20:53	26°♂06'38 2.62120 AU		asc. node	4473 Jul 11 17:59	26°♂43'32
	4468 Nov 15 19:10	0°♄			4473 Jul 16 04:19	0°♄
desc. node	4468 Nov 27 23:16	8°♄03'13			4473 Aug 27 01:27	0°♂
					4473 Oct 10 21:23	0°♄
conjunction	4468 Nov 30 21:46	10°♄00'41 -0°01'40			4473 Nov 29 11:41	0°♄
minimum elong	4468 Nov 30 21:44	10°♄00'39 0°01'39			4474 Feb 03 14:09	0°♂
behind sun begin	4468 Nov 30 02:32	9°♄28'37		retrograde	4474 Mar 04 19:37	4°♂38'04
behind sun end	4468 Dec 01 16:57	10°♄32'41			4474 Mar 31 18:36	30°♄♄
	4468 Dec 30 10:06	0°♄		opposition	4474 Apr 13 21:11	25°♄06'28 3°07'49
morning rise	4469 Jan 16 14:19	11°♄54'31		greatest brilliancy	4474 Apr 14 01:05	25°♄02'37 -1.3m
	4469 Feb 11 03:08	0°♄		min. Earth dist.	4474 Apr 15 06:50	24°♄33'11 0.67755 AU
	4469 Mar 24 03:47	0°♄		direct	4474 May 25 05:07	15°♄09'35
	4469 May 02 22:44	0°♄		desc. node	4474 Jul 20 19:15	29°♄48'19
	4469 Jun 11 04:16	0°♄			4474 Jul 21 05:53	0°♂
	4469 Jul 20 20:06	0°♂			4474 Sep 15 19:48	0°♄
	4469 Aug 31 12:15	0°♄			4474 Nov 01 14:18	0°♄
asc. node	4469 Oct 06 18:53	23°♄33'24			4474 Dec 13 23:09	0°♄
	4469 Oct 17 20:29	0°♂			4475 Jan 22 16:37	0°♄
retrograde	4469 Dec 24 20:53	23°♂14'04			4475 Mar 01 23:56	0°♄
min. Earth dist.	4470 Jan 26 20:57	15°♂55'46 0.57790 AU		evening set	4475 Mar 17 13:16	12°♄18'27
greatest brilliancy	4470 Feb 01 03:23	13°♂52'15 -1.7m			4475 Apr 08 22:37	0°♄
opposition	4470 Feb 02 03:53	13°♂28'15 4°29'19			4475 May 17 11:18	0°♂
direct	4470 Mar 10 22:18	5°♂05'15				
	4470 May 28 11:41	0°♄		conjunction	4475 May 25 14:04	6°♂12'14 -0°02'51
	4470 Jul 22 23:33	0°♄		minimum elong	4475 May 25 14:20	6°♂12'44 0°02'51
	4470 Sep 11 05:27	0°♂		behind sun begin	4475 May 24 10:05	5°♂18'57
desc. node	4470 Oct 15 22:21	21°♂54'38		behind sun end	4475 May 26 18:35	7°♂06'26
	4470 Oct 28 08:54	0°♄		asc. node	4475 May 29 16:38	9°♂19'25
evening set	4470 Nov 24 06:47	17°♄57'13			4475 Jun 26 09:08	0°♄
max. Earth dist.	4470 Dec 09 18:17	28°♄34'04 2.51989 AU		max. Earth dist.	4475 Jul 14 17:59	13°♄20'58 2.44974 AU
	4470 Dec 11 19:50	0°♄		morning rise	4475 Jul 29 01:48	23°♄33'07
					4475 Aug 07 06:23	0°♂

	4475 Sep 20 11:53	0°♎			4481 Jan 26 05:39	0°♎	
	4475 Nov 06 10:31	0°♏			4481 Mar 10 21:53	0°♐	
	4475 Dec 27 07:36	0°♑			4481 Apr 23 18:42	0°♑	
	4476 Feb 28 04:07	0°♒			4481 Jun 07 18:23	0°♒	
retrograde	4476 Apr 09 16:24	8°♒29'45			4481 Jul 23 23:30	0°♓	
	4476 May 17 15:42	30°♑♑		evening set	4481 Aug 27 03:04	21°♑48'10	
opposition	4476 May 18 06:26	29°♑45'51	0°44'26		4481 Sep 09 00:43	0°♏	
greatest brilliancy	4476 May 18 10:12	29°♑42'13	-1.5m	max. Earth dist.	4481 Oct 09 01:30	19°♏03'58	2.67837 AU
min. Earth dist.	4476 May 23 10:39	27°♑46'25	0.62910 AU				
desc. node	4476 Jun 06 18:07	22°♑53'45		conjunction	4481 Oct 12 00:31	20°♏56'50	0°51'03
direct	4476 Jun 28 15:35	19°♑46'56		minimum elong	4481 Oct 12 01:35	20°♏58'32	0°51'03
	4476 Aug 12 00:17	0°♒			4481 Oct 26 05:55	0°♑	
	4476 Oct 07 12:38	0°♓		morning rise	4481 Nov 25 02:12	19°♑06'00	
	4476 Nov 21 03:27	0°♑			4481 Dec 11 23:41	0°♒	
	4476 Dec 31 15:16	0°♑			4482 Jan 26 21:04	0°♓	
	4477 Feb 08 07:06	0°♑		desc. node	4482 Jan 27 15:19	0°♓30'10	
	4477 Mar 18 13:05	0°♎			4482 Mar 12 19:56	0°♑	
asc. node	4477 Apr 15 15:03	21°♎44'38			4482 Apr 25 23:57	0°♑	
	4477 Apr 26 10:50	0°♐			4482 Jun 08 21:10	0°♑	
evening set	4477 May 25 22:21	22°♐02'33			4482 Jul 24 05:24	0°♎	
	4477 Jun 05 19:28	0°♑			4482 Sep 19 18:15	0°♐	
	4477 Jul 18 02:41	0°♒		retrograde	4482 Oct 17 13:39	5°♐05'56	
				min. Earth dist.	4482 Nov 12 21:18	0°♐34'37	0.39955 AU
conjunction	4477 Jul 23 13:38	3°♒45'56	0°54'39		4482 Nov 14 19:28	30°♑♑	
minimum elong	4477 Jul 23 11:51	3°♒42'53	0°54'38	opposition	4482 Nov 19 16:24	28°♑30'30	-1°08'26
max. Earth dist.	4477 Aug 21 12:38	23°♒23'12	2.57579 AU	greatest brilliancy	4482 Nov 19 10:23	28°♑35'05	-2.8m
	4477 Aug 31 11:30	0°♓		asc. node	4482 Dec 06 11:48	24°♑11'23	
morning rise	4477 Sep 13 18:30	8°♓44'04		direct	4482 Dec 20 03:27	22°♑57'30	
	4477 Oct 16 18:37	0°♏			4483 Jan 24 03:56	0°♐	
	4477 Dec 03 21:17	0°♑			4483 Mar 26 02:19	0°♑	
	4478 Jan 23 10:38	0°♒			4483 May 15 18:28	0°♒	
	4478 Mar 21 09:53	0°♓			4483 Jul 03 20:13	0°♓	
desc. node	4478 Apr 24 16:52	13°♓22'25			4483 Aug 21 08:47	0°♏	
retrograde	4478 May 25 16:29	18°♓25'11		evening set	4483 Oct 03 00:15	26°♏45'28	
opposition	4478 Jun 30 04:27	11°♓04'08	-2°52'46		4483 Oct 08 02:52	0°♑	
greatest brilliancy	4478 Jul 01 00:20	10°♓46'26	-2.0m	max. Earth dist.	4483 Nov 01 09:24	15°♑32'41	2.64777 AU
min. Earth dist.	4478 Jul 08 09:56	8°♓08'39	0.52045 AU				
direct	4478 Aug 08 05:27	2°♓04'03		conjunction	4483 Nov 17 03:49	25°♑46'57	0°15'27
	4478 Oct 22 16:30	0°♑		minimum elong	4483 Nov 17 04:18	25°♑47'44	0°15'27
	4478 Dec 06 12:53	0°♑		behind sun begin	4483 Nov 16 23:12	25°♑39'25	
	4479 Jan 16 00:33	0°♑		behind sun end	4483 Nov 17 09:24	25°♑56'04	
	4479 Feb 24 11:19	0°♎			4483 Nov 23 14:25	0°♒	
asc. node	4479 Mar 03 14:53	5°♎25'13		desc. node	4483 Dec 15 13:44	14°♒33'03	
	4479 Apr 05 09:57	0°♐		morning rise	4484 Jan 01 07:36	25°♒49'21	
	4479 May 16 17:53	0°♑			4484 Jan 07 11:01	0°♓	
	4479 Jun 28 21:40	0°♒			4484 Feb 19 14:32	0°♑	
evening set	4479 Jul 17 20:02	12°♒46'07			4484 Apr 01 04:48	0°♑	
	4479 Aug 12 20:54	0°♓			4484 May 11 14:29	0°♑	
					4484 Jun 20 11:41	0°♎	
conjunction	4479 Sep 05 16:26	15°♓29'26	1°07'45		4484 Jul 31 00:12	0°♐	
minimum elong	4479 Sep 05 16:39	15°♓29'48	1°07'45		4484 Sep 12 13:03	0°♑	
max. Earth dist.	4479 Sep 17 00:03	22°♓46'47	2.65413 AU	asc. node	4484 Oct 23 12:06	23°♑17'38	
	4479 Sep 28 06:28	0°♏			4484 Nov 08 15:33	0°♒	
morning rise	4479 Oct 21 20:11	15°♏00'26		retrograde	4484 Dec 08 15:14	5°♒44'56	
	4479 Nov 14 13:01	0°♑			4485 Jan 06 09:05	30°♑♑	
	4480 Jan 01 07:05	0°♒		min. Earth dist.	4485 Jan 08 09:21	29°♑15'46	0.52988 AU
	4480 Feb 18 15:26	0°♓		opposition	4485 Jan 15 23:09	26°♑23'25	3°52'07
desc. node	4480 Mar 11 16:27	13°♓25'23		greatest brilliancy	4485 Jan 14 20:50	26°♑48'26	-2.0m
	4480 Apr 08 15:08	0°♑		direct	4485 Feb 20 03:28	18°♑37'29	
	4480 Jun 03 21:47	0°♑			4485 Apr 09 03:47	0°♒	
retrograde	4480 Jul 30 21:47	15°♑38'28			4485 Jun 09 01:01	0°♓	
opposition	4480 Aug 30 14:35	10°♑24'07	-6°34'18		4485 Jul 31 06:35	0°♏	
greatest brilliancy	4480 Aug 31 22:41	10°♑01'26	-2.8m		4485 Sep 18 11:41	0°♑	
min. Earth dist.	4480 Sep 05 05:48	8°♑49'03	0.39331 AU	desc. node	4485 Nov 01 12:45	28°♑10'37	
direct	4480 Oct 01 19:29	4°♑29'14			4485 Nov 04 07:26	0°♒	
	4480 Dec 10 17:59	0°♑		evening set	4485 Nov 08 11:24	2°♒44'36	
asc. node	4481 Jan 18 13:14	24°♑48'40		max. Earth dist.	4485 Nov 26 23:12	15°♒05'09	2.56492 AU

	4485 Dec 18 19:01	0°♁			4491 Jan 06 20:13	0°♍
				retrograde	4491 Mar 26 17:22	25°♍10'06
conjunction	4485 Dec 26 02:00	5°♁04'11 -0°29'55		opposition	4491 May 05 01:00	16°♍04'35 1°47'40
minimum elong	4485 Dec 26 00:54	5°♁02'16 0°29'54		greatest brilliancy	4491 May 05 07:14	15°♍58'30 -1.4m
	4486 Jan 30 01:48	0°♁		min. Earth dist.	4491 May 08 18:31	14°♍37'20 0.65569 AU
morning rise	4486 Feb 14 22:57	11°♁38'08		direct	4491 Jun 15 14:40	6°♍02'04
	4486 Mar 11 12:42	0°♂		desc. node	4491 Jun 24 08:59	6°♍30'02
	4486 Apr 19 16:54	0°♀			4491 Aug 29 02:10	0°♂
	4486 May 28 07:56	0°♂			4491 Oct 18 10:07	0°♁
	4486 Jul 06 07:12	0°♂			4491 Nov 30 18:55	0°♁
	4486 Aug 15 17:26	0°♂			4492 Jan 09 20:36	0°♂
asc. node	4486 Sep 10 11:41	18°♂06'30			4492 Feb 17 07:27	0°♀
	4486 Sep 28 07:09	0°♂			4492 Mar 26 09:11	0°♂
	4486 Nov 18 15:14	0°♍		evening set	4492 Apr 30 05:36	27°♂03'19
retrograde	4487 Jan 16 21:01	17°♍32'08		asc. node	4492 May 02 08:19	28°♂40'20
min. Earth dist.	4487 Feb 21 23:49	9°♍09'35 0.63522 AU			4492 May 04 02:02	0°♂
opposition	4487 Feb 25 23:33	7°♍34'11 4°41'23			4492 Jun 13 04:57	0°♂
greatest brilliancy	4487 Feb 25 07:38	7°♍50'04 -1.5m				
	4487 Mar 21 09:18	30°♍♂		conjunction	4492 Jul 02 16:30	14°♂04'42 0°38'01
direct	4487 Apr 05 17:10	28°♂28'57		minimum elong	4492 Jul 02 14:22	14°♂00'53 0°37'59
	4487 Apr 21 23:07	0°♍			4492 Jul 25 06:37	0°♂
	4487 Jul 07 00:35	0°♂		max. Earth dist.	4492 Aug 08 22:25	10°♂06'30 2.53103 AU
	4487 Aug 29 07:01	0°♍		morning rise	4492 Aug 27 21:03	22°♂55'22
desc. node	4487 Sep 19 11:29	12°♍54'49			4492 Sep 07 12:09	0°♍
	4487 Oct 16 09:25	0°♂			4492 Oct 23 22:01	0°♂
	4487 Nov 30 01:29	0°♁			4492 Dec 11 17:23	0°♍
evening set	4487 Dec 22 01:57	15°♁32'09			4493 Feb 02 15:40	0°♂
max. Earth dist.	4488 Jan 05 17:42	26°♁08'36 2.44033 AU			4493 Apr 18 01:58	0°♁
	4488 Jan 10 23:58	0°♁		retrograde	4493 May 06 01:03	1°♁48'55
				desc. node	4493 May 11 08:31	1°♁38'31
conjunction	4488 Feb 15 10:59	26°♁37'11 -1°04'02			4493 May 23 01:56	30°♍♂
minimum elong	4488 Feb 15 10:10	26°♁35'36 1°04'02		opposition	4493 Jun 11 23:55	23°♂49'41 -1°18'44
	4488 Feb 19 20:53	0°♂		greatest brilliancy	4493 Jun 12 07:57	23°♂42'14 -1.8m
	4488 Mar 29 10:25	0°♀		min. Earth dist.	4493 Jun 19 06:13	21°♂08'14 0.56908 AU
morning rise	4488 Apr 20 12:21	17°♀23'01		direct	4493 Jul 22 08:32	14°♂14'53
	4488 May 06 12:54	0°♂			4493 Sep 15 08:09	0°♁
	4488 Jun 14 01:27	0°♂			4493 Nov 04 19:45	0°♁
	4488 Jul 23 21:09	0°♂			4493 Dec 16 23:11	0°♂
asc. node	4488 Jul 28 09:45	3°♂19'12			4494 Jan 25 09:28	0°♀
	4488 Sep 03 21:57	0°♂			4494 Mar 05 04:19	0°♂
	4488 Oct 19 08:54	0°♍		asc. node	4494 Mar 20 06:26	11°♂35'01
	4488 Dec 10 15:24	0°♂			4494 Apr 13 13:58	0°♂
retrograde	4489 Feb 19 11:01	22°♂02'04			4494 May 24 10:15	0°♂
opposition	4489 Mar 31 18:23	12°♂18'09 3°46'36		evening set	4494 Jun 29 03:40	25°♂10'21
greatest brilliancy	4489 Mar 31 18:03	12°♂18'29 -1.3m			4494 Jul 06 03:58	0°♂
min. Earth dist.	4489 Mar 31 15:57	12°♂20'34 0.67859 AU			4494 Aug 19 19:50	0°♍
direct	4489 May 11 15:00	2°♂30'37				
	4489 Aug 03 10:55	0°♍		conjunction	4494 Aug 20 18:00	0°♍36'30 1°07'02
desc. node	4489 Aug 06 09:50	1°♍32'41		minimum elong	4494 Aug 20 17:31	0°♍35'42 1°07'01
	4489 Sep 24 15:53	0°♂		max. Earth dist.	4494 Sep 07 11:07	12°♍11'24 2.62990 AU
	4489 Nov 09 11:13	0°♁			4494 Oct 05 02:35	0°♂
	4489 Dec 21 13:54	0°♁		morning rise	4494 Oct 07 16:18	1°♂38'35
	4490 Jan 30 06:32	0°♂			4494 Nov 21 13:48	0°♍
evening set	4490 Feb 17 12:33	14°♂12'16			4495 Jan 09 02:08	0°♂
	4490 Mar 09 14:04	0°♀			4495 Feb 28 08:51	0°♁
	4490 Apr 16 12:15	0°♂		desc. node	4495 Mar 29 07:02	16°♁15'04
					4495 Apr 25 00:42	0°♁
conjunction	4490 Apr 26 15:01	7°♂57'31 -0°32'59		retrograde	4495 Jul 02 03:49	20°♁14'50
minimum elong	4490 Apr 26 18:03	8°♂03'27 0°32'57		opposition	4495 Aug 03 18:42	14°♁09'37 -5°30'31
	4490 May 24 23:14	0°♂		greatest brilliancy	4495 Aug 05 07:44	13°♁40'06 -2.5m
asc. node	4490 Jun 15 09:01	16°♂17'47		min. Earth dist.	4495 Aug 11 20:13	11°♁36'34 0.43840 AU
max. Earth dist.	4490 Jun 15 23:36	16°♂45'12 2.39566 AU		direct	4495 Sep 08 05:10	6°♁48'05
	4490 Jul 03 18:28	0°♂			4495 Nov 12 20:34	0°♂
morning rise	4490 Jul 05 09:38	1°♂12'06			4495 Dec 28 15:53	0°♀
	4490 Aug 14 13:45	0°♂		asc. node	4496 Feb 05 05:53	27°♀39'58
	4490 Sep 27 21:25	0°♍			4496 Feb 08 11:01	0°♂
	4490 Nov 14 10:50	0°♂			4496 Mar 20 22:42	0°♂

	4496 May 02 10:47	0°☿		behind sun end	4500 Dec 11 06:09	19°♊23'58	
	4496 Jun 15 12:16	0°♈			4500 Dec 26 18:37	0°♊	
	4496 Jul 31 02:50	0°♉		morning rise	4501 Jan 27 14:04	22°♊17'23	
evening set	4496 Aug 11 22:32	7°♉38'30			4501 Feb 07 08:14	0°♊	
	4496 Sep 15 20:07	0°♊			4501 Mar 20 04:02	0°♋	
					4501 Apr 28 17:19	0°♌	
conjunction	4496 Sep 27 22:26	7°♊42'18	1°00'14		4501 Jun 06 16:36	0°♍	
minimum elong	4496 Sep 27 23:20	7°♊43'45	1°00'14		4501 Jul 16 00:35	0°♎	
max. Earth dist.	4496 Sep 30 05:16	9°♊09'31	2.67544 AU		4501 Aug 26 01:22	0°☿	
	4496 Nov 02 00:06	0°♌		asc. node	4501 Sep 28 03:32	22°☿21'42	
morning rise	4496 Nov 11 10:32	6°♌00'07			4501 Oct 10 08:38	0°♏	
	4496 Dec 19 00:41	0°♐			4501 Dec 13 15:27	0°♑	
	4497 Feb 03 15:04	0°♑		retrograde	4502 Jan 03 13:05	2°♑46'26	
desc. node	4497 Feb 13 05:57	6°♑13'43			4502 Jan 23 08:38	30°♒♏	
	4497 Mar 21 20:57	0°♒		min. Earth dist.	4502 Feb 06 17:00	25°♏03'23	0.60086 AU
	4497 May 07 05:53	0°♋		greatest brilliancy	4502 Feb 11 06:36	23°♏15'12	-1.6m
	4497 Jun 24 08:12	0°♌		opposition	4502 Feb 12 04:31	22°♏53'30	4°39'28
	4497 Aug 24 22:13	0°♍		direct	4502 Mar 21 17:20	14°♏13'31	
retrograde	4497 Sep 19 07:35	4°♍04'27			4502 May 20 02:13	0°♑	
	4497 Oct 15 11:39	30°♒♌			4502 Jul 18 00:19	0°♊	
min. Earth dist.	4497 Oct 17 08:24	29°♌30'03	0.37219 AU		4502 Sep 07 03:30	0°♌	
opposition	4497 Oct 19 23:27	28°♌47'27	-4°23'40	desc. node	4502 Oct 07 02:23	18°♌42'08	
greatest brilliancy	4497 Oct 19 18:09	28°♌51'02	-3.0m		4502 Oct 24 14:30	0°♐	
direct	4497 Nov 18 07:24	23°♌52'43		evening set	4502 Dec 04 21:48	27°♐45'21	
	4497 Dec 20 06:28	0°♍			4502 Dec 08 03:33	0°♑	
asc. node	4497 Dec 23 05:50	1°♍05'02		max. Earth dist.	4502 Dec 19 07:19	7°♑48'15	2.49243 AU
	4498 Feb 17 21:32	0°♎			4503 Jan 19 04:30	0°♒	
	4498 Apr 07 14:08	0°☿					
	4498 May 25 00:27	0°♏		conjunction	4503 Jan 25 08:56	4°♒32'48	-0°54'47
	4498 Jul 11 15:00	0°♑		minimum elong	4503 Jan 25 07:17	4°♒29'46	0°54'46
	4498 Aug 28 10:16	0°♊			4503 Feb 28 06:10	0°♋	
evening set	4498 Sep 18 21:01	13°♊30'14		morning rise	4503 Mar 24 19:49	18°♋55'54	
	4498 Oct 14 21:32	0°♌			4503 Apr 08 00:39	0°♌	
max. Earth dist.	4498 Oct 23 06:13	5°♌20'13	2.66614 AU		4503 May 16 06:55	0°♍	
					4503 Jun 23 22:00	0°♎	
conjunction	4498 Nov 02 23:22	12°♌12'34	0°30'55		4503 Aug 02 20:26	0°☿	
minimum elong	4498 Nov 03 00:14	12°♌13'57	0°30'56	asc. node	4503 Aug 16 03:24	9°☿38'51	
	4498 Nov 30 10:06	0°♐			4503 Sep 14 04:32	0°♏	
morning rise	4498 Dec 17 07:04	11°♐05'30			4503 Oct 30 18:23	0°♑	
desc. node	4499 Jan 01 04:33	20°♐59'43			4503 Dec 28 07:19	0°♊	
	4499 Jan 14 14:19	0°♑		retrograde	4504 Feb 08 04:45	9°♊13'44	
	4499 Feb 27 07:05	0°♒			4504 Mar 17 22:36	30°♒♑	
	4499 Apr 10 15:05	0°♋		min. Earth dist.	4504 Mar 17 23:00	29°♑59'36	0.66952 AU
	4499 May 21 21:48	0°♌		opposition	4504 Mar 19 13:49	29°♑20'50	4°16'15
	4499 Jul 01 20:51	0°♍		greatest brilliancy	4504 Mar 19 07:54	29°♑26'44	-1.3m
	4499 Aug 13 03:37	0°♎		direct	4504 Apr 28 18:17	19°♑46'27	
	4499 Oct 01 01:39	0°☿			4504 Jun 14 02:58	0°♊	
asc. node	4499 Nov 10 04:42	14°☿29'30			4504 Aug 14 19:13	0°♌	
retrograde	4499 Nov 21 07:40	15°☿22'58		desc. node	4504 Aug 24 01:30	5°♌16'08	
min. Earth dist.	4499 Dec 19 20:27	9°☿45'55	0.47686 AU		4504 Oct 03 19:04	0°♐	
greatest brilliancy	4499 Dec 27 07:22	7°☿05'27	-2.3m		4504 Nov 18 00:14	0°♑	
opposition	4499 Dec 28 04:19	6°☿46'37	2°37'41		4504 Dec 29 23:48	0°♒	
	4500 Jan 24 20:44	30°♒♎		evening set	4505 Jan 24 08:27	18°♒59'52	
direct	4500 Jan 30 12:18	29°♎47'13			4505 Feb 07 17:12	0°♋	
	4500 Feb 05 06:53	0°☿		max. Earth dist.	4505 Mar 12 17:40	25°♋46'24	2.37073 AU
	4500 Apr 27 05:39	0°♏			4505 Mar 18 02:18	0°♌	
	4500 Jun 19 18:11	0°♑					
	4500 Aug 09 01:31	0°♊		conjunction	4505 Mar 28 22:10	8°♌33'23	-0°56'01
	4500 Sep 26 13:20	0°♌		minimum elong	4505 Mar 29 01:02	8°♌39'03	0°56'00
evening set	4500 Oct 25 12:24	18°♌28'51			4505 Apr 25 01:18	0°♍	
	4500 Nov 12 04:28	0°♐			4505 Jun 02 11:55	0°♎	
max. Earth dist.	4500 Nov 16 20:50	3°♐05'09	2.60333 AU	morning rise	4505 Jun 08 17:36	4°♎47'15	
desc. node	4500 Nov 19 03:20	4°♐35'14		asc. node	4505 Jul 03 01:10	23°♎10'19	
					4505 Jul 12 06:02	0°☿	
conjunction	4500 Dec 10 17:11	19°♐02'02	-0°12'01		4505 Aug 23 01:05	0°♏	
minimum elong	4500 Dec 10 16:45	19°♐01'18	0°12'00		4505 Oct 06 14:15	0°♑	
behind sun begin	4500 Dec 10 03:22	18°♐38'40			4505 Nov 24 04:09	0°♊	

	4506 Jan 21 17:15	0°♌			4511 Jan 10 14:42	0°♑		
retrograde	4506 Mar 13 14:46	12°♌20'09			4511 Feb 19 15:13	0°♐		
opposition	4506 Apr 22 11:16	2°♌56'53	2°40'53	asc. node	4511 Feb 22 23:11	2°♐30'01		
greatest brilliancy	4506 Apr 22 16:40	2°♌51'34	-1.3m		4511 Mar 31 23:31	0°♐		
min. Earth dist.	4506 Apr 24 17:09	2°♌03'50	0.67268 AU		4511 May 12 15:05	0°♐		
	4506 Apr 30 01:05	30°♌			4511 Jun 25 00:38	0°♏		
direct	4506 Jun 02 22:48	22°♌56'36		evening set	4511 Jul 28 16:23	22°♏27'56		
	4506 Jul 10 00:19	0°♌			4511 Aug 09 03:56	0°♏		
desc. node	4506 Jul 12 00:04	0°♌41'34						
	4506 Sep 10 11:26	0°♌		conjunction	4511 Sep 15 08:20	24°♏03'24	1°06'06	
	4506 Oct 28 05:49	0°♌		minimum elong	4511 Sep 15 08:53	24°♏04'16	1°06'05	
	4506 Dec 09 22:12	0°♌		max. Earth dist.	4511 Sep 23 09:19	29°♏12'18	2.66393 AU	
	4507 Jan 18 18:22	0°♌			4511 Sep 24 15:10	0°♌		
	4507 Feb 26 02:33	0°♑		morning rise	4511 Oct 30 18:41	22°♌59'53		
evening set	4507 Apr 03 22:00	29°♑05'44			4511 Nov 10 19:51	0°♌		
	4507 Apr 05 01:33	0°♐			4511 Dec 28 06:31	0°♌		
	4507 May 13 14:47	0°♐			4512 Feb 13 20:51	0°♌		
asc. node	4507 May 21 00:04	5°♐38'37		desc. node	4512 Mar 02 20:22	11°♌15'35		
					4512 Apr 02 02:56	0°♌		
conjunction	4507 Jun 10 17:27	21°♐15'07	0°13'54		4512 May 22 20:55	0°♌		
minimum elong	4507 Jun 10 16:18	21°♐12'58	0°13'52		4512 Jul 30 00:06	0°♑		
behind sun begin	4507 Jun 10 02:36	20°♐47'29		retrograde	4512 Aug 19 03:42	2°♑26'24		
behind sun end	4507 Jun 11 05:59	21°♐38'27			4512 Sep 08 03:57	30°♑		
	4507 Jun 22 13:20	0°♐		opposition	4512 Sep 18 03:48	27°♑28'37	-6°26'24	
max. Earth dist.	4507 Jul 26 15:45	24°♐32'04	2.47997 AU	greatest brilliancy	4512 Sep 19 00:02	27°♑15'00	-2.9m	
	4507 Aug 03 10:52	0°♏		min. Earth dist.	4512 Sep 21 06:33	26°♑38'22	0.37695 AU	
morning rise	4507 Aug 11 00:44	5°♏15'40		direct	4512 Oct 18 20:35	22°♑12'30		
	4507 Sep 16 14:59	0°♏			4512 Nov 23 09:52	0°♑		
	4507 Nov 02 06:45	0°♏		asc. node	4513 Jan 09 21:11	25°♑03'43		
	4507 Dec 22 04:00	0°♌			4513 Jan 17 20:22	0°♐		
	4508 Feb 17 12:43	0°♌			4513 Mar 04 19:47	0°♐		
retrograde	4508 Apr 19 18:42	16°♌57'10			4513 Apr 18 19:51	0°♐		
opposition	4508 May 27 20:37	8°♌27'30	0°02'34		4513 Jun 03 11:16	0°♏		
greatest brilliancy	4510 Sep 21 01:46	20°♌23'02	2.2m		4513 Jul 20 02:04	0°♏		
desc. node	4508 May 28 22:47	8°♌02'35		evening set	4513 Sep 05 12:43	0°♏06'28		
min. Earth dist.	4508 Jun 02 19:46	6°♌11'22	0.61031 AU		4513 Sep 05 08:38	0°♏		
	4508 Jun 23 05:54	30°♌		max. Earth dist.	4513 Oct 15 05:22	25°♏16'33	2.67626 AU	
direct	4508 Jul 07 23:47	28°♌34'04						
	4508 Jul 23 06:21	0°♌		conjunction	4513 Oct 21 00:34	28°♏58'09	0°44'21	
	4508 Oct 01 06:09	0°♌		minimum elong	4513 Oct 21 01:37	28°♏59'49	0°44'20	
	4508 Nov 16 05:39	0°♌			4513 Oct 22 15:23	0°♌		
	4508 Dec 27 04:33	0°♌		morning rise	4513 Dec 04 01:22	27°♌15'07		
	4509 Feb 04 01:44	0°♑			4513 Dec 08 06:58	0°♌		
	4509 Mar 14 11:05	0°♐		desc. node	4514 Jan 18 19:07	27°♌16'20		
asc. node	4509 Apr 07 00:20	18°♐12'25			4514 Jan 22 21:31	0°♌		
	4509 Apr 22 11:46	0°♐			4514 Mar 08 08:19	0°♌		
	4509 Jun 01 23:06	0°♐			4514 Apr 20 17:43	0°♌		
evening set	4509 Jun 09 01:41	5°♐07'57			4514 Jun 02 10:14	0°♑		
	4509 Jul 14 08:30	0°♏			4514 Jul 15 11:21	0°♐		
					4514 Aug 31 13:13	0°♐		
conjunction	4509 Aug 04 07:58	14°♏20'05	1°00'58	retrograde	4514 Nov 01 03:03	21°♐08'41		
minimum elong	4509 Aug 04 06:38	14°♏17'50	1°00'57	asc. node	4514 Nov 27 21:27	16°♐19'29		
	4509 Aug 27 18:30	0°♏		min. Earth dist.	4514 Nov 27 21:55	16°♐19'07	0.42424 AU	
max. Earth dist.	4509 Aug 29 01:32	0°♏51'15	2.59714 AU	opposition	4514 Dec 05 19:02	13°♐44'27	0°30'17	
morning rise	4509 Sep 23 18:45	17°♏39'20		greatest brilliancy	4514 Dec 05 14:51	13°♐47'53	-2.7m	
	4509 Oct 13 00:08	0°♏		direct	4515 Jan 06 04:26	7°♐40'25		
	4509 Nov 29 19:23	0°♌			4515 Mar 17 02:34	0°♐		
	4510 Jan 18 10:29	0°♌			4515 May 10 04:28	0°♏		
	4510 Mar 13 00:06	0°♌			4515 Jun 29 10:25	0°♏		
desc. node	4510 Apr 15 21:44	16°♌08'48			4515 Aug 17 11:45	0°♏		
retrograde	4510 Jun 08 04:23	29°♌20'02			4515 Oct 04 11:27	0°♌		
opposition	4510 Jul 12 16:26	22°♌23'57	-3°50'45	evening set	4515 Oct 12 02:41	4°♌51'00		
greatest brilliancy	4510 Jul 13 19:49	22°♌00'19	-2.2m	max. Earth dist.	4515 Nov 07 21:07	22°♌04'23	2.63401 AU	
min. Earth dist.	4510 Jul 21 03:42	19°♌28'54	0.49128 AU		4515 Nov 20 00:17	0°♌		
direct	4510 Aug 19 16:10	13°♌52'05						
	4510 Oct 12 10:51	0°♌		conjunction	4515 Nov 26 11:56	4°♌16'19	0°05'42	
	4510 Nov 30 00:30	0°♌		minimum elong	4515 Nov 26 12:06	4°♌16'37	0°05'43	

behind sun begin	4515 Nov 25 18:02	3°♂46'49		retrograde	4521 Feb 28 02:31	29°♂45'22	
behind sun end	4515 Nov 27 06:11	4°♂46'27		opposition	4521 Apr 09 07:12	20°♂07'55	3°24'54
desc. node	4515 Dec 06 18:30	11°♂05'17		greatest brilliancy	4521 Apr 09 09:27	20°♂05'42	-1.3m
	4516 Jan 03 18:31	0°♂		min. Earth dist.	4521 Apr 10 01:06	19°♂50'10	0.67934 AU
morning rise	4516 Jan 11 09:54	5°♂14'55		direct	4521 May 20 10:31	10°♂14'35	
	4516 Feb 15 16:52	0°♂			4521 Jul 27 10:27	0°♂	
	4516 Mar 27 23:56	0°♂		desc. node	4521 Jul 28 14:25	0°♂33'34	
	4516 May 07 01:28	0°♂			4521 Sep 19 23:01	0°♂	
	4516 Jun 15 13:10	0°♂			4521 Nov 05 08:44	0°♂	
	4516 Jul 25 12:11	0°♂			4521 Dec 17 16:07	0°♂	
	4516 Sep 05 17:43	0°♂			4522 Jan 26 10:06	0°♂	
asc. node	4516 Oct 14 20:25	24°♂23'42			4522 Mar 05 17:56	0°♂	
	4516 Oct 25 07:46	0°♂		evening set	4522 Mar 06 00:25	0°♂12'48	
retrograde	4516 Dec 19 02:56	16°♂25'35			4522 Apr 12 16:09	0°♂	
min. Earth dist.	4517 Jan 20 03:01	9°♂28'21	0.55738 AU				
greatest brilliancy	4517 Jan 25 22:15	7°♂13'52	-1.8m	conjunction	4522 May 14 04:32	24°♂38'23	-0°16'04
opposition	4517 Jan 27 00:11	6°♂48'44	4°17'31	minimum elong	4522 May 14 06:06	24°♂41'26	0°16'04
	4517 Feb 18 00:30	30°♂			4522 May 21 03:21	0°♂	
direct	4517 Mar 04 02:29	28°♂41'08		asc. node	4522 Jun 06 17:46	12°♂39'44	
	4517 Mar 18 21:45	0°♂			4522 Jun 29 22:56	0°♂	
	4517 Jun 02 20:57	0°♂		max. Earth dist.	4522 Jul 05 10:25	4°♂01'26	2.42500 AU
	4517 Jul 26 19:24	0°♂		morning rise	4522 Jul 20 05:40	14°♂45'39	
	4517 Sep 14 14:42	0°♂			4522 Aug 10 17:39	0°♂	
desc. node	4517 Oct 23 17:34	24°♂49'32			4522 Sep 23 22:13	0°♂	
	4517 Oct 31 15:52	0°♂			4522 Nov 10 00:20	0°♂	
evening set	4517 Nov 18 07:59	11°♂42'39			4522 Dec 31 15:53	0°♂	
max. Earth dist.	4517 Dec 04 23:17	22°♂58'27	2.54083 AU		4523 Mar 11 22:07	0°♂	
	4517 Dec 15 04:19	0°♂		retrograde	4523 Apr 05 03:20	3°♂11'53	
					4523 Apr 27 16:08	30°♂	
conjunction	4518 Jan 06 01:09	15°♂21'10	-0°39'47	opposition	4523 May 14 02:02	24°♂17'48	1°11'58
minimum elong	4518 Jan 05 23:43	15°♂18'37	0°39'46	greatest brilliancy	4523 May 14 07:16	24°♂12'45	-1.5m
	4518 Jan 26 09:22	0°♂		min. Earth dist.	4523 May 18 15:09	22°♂32'11	0.64225 AU
morning rise	4518 Feb 28 04:21	24°♂18'42		desc. node	4523 Jun 15 13:30	14°♂47'47	
	4518 Mar 07 16:56	0°♂		direct	4523 Jun 24 14:10	14°♂16'15	
	4518 Apr 15 17:24	0°♂			4523 Aug 20 22:03	0°♂	
	4518 May 24 04:34	0°♂			4523 Oct 13 06:10	0°♂	
	4518 Jul 01 23:42	0°♂			4523 Nov 26 08:17	0°♂	
	4518 Aug 11 03:41	0°♂			4524 Jan 05 16:10	0°♂	
asc. node	4518 Sep 01 18:35	15°♂26'07			4524 Feb 13 05:59	0°♂	
	4518 Sep 23 01:53	0°♂			4524 Mar 22 09:35	0°♂	
	4518 Nov 10 20:15	0°♂		asc. node	4524 Apr 23 16:07	25°♂01'52	
retrograde	4519 Jan 25 19:13	25°♂57'32			4524 Apr 30 04:12	0°♂	
min. Earth dist.	4519 Mar 03 21:52	17°♂15'00	0.65037 AU	evening set	4524 May 16 02:41	12°♂02'46	
opposition	4519 Mar 07 01:02	15°♂59'53	4°35'43		4524 Jun 09 09:07	0°♂	
greatest brilliancy	4519 Mar 06 12:47	16°♂12'08	-1.4m				
direct	4519 Apr 15 08:08	6°♂42'54		conjunction	4524 Jul 15 20:42	26°♂03'37	0°48'29
	4519 Jun 30 10:10	0°♂		minimum elong	4524 Jul 15 18:39	26°♂00'02	0°48'28
	4519 Aug 24 18:06	0°♂			4524 Jul 21 12:22	0°♂	
desc. node	4519 Sep 10 15:54	10°♂05'44		max. Earth dist.	4524 Aug 17 08:17	18°♂21'36	2.55667 AU
	4519 Oct 12 10:56	0°♂			4524 Sep 03 18:20	0°♂	
	4519 Nov 26 07:49	0°♂		morning rise	4524 Sep 07 17:01	2°♂36'30	
evening set	4520 Jan 03 07:01	27°♂03'29			4524 Oct 20 01:03	0°♂	
	4520 Jan 07 07:13	0°♂			4524 Dec 07 08:58	0°♂	
max. Earth dist.	4520 Jan 21 05:37	10°♂20'26	2.41196 AU		4525 Jan 27 17:31	0°♂	
	4520 Feb 16 03:16	0°♂			4525 Mar 29 11:40	0°♂	
				desc. node	4525 May 02 12:13	10°♂08'46	
conjunction	4520 Mar 01 08:27	10°♂59'25	-1°05'02	retrograde	4525 May 17 20:27	11°♂29'03	
minimum elong	4520 Mar 01 08:46	11°♂00'01	1°05'02	opposition	4525 Jun 23 00:46	3°♂49'52	-2°11'20
	4520 Mar 25 15:23	0°♂		greatest brilliancy	4525 Jun 23 15:14	3°♂36'43	-1.9m
	4520 May 02 16:17	0°♂		min. Earth dist.	4525 Jun 30 20:45	0°♂59'03	0.54310 AU
morning rise	4520 May 08 20:26	4°♂51'22			4525 Jul 03 16:18	30°♂	
	4520 Jun 10 03:17	0°♂		direct	4525 Aug 01 17:39	24°♂31'38	
asc. node	4520 Jul 19 18:30	29°♂55'06			4525 Aug 31 20:05	0°♂	
	4520 Jul 19 21:09	0°♂			4525 Oct 29 05:03	0°♂	
	4520 Aug 30 17:45	0°♂			4525 Dec 11 16:16	0°♂	
	4520 Oct 14 17:02	0°♂			4526 Jan 20 15:36	0°♂	
	4520 Dec 04 01:43	0°♂			4526 Feb 28 18:07	0°♂	

asc. node	4526 Mar 11 15:40	8°♄19'25		4531 Jan 10 20:14	0°♄	
	4526 Apr 09 09:29	0°♄		4531 Feb 23 06:21	0°♄	
	4526 May 20 10:45	0°♄		4531 Apr 06 04:39	0°♄	
	4526 Jul 02 08:25	0°♄		4531 May 16 23:22	0°♄	
evening set	4526 Jul 11 00:28	5°♄54'06		4531 Jun 26 06:13	0°♄	
	4526 Aug 16 03:10	0°♄		4531 Aug 06 08:26	0°♄	
				4531 Sep 20 07:24	0°♄	
conjunction	4526 Aug 30 23:54	9°♄43'26	1°08'01	asc. node	4531 Nov 01 13:03	21°♄24'57
minimum elong	4526 Aug 30 23:51	9°♄43'21	1°08'01	retrograde	4531 Dec 03 01:19	27°♄47'37
max. Earth dist.	4526 Sep 14 02:56	18°♄52'36	2.64435 AU	min. Earth dist.	4532 Jan 01 18:21	21°♄41'53 0.50650 AU
	4526 Oct 01 10:27	0°♄		opposition	4532 Jan 09 18:43	18°♄43'26 3°26'18
morning rise	4526 Oct 16 20:44	9°♄50'10		greatest brilliancy	4532 Jan 08 17:26	19°♄06'58 -2.1m
	4526 Nov 17 18:18	0°♄		direct	4532 Feb 13 04:34	11°♄17'00
	4527 Jan 04 19:19	0°♄			4532 Apr 17 14:17	0°♄
	4527 Feb 22 20:42	0°♄			4532 Jun 13 12:57	0°♄
desc. node	4527 Mar 20 11:24	15°♄09'41			4532 Aug 03 20:59	0°♄
	4527 Apr 15 16:09	0°♄			4532 Sep 21 18:53	0°♄
	4527 Jun 21 02:16	0°♄		evening set	4532 Nov 02 23:12	26°♄59'09
retrograde	4527 Jul 19 06:55	4°♄25'53			4532 Nov 07 13:38	0°♄
	4527 Aug 15 21:09	30°♄		desc. node	4532 Nov 09 08:04	1°♄09'44
opposition	4527 Aug 19 20:16	28°♄50'16	-6°14'56	max. Earth dist.	4532 Nov 23 02:51	10°♄17'58 2.58304 AU
greatest brilliancy	4527 Aug 21 09:14	28°♄22'41	-2.6m			
min. Earth dist.	4527 Aug 26 21:55	26°♄44'40	0.41165 AU	conjunction	4532 Dec 19 20:29	28°♄25'28 -0°22'25
direct	4527 Sep 22 12:01	22°♄16'55		minimum elong	4532 Dec 19 19:40	28°♄24'03 0°22'23
	4527 Oct 27 12:41	0°♄			4532 Dec 22 03:22	0°♄
	4527 Dec 20 11:39	0°♄			4533 Feb 02 14:16	0°♄
asc. node	4528 Jan 27 14:34	26°♄00'18		morning rise	4533 Feb 07 05:27	3°♄21'35
	4528 Feb 02 07:10	0°♄			4533 Mar 15 05:46	0°♄
	4528 Mar 15 19:06	0°♄			4533 Apr 23 14:26	0°♄
	4528 Apr 27 22:43	0°♄			4533 Jun 01 08:57	0°♄
	4528 Jun 11 10:29	0°♄			4533 Jul 10 11:01	0°♄
	4528 Jul 27 07:53	0°♄			4533 Aug 20 01:25	0°♄
evening set	4528 Aug 21 16:56	16°♄17'40		asc. node	4533 Sep 18 12:56	20°♄27'44
	4528 Sep 12 04:48	0°♄			4533 Oct 03 02:42	0°♄
max. Earth dist.	4528 Oct 06 08:42	15°♄21'33	2.67812 AU		4533 Nov 26 04:12	0°♄
				retrograde	4534 Jan 11 21:04	11°♄49'13
conjunction	4528 Oct 07 00:33	15°♄46'43	0°55'14	min. Earth dist.	4534 Feb 16 03:15	3°♄43'22 0.62095 AU
minimum elong	4528 Oct 07 01:34	15°♄48'21	0°55'13	opposition	4534 Feb 20 18:43	1°♄52'32 4°42'53
	4528 Oct 29 09:17	0°♄		greatest brilliancy	4534 Feb 20 00:00	2°♄11'10 -1.5m
morning rise	4528 Nov 20 05:30	13°♄56'08			4534 Feb 25 13:30	30°♄
	4528 Dec 15 06:13	0°♄		direct	4534 Mar 30 23:31	22°♄57'49
	4529 Jan 30 10:57	0°♄			4534 May 07 04:57	0°♄
desc. node	4529 Feb 04 10:46	3°♄16'13			4534 Jul 11 14:44	0°♄
	4529 Mar 16 22:41	0°♄			4534 Sep 01 22:32	0°♄
	4529 Apr 30 22:46	0°♄		desc. node	4534 Sep 27 06:46	15°♄36'15
	4529 Jun 15 05:18	0°♄			4534 Oct 19 19:30	0°♄
	4529 Aug 02 19:37	0°♄			4534 Dec 03 11:30	0°♄
retrograde	4529 Oct 06 22:31	22°♄23'26		evening set	4534 Dec 14 23:26	8°♄02'11
min. Earth dist.	4529 Nov 02 12:46	17°♄57'57	0.38382 AU	max. Earth dist.	4534 Dec 28 23:15	17°♄59'35 2.46384 AU
opposition	4529 Nov 07 19:16	16°♄27'20	-2°33'19		4535 Jan 14 12:17	0°♄
greatest brilliancy	4529 Nov 07 10:05	16°♄33'57	-2.9m			
direct	4529 Dec 07 14:12	11°♄16'19		conjunction	4535 Feb 06 10:36	17°♄02'48 -1°01'03
asc. node	4529 Dec 14 12:50	11°♄35'17		minimum elong	4535 Feb 06 09:15	17°♄00'17 1°01'02
	4530 Feb 06 20:07	0°♄			4535 Feb 23 12:00	0°♄
	4530 Apr 01 02:57	0°♄			4535 Apr 03 04:07	0°♄
	4530 May 20 02:51	0°♄		morning rise	4535 Apr 09 11:39	4°♄57'10
	4530 Jul 07 11:22	0°♄			4535 May 11 08:10	0°♄
	4530 Aug 24 15:41	0°♄			4535 Jun 18 21:06	0°♄
evening set	4530 Sep 27 23:07	21°♄33'06			4535 Jul 28 16:48	0°♄
	4530 Oct 11 06:53	0°♄		asc. node	4535 Aug 06 10:57	6°♄24'15
max. Earth dist.	4530 Oct 29 13:35	11°♄40'58	2.65710 AU		4535 Sep 08 18:34	0°♄
					4535 Oct 24 12:44	0°♄
conjunction	4530 Nov 12 00:33	20°♄21'59	0°22'08		4535 Dec 17 11:17	0°♄
minimum elong	4530 Nov 12 01:13	20°♄23'04	0°22'08	retrograde	4536 Feb 15 20:05	17°♄04'49
	4530 Nov 26 19:35	0°♄		min. Earth dist.	4536 Mar 26 09:52	7°♄34'55 0.67577 AU
desc. node	4530 Dec 23 09:22	17°♄34'31		opposition	4536 Mar 27 04:17	7°♄16'33 4°00'04
morning rise	4530 Dec 26 17:30	19°♄48'32		greatest brilliancy	4536 Mar 27 01:39	7°♄19'11 -1.3m

	4536 Apr 17 05:47	30° \mathbb{R} \mathbb{M}		conjunction	4541 Aug 14 10:51	24° \mathcal{O} 16'34	1°05'10
direct	4536 May 06 17:40	27° \mathbb{M} 34'24		minimum elong	4541 Aug 14 10:00	24° \mathcal{O} 15'10	1°05'10
	4536 May 27 17:12	0° \mathcal{E}			4541 Aug 23 02:05	0° \mathbb{M}	
	4536 Aug 08 05:36	0° \mathbb{M}		max. Earth dist.	4541 Sep 04 03:18	7° \mathbb{M} 55'17	2.61632 AU
desc. node	4536 Aug 14 05:22	3° \mathbb{M} 15'38		morning rise	4541 Oct 02 09:30	26° \mathbb{M} 13'14	
	4536 Sep 28 11:43	0° \mathcal{Z}			4541 Oct 08 07:08	0° \mathcal{E}	
	4536 Nov 13 02:17	0° \mathcal{Z}			4541 Nov 24 20:51	0° \mathbb{M}	
	4536 Dec 25 05:02	0° \approx			4542 Jan 12 18:54	0° \mathcal{Z}	
	4537 Feb 02 22:51	0° \mathcal{H}			4542 Mar 05 04:49	0° \mathcal{Z}	
evening set	4537 Feb 07 02:44	3° \mathcal{H} 12'59		desc. node	4542 Apr 06 02:20	16° \mathcal{Z} 58'30	
	4537 Mar 13 07:29	0° \mathcal{Y}			4542 May 04 16:38	0° \approx	
				retrograde	4542 Jun 21 16:40	11° \approx 08'58	
conjunction	4537 Apr 14 11:54	25° \mathcal{Y} 27'46	-0°44'26	opposition	4542 Jul 25 04:41	4° \approx 40'00	-4°48'38
minimum elong	4537 Apr 14 15:21	25° \mathcal{Y} 34'34	0°44'24	greatest brilliancy	4542 Jul 26 14:31	4° \approx 11'53	-2.3m
	4537 Apr 20 05:48	0° \mathcal{B}		min. Earth dist.	4542 Aug 02 14:50	1° \approx 53'06	0.46180 AU
max. Earth dist.	4537 May 22 20:12	25° \mathcal{B} 30'28	2.37578 AU		4542 Aug 08 21:26	30° \mathcal{R} \mathcal{Z}	
	4537 May 28 15:47	0° \mathbb{I}		direct	4542 Aug 30 20:32	26° \mathcal{Z} 43'51	
asc. node	4537 Jun 23 09:49	19° \mathbb{I} 35'28			4542 Sep 22 03:04	0° \approx	
morning rise	4537 Jun 24 19:00	20° \mathbb{I} 37'43			4542 Nov 21 04:16	0° \mathcal{H}	
	4537 Jul 07 09:21	0° \mathcal{E}			4543 Jan 03 14:21	0° \mathcal{Y}	
	4537 Aug 18 02:54	0° \mathcal{O}		asc. node	4543 Feb 13 06:39	29° \mathcal{Y} 52'16	
	4537 Oct 01 10:48	0° \mathbb{M}			4543 Feb 13 10:51	0° \mathcal{B}	
	4537 Nov 18 06:54	0° \mathcal{E}			4543 Mar 26 07:46	0° \mathbb{I}	
	4538 Jan 12 03:48	0° \mathbb{M}			4543 May 07 08:43	0° \mathcal{E}	
retrograde	4538 Mar 21 14:46	20° \mathbb{M} 07'11			4543 Jun 20 01:28	0° \mathcal{O}	
opposition	4538 Apr 30 04:38	10° \mathbb{M} 53'26	2°10'50		4543 Aug 04 09:50	0° \mathbb{M}	
greatest brilliancy	4538 Apr 30 10:48	10° \mathbb{M} 47'24	-1.4m	evening set	4543 Aug 07 02:56	1° \mathbb{M} 45'55	
min. Earth dist.	4538 May 03 06:32	9° \mathbb{M} 41'01	0.66450 AU		4543 Sep 19 23:37	0° \mathcal{E}	
direct	4538 Jun 10 17:48	0° \mathbb{M} 51'11					
desc. node	4538 Jul 02 04:13	3° \mathbb{M} 27'07		conjunction	4543 Sep 23 18:37	2° \mathcal{E} 25'12	1°03'07
	4538 Sep 03 10:56	0° \mathcal{Z}		minimum elong	4543 Sep 23 19:25	2° \mathcal{E} 26'28	1°03'06
	4538 Oct 22 15:05	0° \mathcal{Z}		max. Earth dist.	4543 Sep 28 15:08	5° \mathcal{E} 30'52	2.67143 AU
	4538 Dec 04 17:56	0° \approx			4543 Nov 06 03:38	0° \mathbb{M}	
	4539 Jan 13 17:58	0° \mathcal{H}		morning rise	4543 Nov 07 14:51	0° \mathbb{M} 55'55	
	4539 Feb 21 04:04	0° \mathcal{Y}			4543 Dec 23 08:23	0° \mathcal{Z}	
	4539 Mar 31 04:24	0° \mathcal{B}			4544 Feb 08 08:33	0° \mathcal{Z}	
evening set	4539 Apr 20 02:01	15° \mathcal{B} 33'59		desc. node	4544 Feb 22 01:01	8° \mathcal{Z} 44'40	
	4539 May 08 18:49	0° \mathbb{I}			4544 Mar 26 09:13	0° \approx	
asc. node	4539 May 11 09:34	1° \mathbb{I} 59'58			4544 May 13 05:55	0° \mathcal{H}	
	4539 Jun 17 18:39	0° \mathcal{E}			4544 Jul 04 05:38	0° \mathcal{Y}	
				retrograde	4544 Sep 06 09:27	20° \mathcal{Y} 24'52	
conjunction	4539 Jun 24 16:08	5° \mathcal{E} 02'15	0°28'34	opposition	4544 Oct 06 12:23	15° \mathcal{Y} 25'20	-5°33'01
minimum elong	4539 Jun 24 14:12	4° \mathcal{E} 58'43	0°28'31	min. Earth dist.	4544 Oct 06 11:03	15° \mathcal{Y} 26'14	0.37007 AU
	4539 Jul 29 16:58	0° \mathcal{O}		greatest brilliancy	4544 Oct 06 17:00	15° \mathcal{Y} 22'17	-3.0m
max. Earth dist.	4539 Aug 04 18:15	4° \mathcal{O} 12'27	2.50877 AU	direct	4544 Nov 05 03:01	10° \mathcal{Y} 29'51	
morning rise	4539 Aug 22 00:14	16° \mathcal{O} 01'47		asc. node	4544 Dec 31 06:35	27° \mathcal{Y} 26'26	
	4539 Sep 11 20:14	0° \mathbb{M}			4545 Jan 05 04:47	0° \mathcal{B}	
	4539 Oct 28 06:46	0° \mathcal{E}			4545 Feb 24 19:16	0° \mathbb{I}	
	4539 Dec 16 10:25	0° \mathbb{M}			4545 Apr 12 11:33	0° \mathcal{E}	
	4540 Feb 08 17:55	0° \mathcal{Z}			4545 May 28 23:42	0° \mathcal{O}	
retrograde	4540 Apr 29 08:45	25° \mathcal{Z} 43'38			4545 Jul 15 02:15	0° \mathbb{M}	
desc. node	4540 May 19 03:49	23° \mathcal{Z} 16'15			4545 Aug 31 15:14	0° \mathcal{E}	
opposition	4540 Jun 05 20:22	17° \mathcal{Z} 30'04	-0°42'58	evening set	4545 Sep 13 19:05	8° \mathcal{E} 18'05	
greatest brilliancy	4540 Jun 06 00:27	17° \mathcal{Z} 26'13	-1.7m		4545 Oct 18 00:40	0° \mathbb{M}	
min. Earth dist.	4540 Jun 12 13:13	14° \mathcal{Z} 58'56	0.58853 AU	max. Earth dist.	4545 Oct 20 10:36	1° \mathbb{M} 32'19	2.67180 AU
direct	4540 Jul 16 14:29	7° \mathcal{Z} 45'09					
	4540 Sep 22 17:38	0° \mathcal{Z}		conjunction	4545 Oct 29 00:13	7° \mathbb{M} 00'43	0°36'47
	4540 Nov 09 21:29	0° \approx		minimum elong	4545 Oct 29 01:11	7° \mathbb{M} 02'16	0°36'46
	4540 Dec 21 11:38	0° \mathcal{H}			4545 Dec 03 15:02	0° \mathcal{Z}	
	4541 Jan 29 15:51	0° \mathcal{Y}		morning rise	4545 Dec 12 03:08	5° \mathcal{Z} 33'19	
	4541 Mar 09 05:53	0° \mathcal{B}		desc. node	4546 Jan 08 23:53	23° \mathcal{Z} 58'03	
asc. node	4541 Mar 28 07:36	14° \mathcal{B} 42'11			4546 Jan 18 00:17	0° \mathcal{Z}	
	4541 Apr 17 10:26	0° \mathbb{I}			4546 Mar 03 01:19	0° \approx	
	4541 May 28 01:30	0° \mathcal{E}			4546 Apr 14 20:05	0° \mathcal{H}	
evening set	4541 Jun 21 08:27	17° \mathcal{E} 18'33			4546 May 26 16:16	0° \mathcal{Y}	
	4541 Jul 09 14:06	0° \mathcal{O}			4546 Jul 07 08:46	0° \mathcal{B}	
					4546 Aug 20 00:15	0° \mathbb{I}	

	4546 Oct 14 22:12	0°♄		desc. node	4551 Aug 31 20:25	7°♎30'38
retrograde	4546 Nov 13 12:58	5°♄49'24			4551 Oct 07 09:45	0°♊
asc. node	4546 Nov 18 05:57	5°♄39'32			4551 Nov 21 12:35	0°♈
min. Earth dist.	4546 Dec 11 03:50	0°♄35'24	0.45269 AU		4552 Jan 02 13:23	0°♐
	4546 Dec 12 21:34	30°♎II		evening set	4552 Jan 15 09:54	9°♐32'16
opposition	4546 Dec 19 12:22	27°♎42'03	1°50'36	max. Earth dist.	4552 Feb 10 22:43	29°♐40'42 2.38584 AU
greatest brilliancy	4546 Dec 18 21:04	27°♎55'18	-2.5m		4552 Feb 11 08:45	0°♋
direct	4547 Jan 20 23:23	21°♎06'38				
	4547 Mar 02 17:39	0°♄		conjunction	4552 Mar 16 12:10	26°♋36'27 -1°01'45
	4547 May 02 21:18	0°♏		minimum elong	4552 Mar 16 13:58	26°♋40'00 1°01'44
	4547 Jun 23 18:27	0°♐			4552 Mar 20 19:34	0°♑
	4547 Aug 12 11:44	0°♑			4552 Apr 27 19:23	0°♒
	4547 Sep 29 18:34	0°♎		morning rise	4552 May 26 11:29	22°♒27'12
evening set	4547 Oct 20 07:29	13°♎04'15			4552 Jun 05 05:35	0°♈
max. Earth dist.	4547 Nov 13 16:02	28°♎51'54	2.61809 AU	asc. node	4552 Jul 10 02:11	26°♈24'38
	4547 Nov 15 09:33	0°♊			4552 Jul 14 22:27	0°♄
desc. node	4547 Nov 26 22:33	7°♊37'09			4552 Aug 25 16:36	0°♏
					4552 Oct 09 07:27	0°♐
conjunction	4547 Dec 05 01:40	13°♊02'17	-0°04'33		4552 Nov 27 09:45	0°♑
minimum elong	4547 Dec 05 01:30	13°♊02'00	0°04'33		4553 Jan 28 20:19	0°♎
behind sun begin	4547 Dec 04 06:42	12°♊30'36		retrograde	4553 Mar 07 19:29	7°♎25'16
behind sun end	4547 Dec 05 20:17	13°♊33'25			4553 Apr 11 12:18	30°♎♄
	4547 Dec 30 02:30	0°♈		opposition	4553 Apr 16 19:55	27°♄55'20 3°00'09
morning rise	4548 Jan 20 22:42	15°♈09'21		greatest brilliancy	4553 Apr 17 00:09	27°♄51'09 -1.3m
	4548 Feb 10 21:01	0°♐		min. Earth dist.	4553 Apr 18 09:58	27°♄17'43 0.67695 AU
	4548 Mar 22 22:24	0°♋		direct	4553 May 28 03:58	17°♄57'30
	4548 May 01 17:17	0°♑			4553 Jul 17 14:36	0°♎
	4548 Jun 09 21:39	0°♒		desc. node	4553 Jul 18 19:22	0°♎29'47
	4548 Jul 19 10:36	0°♈			4553 Sep 13 22:37	0°♊
	4548 Aug 29 20:03	0°♄			4553 Oct 31 03:34	0°♈
asc. node	4548 Oct 05 04:33	23°♄57'20			4553 Dec 12 17:19	0°♐
	4548 Oct 15 07:01	0°♏			4554 Jan 21 13:13	0°♋
retrograde	4548 Dec 28 03:08	26°♏26'38			4554 Feb 28 21:25	0°♑
min. Earth dist.	4549 Jan 30 08:18	19°♏02'52	0.58244 AU	evening set	4554 Mar 22 04:32	16°♑51'17
greatest brilliancy	4549 Feb 04 10:43	17°♏02'54	-1.7m		4554 Apr 07 19:47	0°♒
opposition	4549 Feb 05 10:50	16°♏39'11	4°33'30		4554 May 16 07:15	0°♈
direct	4549 Mar 14 08:30	8°♏12'37		asc. node	4554 May 28 00:54	8°♈58'09
	4549 May 25 13:56	0°♐				
	4549 Jul 21 01:00	0°♑		conjunction	4554 May 30 03:35	10°♈34'20 0°01'28
	4549 Sep 09 14:34	0°♎		minimum elong	4554 May 30 03:24	10°♈33'59 0°01'28
desc. node	4549 Oct 13 21:17	21°♎32'52		behind sun begin	4554 May 28 23:10	9°♈40'26
	4549 Oct 26 22:23	0°♊		behind sun end	4554 May 31 07:39	11°♈27'28
evening set	4549 Nov 27 14:41	21°♊08'07			4554 Jun 25 03:16	0°♄
	4549 Dec 10 12:23	0°♈		max. Earth dist.	4554 Jul 18 11:39	16°♄57'22 2.45563 AU
max. Earth dist.	4549 Dec 12 19:45	1°♈36'02	2.51475 AU	morning rise	4554 Aug 02 00:23	27°♄15'39
					4554 Aug 05 22:10	0°♏
conjunction	4550 Jan 16 17:10	26°♈23'04	-0°48'54		4554 Sep 19 00:43	0°♐
minimum elong	4550 Jan 16 15:31	26°♈20'06	0°48'53		4554 Nov 04 18:50	0°♑
	4550 Jan 21 16:24	0°♐			4554 Dec 25 05:29	0°♎
	4550 Mar 02 21:33	0°♋			4555 Feb 23 16:17	0°♊
morning rise	4550 Mar 13 13:53	8°♋09'34		retrograde	4555 Apr 13 21:53	11°♊25'12
	4550 Apr 10 19:09	0°♑		opposition	4555 May 22 09:39	2°♊44'06 0°32'52
	4550 May 19 03:38	0°♒		greatest brilliancy	4555 May 22 12:34	2°♊41'17 -1.5m
	4550 Jun 26 19:48	0°♈		min. Earth dist.	4555 May 27 17:47	0°♊41'05 0.62584 AU
	4550 Aug 05 19:10	0°♄			4555 May 29 13:14	30°♎♎
asc. node	4550 Aug 23 04:07	12°♄32'46		desc. node	4555 Jun 05 18:02	27°♎26'27
	4550 Sep 17 06:35	0°♏		direct	4555 Jul 02 17:35	22°♎45'51
	4550 Nov 03 11:09	0°♐			4555 Aug 08 05:53	0°♊
	4551 Jan 06 21:29	0°♑			4555 Oct 06 13:27	0°♈
retrograde	4551 Feb 02 13:11	4°♑06'17			4555 Nov 20 16:26	0°♐
	4551 Feb 27 07:22	30°♎♐			4555 Dec 31 09:09	0°♋
min. Earth dist.	4551 Mar 12 14:09	25°♎05'27	0.66214 AU		4556 Feb 08 03:02	0°♑
opposition	4551 Mar 14 20:52	24°♎10'43	4°25'49		4556 Mar 17 09:23	0°♒
greatest brilliancy	4551 Mar 14 12:14	24°♎19'21	-1.4m	asc. node	4556 Apr 14 01:09	21°♒26'01
direct	4551 Apr 23 15:50	14°♎43'32			4556 Apr 25 06:18	0°♈
	4551 Jun 21 10:07	0°♑		evening set	4556 May 30 00:54	25°♈58'10
	4551 Aug 18 22:30	0°♎			4556 Jun 04 13:20	0°♄

	4556 Jul 16 18:32	0°♈	retrograde	4561 Oct 21 16:15	9°♊33'44	
			min. Earth dist.	4561 Nov 17 02:34	4°♊59'39	0.40370 AU
conjunction	4556 Jul 27 05:20	7°♈12'27 0°56'32	opposition	4561 Nov 24 03:28	2°♊48'56	-0°43'35
minimum elong	4556 Jul 27 03:38	7°♈09'33 0°56'31	greatest brilliancy	4561 Nov 23 23:23	2°♊52'07	-2.8m
max. Earth dist.	4556 Aug 24 06:46	26°♈10'03 2.57996 AU		4561 Dec 03 21:37	30°♋	
	4556 Aug 30 01:13	0°♎	asc. node	4561 Dec 04 22:19	29°♋44'32	
morning rise	4556 Sep 17 01:29	11°♎50'09	direct	4561 Dec 24 17:30	27°♋10'26	
	4556 Oct 15 06:01	0°♊		4562 Jan 15 03:26	0°♊	
	4556 Dec 02 05:16	0°♌		4562 Mar 23 11:47	0°♌	
	4557 Jan 21 10:42	0°♍		4562 May 13 20:17	0°♍	
	4557 Mar 18 03:52	0°♎		4562 Jul 02 03:40	0°♎	
desc. node	4557 Apr 22 16:53	14°♎52'54		4562 Aug 19 19:07	0°♊	
retrograde	4557 May 29 12:47	21°♎45'59	evening set	4562 Oct 06 01:05	29°♊37'23	
opposition	4557 Jul 03 19:23	14°♎29'28 -3°07'09		4562 Oct 06 15:21	0°♌	
greatest brilliancy	4557 Jul 04 17:07	14°♎10'12 -2.0m	max. Earth dist.	4562 Nov 03 22:57	18°♌07'44	2.64531 AU
min. Earth dist.	4557 Jul 12 01:22	11°♎34'08 0.51504 AU				
direct	4557 Aug 11 15:12	5°♎33'59	conjunction	4562 Nov 20 05:30	28°♌42'47	0°12'44
	4557 Oct 20 01:19	0°♏	minimum elong	4562 Nov 20 05:54	28°♌43'27	0°12'44
	4557 Dec 04 19:21	0°♐	behind sun begin	4562 Nov 19 18:12	28°♌24'18	
	4558 Jan 14 13:38	0°♑	behind sun end	4562 Nov 20 17:37	29°♌02'35	
	4558 Feb 23 02:53	0°♒		4562 Nov 22 04:40	0°♑	
asc. node	4558 Mar 02 00:15	5°♒13'06	desc. node	4562 Dec 13 13:54	14°♑08'25	
	4558 Apr 04 02:06	0°♊	morning rise	4563 Jan 04 12:34	28°♑55'22	
	4558 May 15 09:35	0°♋		4563 Jan 06 02:32	0°♒	
	4558 Jun 27 12:20	0°♌		4563 Feb 18 06:41	0°♏	
evening set	4558 Jul 21 06:58	16°♌01'03		4563 Mar 31 20:56	0°♐	
	4558 Aug 11 10:25	0°♎		4563 May 11 05:54	0°♑	
				4563 Jun 20 01:17	0°♒	
conjunction	4558 Sep 08 21:38	18°♎30'37 1°07'24		4563 Jul 30 09:29	0°♊	
minimum elong	4558 Sep 08 21:58	18°♎31'09 1°07'24		4563 Sep 11 10:17	0°♋	
max. Earth dist.	4558 Sep 19 15:29	25°♎25'16 2.65619 AU	asc. node	4563 Oct 22 21:52	24°♋21'54	
	4558 Sep 26 18:57	0°♊		4563 Nov 04 02:50	0°♌	
morning rise	4558 Oct 24 21:32	17°♊53'59	retrograde	4563 Dec 13 00:47	9°♌09'35	
	4558 Nov 13 00:24	0°♌	min. Earth dist.	4564 Jan 13 00:08	2°♌34'29	0.53537 AU
	4558 Dec 30 16:34	0°♍	greatest brilliancy	4564 Jan 19 07:40	0°♌10'18	-2.0m
	4559 Feb 16 20:29	0°♎		4564 Jan 19 18:26	30°♋	
desc. node	4559 Mar 10 15:31	13°♎21'56	opposition	4564 Jan 20 10:11	29°♋44'57	4°00'24
	4559 Apr 07 08:48	0°♏	direct	4564 Feb 24 19:10	21°♋54'30	
	4559 May 31 18:35	0°♐		4564 Apr 04 06:06	0°♌	
retrograde	4559 Aug 05 20:22	20°♐01'47		4564 Jun 06 19:17	0°♎	
opposition	4559 Sep 05 07:49	14°♐51'43 -6°35'29		4564 Jul 29 12:21	0°♊	
greatest brilliancy	4559 Sep 06 14:30	14°♐30'16 -2.8m		4564 Sep 16 22:44	0°♌	
min. Earth dist.	4559 Sep 10 13:51	13°♐23'53 0.38951 AU	desc. node	4564 Oct 30 12:47	27°♌47'07	
direct	4559 Oct 07 06:24	9°♐05'03		4564 Nov 02 22:03	0°♍	
	4559 Dec 08 06:50	0°♑	evening set	4564 Nov 11 14:24	5°♍43'01	
asc. node	4560 Jan 17 22:17	25°♑13'27	max. Earth dist.	4564 Nov 29 17:02	17°♍50'02	2.56057 AU
	4560 Jan 25 02:32	0°♒		4564 Dec 17 12:17	0°♎	
	4560 Mar 09 03:59	0°♊				
	4560 Apr 22 04:23	0°♋	conjunction	4564 Dec 29 09:44	8°♎16'25	-0°32'36
	4560 Jun 06 05:26	0°♌	minimum elong	4564 Dec 29 08:32	8°♎14'20	0°32'34
	4560 Jul 22 11:05	0°♎		4565 Jan 28 20:55	0°♏	
evening set	4560 Aug 30 06:17	24°♎45'03	morning rise	4565 Feb 18 16:29	15°♏16'20	
	4560 Sep 07 12:41	0°♊		4565 Mar 10 08:44	0°♐	
max. Earth dist.	4560 Oct 11 12:08	21°♊33'57 2.67811 AU		4565 Apr 18 12:59	0°♑	
				4565 May 27 03:10	0°♒	
conjunction	4560 Oct 15 01:35	23°♊49'45 0°49'12		4565 Jul 05 00:29	0°♊	
minimum elong	4560 Oct 15 02:39	23°♊51'27 0°49'11		4565 Aug 14 07:01	0°♋	
	4560 Oct 24 18:19	0°♌	asc. node	4565 Sep 08 19:35	18°♋03'27	
morning rise	4560 Nov 28 02:50	21°♌59'46		4565 Sep 26 12:48	0°♌	
	4560 Dec 10 12:21	0°♍		4565 Nov 15 17:00	0°♎	
desc. node	4561 Jan 25 14:32	0°♎08'29	retrograde	4566 Jan 19 22:58	20°♎30'13	
	4561 Jan 25 09:24	0°♎	min. Earth dist.	4566 Feb 25 06:11	12°♎03'03	0.63852 AU
	4561 Mar 11 06:53	0°♏	greatest brilliancy	4566 Feb 28 10:07	10°♎47'13	-1.5m
	4561 Apr 24 07:53	0°♐	opposition	4566 Mar 01 01:17	10°♎32'04	4°40'37
	4561 Jun 06 22:57	0°♑	direct	4566 Apr 08 20:43	1°♎24'19	
	4561 Jul 21 15:15	0°♒		4566 Jul 04 13:57	0°♊	
	4561 Sep 12 15:18	0°♊		4566 Aug 27 13:01	0°♌	

desc. node	4566 Sep 17 11:17	12° \mathbb{M} 39'53		4571 Sep 07 02:21	0° \mathbb{M}
	4566 Oct 14 22:16	0° \mathbb{A}		4571 Oct 23 09:11	0° \mathbb{A}
	4566 Nov 28 18:28	0° \mathbb{Z}		4571 Dec 10 23:12	0° \mathbb{M}
evening set	4566 Dec 25 14:32	18° \mathbb{Z} 56'30		4572 Feb 01 06:56	0° \mathbb{A}
	4567 Jan 09 19:45	0° \approx		4572 Apr 08 19:27	0° \mathbb{Z}
max. Earth dist.	4567 Jan 09 17:45	29° \mathbb{Z} 56'20	2.43501 AU	4572 May 09 14:03	4° \mathbb{Z} 56'53
	4567 Feb 18 18:22	0° \mathbb{H}		4572 May 09 07:32	4° \mathbb{Z} 56'51
				4572 Jun 06 22:15	30° \mathbb{R} \mathbb{A}
conjunction	4567 Feb 19 10:55	0° \mathbb{H} 31'45	-1°04'39	4572 Jun 15 08:50	27° \mathbb{A} 01'19
minimum elong	4567 Feb 19 10:21	0° \mathbb{H} 30'38	1°04'39	4572 Jun 15 18:25	26° \mathbb{A} 52'27
	4567 Mar 29 08:35	0° \mathbb{Y}		4572 Jun 22 17:04	24° \mathbb{A} 18'16
morning rise	4567 Apr 26 05:37	21° \mathbb{Y} 57'23		4572 Jul 25 14:14	17° \mathbb{A} 28'56
	4567 May 06 10:44	0° \mathbb{B}		4572 Sep 11 16:13	0° \mathbb{Z}
	4567 Jun 13 21:53	0° \mathbb{II}		4572 Nov 02 23:19	0° \approx
	4567 Jul 23 15:07	0° \mathbb{G}		4572 Dec 15 12:48	0° \mathbb{H}
asc. node	4567 Jul 27 19:12	3° \mathbb{G} 04'12		4573 Jan 24 02:50	0° \mathbb{Y}
	4567 Sep 03 11:58	0° \mathbb{Q}		4573 Mar 03 22:50	0° \mathbb{B}
	4567 Oct 18 15:42	0° \mathbb{M}		4573 Mar 18 16:28	11° \mathbb{B} 18'45
	4567 Dec 09 00:52	0° \mathbb{A}		4573 Apr 12 08:11	0° \mathbb{II}
retrograde	4568 Feb 23 10:59	24° \mathbb{A} 51'00		4573 May 23 03:18	0° \mathbb{G}
opposition	4568 Apr 03 17:32	15° \mathbb{A} 08'15	3°40'35	4573 Jul 02 18:59	28° \mathbb{G} 36'38
greatest brilliancy	4568 Apr 03 17:47	15° \mathbb{A} 08'00	-1.3m	4573 Jul 04 19:29	0° \mathbb{Q}
min. Earth dist.	4568 Apr 03 19:21	15° \mathbb{A} 06'26	0.67907 AU	4573 Aug 18 09:50	0° \mathbb{M}
direct	4568 May 14 14:46	5° \mathbb{A} 19'20			
	4568 Jul 31 22:14	0° \mathbb{M}		conjunction	4573 Aug 24 01:18
desc. node	4568 Aug 04 10:01	1° \mathbb{M} 46'47		minimum elong	4573 Aug 24 00:56
	4568 Sep 22 23:08	0° \mathbb{A}		max. Earth dist.	4573 Sep 09 23:38
	4568 Nov 08 01:54	0° \mathbb{Z}			4573 Oct 03 15:10
	4568 Dec 20 08:34	0° \approx		morning rise	4573 Oct 10 18:14
	4569 Jan 29 03:26	0° \mathbb{H}			4573 Nov 20 00:36
evening set	4569 Feb 21 21:02	18° \mathbb{H} 28'49			4574 Jan 07 09:20
	4569 Mar 08 11:58	0° \mathbb{Y}			4574 Feb 26 07:08
	4569 Apr 15 10:08	0° \mathbb{B}		desc. node	4574 Mar 27 06:31
					4574 Apr 21 15:22
conjunction	4569 May 01 07:00	12° \mathbb{B} 28'42	-0°29'09	retrograde	4574 Jul 06 14:51
minimum elong	4569 May 01 09:45	12° \mathbb{B} 34'05	0°29'07	opposition	4574 Aug 08 01:59
	4569 May 23 20:10	0° \mathbb{II}		greatest brilliancy	4574 Aug 09 15:32
asc. node	4569 Jun 13 19:00	15° \mathbb{II} 58'45		min. Earth dist.	4574 Aug 16 00:53
max. Earth dist.	4569 Jun 21 19:52	22° \mathbb{II} 00'59	2.40097 AU	direct	4574 Sep 12 03:49
	4569 Jul 02 13:36	0° \mathbb{G}			4574 Nov 09 10:15
morning rise	4569 Jul 09 15:08	5° \mathbb{G} 11'42			4574 Dec 26 15:05
	4569 Aug 13 06:17	0° \mathbb{Q}		asc. node	4575 Feb 03 15:52
	4569 Sep 26 10:12	0° \mathbb{M}			4575 Feb 06 19:33
	4569 Nov 12 17:06	0° \mathbb{A}			4575 Mar 20 10:51
	4570 Jan 04 08:08	0° \mathbb{M}			4575 May 02 00:06
retrograde	4570 Mar 29 19:33	28° \mathbb{M} 00'30			4575 Jun 15 01:37
opposition	4570 May 08 01:29	18° \mathbb{M} 57'10	1°37'37		4575 Jul 30 15:47
greatest brilliancy	4570 May 08 07:27	18° \mathbb{M} 51'21	-1.4m	evening set	4575 Aug 16 03:04
min. Earth dist.	4570 May 11 23:02	17° \mathbb{M} 26'00	0.65349 AU		4575 Sep 15 08:49
direct	4570 Jun 18 14:34	8° \mathbb{M} 54'22			
desc. node	4570 Jun 22 08:55	8° \mathbb{M} 59'40		conjunction	4575 Oct 01 23:22
	4570 Aug 26 10:17	0° \mathbb{A}		minimum elong	4575 Oct 02 00:20
	4570 Oct 16 18:14	0° \mathbb{Z}		max. Earth dist.	4575 Oct 03 19:07
	4570 Nov 29 10:48	0° \approx			4575 Nov 01 12:45
	4571 Jan 08 15:58	0° \mathbb{H}		morning rise	4575 Nov 15 09:41
	4571 Feb 16 04:13	0° \mathbb{Y}			4575 Dec 18 13:02
	4571 Mar 26 06:02	0° \mathbb{B}			4576 Feb 03 02:04
asc. node	4571 May 01 17:26	28° \mathbb{B} 19'24		desc. node	4576 Feb 12 06:00
	4571 May 03 22:01	0° \mathbb{II}			4576 Mar 20 04:26
evening set	4571 May 05 15:49	1° \mathbb{II} 19'49			4576 May 05 05:36
	4571 Jun 12 23:25	0° \mathbb{G}			4576 Jun 21 12:10
					4576 Aug 16 06:09
conjunction	4571 Jul 07 14:43	17° \mathbb{G} 47'04	0°40'56	retrograde	4576 Sep 24 05:24
minimum elong	4571 Jul 07 12:34	17° \mathbb{G} 43'14	0°40'54	min. Earth dist.	4576 Oct 21 20:08
	4571 Jul 24 23:09	0° \mathbb{Q}		opposition	4576 Oct 25 00:25
max. Earth dist.	4571 Aug 12 20:24	13° \mathbb{Q} 01'08	2.53605 AU	greatest brilliancy	4576 Oct 24 17:47
morning rise	4571 Sep 01 07:40	26° \mathbb{Q} 09'13			4576 Nov 09 03:17

direct	4576 Nov 23 09:17	28° Υ 40'57		max. Earth dist.	4581 Dec 21 11:33	10° Ξ 56'25	2.48708 AU
	4576 Dec 07 17:15	0° \mathcal{B}			4582 Jan 16 23:35	0° \approx	
asc. node	4576 Dec 21 13:59	3° \mathcal{B} 31'22					
	4577 Feb 15 01:06	0° Π		conjunction	4582 Jan 28 01:59	8° \approx 10'05	-0°56'36
	4577 Apr 05 13:53	0° \mathcal{G}		minimum elong	4582 Jan 28 00:23	8° \approx 07'08	0°56'34
	4577 May 23 07:01	0° Ω			4582 Feb 26 02:37	0° \mathcal{H}	
	4577 Jul 10 00:32	0° \mathcal{M}		morning rise	4582 Mar 28 04:51	23° \mathcal{H} 12'53	
	4577 Aug 26 21:32	0° $\underline{\Omega}$			4582 Apr 05 21:32	0° Υ	
evening set	4577 Sep 21 22:05	16° $\underline{\Omega}$ 22'21			4582 May 14 03:25	0° \mathcal{B}	
	4577 Oct 13 10:16	0° \mathcal{M}			4582 Jun 21 17:14	0° Π	
max. Earth dist.	4577 Oct 25 16:31	7° \mathcal{M} 49'25	2.66478 AU		4582 Jul 31 13:11	0° \mathcal{G}	
				asc. node	4582 Aug 13 11:58	9° \mathcal{G} 26'09	
conjunction	4577 Nov 05 23:46	15° \mathcal{M} 04'42	0°28'29		4582 Sep 11 16:44	0° Ω	
minimum elong	4577 Nov 06 00:34	15° \mathcal{M} 06'01	0°28'28		4582 Oct 27 20:14	0° \mathcal{M}	
	4577 Nov 29 00:10	0° \mathcal{A}			4582 Dec 23 05:32	0° $\underline{\Omega}$	
morning rise	4577 Dec 20 08:40	14° \mathcal{A} 02'41		retrograde	4583 Feb 10 05:23	12° $\underline{\Omega}$ 05'05	
desc. node	4577 Dec 30 04:42	20° \mathcal{A} 35'14		min. Earth dist.	4583 Mar 21 02:43	2° $\underline{\Omega}$ 47'41	0.67088 AU
	4578 Jan 13 05:22	0° \mathcal{B}		opposition	4583 Mar 22 13:19	2° $\underline{\Omega}$ 13'05	4°12'03
	4578 Feb 25 22:29	0° \approx		greatest brilliancy	4583 Mar 22 08:07	2° $\underline{\Omega}$ 18'17	-1.3m
	4578 Apr 09 05:59	0° \mathcal{H}			4583 Mar 28 04:03	30° \mathcal{R} \mathcal{M}	
	4578 May 20 11:02	0° Υ		direct	4583 May 01 18:25	22° \mathcal{M} 37'11	
	4578 Jun 30 06:15	0° \mathcal{B}			4583 Jun 09 07:22	0° $\underline{\Omega}$	
	4578 Aug 11 03:29	0° Π			4583 Aug 12 16:25	0° \mathcal{M}	
	4578 Sep 27 11:33	0° \mathcal{G}		desc. node	4583 Aug 22 00:29	5° \mathcal{M} 14'14	
asc. node	4578 Nov 08 13:48	17° \mathcal{G} 19'21			4583 Oct 02 04:36	0° \mathcal{A}	
retrograde	4578 Nov 25 00:14	19° \mathcal{G} 12'22			4583 Nov 16 15:45	0° \mathcal{B}	
min. Earth dist.	4578 Dec 23 16:37	13° \mathcal{G} 30'22	0.48243 AU		4583 Dec 28 18:58	0° \approx	
greatest brilliancy	4578 Dec 31 01:40	10° \mathcal{G} 50'44	-2.3m	evening set	4584 Jan 28 09:00	22° \approx 55'32	
opposition	4579 Jan 01 00:09	10° \mathcal{G} 30'22	2°52'15		4584 Feb 06 14:30	0° \mathcal{H}	
direct	4579 Feb 03 14:15	3° \mathcal{G} 25'30			4584 Mar 16 00:27	0° Υ	
	4579 Apr 24 10:25	0° Ω		max. Earth dist.	4584 Mar 23 06:35	5° Υ 43'51	2.36889 AU
	4579 Jun 17 18:51	0° \mathcal{M}					
	4579 Aug 07 09:02	0° $\underline{\Omega}$		conjunction	4584 Apr 01 12:44	13° Υ 03'03	-0°53'42
	4579 Sep 25 00:40	0° \mathcal{M}		minimum elong	4584 Apr 01 15:49	13° Υ 09'09	0°53'41
evening set	4579 Oct 28 14:46	21° \mathcal{M} 25'20			4584 Apr 22 23:12	0° \mathcal{B}	
	4579 Nov 10 18:34	0° \mathcal{A}			4584 May 31 08:36	0° Π	
desc. node	4579 Nov 17 03:11	4° \mathcal{A} 11'05		morning rise	4584 Jun 12 09:24	9° Π 13'53	
max. Earth dist.	4579 Nov 19 15:41	5° \mathcal{A} 51'04	2.59970 AU	asc. node	4584 Jun 30 10:28	22° Π 51'54	
					4584 Jul 10 00:37	0° \mathcal{G}	
conjunction	4579 Dec 13 21:53	22° \mathcal{A} 06'54	-0°14'52		4584 Aug 20 16:43	0° Ω	
minimum elong	4579 Dec 13 21:21	22° \mathcal{A} 05'59	0°14'52		4584 Oct 04 01:19	0° \mathcal{M}	
behind sun begin	4579 Dec 13 13:31	21° \mathcal{A} 52'41			4584 Nov 21 05:59	0° $\underline{\Omega}$	
behind sun end	4579 Dec 14 05:11	22° \mathcal{A} 19'18			4585 Jan 17 03:19	0° \mathcal{M}	
	4579 Dec 25 10:52	0° \mathcal{B}		retrograde	4585 Mar 15 16:15	15° \mathcal{M} 09'31	
morning rise	4580 Jan 31 00:41	25° \mathcal{B} 39'16		opposition	4585 Apr 24 11:06	5° \mathcal{M} 48'11	2°32'20
	4580 Feb 06 02:02	0° \approx		greatest brilliancy	4585 Apr 24 16:40	5° \mathcal{M} 42'42	-1.3m
	4580 Mar 17 22:45	0° \mathcal{H}		min. Earth dist.	4585 Apr 26 21:00	4° \mathcal{M} 51'08	0.67128 AU
	4580 Apr 26 12:15	0° Υ			4585 May 10 04:02	30° \mathcal{R} $\underline{\Omega}$	
	4580 Jun 04 10:52	0° \mathcal{B}		direct	4585 Jun 04 22:10	25° $\underline{\Omega}$ 47'16	
	4580 Jul 13 16:43	0° Π			4585 Jul 02 20:22	0° \mathcal{M}	
	4580 Aug 23 12:27	0° \mathcal{G}		desc. node	4585 Jul 08 23:21	1° \mathcal{M} 50'47	
asc. node	4580 Sep 25 13:54	22° \mathcal{G} 34'19			4585 Sep 07 08:41	0° \mathcal{A}	
	4580 Oct 07 06:04	0° Ω			4585 Oct 25 16:44	0° \mathcal{B}	
	4580 Dec 05 07:49	0° \mathcal{M}			4585 Dec 07 15:02	0° \approx	
retrograde	4581 Jan 05 17:22	5° \mathcal{M} 53'23			4586 Jan 16 14:19	0° \mathcal{H}	
	4581 Feb 04 01:41	30° \mathcal{R} Ω			4586 Feb 23 23:57	0° Υ	
min. Earth dist.	4581 Feb 09 01:54	28° Ω 05'26	0.60477 AU		4586 Apr 02 23:10	0° \mathcal{B}	
greatest brilliancy	4581 Feb 13 11:41	26° Ω 20'42	-1.6m	evening set	4586 Apr 07 12:39	3° \mathcal{B} 35'19	
opposition	4581 Feb 14 09:05	25° Ω 59'28	4°41'36		4586 May 11 11:36	0° Π	
direct	4581 Mar 23 23:49	17° Ω 16'35		asc. node	4586 May 18 10:40	5° Π 19'37	
	4581 May 15 06:40	0° \mathcal{M}					
	4581 Jul 14 21:57	0° $\underline{\Omega}$		conjunction	4586 Jun 13 23:14	25° Π 16'55	0°17'40
	4581 Sep 04 11:22	0° \mathcal{M}		minimum elong	4586 Jun 13 21:49	25° Π 14'18	0°17'39
desc. node	4581 Oct 04 01:42	18° \mathcal{M} 22'49			4586 Jun 20 08:30	0° \mathcal{G}	
	4581 Oct 22 03:43	0° \mathcal{A}		max. Earth dist.	4586 Jul 28 22:52	27° \mathcal{G} 45'18	2.48540 AU
	4581 Dec 05 20:18	0° \mathcal{B}			4586 Aug 01 03:46	0° Ω	
evening set	4581 Dec 07 06:29	0° \mathcal{B} 59'13		morning rise	4586 Aug 13 16:21	8° Ω 41'29	

	4586 Sep 14 05:05	0°♎			4591 Nov 14 03:06	0°♐	
	4586 Oct 30 16:57	0°♏		asc. node	4592 Jan 08 07:27	25°♐53'08	
	4586 Dec 19 06:17	0°♎			4592 Jan 15 03:29	0°♐	
	4587 Feb 13 09:04	0°♏			4592 Mar 01 21:08	0°♐	
retrograde	4587 Apr 23 02:40	19°♏55'27			4592 Apr 16 03:20	0°♐	
desc. node	4587 May 26 22:47	13°♏01'14			4592 May 31 21:07	0°♐	
opposition	4587 May 31 01:30	11°♏28'53	-0°09'45		4592 Jul 17 12:57	0°♎	
greatest brilliancy	4587 May 31 02:25	11°♏28'01	-1.6m		4592 Sep 02 20:20	0°♏	
min. Earth dist.	4587 Jun 06 03:45	9°♏09'50	0.60625 AU	evening set	4592 Sep 07 15:27	3°♏02'03	
direct	4587 Jul 11 02:28	1°♏36'34		max. Earth dist.	4592 Oct 16 16:07	27°♏46'30	2.67574 AU
	4587 Sep 28 23:17	0°♐			4592 Oct 20 04:00	0°♎	
	4587 Nov 14 15:40	0°♏					
	4587 Dec 25 20:29	0°♏		conjunction	4592 Oct 23 01:25	1°♎50'35	0°42'14
	4588 Feb 02 20:06	0°♐		minimum elong	4592 Oct 23 02:28	1°♎52'14	0°42'14
	4588 Mar 12 06:12	0°♐			4592 Dec 05 20:23	0°♏	
asc. node	4588 Apr 04 08:47	17°♐52'09		morning rise	4592 Dec 06 01:53	0°♏08'57	
	4588 Apr 20 06:32	0°♐		desc. node	4593 Jan 15 19:18	26°♏53'55	
	4588 May 30 16:49	0°♐			4593 Jan 20 11:10	0°♐	
evening set	4588 Jun 12 00:47	8°♐53'23			4593 Mar 05 21:13	0°♏	
	4588 Jul 12 00:44	0°♐			4593 Apr 18 04:37	0°♏	
					4593 May 30 17:08	0°♐	
conjunction	4588 Aug 06 19:50	17°♐36'41	1°02'17		4593 Jul 12 09:32	0°♐	
minimum elong	4588 Aug 06 18:36	17°♐34'37	1°02'16		4593 Aug 27 06:26	0°♐	
	4588 Aug 25 09:02	0°♎		retrograde	4593 Nov 04 02:07	25°♐23'19	
max. Earth dist.	4588 Aug 30 15:13	3°♎28'28	2.60107 AU	asc. node	4593 Nov 25 07:11	22°♐13'13	
morning rise	4588 Sep 25 22:38	20°♎37'55		min. Earth dist.	4593 Nov 30 23:00	20°♐30'23	0.42946 AU
	4588 Oct 10 12:46	0°♏		opposition	4593 Dec 09 00:38	17°♐50'27	0°51'58
	4588 Nov 27 05:19	0°♎		greatest brilliancy	4593 Dec 08 17:24	17°♐56'27	-2.6m
	4589 Jan 15 14:41	0°♏		direct	4594 Jan 09 14:04	11°♐40'29	
	4589 Mar 09 10:54	0°♐			4594 Mar 12 14:23	0°♐	
desc. node	4589 Apr 12 21:30	17°♐00'39			4594 May 07 01:11	0°♐	
	4589 May 19 15:10	0°♏			4594 Jun 26 15:42	0°♎	
retrograde	4589 Jun 11 02:34	2°♏47'52			4594 Aug 14 20:55	0°♏	
	4589 Jul 02 06:21	30°♏♐			4594 Oct 01 23:15	0°♎	
opposition	4589 Jul 15 10:41	25°♐56'22	-4°04'50	evening set	4594 Oct 14 04:18	7°♎45'14	
greatest brilliancy	4589 Jul 16 15:41	25°♐31'26	-2.2m	max. Earth dist.	4594 Nov 09 13:52	24°♎45'40	2.63135 AU
min. Earth dist.	4589 Jul 23 22:12	23°♐02'16	0.48580 AU		4594 Nov 17 14:19	0°♏	
direct	4589 Aug 22 03:53	17°♐30'26					
	4589 Oct 07 13:36	0°♏		conjunction	4594 Nov 28 14:39	7°♏15'20	0°02'52
	4589 Nov 27 00:57	0°♏		minimum elong	4594 Nov 28 14:45	7°♏15'29	0°02'52
	4590 Jan 08 01:00	0°♐		behind sun begin	4594 Nov 27 19:50	6°♏44'13	
	4590 Feb 17 04:55	0°♏		behind sun end	4594 Nov 29 09:41	7°♏46'47	
asc. node	4590 Feb 20 07:17	2°♏19'15		desc. node	4594 Dec 03 17:55	10°♏39'44	
	4590 Mar 29 14:15	0°♐			4595 Jan 01 10:24	0°♐	
	4590 May 10 05:41	0°♐		morning rise	4595 Jan 13 16:09	8°♐24'53	
	4590 Jun 22 14:39	0°♐			4595 Feb 13 10:00	0°♏	
evening set	4590 Jul 31 01:58	25°♐38'53			4595 Mar 26 17:36	0°♏	
	4590 Aug 06 17:17	0°♎			4595 May 05 18:49	0°♐	
					4595 Jun 14 05:04	0°♏	
conjunction	4590 Sep 17 12:24	27°♎01'30	1°05'21		4595 Jul 24 00:39	0°♐	
minimum elong	4590 Sep 17 13:02	27°♎02'31	1°05'22		4595 Sep 03 21:47	0°♐	
	4590 Sep 22 04:00	0°♏		asc. node	4595 Oct 13 05:31	25°♐00'55	
max. Earth dist.	4590 Sep 24 23:26	1°♏47'46	2.66577 AU		4595 Oct 22 03:52	0°♐	
morning rise	4590 Nov 01 19:00	25°♏51'02		retrograde	4595 Dec 22 10:19	19°♐44'22	
	4590 Nov 08 08:05	0°♎		min. Earth dist.	4596 Jan 23 15:54	12°♐41'14	0.56233 AU
	4590 Dec 25 17:29	0°♏		greatest brilliancy	4596 Jan 29 07:00	10°♐30'08	-1.8m
	4591 Feb 11 04:45	0°♐		opposition	4596 Jan 30 08:48	10°♐05'00	4°23'20
desc. node	4591 Feb 28 20:11	11°♐06'05		direct	4596 Mar 06 14:10	1°♐53'28	
	4591 Mar 31 03:36	0°♏			4596 May 30 06:30	0°♎	
	4591 May 20 01:40	0°♏			4596 Jul 23 22:07	0°♏	
	4591 Jul 19 15:42	0°♐			4596 Sep 11 23:58	0°♎	
retrograde	4591 Aug 24 00:07	7°♐03'58		desc. node	4596 Oct 20 16:24	24°♎27'10	
opposition	4591 Sep 23 01:22	2°♐07'10	-6°17'55		4596 Oct 29 05:08	0°♏	
greatest brilliancy	4591 Sep 23 18:35	1°♐55'37	-2.9m	evening set	4596 Nov 20 14:06	14°♏49'33	
min. Earth dist.	4591 Sep 25 13:50	1°♐26'39	0.37491 AU	max. Earth dist.	4596 Dec 07 00:27	25°♏58'55	2.53606 AU
	4591 Oct 01 04:13	30°♏♏			4596 Dec 12 20:33	0°♐	
direct	4591 Oct 23 11:57	26°♏56'10					

conjunction	4597 Jan 08 13:11	18° ♄ 45'06 -0°42'19	4601 Dec 29 11:10	0° ♄
minimum elong	4597 Jan 08 11:41	18° ♄ 42'27 0°42'18		
	4597 Jan 24 03:45	0° ♄		
morning rise	4597 Mar 03 03:41	28° ♄ 12'02		
	4597 Mar 05 12:45	0° ♄		
	4597 Apr 13 13:48	0° ♄		
	4597 May 22 00:38	0° ♄		
	4597 Jun 29 18:20	0° ♄		
	4597 Aug 08 19:14	0° ♄		
asc. node	4597 Aug 30 04:53	15° ♄ 21'30		
	4597 Sep 20 11:07	0° ♄		
	4597 Nov 07 11:42	0° ♄		
retrograde	4598 Jan 27 19:43	28° ♄ 51'59		
min. Earth dist.	4598 Mar 06 02:16	20° ♄ 05'32 0.65277 AU		
opposition	4598 Mar 09 01:14	18° ♄ 54'29 4°33'38		
greatest brilliancy	4598 Mar 08 13:43	19° ♄ 06'02 -1.4m		
direct	4598 Apr 17 09:49	9° ♄ 35'28		
	4598 Jun 26 12:53	0° ♄		
	4598 Aug 21 21:18	0° ♄		
desc. node	4598 Sep 07 15:40	9° ♄ 55'22		
	4598 Oct 09 22:17	0° ♄		
	4598 Nov 23 23:39	0° ♄		
	4599 Jan 05 01:50	0° ♄		
evening set	4599 Jan 06 01:23	0° ♄ 43'17		
max. Earth dist.	4599 Jan 25 08:06	15° ♄ 03'47 2.40650 AU		
	4599 Feb 13 23:32	0° ♄		
conjunction	4599 Mar 05 16:52	15° ♄ 15'50 -1°04'40		
minimum elong	4599 Mar 05 17:32	15° ♄ 17'08 1°04'40		
	4599 Mar 24 12:22	0° ♄		
	4599 May 01 13:07	0° ♄		
morning rise	4599 May 13 19:13	9° ♄ 38'02		
	4599 Jun 08 23:11	0° ♄		
asc. node	4599 Jul 18 03:36	29° ♄ 38'37		
	4599 Jul 18 15:09	0° ♄		
	4599 Aug 29 08:36	0° ♄		
	4599 Oct 13 02:13	0° ♄		
	4599 Dec 01 20:19	0° ♄		
	4600 Feb 09 22:48	0° ♄		
retrograde	4600 Mar 03 02:25	2° ♄ 32'23		
	4600 Mar 22 20:38	30° ♄ 1		
opposition	4600 Apr 12 05:41	22° ♄ 56'17 3°17'58		
greatest brilliancy	4600 Apr 12 08:20	22° ♄ 53'39 -1.3m		
min. Earth dist.	4600 Apr 13 03:26	22° ♄ 34'41 0.67918 AU		
direct	4600 May 23 08:58	13° ♄ 01'57		
	4600 Jul 24 09:28	0° ♄		
desc. node	4600 Jul 26 15:02	1° ♄ 01'47		
	4600 Sep 18 03:55	0° ♄		
	4600 Nov 03 22:40	0° ♄		
	4600 Dec 16 10:31	0° ♄		
	4601 Jan 25 06:47	0° ♄		
	4601 Mar 04 15:27	0° ♄		
evening set	4601 Mar 10 13:46	4° ♄ 41'23		
	4601 Apr 11 13:23	0° ♄		
conjunction	4601 May 18 21:10	29° ♄ 09'22 -0°11'48		
minimum elong	4601 May 18 22:20	29° ♄ 11'36 0°11'47		
behind sun begin	4601 May 18 02:07	28° ♄ 32'40		
behind sun end	4601 May 19 18:32	29° ♄ 50'30		
	4601 May 19 23:28	0° ♄		
asc. node	4601 Jun 05 02:00	12° ♄ 18'33		
	4601 Jun 28 17:15	0° ♄		
max. Earth dist.	4601 Jul 09 15:01	8° ♄ 00'11 2.43091 AU		
morning rise	4601 Jul 24 08:08	18° ♄ 37'31		
	4601 Aug 09 09:39	0° ♄		
	4601 Sep 22 11:09	0° ♄		
	4601 Nov 08 08:15	0° ♄		