

superior conj	99 Jul 22 j 02:05	26°☿20'43	1°10'14	direct	102 Jan 07 j 04:17	17°♁49'21	
minimum elong	99 Jul 21 j 17:55	25°☿55'24	1°10'00	greatest brilliancy	102 Jan 18 j 05:08	20°♁05'24	-4.6m
	99 Jul 25 j 00:55	0°♁			102 Feb 03 j 20:37	0°♁	
	99 Aug 18 j 04:32	0°♁		morning max el	102 Feb 25 j 23:45	19°♁37'57	46°27'37
evening rise	99 Aug 27 j 14:13	11°♁42'29			102 Mar 08 j 05:02	0°♁	
	99 Sep 11 j 06:27	0°♁		desc. node	102 Mar 23 j 13:34	16°♁25'30	
	99 Oct 05 j 08:14	0°♁			102 Apr 04 j 18:55	0°♁	
desc. node	99 Oct 06 j 18:34	1°♁46'54			102 Apr 30 j 23:51	0°♁	
	99 Oct 29 j 11:05	0°♁			102 May 26 j 13:10	0°♁	
	99 Nov 22 j 16:17	0°♁			102 Jun 20 j 16:04	0°♁	
	99 Dec 17 j 02:51	0°♁		asc. node	102 Jul 14 j 16:34	29°♁06'47	
	100 Jan 11 j 01:23	0°♁			102 Jul 15 j 10:01	0°♁	
asc. node	100 Jan 27 j 21:23	19°♁36'50			102 Aug 08 j 19:46	0°♁	
	100 Feb 06 j 01:58	0°♁		morning set	102 Aug 23 j 04:52	17°♁50'29	
evening max el	100 Mar 02 j 01:14	26°♁21'40	45°52'44		102 Sep 01 j 22:53	0°♁	
	100 Mar 05 j 19:30	0°♁			102 Sep 25 j 21:45	0°♁	
greatest brilliancy	100 Apr 05 j 10:57	23°♁16'53	-4.5m	max. Earth dist.	102 Sep 27 j 20:30	2°♁26'46	1.71452 AU
retrograde	100 Apr 20 j 02:56	27°♁03'23					
evening set	100 May 05 j 10:47	22°♁31'26		superior conj	102 Sep 30 j 01:55	5°♁14'30	1°09'28
inferior conj	100 May 11 j 14:05	18°♁48'50	1°36'00	minimum elong	102 Sep 30 j 11:44	5°♁45'19	1°09'11
minimum elong	100 May 11 j 17:32	18°♁43'25	1°35'00		102 Oct 19 j 18:46	0°♁	
min. Earth dist.	100 May 11 j 18:56	18°♁41'13	0.28990 AU	desc. node	102 Nov 03 j 06:25	18°♁12'31	
morning rise	100 May 18 j 00:18	14°♁56'26		evening rise	102 Nov 09 j 14:51	26°♁11'18	
desc. node	100 May 18 j 11:03	14°♁41'48			102 Nov 12 j 15:42	0°♁	
direct	100 Jun 02 j 05:59	10°♁29'58			102 Dec 06 j 13:42	0°♁	
greatest brilliancy	100 Jun 15 j 18:30	13°♁41'04	-4.5m		102 Dec 30 j 14:06	0°♁	
	100 Jul 09 j 17:51	0°♁			103 Jan 23 j 19:14	0°♁	
morning max el	100 Jul 21 j 02:19	10°♁20'40	45°52'17		103 Feb 17 j 08:57	0°♁	
	100 Aug 09 j 09:26	0°♁		asc. node	103 Feb 24 j 09:23	8°♁27'10	
	100 Sep 05 j 05:28	0°♁			103 Mar 14 j 13:08	0°♁	
asc. node	100 Sep 08 j 14:21	3°♁55'04			103 Apr 09 j 18:16	0°♁	
	100 Sep 30 j 12:38	0°♁			103 May 08 j 03:36	0°♁	
	100 Oct 25 j 00:41	0°♁		evening max el	103 May 12 j 13:57	4°♁18'08	45°18'20
	100 Nov 18 j 03:19	0°♁			103 Jun 15 j 04:35	0°♁	
	100 Dec 12 j 02:26	0°♁		desc. node	103 Jun 15 j 22:58	0°♁21'29	
desc. node	100 Dec 29 j 03:53	21°♁22'27		greatest brilliancy	103 Jun 17 j 01:34	0°♁50'59	-4.5m
	101 Jan 05 j 01:16	0°♁		retrograde	103 Jun 30 j 02:52	3°♁49'43	
morning set	101 Jan 22 j 20:23	22°♁15'03			103 Jul 14 j 05:03	30°♁	
	101 Jan 29 j 01:23	0°♁		evening set	103 Jul 16 j 11:58	28°♁45'29	
	101 Feb 22 j 03:37	0°♁		inferior conj	103 Jul 21 j 11:13	25°♁46'38	-7°-8'-27
				minimum elong	103 Jul 21 j 01:41	26°♁01'21	7°06'52
superior conj	101 Mar 03 j 23:56	12°♁13'13	-1°-23'-9	min. Earth dist.	103 Jul 21 j 16:41	25°♁38'11	0.28645 AU
minimum elong	101 Mar 04 j 04:35	12°♁27'37	1°23'08	morning rise	103 Jul 25 j 15:06	23°♁14'57	
max. Earth dist.	101 Mar 07 j 17:20	16°♁50'12	1.72616 AU	direct	103 Aug 11 j 23:50	17°♁33'47	
	101 Mar 18 j 08:37	0°♁		greatest brilliancy	103 Aug 26 j 13:01	21°♁17'31	-4.6m
evening rise	101 Apr 11 j 09:07	29°♁36'23			103 Sep 09 j 07:57	0°♁	
	101 Apr 11 j 16:48	0°♁		morning max el	103 Oct 01 j 01:24	19°♁27'21	46°31'31
asc. node	101 Apr 21 j 07:12	11°♁47'14		asc. node	103 Oct 07 j 02:08	25°♁36'47	
	101 May 06 j 04:15	0°♁			103 Oct 11 j 06:01	0°♁	
	101 May 30 j 19:00	0°♁			103 Nov 06 j 23:11	0°♁	
	101 Jun 24 j 13:52	0°♁			103 Dec 02 j 03:13	0°♁	
	101 Jul 19 j 14:59	0°♁			103 Dec 26 j 16:49	0°♁	
desc. node	101 Aug 10 j 20:38	26°♁13'08			104 Jan 20 j 01:21	0°♁	
	101 Aug 14 j 02:28	0°♁		desc. node	104 Jan 26 j 15:54	8°♁09'01	
	101 Sep 09 j 08:43	0°♁			104 Feb 13 j 08:49	0°♁	
	101 Oct 07 j 10:43	0°♁			104 Mar 08 j 16:46	0°♁	
evening max el	101 Oct 07 j 12:49	0°♁05'17	47°14'24		104 Apr 02 j 01:48	0°♁	
	101 Nov 13 j 23:47	0°♁		morning set	104 Apr 05 j 19:05	4°♁34'25	
greatest brilliancy	101 Nov 15 j 08:14	0°♁36'07	-4.7m		104 Apr 26 j 11:49	0°♁	
retrograde	101 Nov 27 j 06:07	3°♁16'38					
asc. node	101 Dec 01 j 23:39	2°♁48'48		superior conj	104 May 12 j 17:01	19°♁54'34	0°-14'-21
	101 Dec 09 j 23:15	30°♁		minimum elong	104 May 12 j 19:57	20°♁03'33	0°14'13
evening set	101 Dec 11 j 20:40	29°♁01'08		behind sun begin	104 May 12 j 09:56	19°♁32'48	
min. Earth dist.	101 Dec 17 j 03:02	25°♁55'12	0.26585 AU	behind sun end	104 May 13 j 05:58	20°♁34'19	
inferior conj	101 Dec 17 j 20:57	25°♁27'36	3°57'53	max. Earth dist.	104 May 12 j 10:42	19°♁35'12	1.73643 AU
minimum elong	101 Dec 17 j 12:50	25°♁40'06	3°55'34	asc. node	104 May 18 j 18:57	27°♁22'33	
morning rise	101 Dec 23 j 05:25	22°♁16'36			104 May 20 j 22:14	0°♁	

	104 Jun 14 j 08:17	0°☿		morning max el	106 Dec 12 j 06:55	2°♁41'49	46°56'11
evening rise	104 Jun 17 j 17:54	4°☿10'49			107 Jan 06 j 11:32	0°♁	
	104 Jul 08 j 17:45	0°♁			107 Feb 01 j 09:42	0°♁	
	104 Aug 02 j 03:18	0°♁		desc. node	107 Feb 23 j 03:48	25°♁49'30	
	104 Aug 26 j 14:23	0°♁			107 Feb 26 j 15:36	0°♁	
desc. node	104 Sep 07 j 08:43	14°♁22'27			107 Mar 23 j 14:35	0°♁	
	104 Sep 20 j 04:41	0°♁			107 Apr 17 j 10:09	0°♁	
	104 Oct 15 j 00:36	0°♁			107 May 12 j 03:22	0°♁	
	104 Nov 09 j 07:42	0°♁			107 Jun 05 j 17:52	0°♁	
	104 Dec 05 j 18:04	0°♁		morning set	107 Jun 13 j 13:12	9°♁33'21	
evening max el	104 Dec 18 j 11:21	13°♁28'03	47°07'39	asc. node	107 Jun 16 j 06:48	12°♁54'21	
asc. node	104 Dec 29 j 11:36	24°♁13'45			107 Jun 30 j 04:47	0°☿	
	105 Jan 04 j 22:37	0°♁		max. Earth dist.	107 Jul 16 j 03:09	19°♁39'27	1.73022 AU
greatest brilliancy	105 Jan 24 j 05:57	13°♁21'27	-4.6m				
retrograde	105 Feb 07 j 07:13	16°♁58'56		superior conj	107 Jul 19 j 20:05	24°☿14'27	1°08'24
evening set	105 Feb 25 j 04:24	10°♁44'15		minimum elong	107 Jul 19 j 11:42	23°☿48'32	1°08'10
min. Earth dist.	105 Feb 27 j 22:39	9°♁00'29	0.28346 AU		107 Jul 24 j 11:43	0°♁	
inferior conj	105 Feb 28 j 09:53	8°♁42'42	8°29'38		107 Aug 17 j 15:27	0°♁	
minimum elong	105 Feb 28 j 13:14	8°♁37'23	8°29'29	evening rise	107 Aug 25 j 06:09	9°♁28'29	
morning rise	105 Mar 03 j 22:20	6°♁31'12			107 Sep 10 j 17:32	0°♁	
direct	105 Mar 21 j 12:06	0°♁35'41			107 Oct 04 j 19:34	0°♁	
greatest brilliancy	105 Apr 01 j 19:13	2°♁55'14	-4.5m	desc. node	107 Oct 05 j 20:34	1°♁17'50	
desc. node	105 Apr 20 j 01:16	13°♁50'41			107 Oct 28 j 22:41	0°♁	
	105 May 08 j 15:37	0°♁			107 Nov 22 j 04:16	0°♁	
morning max el	105 May 09 j 11:42	0°♁47'54	45°50'00		107 Dec 16 j 15:26	0°♁	
	105 Jun 06 j 19:37	0°♁			108 Jan 10 j 15:04	0°♁	
	105 Jul 03 j 14:17	0°♁		asc. node	108 Jan 26 j 23:30	19°♁00'03	
	105 Jul 29 j 05:37	0°☿			108 Feb 05 j 18:06	0°♁	
asc. node	105 Aug 11 j 04:32	15°☿31'12		evening max el	108 Feb 28 j 15:37	24°♁05'38	45°55'02
	105 Aug 23 j 02:57	0°♁			108 Mar 05 j 19:22	0°♁	
	105 Sep 16 j 11:34	0°♁		greatest brilliancy	108 Apr 03 j 02:52	21°♁07'17	-4.5m
	105 Oct 10 j 12:05	0°♁		retrograde	108 Apr 17 j 19:13	24°♁55'16	
	105 Nov 03 j 08:39	0°♁		evening set	108 May 03 j 04:52	20°♁20'49	
morning set	105 Nov 04 j 00:16	0°♁49'09		inferior conj	108 May 09 j 06:41	16°♁40'30	1°55'07
	105 Nov 27 j 04:17	0°♁		minimum elong	108 May 09 j 10:47	16°♁34'03	1°53'57
desc. node	105 Nov 30 j 18:09	4°♁30'19		min. Earth dist.	108 May 09 j 12:00	16°♁32'09	0.28989 AU
				morning rise	108 May 15 j 16:39	12°♁48'11	
superior conj	105 Dec 15 j 13:41	23°♁08'27	0°-34'-15	desc. node	108 May 17 j 13:02	11°♁49'44	
minimum elong	105 Dec 15 j 05:01	22°♁41'12	0°33'52	direct	108 May 30 j 21:42	8°♁21'28	
max. Earth dist.	105 Dec 18 j 11:10	26°♁46'50	1.71157 AU	greatest brilliancy	108 Jun 13 j 10:16	11°♁32'00	-4.5m
	105 Dec 21 j 00:40	0°♁			108 Jul 09 j 21:23	0°♁	
	106 Jan 13 j 22:47	0°♁		morning max el	108 Jul 18 j 17:42	8°♁09'13	45°51'25
evening rise	106 Jan 25 j 23:48	15°♁03'03			108 Aug 09 j 02:16	0°☿	
	106 Feb 06 j 23:49	0°♁			108 Sep 04 j 19:17	0°♁	
	106 Mar 03 j 05:20	0°♁		asc. node	108 Sep 07 j 16:22	3°♁21'11	
asc. node	106 Mar 23 j 21:20	25°♁20'03			108 Sep 30 j 01:10	0°♁	
	106 Mar 27 j 17:15	0°♁			108 Oct 24 j 12:35	0°♁	
	106 Apr 21 j 13:36	0°♁			108 Nov 17 j 14:50	0°♁	
	106 May 16 j 21:29	0°☿			108 Dec 11 j 13:42	0°♁	
	106 Jun 11 j 23:31	0°♁		desc. node	108 Dec 28 j 06:04	20°♁54'30	
	106 Jul 09 j 13:07	0°♁			109 Jan 04 j 12:20	0°♁	
desc. node	106 Jul 13 j 10:53	4°♁01'35		morning set	109 Jan 20 j 07:10	19°♁44'33	
evening max el	106 Jul 23 j 17:47	14°♁14'38	46°01'15		109 Jan 28 j 12:18	0°♁	
	106 Aug 10 j 13:38	0°♁			109 Feb 21 j 14:26	0°♁	
greatest brilliancy	106 Aug 31 j 13:26	12°♁40'28	-4.6m				
retrograde	106 Sep 10 j 23:18	14°♁37'54		superior conj	109 Mar 01 j 14:02	9°♁54'43	-1°-23'-54
evening set	106 Sep 27 j 17:23	9°♁20'04		minimum elong	109 Mar 01 j 17:55	10°♁06'46	1°23'53
inferior conj	106 Oct 01 j 17:42	6°♁56'07	-7°-12'-28	max. Earth dist.	109 Mar 05 j 06:52	14°♁30'04	1.72562 AU
minimum elong	106 Oct 02 j 03:57	6°♁40'30	7°10'35		109 Mar 17 j 19:23	0°♁	
min. Earth dist.	106 Oct 02 j 13:10	6°♁26'27	0.27076 AU	evening rise	109 Apr 09 j 01:27	27°♁25'59	
morning rise	106 Oct 06 j 14:07	4°♁02'57			109 Apr 11 j 03:34	0°♁	
	106 Oct 15 j 23:36	30°♁		asc. node	109 Apr 20 j 09:08	11°♁20'05	
direct	106 Oct 22 j 12:01	29°♁07'59			109 May 05 j 15:07	0°♁	
	106 Oct 29 j 04:19	0°♁			109 May 30 j 06:09	0°☿	
asc. node	106 Nov 03 j 13:48	1°♁51'19			109 Jun 24 j 01:32	0°♁	
greatest brilliancy	106 Nov 04 j 23:15	2°♁28'54	-4.7m		109 Jul 19 j 03:31	0°♁	
	106 Dec 09 j 14:58	0°♁		desc. node	109 Aug 09 j 22:45	25°♁39'17	

	109 Aug 13 j 16:27	0°♁		desc. node	112 Jan 25 j 17:56	7°♁39'32	
	109 Sep 09 j 01:25	0°♁			112 Feb 12 j 20:07	0°≈	
evening max el	109 Oct 05 j 02:07	27°♁40'12	47°12'55		112 Mar 08 j 03:44	0°✕	
	109 Oct 07 j 10:25	0°♁			112 Apr 01 j 12:30	0°♃	
greatest brilliancy	109 Nov 12 j 22:28	28°♁08'48	-4.7m	morning set	112 Apr 03 j 11:51	2°♃25'35	
	109 Nov 18 j 10:09	0°♁			112 Apr 25 j 22:22	0°♁	
retrograde	109 Nov 24 j 19:08	0°♁48'11					
	109 Dec 01 j 00:11	30°♁		superior conj	112 May 10 j 11:13	17°♁50'44	0°-17'-26
asc. node	109 Dec 01 j 01:45	29°♁58'59		minimum elong	112 May 10 j 14:45	18°♁01'38	0°17'17
evening set	109 Dec 09 j 07:39	26°♁34'56		max. Earth dist.	112 May 10 j 10:44	17°♁49'16	1.73634 AU
min. Earth dist.	109 Dec 14 j 16:39	23°♁25'52	0.26543 AU	asc. node	112 May 17 j 21:05	26°♁56'48	
inferior conj	109 Dec 15 j 09:29	23°♁00'02	3°36'13		112 May 20 j 08:46	0°♁	
minimum elong	109 Dec 15 j 01:56	23°♁11'37	3°33'59		112 Jun 13 j 18:54	0°♁	
morning rise	109 Dec 20 j 20:37	19°♁45'53		evening rise	112 Jun 15 j 13:14	2°♁10'07	
direct	110 Jan 04 j 16:24	15°♁22'08			112 Jul 08 j 04:33	0°♁	
greatest brilliancy	110 Jan 15 j 19:21	17°♁40'45	-4.6m		112 Aug 01 j 14:25	0°♁	
	110 Feb 04 j 11:36	0°♁			112 Aug 26 j 01:57	0°♁	
morning max el	110 Feb 23 j 13:53	17°♁17'55	46°29'14	desc. node	112 Sep 06 j 10:41	13°♁52'14	
	110 Mar 08 j 00:22	0°≈			112 Sep 19 j 16:56	0°♁	
desc. node	110 Mar 22 j 15:36	15°≈46'09			112 Oct 14 j 13:51	0°♁	
	110 Apr 04 j 09:47	0°✕			112 Nov 08 j 22:37	0°♁	
	110 Apr 30 j 12:47	0°♃			112 Dec 05 j 12:39	0°≈	
	110 May 26 j 01:03	0°♁		evening max el	112 Dec 16 j 03:17	11°≈10'36	47°09'25
	110 Jun 20 j 03:21	0°♁		asc. node	112 Dec 28 j 13:46	23°≈15'28	
asc. node	110 Jul 13 j 18:44	28°♁39'59			113 Jan 05 j 08:04	0°✕	
	110 Jul 14 j 20:57	0°♁		greatest brilliancy	113 Jan 22 j 00:07	11°✕07'56	-4.6m
	110 Aug 08 j 06:32	0°♁		retrograde	113 Feb 04 j 23:07	14°✕42'23	
morning set	110 Aug 20 j 20:47	15°♁37'20		evening set	113 Feb 22 j 20:39	8°✕27'11	
	110 Sep 01 j 09:37	0°♁		min. Earth dist.	113 Feb 25 j 12:53	6°✕46'25	0.28290 AU
max. Earth dist.	110 Sep 25 j 08:20	29°♁59'20	1.71496 AU	inferior conj	113 Feb 26 j 01:14	6°✕26'50	8°33'23
	110 Sep 25 j 08:33	0°♁		minimum elong	113 Feb 26 j 03:50	6°✕22'43	8°33'18
				morning rise	113 Mar 01 j 11:17	4°✕18'51	
superior conj	110 Sep 27 j 15:16	2°♁51'43	1°11'29		113 Mar 10 j 02:16	30°≈	
minimum elong	110 Sep 28 j 00:40	3°♁21'16	1°11'14	direct	113 Mar 19 j 03:08	28°≈21'03	
	110 Oct 19 j 05:40	0°♁			113 Mar 28 j 13:28	0°✕	
desc. node	110 Nov 02 j 08:26	17°♁44'20		greatest brilliancy	113 Mar 30 j 06:50	0°✕37'22	-4.5m
evening rise	110 Nov 07 j 01:04	23°♁38'06		desc. node	113 Apr 19 j 03:14	12°✕45'00	
	110 Nov 12 j 02:43	0°♁		morning max el	113 May 07 j 02:34	28°✕35'00	45°50'47
	110 Dec 06 j 00:50	0°♁			113 May 08 j 13:54	0°♃	
	110 Dec 30 j 01:22	0°≈			113 Jun 06 j 11:07	0°♁	
	111 Jan 23 j 06:43	0°✕			113 Jul 03 j 03:23	0°♁	
	111 Feb 16 j 20:51	0°♃			113 Jul 28 j 17:36	0°♁	
asc. node	111 Feb 23 j 11:26	7°♃56'57		asc. node	113 Aug 10 j 06:31	15°♁02'05	
	111 Mar 14 j 01:59	0°♁			113 Aug 22 j 14:23	0°♁	
	111 Apr 09 j 09:13	0°♁			113 Sep 15 j 22:43	0°♁	
	111 May 08 j 00:30	0°♁			113 Oct 09 j 23:06	0°♁	
evening max el	111 May 10 j 06:35	2°♁10'17	45°18'12	morning set	113 Nov 01 j 11:42	28°♁19'30	
greatest brilliancy	111 Jun 14 j 14:20	28°♁37'41	-4.5m		113 Nov 02 j 19:38	0°♁	
desc. node	111 Jun 15 j 01:10	28°♁49'12			113 Nov 26 j 15:15	0°♁	
	111 Jun 18 j 04:36	0°♁		desc. node	113 Nov 29 j 20:19	4°♁02'38	
retrograde	111 Jun 27 j 18:30	1°♁38'52					
	111 Jul 06 j 22:05	30°♁		superior conj	113 Dec 12 j 22:56	20°♁32'13	0°-30'-31
evening set	111 Jul 14 j 00:17	26°♁39'02		minimum elong	113 Dec 12 j 15:05	20°♁07'32	0°30'09
inferior conj	111 Jul 19 j 02:46	23°♁35'11	-6°-56'-12	max. Earth dist.	113 Dec 15 j 17:03	24°♁00'04	1.71130 AU
minimum elong	111 Jul 18 j 17:01	23°♁50'15	6°54'30		113 Dec 20 j 11:37	0°♁	
min. Earth dist.	111 Jul 19 j 07:23	23°♁28'03	0.28676 AU		114 Jan 13 j 09:45	0°≈	
morning rise	111 Jul 23 j 09:31	20°♁59'14		evening rise	114 Jan 23 j 10:35	12°≈32'37	
direct	111 Aug 09 j 16:26	15°♁22'05			114 Feb 06 j 10:48	0°✕	
greatest brilliancy	111 Aug 24 j 04:03	19°♁04'21	-4.6m		114 Mar 02 j 16:25	0°♃	
	111 Sep 09 j 19:53	0°♁		asc. node	114 Mar 22 j 23:21	24°♃51'53	
morning max el	111 Sep 28 j 16:52	17°♁11'48	46°29'54		114 Mar 27 j 04:33	0°♁	
asc. node	111 Oct 06 j 04:08	24°♁50'49			114 Apr 21 j 01:22	0°♁	
	111 Oct 11 j 00:31	0°♁			114 May 16 j 10:10	0°♁	
	111 Nov 06 j 13:53	0°♁			114 Jun 11 j 14:03	0°♁	
	111 Dec 01 j 16:19	0°♁			114 Jul 09 j 08:06	0°♁	
	111 Dec 26 j 05:05	0°♁		desc. node	114 Jul 12 j 12:56	3°♁16'04	
	112 Jan 19 j 13:04	0°♁		evening max el	114 Jul 21 j 06:15	11°♁53'05	45°58'35

	114 Aug 11 j 04:15	0°♁			117 Feb 21 j 01:29	0°♁	
greatest brilliancy	114 Aug 29 j 02:14	10°♁17'43	-4.6m				
retrograde	114 Sep 08 j 11:00	12°♁14'33		superior conj	117 Feb 27 j 03:31	7°♁33'31	-1°-24'-31
evening set	114 Sep 25 j 09:18	6°♁51'51		minimum elong	117 Feb 27 j 06:35	7°♁42'59	1°24'30
inferior conj	114 Sep 29 j 06:40	4°♁32'17	-7°-25'-18	max. Earth dist.	117 Mar 02 j 19:31	12°♁06'27	1.72507 AU
minimum elong	114 Sep 29 j 16:34	4°♁17'11	7°23'37		117 Mar 17 j 06:22	0°♁	
min. Earth dist.	114 Sep 30 j 02:53	4°♁01'27	0.27141 AU	evening rise	117 Apr 06 j 17:28	25°♁13'55	
morning rise	114 Oct 03 j 23:24	1°♁44'03			117 Apr 10 j 14:33	0°♁	
	114 Oct 07 j 05:34	30°♁		asc. node	117 Apr 19 j 11:18	10°♁52'53	
direct	114 Oct 20 j 01:07	26°♁42'51			117 May 05 j 02:14	0°♁	
	114 Nov 02 j 09:51	0°♁			117 May 29 j 17:33	0°♁	
greatest brilliancy	114 Nov 02 j 15:21	0°♁06'26	-4.7m		117 Jun 23 j 13:28	0°♁	
asc. node	114 Nov 02 j 15:55	0°♁07'07			117 Jul 18 j 16:18	0°♁	
	114 Dec 09 j 14:14	0°♁		desc. node	117 Aug 09 j 00:46	25°♁04'35	
morning max el	114 Dec 09 j 19:40	0°♁13'53	46°56'15		117 Aug 13 j 06:41	0°♁	
	115 Jan 06 j 04:08	0°♁			117 Sep 08 j 18:32	0°♁	
	115 Jan 31 j 23:47	0°♁		evening max el	117 Oct 02 j 16:16	25°♁17'06	47°11'14
desc. node	115 Feb 22 j 05:47	25°♁16'53			117 Oct 07 j 11:24	0°♁	
	115 Feb 26 j 04:21	0°♁		greatest brilliancy	117 Nov 10 j 11:46	25°♁39'46	-4.7m
	115 Mar 23 j 02:31	0°♁		retrograde	117 Nov 22 j 08:19	28°♁18'40	
	115 Apr 16 j 21:34	0°♁		asc. node	117 Nov 30 j 03:54	27°♁02'14	
	115 May 11 j 14:24	0°♁		evening set	117 Dec 06 j 18:50	24°♁07'22	
	115 Jun 05 j 04:40	0°♁		min. Earth dist.	117 Dec 12 j 05:56	20°♁55'33	0.26510 AU
morning set	115 Jun 11 j 07:43	7°♁30'05		inferior conj	117 Dec 12 j 21:54	20°♁31'07	3°13'51
asc. node	115 Jun 15 j 08:58	12°♁28'09		minimum elong	117 Dec 12 j 15:00	20°♁41'40	3°11'46
	115 Jun 29 j 15:27	0°♁		morning rise	117 Dec 18 j 11:37	17°♁14'00	
max. Earth dist.	115 Jul 13 j 23:36	17°♁41'21	1.73069 AU	direct	118 Jan 02 j 05:08	12°♁53'39	
				greatest brilliancy	118 Jan 13 j 09:01	15°♁14'01	-4.6m
superior conj	115 Jul 17 j 14:30	22°♁09'57	1°06'31		118 Feb 04 j 23:24	0°♁	
minimum elong	115 Jul 17 j 05:58	21°♁43'34	1°06'15	morning max el	118 Feb 21 j 04:26	14°♁57'28	46°30'41
	115 Jul 23 j 22:24	0°♁			118 Mar 07 j 19:40	0°♁	
	115 Aug 17 j 02:16	0°♁		desc. node	118 Mar 21 j 17:41	15°♁06'02	
evening rise	115 Aug 22 j 22:37	7°♁16'33			118 Apr 04 j 00:54	0°♁	
	115 Sep 10 j 04:36	0°♁			118 Apr 30 j 02:01	0°♁	
	115 Oct 04 j 06:54	0°♁			118 May 25 j 13:15	0°♁	
desc. node	115 Oct 04 j 22:38	0°♁48'57			118 Jun 19 j 14:56	0°♁	
	115 Oct 28 j 10:21	0°♁		asc. node	118 Jul 12 j 20:41	28°♁11'36	
	115 Nov 21 j 16:22	0°♁			118 Jul 14 j 08:11	0°♁	
	115 Dec 16 j 04:09	0°♁			118 Aug 07 j 17:37	0°♁	
asc. node	116 Jan 10 j 04:58	0°♁		morning set	118 Aug 18 j 13:06	13°♁24'34	
	116 Jan 26 j 01:30	18°♁22'25			118 Aug 31 j 20:39	0°♁	
	116 Feb 05 j 10:36	0°♁		max. Earth dist.	118 Sep 22 j 19:01	27°♁27'38	1.71536 AU
evening max el	116 Feb 26 j 06:04	21°♁49'30	45°57'29		118 Sep 24 j 19:36	0°♁	
	116 Mar 05 j 20:33	0°♁					
greatest brilliancy	116 Mar 31 j 18:11	18°♁56'38	-4.5m	superior conj	118 Sep 25 j 05:16	0°♁30'19	1°13'20
retrograde	116 Apr 15 j 11:53	22°♁46'57		minimum elong	118 Sep 25 j 14:13	0°♁58'25	1°13'07
evening set	116 Apr 30 j 23:02	18°♁09'37			118 Oct 18 j 16:48	0°♁	
inferior conj	116 May 06 j 23:15	14°♁31'45	2°14'09	desc. node	118 Nov 01 j 10:37	17°♁15'58	
minimum elong	116 May 07 j 03:59	14°♁24'18	2°12'49	evening rise	118 Nov 04 j 11:46	21°♁05'41	
min. Earth dist.	116 May 07 j 04:48	14°♁23'02	0.28986 AU		118 Nov 11 j 13:58	0°♁	
morning rise	116 May 13 j 08:52	10°♁39'59			118 Dec 05 j 12:15	0°♁	
desc. node	116 May 16 j 15:15	9°♁00'32			118 Dec 29 j 12:59	0°♁	
direct	116 May 28 j 13:36	6°♁12'30			119 Jan 22 j 18:37	0°♁	
greatest brilliancy	116 Jun 11 j 02:25	9°♁23'15	-4.5m		119 Feb 16 j 09:17	0°♁	
	116 Jul 09 j 23:23	0°♁		asc. node	119 Feb 22 j 13:27	7°♁25'08	
morning max el	116 Jul 16 j 10:01	6°♁00'04	45°50'48		119 Mar 13 j 15:27	0°♁	
	116 Aug 08 j 18:46	0°♁			119 Apr 09 j 00:58	0°♁	
	116 Sep 04 j 08:59	0°♁			119 May 07 j 22:51	0°♁	
asc. node	116 Sep 06 j 18:25	2°♁47'40		evening max el	119 May 07 j 22:49	29°♁59'56	45°18'10
	116 Sep 29 j 13:41	0°♁		greatest brilliancy	119 Jun 12 j 04:13	26°♁24'12	-4.5m
	116 Oct 24 j 00:31	0°♁		desc. node	119 Jun 14 j 03:11	27°♁11'54	
	116 Nov 17 j 02:29	0°♁		retrograde	119 Jun 25 j 09:37	29°♁26'25	
	116 Dec 11 j 01:09	0°♁		evening set	119 Jul 11 j 12:39	24°♁31'01	
desc. node	116 Dec 27 j 08:10	20°♁25'31		inferior conj	119 Jul 16 j 18:14	21°♁22'21	-6°-43'-29
	117 Jan 03 j 23:38	0°♁		minimum elong	119 Jul 16 j 08:20	21°♁37'41	6°41'39
morning set	117 Jan 17 j 17:19	17°♁11'13		min. Earth dist.	119 Jul 16 j 22:18	21°♁16'03	0.28701 AU
	117 Jan 27 j 23:27	0°♁		morning rise	119 Jul 21 j 03:48	18°♁42'00	

direct	119 Aug 07 j 08:39	13°♁09'02			122 Feb 05 j 22:00	0°♁	
greatest brilliancy	119 Aug 21 j 18:21	16°♁48'51	-4.6m		122 Mar 02 j 03:45	0°♁	
	119 Sep 10 j 05:17	0°♁		asc. node	122 Mar 22 j 01:30	24°♁23'15	
morning max el	119 Sep 26 j 07:24	14°♁52'55	46°28'29		122 Mar 26 j 16:10	0°♁	
asc. node	119 Oct 05 j 06:15	24°♁04'47			122 Apr 20 j 13:31	0°♁	
	119 Oct 10 j 18:57	0°♁			122 May 15 j 23:19	0°♁	
	119 Nov 06 j 04:42	0°♁			122 Jun 11 j 05:13	0°♁	
	119 Dec 01 j 05:36	0°♁			122 Jul 09 j 04:08	0°♁	
	119 Dec 25 j 17:33	0°♁		desc. node	122 Jul 11 j 14:58	2°♁28'37	
	120 Jan 19 j 01:03	0°♁		evening max el	122 Jul 18 j 18:23	9°♁29'46	45°56'07
desc. node	120 Jan 24 j 19:56	7°♁09'03			122 Aug 12 j 00:27	0°♁	
	120 Feb 12 j 07:45	0°♁		greatest brilliancy	122 Aug 26 j 14:02	7°♁53'05	-4.6m
	120 Mar 07 j 15:06	0°♁		retrograde	122 Sep 05 j 23:04	9°♁50'37	
	120 Mar 31 j 23:39	0°♁		evening set	122 Sep 23 j 01:07	4°♁22'46	
morning set	120 Apr 01 j 04:06	0°♁13'41		inferior conj	122 Sep 26 j 19:35	2°♁07'35	-7°-37'-21
	120 Apr 25 j 09:23	0°♁		minimum elong	122 Sep 27 j 05:06	1°♁53'05	7°35'50
				min. Earth dist.	122 Sep 27 j 16:19	1°♁36'00	0.27207 AU
superior conj	120 May 08 j 04:54	15°♁43'57	0°-20'-33		122 Sep 30 j 08:15	30°♁	
minimum elong	120 May 08 j 09:03	15°♁56'43	0°20'22	morning rise	122 Oct 01 j 08:38	29°♁24'39	
max. Earth dist.	120 May 08 j 08:59	15°♁56'32	1.73621 AU	direct	122 Oct 17 j 14:24	24°♁16'47	
asc. node	120 May 16 j 23:11	26°♁29'31		greatest brilliancy	122 Oct 31 j 08:07	27°♁44'12	-4.7m
	120 May 19 j 19:44	0°♁		asc. node	122 Nov 01 j 18:05	28°♁26'03	
	120 Jun 13 j 05:57	0°♁			122 Nov 04 j 14:36	0°♁	
evening rise	120 Jun 13 j 08:09	0°♁06'46		morning max el	122 Dec 07 j 09:15	27°♁47'18	46°56'24
	120 Jul 07 j 15:48	0°♁			122 Dec 09 j 12:50	0°♁	
	120 Aug 01 j 01:59	0°♁			123 Jan 05 j 20:39	0°♁	
	120 Aug 25 j 14:00	0°♁			123 Jan 31 j 13:54	0°♁	
desc. node	120 Sep 05 j 12:47	13°♁21'03		desc. node	123 Feb 21 j 07:55	24°♁44'23	
	120 Sep 19 j 05:38	0°♁			123 Feb 25 j 17:09	0°♁	
	120 Oct 14 j 03:33	0°♁			123 Mar 22 j 14:32	0°♁	
	120 Nov 08 j 14:01	0°♁			123 Apr 16 j 09:04	0°♁	
	120 Dec 05 j 07:58	0°♁			123 May 11 j 01:35	0°♁	
evening max el	120 Dec 13 j 18:16	8°♁49'58	47°11'08		123 Jun 04 j 15:39	0°♁	
asc. node	120 Dec 27 j 15:42	22°♁14'48		morning set	123 Jun 09 j 02:07	5°♁25'50	
	121 Jan 05 j 21:06	0°♁		asc. node	123 Jun 14 j 10:56	12°♁00'36	
greatest brilliancy	121 Jan 19 j 18:12	8°♁53'27	-4.6m		123 Jun 29 j 02:21	0°♁	
retrograde	121 Feb 02 j 14:29	12°♁24'59		max. Earth dist.	123 Jul 11 j 20:45	15°♁44'39	1.73116 AU
evening set	121 Feb 20 j 12:37	6°♁09'48					
min. Earth dist.	121 Feb 23 j 03:29	4°♁31'06	0.28239 AU	superior conj	123 Jul 15 j 08:40	20°♁03'57	1°04'31
inferior conj	121 Feb 23 j 16:40	4°♁10'09	8°36'17	minimum elong	123 Jul 15 j 00:01	19°♁37'14	1°04'14
minimum elong	121 Feb 23 j 18:30	4°♁07'15	8°36'14		123 Jul 23 j 09:20	0°♁	
morning rise	121 Feb 27 j 00:37	2°♁05'10			123 Aug 16 j 13:20	0°♁	
	121 Mar 02 j 16:05	30°♁		evening rise	123 Aug 20 j 14:55	5°♁03'29	
direct	121 Mar 16 j 17:51	26°♁05'23			123 Sep 09 j 15:51	0°♁	
greatest brilliancy	121 Mar 27 j 19:45	28°♁19'40	-4.5m		123 Oct 03 j 18:26	0°♁	
	121 Mar 31 j 15:30	0°♁		desc. node	123 Oct 04 j 00:47	0°♁19'43	
desc. node	121 Apr 18 j 05:27	11°♁40'20			123 Oct 27 j 22:13	0°♁	
morning max el	121 May 04 j 16:44	26°♁18'49	45°51'28		123 Nov 21 j 04:39	0°♁	
	121 May 08 j 11:54	0°♁			123 Dec 15 j 17:06	0°♁	
	121 Jun 06 j 02:55	0°♁			124 Jan 09 j 19:05	0°♁	
	121 Jul 02 j 16:53	0°♁		asc. node	124 Jan 25 j 03:37	17°♁44'41	
	121 Jul 28 j 05:59	0°♁			124 Feb 05 j 03:26	0°♁	
asc. node	121 Aug 09 j 08:36	14°♁32'05		evening max el	124 Feb 23 j 21:21	19°♁35'28	46°00'06
	121 Aug 22 j 02:10	0°♁			124 Mar 05 j 23:03	0°♁	
	121 Sep 15 j 10:11	0°♁		greatest brilliancy	124 Mar 29 j 09:33	16°♁46'28	-4.5m
	121 Oct 09 j 10:26	0°♁		retrograde	124 Apr 13 j 05:09	20°♁39'07	
morning set	121 Oct 29 j 23:16	25°♁49'10		evening set	124 Apr 28 j 17:29	15°♁58'47	
	121 Nov 02 j 06:56	0°♁		inferior conj	124 May 04 j 15:57	12°♁23'21	2°32'56
	121 Nov 26 j 02:31	0°♁		minimum elong	124 May 04 j 21:18	12°♁14'57	2°31'26
desc. node	121 Nov 28 j 22:22	3°♁33'36		min. Earth dist.	124 May 04 j 21:19	12°♁14'54	0.28985 AU
				morning rise	124 May 11 j 01:06	8°♁32'30	
superior conj	121 Dec 10 j 08:28	17°♁56'01	0°-26'-43	desc. node	124 May 15 j 17:15	6°♁16'08	
minimum elong	121 Dec 10 j 01:29	17°♁34'02	0°26'24	direct	124 May 26 j 06:12	4°♁04'00	
max. Earth dist.	121 Dec 12 j 20:12	21°♁03'46	1.71101 AU	greatest brilliancy	124 Jun 08 j 18:26	7°♁14'40	-4.5m
	121 Dec 19 j 22:51	0°♁			124 Jul 10 j 00:07	0°♁	
	122 Jan 12 j 20:56	0°♁		morning max el	124 Jul 14 j 03:02	3°♁52'34	45°49'57
evening rise	122 Jan 20 j 21:39	10°♁02'20			124 Aug 08 j 11:06	0°♁	

	124 Sep 03 j 22:43	0°♁		evening max el	127 May 05 j 14:33	27°♁49'27	45°18'18
asc. node	124 Sep 05 j 20:35	2°♁14'11			127 May 07 j 21:38	0°♁	
	124 Sep 29 j 02:15	0°♁		greatest brilliancy	127 Jun 09 j 18:46	24°♁13'12	-4.5m
	124 Oct 23 j 12:31	0°♁		desc. node	127 Jun 13 j 05:11	25°♁32'56	
	124 Nov 16 j 14:08	0°♁		retrograde	127 Jun 23 j 00:42	27°♁16'18	
	124 Dec 10 j 12:35	0°♁		evening set	127 Jul 09 j 01:30	22°♁25'04	
desc. node	124 Dec 26 j 10:06	19°♁56'05		inferior conj	127 Jul 14 j 10:04	19°♁11'56	-6°-30'-13
	125 Jan 03 j 10:54	0°♁		minimum elong	127 Jul 14 j 00:06	19°♁27'25	6°28'17
morning set	125 Jan 15 j 03:26	14°♁37'42		min. Earth dist.	127 Jul 14 j 13:54	19°♁06'00	0.28725 AU
	125 Jan 27 j 10:36	0°♁		morning rise	127 Jul 18 j 22:26	16°♁27'08	
	125 Feb 20 j 12:30	0°♁		direct	127 Aug 05 j 00:43	10°♁58'20	
				greatest brilliancy	127 Aug 19 j 09:05	14°♁35'46	-4.5m
superior conj	125 Feb 24 j 17:02	5°♁12'19	-1°-24'-58		127 Sep 10 j 11:30	0°♁	
minimum elong	125 Feb 24 j 19:13	5°♁19'05	1°24'59	morning max el	127 Sep 23 j 21:13	12°♁33'25	46°26'49
max. Earth dist.	125 Feb 28 j 09:33	9°♁47'03	1.72449 AU	asc. node	127 Oct 04 j 08:21	23°♁20'23	
	125 Mar 16 j 17:17	0°♁			127 Oct 10 j 12:36	0°♁	
evening rise	125 Apr 04 j 09:40	23°♁02'39			127 Nov 05 j 19:07	0°♁	
	125 Apr 10 j 01:27	0°♁			127 Nov 30 j 18:38	0°♁	
asc. node	125 Apr 18 j 13:25	10°♁25'50			127 Dec 25 j 05:49	0°♁	
	125 May 04 j 13:14	0°♁			128 Jan 18 j 12:48	0°♁	
	125 May 29 j 04:52	0°♁		desc. node	128 Jan 23 j 22:07	6°♁39'52	
	125 Jun 23 j 01:21	0°♁			128 Feb 11 j 19:07	0°♁	
	125 Jul 18 j 05:08	0°♁			128 Mar 07 j 02:09	0°♁	
desc. node	125 Aug 08 j 02:51	24°♁29'53		morning set	128 Mar 29 j 20:15	28°♁02'24	
	125 Aug 12 j 21:06	0°♁			128 Mar 31 j 10:28	0°♁	
	125 Sep 08 j 12:03	0°♁			128 Apr 24 j 20:05	0°♁	
evening max el	125 Sep 30 j 07:01	22°♁55'28	47°09'29				
	125 Oct 07 j 13:45	0°♁		superior conj	128 May 05 j 22:47	13°♁38'48	0°-23'-38
greatest brilliancy	125 Nov 08 j 01:27	23°♁11'15	-4.7m	minimum elong	128 May 06 j 03:32	13°♁53'23	0°23'25
retrograde	125 Nov 19 j 21:31	25°♁48'47		max. Earth dist.	128 May 06 j 05:44	14°♁00'10	1.73603 AU
asc. node	125 Nov 29 j 05:51	23°♁59'52		asc. node	128 May 16 j 01:11	26°♁02'58	
evening set	125 Dec 04 j 06:13	21°♁39'34			128 May 19 j 06:23	0°♁	
min. Earth dist.	125 Dec 09 j 19:06	18°♁25'07	0.26475 AU	evening rise	128 Jun 11 j 03:23	28°♁05'31	
inferior conj	125 Dec 10 j 10:11	18°♁02'02	2°50'58		128 Jun 12 j 16:39	0°♁	
minimum elong	125 Dec 10 j 04:01	18°♁11'29	2°49'04		128 Jul 07 j 02:40	0°♁	
morning rise	125 Dec 16 j 02:19	14°♁42'04			128 Jul 31 j 13:09	0°♁	
direct	125 Dec 30 j 17:57	10°♁25'19			128 Aug 25 j 01:40	0°♁	
greatest brilliancy	126 Jan 10 j 21:57	12°♁46'24	-4.6m	desc. node	128 Sep 04 j 14:56	12°♁51'15	
	126 Feb 05 j 08:01	0°♁			128 Sep 18 j 18:02	0°♁	
morning max el	126 Feb 18 j 18:25	12°♁35'55	46°32'06		128 Oct 13 j 17:03	0°♁	
	126 Mar 07 j 14:16	0°♁			128 Nov 08 j 05:23	0°♁	
desc. node	126 Mar 20 j 19:47	14°♁26'57			128 Dec 05 j 03:40	0°♁	
	126 Apr 03 j 15:37	0°♁		evening max el	128 Dec 11 j 08:16	6°♁27'00	47°12'41
	126 Apr 29 j 14:56	0°♁		asc. node	128 Dec 26 j 17:51	21°♁13'23	
	126 May 25 j 01:09	0°♁			129 Jan 06 j 14:28	0°♁	
	126 Jun 19 j 02:14	0°♁		greatest brilliancy	129 Jan 17 j 12:01	6°♁38'21	-4.6m
asc. node	126 Jul 11 j 22:49	27°♁44'30		retrograde	129 Jan 31 j 05:28	10°♁07'26	
	126 Jul 13 j 19:11	0°♁		evening set	129 Feb 18 j 03:57	3°♁52'46	
	126 Aug 07 j 04:29	0°♁		min. Earth dist.	129 Feb 20 j 18:03	2°♁15'20	0.28184 AU
morning set	126 Aug 16 j 05:31	11°♁12'47		inferior conj	129 Feb 21 j 07:52	1°♁53'24	8°38'18
	126 Aug 31 j 07:31	0°♁		minimum elong	129 Feb 21 j 08:54	1°♁51'46	8°38'17
max. Earth dist.	126 Sep 20 j 03:15	24°♁48'43	1.71585 AU		129 Feb 24 j 08:11	30°♁	
				morning rise	129 Feb 24 j 14:04	29°♁51'01	
superior conj	126 Sep 22 j 19:16	28°♁09'25	1°15'04	direct	129 Mar 14 j 07:51	23°♁49'33	
minimum elong	126 Sep 23 j 03:42	28°♁35'52	1°14'52	greatest brilliancy	129 Mar 25 j 09:17	26°♁02'58	-4.5m
	126 Sep 24 j 06:32	0°♁			129 Apr 02 j 10:58	0°♁	
	126 Oct 18 j 03:50	0°♁		desc. node	129 Apr 17 j 07:29	10°♁37'40	
desc. node	126 Oct 31 j 12:38	16°♁47'25		morning max el	129 May 02 j 06:39	24°♁02'48	45°52'24
evening rise	126 Nov 01 j 22:06	18°♁32'29			129 May 08 j 08:43	0°♁	
	126 Nov 11 j 01:07	0°♁			129 Jun 05 j 18:04	0°♁	
	126 Dec 04 j 23:33	0°♁			129 Jul 02 j 05:52	0°♁	
	126 Dec 29 j 00:27	0°♁			129 Jul 27 j 17:53	0°♁	
	127 Jan 22 j 06:21	0°♁		asc. node	129 Aug 08 j 10:45	14°♁03'39	
	127 Feb 15 j 21:31	0°♁			129 Aug 21 j 13:30	0°♁	
asc. node	127 Feb 21 j 15:37	6°♁54'24			129 Sep 14 j 21:13	0°♁	
	127 Mar 13 j 04:45	0°♁			129 Oct 08 j 21:21	0°♁	
	127 Apr 08 j 16:37	0°♁		morning set	129 Oct 27 j 11:14	23°♁21'21	

	129 Nov 01 j 17:50	0°♍		inferior conj	132 May 02 j 08:24	10°♄14'24	2°51'37
	129 Nov 25 j 13:27	0°♁		minimum elong	132 May 02 j 14:20	10°♄05'05	2°49'58
desc. node	129 Nov 28 j 00:23	3°♁05'33		min. Earth dist.	132 May 02 j 13:21	10°♄06'37	0.28981 AU
				morning rise	132 May 08 j 16:54	6°♄24'44	
superior conj	129 Dec 07 j 17:53	15°♁20'17	0°-22'-51	desc. node	132 May 14 j 19:14	3°♄35'11	
minimum elong	129 Dec 07 j 11:49	15°♁01'14	0°22'36	direct	132 May 23 j 22:52	1°♄55'15	
max. Earth dist.	129 Dec 09 j 22:06	18°♁04'31	1.71085 AU	greatest brilliancy	132 Jun 06 j 09:16	5°♄04'41	-4.5m
	129 Dec 19 j 09:48	0°♄			132 Jul 09 j 23:32	0°♄	
	130 Jan 12 j 07:53	0°♁		morning max el	132 Jul 11 j 19:52	1°♄45'11	45°49'12
evening rise	130 Jan 18 j 08:14	7°♁31'12			132 Aug 08 j 02:55	0°♄	
	130 Feb 05 j 08:59	0°♁			132 Sep 03 j 12:04	0°♄	
	130 Mar 01 j 14:50	0°♁		asc. node	132 Sep 04 j 22:35	1°♄41'12	
asc. node	130 Mar 21 j 03:34	23°♁55'14			132 Sep 28 j 14:32	0°♄	
	130 Mar 26 j 03:30	0°♄			132 Oct 23 j 00:13	0°♄	
	130 Apr 20 j 01:23	0°♄			132 Nov 16 j 01:31	0°♄	
	130 May 15 j 12:12	0°♄			132 Dec 09 j 23:44	0°♁	
	130 Jun 10 j 20:10	0°♄		desc. node	132 Dec 25 j 12:18	19°♁28'17	
	130 Jul 09 j 00:16	0°♄			133 Jan 02 j 21:54	0°♄	
desc. node	130 Jul 10 j 17:07	1°♄42'06		morning set	133 Jan 12 j 13:54	12°♄06'08	
evening max el	130 Jul 16 j 07:25	7°♄10'14	45°53'53		133 Jan 26 j 21:29	0°♁	
	130 Aug 13 j 02:43	0°♄			133 Feb 19 j 23:19	0°♁	
greatest brilliancy	130 Aug 24 j 01:06	5°♄29'59	-4.6m				
retrograde	130 Sep 03 j 12:11	7°♄29'22		superior conj	133 Feb 22 j 06:27	2°♁51'22	-1°-25'-16
evening set	130 Sep 20 j 17:09	1°♄56'25		minimum elong	133 Feb 22 j 07:45	2°♁55'23	1°25'18
	130 Sep 23 j 23:12	30°♄		max. Earth dist.	133 Feb 26 j 01:37	7°♁34'29	1.72400 AU
inferior conj	130 Sep 24 j 08:50	29°♄45'22	-7°-48'-19		133 Mar 16 j 04:03	0°♁	
minimum elong	130 Sep 24 j 17:54	29°♄31'33	7°46'58	evening rise	133 Apr 02 j 01:32	20°♁50'38	
min. Earth dist.	130 Sep 25 j 05:34	29°♄13'49	0.27273 AU		133 Apr 09 j 12:16	0°♄	
morning rise	130 Sep 28 j 18:15	27°♄07'51		asc. node	133 Apr 17 j 15:22	9°♄58'35	
direct	130 Oct 15 j 04:23	21°♄53'24			133 May 04 j 00:11	0°♄	
greatest brilliancy	130 Oct 29 j 00:32	25°♄23'57	-4.7m		133 May 28 j 16:09	0°♄	
asc. node	130 Oct 31 j 20:01	26°♄50'33			133 Jun 22 j 13:12	0°♄	
	130 Nov 06 j 00:11	0°♄			133 Jul 17 j 17:55	0°♄	
morning max el	130 Dec 04 j 23:53	25°♄25'04	46°56'14	desc. node	133 Aug 07 j 04:57	23°♄55'21	
	130 Dec 09 j 10:02	0°♄			133 Aug 12 j 11:33	0°♄	
	131 Jan 05 j 12:30	0°♁			133 Sep 08 j 05:49	0°♄	
	131 Jan 31 j 03:35	0°♄		evening max el	133 Sep 27 j 21:44	20°♄34'14	47°07'35
desc. node	131 Feb 20 j 09:59	24°♄12'31			133 Oct 07 j 17:29	0°♁	
	131 Feb 25 j 05:41	0°♁		greatest brilliancy	133 Nov 05 j 16:09	20°♁44'27	-4.7m
	131 Mar 22 j 02:19	0°♁		retrograde	133 Nov 17 j 10:22	23°♁19'12	
	131 Apr 15 j 20:21	0°♁		asc. node	133 Nov 28 j 08:00	20°♁52'28	
	131 May 10 j 12:31	0°♄		evening set	133 Dec 01 j 17:53	19°♁12'04	
	131 Jun 04 j 02:21	0°♄		min. Earth dist.	133 Dec 07 j 08:35	15°♁54'52	0.26441 AU
morning set	131 Jun 06 j 20:24	3°♄22'07		inferior conj	133 Dec 07 j 22:31	15°♁33'32	2°27'43
asc. node	131 Jun 13 j 13:03	11°♄34'26		minimum elong	133 Dec 07 j 17:06	15°♁41'49	2°26'02
	131 Jun 28 j 12:57	0°♄		morning rise	133 Dec 13 j 16:50	12°♁10'41	
max. Earth dist.	131 Jul 09 j 18:41	13°♄51'25	1.73158 AU	direct	133 Dec 28 j 06:35	7°♁57'36	
				greatest brilliancy	134 Jan 08 j 10:54	10°♁19'08	-4.7m
superior conj	131 Jul 13 j 02:49	17°♄58'55	1°02'25		134 Feb 05 j 13:59	0°♄	
minimum elong	131 Jul 12 j 18:07	17°♄31'59	1°02'08	morning max el	134 Feb 16 j 07:20	10°♄12'04	46°33'30
	131 Jul 22 j 19:58	0°♄			134 Mar 07 j 08:15	0°♁	
	131 Aug 16 j 00:06	0°♄		desc. node	134 Mar 19 j 21:49	13°♁48'24	
evening rise	131 Aug 18 j 07:31	2°♄52'16			134 Apr 03 j 06:03	0°♁	
	131 Sep 09 j 02:49	0°♄			134 Apr 29 j 03:43	0°♁	
	131 Oct 03 j 05:39	0°♄			134 May 24 j 13:01	0°♄	
desc. node	131 Oct 03 j 02:46	29°♄51'03			134 Jun 18 j 13:35	0°♄	
	131 Oct 27 j 09:44	0°♁		asc. node	134 Jul 11 j 00:58	27°♄17'17	
	131 Nov 20 j 16:37	0°♄			134 Jul 13 j 06:13	0°♄	
	131 Dec 15 j 05:47	0°♁			134 Aug 06 j 15:22	0°♄	
	132 Jan 09 j 09:04	0°♁		morning set	134 Aug 13 j 21:44	9°♄00'25	
asc. node	132 Jan 24 j 05:43	17°♁07'13			134 Aug 30 j 18:23	0°♄	
	132 Feb 04 j 20:25	0°♁		max. Earth dist.	134 Sep 17 j 11:58	22°♄11'27	1.71634 AU
evening max el	132 Feb 21 j 13:24	17°♁23'33	46°02'32				
	132 Mar 06 j 03:08	0°♄		superior conj	134 Sep 20 j 09:20	25°♄48'51	1°16'39
greatest brilliancy	132 Mar 27 j 02:02	14°♄37'33	-4.5m	minimum elong	134 Sep 20 j 17:11	26°♄13'27	1°16'29
retrograde	132 Apr 10 j 22:22	18°♄30'36			134 Sep 23 j 17:27	0°♄	
evening set	132 Apr 26 j 11:52	13°♄47'27			134 Oct 17 j 14:52	0°♄	

evening rise	134 Oct 30 j 08:35	15°♌59'45		morning max el	137 Apr 29 j 21:04	21°♋47'15	45°53'29
desc. node	134 Oct 30 j 14:39	16°♌18'48			137 May 08 j 05:07	0°♍	
	134 Nov 10 j 12:19	0°♎			137 Jun 05 j 09:16	0°♏	
	134 Dec 04 j 10:53	0°♐			137 Jul 01 j 19:01	0°♑	
	134 Dec 28 j 11:56	0°♒			137 Jul 27 j 06:02	0°♓	
	135 Jan 21 j 18:05	0°♋		asc. node	137 Aug 07 j 12:44	13°♌33'46	
	135 Feb 15 j 09:48	0°♌			137 Aug 21 j 01:08	0°♍	
asc. node	135 Feb 20 j 17:38	6°♍23'12			137 Sep 14 j 08:36	0°♎	
	135 Mar 12 j 18:09	0°♏			137 Oct 08 j 08:39	0°♐	
	135 Apr 08 j 08:36	0°♑		morning set	137 Oct 24 j 23:05	20°♒52'09	
evening max el	135 May 03 j 05:25	25°♓36'29	45°18'19		137 Nov 01 j 05:06	0°♌	
	135 May 07 j 21:40	0°♓			137 Nov 25 j 00:42	0°♎	
greatest brilliancy	135 Jun 07 j 08:37	22°♌00'30	-4.5m	desc. node	137 Nov 27 j 02:32	2°♏36'55	
desc. node	135 Jun 12 j 07:23	23°♌49'36					
retrograde	135 Jun 20 j 15:34	25°♌05'26		superior conj	137 Dec 05 j 03:04	12°♏42'53	0°-18'-56
evening set	135 Jul 06 j 14:16	20°♌17'56		minimum elong	137 Dec 04 j 22:00	12°♏26'56	0°18'43
inferior conj	135 Jul 12 j 01:48	17°♌00'41	-6°-16'-15	max. Earth dist.	137 Dec 07 j 02:34	15°♏12'18	1.71069 AU
minimum elong	135 Jul 11 j 15:47	17°♌16'15	6°14'15		137 Dec 18 j 21:01	0°♐	
min. Earth dist.	135 Jul 12 j 05:41	16°♌54'39	0.28750 AU		138 Jan 11 j 19:07	0°♑	
morning rise	135 Jul 16 j 16:59	14°♌11'32		evening rise	138 Jan 15 j 18:45	4°♒58'59	
direct	135 Aug 02 j 16:16	8°♌46'36			138 Feb 04 j 20:17	0°♋	
greatest brilliancy	135 Aug 17 j 00:52	12°♌23'15	-4.5m		138 Mar 01 j 02:15	0°♌	
	135 Sep 10 j 16:00	0°♍		asc. node	138 Mar 20 j 05:34	23°♍25'59	
morning max el	135 Sep 21 j 10:45	10°♍12'47	46°25'20		138 Mar 25 j 15:11	0°♎	
asc. node	135 Oct 03 j 10:23	22°♍35'51			138 Apr 19 j 13:36	0°♏	
	135 Oct 10 j 06:02	0°♐			138 May 15 j 01:29	0°♑	
	135 Nov 05 j 09:30	0°♒			138 Jun 10 j 11:41	0°♓	
	135 Nov 30 j 07:40	0°♋			138 Jul 08 j 21:32	0°♌	
	135 Dec 24 j 18:08	0°♌		desc. node	138 Jul 09 j 19:09	0°♍53'24	
	136 Jan 18 j 00:39	0°♍		evening max el	138 Jul 13 j 21:08	4°♎51'29	45°51'32
desc. node	136 Jan 23 j 00:08	6°♎09'43			138 Aug 14 j 17:02	0°♏	
	136 Feb 11 j 06:35	0°♐		greatest brilliancy	138 Aug 21 j 11:19	3°♐04'41	-4.6m
	136 Mar 06 j 13:19	0°♑		retrograde	138 Sep 01 j 01:21	5°♐06'12	
morning set	136 Mar 27 j 12:24	25°♑50'37			138 Sep 17 j 10:50	30°♑	
	136 Mar 30 j 21:25	0°♒		evening set	138 Sep 18 j 08:50	29°♑28'28	
	136 Apr 24 j 06:54	0°♓		inferior conj	138 Sep 21 j 21:50	27°♑21'13	-7°-58'-23
				minimum elong	138 Sep 22 j 06:24	27°♑08'12	7°57'14
superior conj	136 May 03 j 16:43	11°♓33'25	0°-26'-39	min. Earth dist.	138 Sep 22 j 18:17	26°♑50'09	0.27342 AU
minimum elong	136 May 03 j 22:02	11°♓49'44	0°26'26	morning rise	138 Sep 26 j 03:37	24°♑49'04	
max. Earth dist.	136 May 04 j 01:36	12°♓00'38	1.73588 AU	direct	138 Oct 12 j 18:38	19°♑28'11	
asc. node	136 May 15 j 03:19	25°♓36'20		greatest brilliancy	138 Oct 26 j 16:00	23°♑00'44	-4.7m
	136 May 18 j 17:12	0°♔		asc. node	138 Oct 30 j 22:11	25°♑16'57	
evening rise	136 Jun 08 j 22:34	26°♔03'37			138 Nov 07 j 01:06	0°♕	
	136 Jun 12 j 03:34	0°♕		morning max el	138 Dec 02 j 14:52	23°♕02'15	46°56'06
	136 Jul 06 j 13:47	0°♖			138 Dec 09 j 07:05	0°♎	
	136 Jul 31 j 00:38	0°♗			139 Jan 05 j 04:33	0°♏	
	136 Aug 24 j 13:39	0°♘			139 Jan 30 j 17:31	0°♐	
desc. node	136 Sep 03 j 16:52	12°♘19'53		desc. node	139 Feb 19 j 12:00	23°♐39'34	
	136 Sep 18 j 06:47	0°♙			139 Feb 24 j 18:28	0°♑	
	136 Oct 13 j 06:54	0°♚			139 Mar 21 j 14:23	0°♒	
	136 Nov 07 j 21:13	0°♛			139 Apr 15 j 07:55	0°♓	
	136 Dec 05 j 00:15	0°♜			139 May 09 j 23:45	0°♔	
evening max el	136 Dec 08 j 21:45	4°♜01'56	47°14'14		139 Jun 03 j 13:22	0°♕	
asc. node	136 Dec 25 j 19:59	20°♜09'38		morning set	139 Jun 04 j 14:55	1°♕18'13	
	137 Jan 07 j 14:31	0°♝		asc. node	139 Jun 12 j 15:11	11°♕07'17	
greatest brilliancy	137 Jan 15 j 04:53	4°♝20'56	-4.6m		139 Jun 27 j 23:52	0°♖	
retrograde	137 Jan 28 j 20:36	7°♝48'55		max. Earth dist.	139 Jul 07 j 16:30	11°♖56'50	1.73197 AU
evening set	137 Feb 15 j 18:46	1°♞35'04					
min. Earth dist.	137 Feb 18 j 08:28	29°♞58'29	0.28128 AU	superior conj	139 Jul 10 j 21:14	15°♖53'44	1°00'15
	137 Feb 18 j 07:30	30°♞		minimum elong	139 Jul 10 j 12:31	15°♖26'49	0°59'58
inferior conj	137 Feb 18 j 22:58	29°♞35'29	8°39'27		139 Jul 22 j 06:55	0°♗	
minimum elong	137 Feb 18 j 23:10	29°♞35'10	8°39'28		139 Aug 15 j 11:12	0°♘	
morning rise	137 Feb 22 j 03:46	27°♞35'20		evening rise	139 Aug 16 j 00:22	0°♙40'55	
direct	137 Mar 11 j 21:39	21°♞32'23			139 Sep 08 j 14:10	0°♚	
greatest brilliancy	137 Mar 22 j 23:17	23°♞45'51	-4.5m	desc. node	139 Oct 02 j 04:51	29°♚21'21	
	137 Apr 03 j 17:12	0°♛			139 Oct 02 j 17:18	0°♛	
desc. node	137 Apr 16 j 09:28	9°♛35'44			139 Oct 26 j 21:45	0°♜	

	139 Nov 20 j 05:06	0°☾			142 Jun 18 j 01:02	0°♁		
	139 Dec 14 j 18:59	0°♁		asc. node	142 Jul 10 j 02:54	26°♁49'03		
	140 Jan 08 j 23:37	0°♁			142 Jul 12 j 17:22	0°☾		
asc. node	140 Jan 23 j 07:43	16°♁27'59			142 Aug 06 j 02:23	0°♁		
	140 Feb 04 j 14:10	0°♁		morning set	142 Aug 11 j 14:16	6°♁48'41		
evening max el	140 Feb 19 j 05:41	15°♁11'07	46°05'08		142 Aug 30 j 05:21	0°♁		
	140 Mar 06 j 09:39	0°♁		max. Earth dist.	142 Sep 14 j 22:42	19°♁40'14	1.71683 AU	
greatest brilliancy	140 Mar 24 j 19:35	12°♁29'11	-4.5m					
retrograde	140 Apr 08 j 15:28	16°♁21'11		superior conj	142 Sep 17 j 23:59	23°♁29'51	1°18'04	
evening set	140 Apr 24 j 06:29	11°♁35'21		minimum elong	142 Sep 18 j 07:14	23°♁52'34	1°17'56	
inferior conj	140 Apr 30 j 00:56	8°♁04'44	3°10'01		142 Sep 23 j 04:27	0°♁		
minimum elong	140 Apr 30 j 07:25	7°♁54'33	3°08'16		142 Oct 17 j 01:59	0°♁		
min. Earth dist.	140 Apr 30 j 05:29	7°♁57'35	0.28972 AU	evening rise	142 Oct 27 j 19:39	13°♁28'44		
morning rise	140 May 06 j 08:34	4°♁16'16		desc. node	142 Oct 29 j 16:51	15°♁50'34		
desc. node	140 May 13 j 21:28	0°♁57'41			142 Nov 09 j 23:34	0°♁		
	140 May 18 j 04:56	30°♁			142 Dec 03 j 22:18	0°♁		
direct	140 May 21 j 15:42	29°♁45'54			142 Dec 27 j 23:33	0°♁		
	140 May 25 j 03:57	0°♁			143 Jan 21 j 06:01	0°♁		
greatest brilliancy	140 Jun 03 j 23:04	2°♁52'34	-4.5m		143 Feb 14 j 22:19	0°♁		
morning max el	140 Jul 09 j 12:20	29°♁36'09	45°48'30	asc. node	143 Feb 19 j 19:40	5°♁51'23		
	140 Jul 09 j 22:18	0°♁			143 Mar 12 j 07:50	0°♁		
	140 Aug 07 j 18:46	0°♁			143 Apr 08 j 01:00	0°♁		
asc. node	140 Sep 03 j 01:36	0°♁		evening max el	143 Apr 30 j 19:56	23°♁22'30	45°18'42	
	140 Sep 04 j 00:39	1°♁07'42			143 May 07 j 22:59	0°♁		
	140 Sep 28 j 03:01	0°♁		greatest brilliancy	143 Jun 04 j 21:29	19°♁46'49	-4.5m	
	140 Oct 22 j 12:12	0°♁		desc. node	143 Jun 11 j 09:22	22°♁02'29		
	140 Nov 15 j 13:13	0°♁		retrograde	143 Jun 18 j 06:56	22°♁55'10		
	140 Dec 09 j 11:16	0°♁		evening set	143 Jul 04 j 03:19	18°♁10'49		
desc. node	140 Dec 24 j 14:20	18°♁58'46		inferior conj	143 Jul 09 j 17:41	14°♁49'50	-6°-1'-56	
	141 Jan 02 j 09:18	0°♁		minimum elong	143 Jul 09 j 07:40	15°♁05'22	5°59'49	
morning set	141 Jan 09 j 23:52	9°♁31'37		min. Earth dist.	143 Jul 09 j 21:34	14°♁43'48	0.28775 AU	
	141 Jan 26 j 08:46	0°♁		morning rise	143 Jul 14 j 11:39	11°♁56'33		
	141 Feb 19 j 10:28	0°♁		direct	143 Jul 31 j 07:45	6°♁35'06		
				greatest brilliancy	143 Aug 14 j 17:43	10°♁12'29	-4.5m	
superior conj	141 Feb 19 j 19:23	0°♁27'44	-1°-25'-26		143 Sep 10 j 18:46	0°♁		
minimum elong	141 Feb 19 j 19:45	0°♁28'52	1°25'27	morning max el	143 Sep 19 j 01:22	7°♁55'07	46°23'58	
max. Earth dist.	141 Feb 23 j 18:36	5°♁23'38	1.72341 AU	asc. node	143 Oct 02 j 12:29	21°♁52'14		
	141 Mar 15 j 15:08	0°♁			143 Oct 09 j 23:03	0°♁		
evening rise	141 Mar 30 j 17:07	18°♁36'44			143 Nov 04 j 23:40	0°♁		
	141 Apr 08 j 23:20	0°♁			143 Nov 29 j 20:34	0°♁		
asc. node	141 Apr 16 j 17:32	9°♁31'07			143 Dec 24 j 06:19	0°♁		
	141 May 03 j 11:26	0°♁			144 Jan 17 j 12:23	0°♁		
	141 May 28 j 03:43	0°♁		desc. node	144 Jan 22 j 02:08	5°♁39'50		
	141 Jun 22 j 01:21	0°♁			144 Feb 10 j 17:58	0°♁		
	141 Jul 17 j 07:02	0°♁			144 Mar 06 j 00:27	0°♁		
desc. node	141 Aug 06 j 06:58	23°♁19'48		morning set	144 Mar 25 j 04:06	23°♁37'21		
	141 Aug 12 j 02:21	0°♁			144 Mar 30 j 08:22	0°♁		
	141 Sep 08 j 00:11	0°♁			144 Apr 23 j 17:44	0°♁		
evening max el	141 Sep 25 j 11:32	18°♁10'14	47°05'26					
	141 Oct 07 j 23:18	0°♁		superior conj	144 May 01 j 10:18	9°♁26'57	0°-29'-41	
greatest brilliancy	141 Nov 03 j 07:21	18°♁17'23	-4.7m	minimum elong	144 May 01 j 16:11	9°♁44'58	0°29'26	
retrograde	141 Nov 14 j 22:28	20°♁48'30		max. Earth dist.	144 May 01 j 20:35	9°♁58'30	1.73570 AU	
asc. node	141 Nov 27 j 10:06	17°♁38'53		asc. node	144 May 14 j 05:24	25°♁09'40		
evening set	141 Nov 29 j 05:40	16°♁43'05			144 May 18 j 03:59	0°♁		
min. Earth dist.	141 Dec 04 j 22:23	13°♁22'54	0.26415 AU	evening rise	144 Jun 06 j 17:35	24°♁01'27		
inferior conj	141 Dec 05 j 10:44	13°♁03'59	2°04'06		144 Jun 11 j 14:24	0°♁		
minimum elong	141 Dec 05 j 06:09	13°♁11'01	2°02'38		144 Jul 06 j 00:49	0°♁		
morning rise	141 Dec 11 j 07:04	9°♁38'14			144 Jul 30 j 12:02	0°♁		
direct	141 Dec 25 j 18:39	5°♁28'32			144 Aug 24 j 01:36	0°♁		
greatest brilliancy	142 Jan 06 j 00:48	7°♁51'29	-4.7m	desc. node	144 Sep 02 j 18:59	11°♁49'16		
	142 Feb 05 j 18:32	0°♁			144 Sep 17 j 19:29	0°♁		
morning max el	142 Feb 13 j 19:33	7°♁44'58	46°34'56		144 Oct 12 j 20:44	0°♁		
	142 Mar 07 j 02:13	0°♁			144 Nov 07 j 13:05	0°♁		
desc. node	142 Mar 18 j 23:53	13°♁09'16			144 Dec 04 j 21:13	0°♁		
	142 Apr 02 j 20:38	0°♁		evening max el	144 Dec 06 j 12:01	1°♁39'42	47°15'48	
	142 Apr 28 j 16:39	0°♁		asc. node	144 Dec 24 j 21:55	19°♁04'40		
	142 May 24 j 01:01	0°♁			145 Jan 08 j 23:33	0°♁		

greatest brilliancy	145 Jan 12 j 20:40	2° K 02'53	-4.6m		147 Jun 03 j 00:01	0° II	
retrograde	145 Jan 26 j 12:15	5° K 31'16		asc. node	147 Jun 11 j 17:10	10° II 40'43	
	145 Feb 12 j 05:48	30° \approx			147 Jun 27 j 10:28	0° E	
evening set	145 Feb 13 j 09:15	29° \approx 18'31		max. Earth dist.	147 Jul 05 j 12:25	9° E 57'30	1.73236 AU
min. Earth dist.	145 Feb 15 j 22:37	27° \approx 42'43	0.28075 AU				
inferior conj	145 Feb 16 j 14:07	27° \approx 18'12	8°39'49	superior conj	147 Jul 08 j 15:39	13° E 49'38	0°58'01
minimum elong	145 Feb 16 j 13:30	27° \approx 19'11	8°39'48	minimum elong	147 Jul 08 j 06:59	13° E 22'52	0°57'42
morning rise	145 Feb 19 j 17:57	25° \approx 19'49			147 Jul 21 j 17:33	0° Ω	
direct	145 Mar 09 j 11:46	19° \approx 15'51		evening rise	147 Aug 13 j 17:14	28° Ω 30'44	
greatest brilliancy	145 Mar 20 j 13:08	21° \approx 29'16	-4.5m		147 Aug 14 j 21:58	0° M	
	145 Apr 04 j 14:46	0° K			147 Sep 08 j 01:09	0° E	
desc. node	145 Apr 15 j 11:41	8° K 36'14		desc. node	147 Oct 01 j 06:59	28° E 53'01	
morning max el	145 Apr 27 j 12:33	19° K 34'38	45°54'29		147 Oct 02 j 04:34	0° M	
	145 May 08 j 00:44	0° Y			147 Oct 26 j 09:24	0° Z	
	145 Jun 05 j 00:06	0° B			147 Nov 19 j 17:15	0° Z	
	145 Jul 01 j 07:54	0° II			147 Dec 14 j 07:54	0° \approx	
	145 Jul 26 j 17:56	0° E			148 Jan 08 j 13:57	0° K	
asc. node	145 Aug 06 j 14:50	13° E 04'57		asc. node	148 Jan 22 j 09:51	15° K 49'49	
	145 Aug 20 j 12:30	0° Ω			148 Feb 04 j 07:52	0° Y	
	145 Sep 13 j 19:43	0° M		evening max el	148 Feb 16 j 21:47	12° Y 59'08	46°07'42
	145 Oct 07 j 19:41	0° E			148 Mar 06 j 18:02	0° B	
morning set	145 Oct 22 j 11:16	18° E 24'48		greatest brilliancy	148 Mar 22 j 13:43	10° B 22'47	-4.5m
	145 Oct 31 j 16:07	0° M		retrograde	148 Apr 06 j 08:09	14° B 13'03	
	145 Nov 24 j 11:42	0° Z		evening set	148 Apr 22 j 01:16	9° B 24'35	
desc. node	145 Nov 26 j 04:35	2° Z 08'44		inferior conj	148 Apr 27 j 17:34	5° B 56'35	3°28'07
				minimum elong	148 Apr 28 j 00:33	5° B 45'35	3°26'15
superior conj	145 Dec 02 j 12:30	10° Z 06'55	0°-15'00	min. Earth dist.	148 Apr 27 j 21:56	5° B 49'42	0.28962 AU
minimum elong	145 Dec 02 j 08:28	9° Z 54'11	0°14'48	morning rise	148 May 04 j 00:05	2° B 09'19	
behind sun begin	145 Dec 01 j 20:55	9° Z 17'50			148 May 08 j 09:16	30° Y	
behind sun end	145 Dec 02 j 20:01	10° Z 30'32		desc. node	148 May 12 j 23:25	28° Y 26'20	
max. Earth dist.	145 Dec 04 j 09:40	12° Z 29'01	1.71053 AU	direct	148 May 19 j 08:24	27° Y 38'08	
	145 Dec 18 j 08:00	0° Z			148 May 30 j 20:30	0° B	
	146 Jan 11 j 06:05	0° \approx		greatest brilliancy	148 Jun 01 j 12:23	0° B 41'10	-4.5m
evening rise	146 Jan 13 j 05:32	2° \approx 28'22		morning max el	148 Jul 07 j 04:00	27° B 26'21	45°47'44
	146 Feb 04 j 07:16	0° K			148 Jul 09 j 19:43	0° II	
	146 Feb 28 j 13:22	0° Y			148 Aug 07 j 10:01	0° E	
asc. node	146 Mar 19 j 07:44	22° Y 58'10			148 Sep 02 j 14:43	0° Ω	
	146 Mar 25 j 02:36	0° B		asc. node	148 Sep 03 j 02:47	0° Ω 35'33	
	146 Apr 19 j 01:35	0° II			148 Sep 27 j 15:09	0° M	
	146 May 14 j 14:36	0° E			148 Oct 21 j 23:49	0° E	
	146 Jun 10 j 03:09	0° Ω			148 Nov 15 j 00:32	0° M	
	146 Jul 08 j 19:14	0° M			148 Dec 08 j 22:25	0° Z	
desc. node	146 Jul 08 j 21:11	0° M 04'46		desc. node	148 Dec 23 j 16:19	18° Z 30'14	
evening max el	146 Jul 11 j 11:53	2° M 36'17	45°49'19		149 Jan 01 j 20:19	0° Z	
	146 Aug 17 j 03:27	0° E		morning set	149 Jan 07 j 09:40	6° Z 57'41	
greatest brilliancy	146 Aug 18 j 21:59	0° E 41'35	-4.6m		149 Jan 25 j 19:41	0° \approx	
retrograde	146 Aug 29 j 14:32	2° E 44'44					
	146 Sep 10 j 09:50	30° M		superior conj	149 Feb 17 j 08:10	28° \approx 04'34	-1°-25'-26
evening set	146 Sep 16 j 00:36	27° M 02'48		minimum elong	149 Feb 17 j 07:34	28° \approx 02'43	1°25'27
inferior conj	146 Sep 19 j 11:06	24° M 58'58	-8°-7'-33		149 Feb 18 j 21:17	0° K	
minimum elong	146 Sep 19 j 19:04	24° M 46'50	8°06'35	max. Earth dist.	149 Feb 21 j 10:29	3° K 10'15	1.72282 AU
min. Earth dist.	146 Sep 20 j 07:00	24° M 28'40	0.27408 AU		149 Mar 15 j 01:52	0° Y	
morning rise	146 Sep 23 j 13:14	22° M 31'59		evening rise	149 Mar 28 j 08:29	16° Y 23'08	
direct	146 Oct 10 j 09:20	17° M 05'07			149 Apr 08 j 10:05	0° B	
greatest brilliancy	146 Oct 24 j 06:33	20° M 37'54	-4.7m	asc. node	149 Apr 15 j 19:37	9° B 04'28	
asc. node	146 Oct 30 j 00:17	23° M 47'55			149 May 02 j 22:19	0° II	
	146 Nov 07 j 18:52	0° E			149 May 27 j 14:58	0° E	
morning max el	146 Nov 30 j 05:44	20° E 40'20	46°55'46		149 Jun 21 j 13:11	0° Ω	
	146 Dec 09 j 03:03	0° M			149 Jul 16 j 19:54	0° M	
	147 Jan 04 j 19:59	0° Z		desc. node	149 Aug 05 j 09:03	22° M 45'02	
	147 Jan 30 j 06:59	0° Z			149 Aug 11 j 17:03	0° E	
desc. node	147 Feb 18 j 14:07	23° Z 08'09			149 Sep 07 j 18:44	0° M	
	147 Feb 24 j 06:49	0° \approx		evening max el	149 Sep 23 j 00:29	15° M 44'55	47°03'17
	147 Mar 21 j 02:01	0° K			149 Oct 08 j 07:02	0° Z	
	147 Apr 14 j 19:05	0° Y		greatest brilliancy	149 Oct 31 j 22:57	15° Z 51'34	-4.7m
	147 May 09 j 10:35	0° B		retrograde	149 Nov 12 j 10:16	18° Z 18'53	
morning set	147 Jun 02 j 09:29	29° B 15'33		evening set	149 Nov 26 j 17:40	14° Z 14'34	

asc. node	149 Nov 26 j 12:03	14°♁22'01			152 May 17 j 14:44	0°♁	
min. Earth dist.	149 Dec 02 j 12:33	10°♁51'32	0.26392 AU	evening rise	152 Jun 04 j 12:40	21°♁59'36	
inferior conj	149 Dec 02 j 23:00	10°♁35'30	1°40'08		152 Jun 11 j 01:14	0°♁	
minimum elong	149 Dec 02 j 19:16	10°♁41'15	1°38'56		152 Jul 05 j 11:51	0°♁	
morning rise	149 Dec 08 j 21:09	7°♁07'06			152 Jul 29 j 23:25	0°♁	
direct	149 Dec 23 j 06:16	3°♁00'14			152 Aug 23 j 13:31	0°♁	
greatest brilliancy	150 Jan 03 j 15:35	5°♁25'49	-4.7m	desc. node	152 Sep 01 j 21:08	11°♁18'54	
	150 Feb 05 j 20:59	0°♁			152 Sep 17 j 08:11	0°♁	
morning max el	150 Feb 11 j 07:37	5°♁18'16	46°36'20		152 Oct 12 j 10:40	0°♁	
	150 Mar 06 j 19:26	0°♁			152 Nov 07 j 05:17	0°♁	
desc. node	150 Mar 18 j 02:02	12°♁31'36		evening max el	152 Dec 04 j 03:17	29°♁19'32	47°17'11
	150 Apr 02 j 10:44	0°♁			152 Dec 04 j 19:09	0°♁	
	150 Apr 28 j 05:13	0°♁		asc. node	152 Dec 24 j 00:06	17°♁57'43	
	150 May 23 j 12:42	0°♁		greatest brilliancy	153 Jan 10 j 12:13	29°♁43'29	-4.6m
	150 Jun 17 j 12:11	0°♁			153 Jan 11 j 02:20	0°♁	
asc. node	150 Jul 09 j 05:03	26°♁22'20		retrograde	153 Jan 24 j 04:06	3°♁12'08	
	150 Jul 12 j 04:14	0°♁			153 Feb 05 j 15:18	30°♁	
	150 Aug 05 j 13:08	0°♁		evening set	153 Feb 10 j 23:05	27°♁01'09	
morning set	150 Aug 09 j 06:55	4°♁38'08		min. Earth dist.	153 Feb 13 j 12:14	25°♁25'54	0.28018 AU
	150 Aug 29 j 16:06	0°♁		inferior conj	153 Feb 14 j 04:59	24°♁59'28	8°39'13
max. Earth dist.	150 Sep 12 j 11:32	17°♁16'18	1.71739 AU	minimum elong	153 Feb 14 j 03:34	25°♁01'42	8°39'11
				morning rise	153 Feb 17 j 08:16	23°♁02'13	
superior conj	150 Sep 15 j 14:38	21°♁11'30	1°19'22	direct	153 Mar 07 j 02:03	16°♁58'01	
minimum elong	150 Sep 15 j 21:15	21°♁32'12	1°19'15	greatest brilliancy	153 Mar 18 j 01:43	19°♁10'25	-4.5m
	150 Sep 22 j 15:17	0°♁			153 Apr 05 j 07:04	0°♁	
	150 Oct 16 j 12:57	0°♁		desc. node	153 Apr 14 j 13:42	7°♁37'14	
evening rise	150 Oct 25 j 06:35	10°♁57'51		morning max el	153 Apr 25 j 04:25	17°♁22'38	45°55'28
desc. node	150 Oct 28 j 18:50	15°♁22'11			153 May 07 j 19:55	0°♁	
	150 Nov 09 j 10:41	0°♁			153 Jun 04 j 14:52	0°♁	
	150 Dec 03 j 09:33	0°♁			153 Jun 30 j 20:48	0°♁	
	150 Dec 27 j 11:00	0°♁			153 Jul 26 j 05:53	0°♁	
	151 Jan 20 j 17:47	0°♁		asc. node	153 Aug 05 j 16:57	12°♁35'58	
	151 Feb 14 j 10:42	0°♁			153 Aug 19 j 23:56	0°♁	
asc. node	151 Feb 18 j 21:49	5°♁20'21			153 Sep 13 j 06:55	0°♁	
	151 Mar 11 j 21:30	0°♁			153 Oct 07 j 06:46	0°♁	
	151 Apr 07 j 17:33	0°♁		morning set	153 Oct 19 j 23:52	15°♁58'41	
evening max el	151 Apr 28 j 10:53	21°♁10'05	45°19'13		153 Oct 31 j 03:11	0°♁	
	151 May 08 j 01:32	0°♁			153 Nov 23 j 22:47	0°♁	
greatest brilliancy	151 Jun 02 j 09:34	17°♁32'49	-4.5m	desc. node	153 Nov 25 j 06:37	1°♁40'10	
desc. node	151 Jun 10 j 11:25	20°♁12'03					
retrograde	151 Jun 15 j 22:49	20°♁45'41		superior conj	153 Nov 29 j 21:59	7°♁30'42	0°-11'-1
evening set	151 Jul 01 j 16:32	16°♁04'07		minimum elong	153 Nov 29 j 19:00	7°♁21'19	0°10'53
inferior conj	151 Jul 07 j 09:33	12°♁39'40	-5°-47'-3	behind sun begin	153 Nov 28 j 22:47	6°♁17'40	
minimum elong	151 Jul 06 j 23:38	12°♁55'03	5°44'53	behind sun end	153 Nov 30 j 15:13	8°♁24'57	
min. Earth dist.	151 Jul 07 j 13:14	12°♁33'57	0.28798 AU	max. Earth dist.	153 Dec 01 j 18:50	9°♁51'52	1.71044 AU
morning rise	151 Jul 12 j 06:21	9°♁42'27			153 Dec 17 j 19:07	0°♁	
direct	151 Jul 28 j 23:31	4°♁24'20		evening rise	154 Jan 10 j 15:54	29°♁55'50	
greatest brilliancy	151 Aug 12 j 10:40	8°♁02'49	-4.5m		154 Jan 10 j 17:14	0°♁	
	151 Sep 10 j 19:51	0°♁			154 Feb 03 j 18:29	0°♁	
morning max el	151 Sep 16 j 16:49	5°♁40'18	46°22'28		154 Feb 28 j 00:43	0°♁	
asc. node	151 Oct 01 j 14:36	21°♁09'38		asc. node	154 Mar 18 j 09:46	22°♁29'14	
	151 Oct 09 j 15:36	0°♁			154 Mar 24 j 14:14	0°♁	
	151 Nov 04 j 13:38	0°♁			154 Apr 18 j 13:50	0°♁	
	151 Nov 29 j 09:22	0°♁			154 May 14 j 04:04	0°♁	
	151 Dec 23 j 18:28	0°♁			154 Jun 09 j 19:08	0°♁	
	152 Jan 17 j 00:04	0°♁		desc. node	154 Jul 07 j 23:22	29°♁14'52	
desc. node	152 Jan 21 j 04:21	5°♁10'41			154 Jul 08 j 18:07	0°♁	
	152 Feb 10 j 05:18	0°♁		evening max el	154 Jul 09 j 02:44	0°♁20'38	45°47'05
	152 Mar 05 j 11:30	0°♁		greatest brilliancy	154 Aug 16 j 09:44	28°♁19'21	-4.5m
morning set	152 Mar 22 j 19:32	21°♁23'20			154 Aug 22 j 15:00	0°♁	
	152 Mar 29 j 19:14	0°♁		retrograde	154 Aug 27 j 03:24	0°♁23'00	
	152 Apr 23 j 04:30	0°♁			154 Aug 31 j 13:15	30°♁	
				evening set	154 Sep 13 j 16:20	24°♁37'25	
superior conj	152 Apr 29 j 03:47	7°♁20'12	0°-32'-41	inferior conj	154 Sep 17 j 00:28	22°♁36'43	-8°-15'-51
minimum elong	152 Apr 29 j 10:11	7°♁39'52	0°32'24	minimum elong	154 Sep 17 j 07:47	22°♁25'33	8°15'03
max. Earth dist.	152 Apr 29 j 16:37	7°♁59'37	1.73552 AU	min. Earth dist.	154 Sep 17 j 19:59	22°♁06'55	0.27468 AU
asc. node	152 May 13 j 07:23	24°♁42'47		morning rise	154 Sep 20 j 22:59	20°♁14'42	

direct	154 Oct 07 j 23:51	14°♎42'12			157 Apr 07 j 21:10	0°♄	
greatest brilliancy	154 Oct 21 j 20:22	18°♎13'59	-4.6m	asc. node	157 Apr 14 j 21:37	8°♄36'31	
asc. node	154 Oct 29 j 02:14	22°♎21'23			157 May 02 j 09:35	0°♂	
	154 Nov 08 j 08:15	0°♁			157 May 27 j 02:35	0°♁	
morning max el	154 Nov 27 j 19:40	18°♁15'46	46°55'21		157 Jun 21 j 01:27	0°♁	
	154 Dec 08 j 22:33	0°♌			157 Jul 16 j 09:14	0°♎	
	155 Jan 04 j 11:22	0°♈		desc. node	157 Aug 04 j 11:10	22°♎08'58	
	155 Jan 29 j 20:33	0°♁			157 Aug 11 j 08:19	0°♁	
desc. node	155 Feb 17 j 16:11	22°♁35'52			157 Sep 07 j 14:12	0°♌	
	155 Feb 23 j 19:23	0°♁		evening max el	157 Sep 20 j 12:51	13°♌17'14	47°01'06
	155 Mar 20 j 13:56	0°♈			157 Oct 08 j 18:03	0°♈	
	155 Apr 14 j 06:32	0°♞		greatest brilliancy	157 Oct 29 j 13:59	13°♈23'57	-4.7m
	155 May 08 j 21:43	0°♄		retrograde	157 Nov 09 j 22:07	15°♈48'27	
morning set	155 May 31 j 03:49	27°♄11'18		evening set	157 Nov 24 j 05:50	11°♈44'27	
	155 Jun 02 j 10:57	0°♂		asc. node	157 Nov 25 j 14:15	11°♈00'06	
asc. node	155 Jun 10 j 19:18	10°♂13'49		min. Earth dist.	157 Nov 30 j 02:44	8°♈19'01	0.26373 AU
	155 Jun 26 j 21:20	0°♁		inferior conj	157 Nov 30 j 11:15	8°♈06'00	1°15'51
max. Earth dist.	155 Jul 03 j 06:57	7°♁53'08	1.73274 AU	minimum elong	157 Nov 30 j 08:23	8°♈10'23	1°14'56
				morning rise	157 Dec 06 j 11:04	4°♈35'22	
superior conj	155 Jul 06 j 09:58	11°♁44'27	0°55'42	direct	157 Dec 20 j 17:47	0°♈30'38	
minimum elong	155 Jul 06 j 01:23	11°♁17'58	0°55'23	greatest brilliancy	158 Jan 01 j 06:58	2°♈59'54	-4.7m
	155 Jul 21 j 04:30	0°♁			158 Feb 05 j 22:20	0°♁	
evening rise	155 Aug 11 j 10:12	26°♁19'56		morning max el	158 Feb 08 j 20:22	2°♁52'24	46°37'57
	155 Aug 14 j 09:04	0°♎			158 Mar 06 j 12:31	0°♁	
	155 Sep 07 j 12:28	0°♁		desc. node	158 Mar 17 j 04:03	11°♁53'19	
desc. node	155 Sep 30 j 08:58	28°♁23'20			158 Apr 02 j 00:54	0°♈	
	155 Oct 01 j 16:08	0°♌			158 Apr 27 j 17:57	0°♞	
	155 Oct 25 j 21:19	0°♈			158 May 23 j 00:38	0°♄	
	155 Nov 19 j 05:40	0°♁			158 Jun 16 j 23:39	0°♂	
	155 Dec 13 j 21:07	0°♁		asc. node	158 Jul 08 j 07:12	25°♂54'38	
	156 Jan 08 j 04:40	0°♈			158 Jul 11 j 15:25	0°♁	
asc. node	156 Jan 21 j 11:57	15°♈10'26			158 Aug 05 j 00:11	0°♁	
	156 Feb 04 j 02:20	0°♞		morning set	158 Aug 06 j 23:35	2°♁26'47	
evening max el	156 Feb 14 j 13:07	10°♞44'05	46°10'06		158 Aug 29 j 03:08	0°♎	
	156 Mar 07 j 06:06	0°♄		max. Earth dist.	158 Sep 10 j 02:26	14°♎57'58	1.71793 AU
greatest brilliancy	156 Mar 20 j 07:48	8°♄14'49	-4.5m				
retrograde	156 Apr 04 j 00:22	12°♄03'31		superior conj	158 Sep 13 j 05:19	18°♎52'24	1°20'31
evening set	156 Apr 19 j 20:04	7°♄12'11		minimum elong	158 Sep 13 j 11:14	19°♎10'56	1°20'25
inferior conj	156 Apr 25 j 10:10	3°♄47'05	3°45'59		158 Sep 22 j 02:24	0°♁	
minimum elong	156 Apr 25 j 17:37	3°♄35'20	3°44'01		158 Oct 16 j 00:12	0°♌	
min. Earth dist.	156 Apr 25 j 14:39	3°♄40'00	0.28953 AU	evening rise	158 Oct 22 j 17:41	8°♌26'38	
morning rise	156 May 01 j 15:22	0°♄01'10		desc. node	158 Oct 27 j 20:54	14°♌53'08	
	156 May 01 j 16:12	30°♞			158 Nov 08 j 22:06	0°♈	
desc. node	156 May 12 j 01:28	25°♞57'57			158 Dec 02 j 21:08	0°♁	
direct	156 May 17 j 00:33	25°♞28'55			158 Dec 26 j 22:45	0°♁	
greatest brilliancy	156 May 30 j 02:18	28°♞29'03	-4.5m		159 Jan 20 j 05:51	0°♈	
	156 Jun 02 j 07:07	0°♄			159 Feb 13 j 23:23	0°♞	
morning max el	156 Jul 04 j 19:00	25°♄13'43	45°47'06	asc. node	159 Feb 17 j 23:52	4°♞48'15	
	156 Jul 09 j 16:51	0°♂			159 Mar 11 j 11:27	0°♄	
	156 Aug 07 j 01:26	0°♁			159 Apr 07 j 10:36	0°♂	
	156 Sep 02 j 04:05	0°♁		evening max el	159 Apr 26 j 02:43	18°♂59'22	45°19'43
asc. node	156 Sep 02 j 04:49	0°♁02'09			159 May 08 j 06:00	0°♁	
	156 Sep 27 j 03:34	0°♎		greatest brilliancy	159 May 30 j 21:47	15°♁18'36	-4.5m
	156 Oct 21 j 11:44	0°♁		desc. node	159 Jun 09 j 13:36	18°♁17'01	
	156 Nov 14 j 12:09	0°♌		retrograde	159 Jun 13 j 15:05	18°♁35'44	
	156 Dec 08 j 09:50	0°♈		evening set	159 Jun 29 j 06:03	13°♁56'51	
desc. node	156 Dec 22 j 18:32	18°♈01'36		inferior conj	159 Jul 05 j 01:31	10°♁28'58	-5°-31'-36
	157 Jan 01 j 07:36	0°♁		minimum elong	159 Jul 04 j 15:45	10°♁44'05	5°29'25
morning set	157 Jan 04 j 19:50	4°♁23'55		min. Earth dist.	159 Jul 05 j 04:43	10°♁24'00	0.28822 AU
	157 Jan 25 j 06:51	0°♁		morning rise	159 Jul 10 j 01:08	7°♁27'56	
				direct	159 Jul 26 j 16:02	2°♁13'10	
superior conj	157 Feb 14 j 21:12	25°♁41'24	-1°-25'-16	greatest brilliancy	159 Aug 10 j 03:33	5°♁52'33	-4.5m
minimum elong	157 Feb 14 j 19:39	25°♁36'35	1°25'17		159 Sep 10 j 20:03	0°♁	
	157 Feb 18 j 08:21	0°♈		morning max el	159 Sep 14 j 08:58	3°♁26'46	46°20'55
max. Earth dist.	157 Feb 19 j 01:16	0°♈52'35	1.72224 AU	asc. node	159 Sep 30 j 16:37	20°♁26'33	
	157 Mar 14 j 12:54	0°♞			159 Oct 09 j 08:07	0°♎	
evening rise	157 Mar 25 j 23:53	14°♞08'35			159 Nov 04 j 03:42	0°♁	

	159 Nov 28 j 22:18	0°♍		162 May 13 j 17:33	0°♁	
	159 Dec 23 j 06:46	0°♁		162 Jun 09 j 11:14	0°♈	
	160 Jan 16 j 11:55	0°♁		162 Jul 06 j 16:50	28°♈03'47	45°44'50
desc. node	160 Jan 20 j 06:21	4°♁40'18		162 Jul 07 j 01:22	28°♈24'11	
	160 Feb 09 j 16:48	0°♁		162 Jul 08 j 17:48	0°♍	
	160 Mar 04 j 22:44	0°♁		162 Aug 13 j 22:08	25°♍58'36	-4.5m
morning set	160 Mar 20 j 11:08	19°♁09'16		162 Aug 24 j 15:52	28°♍02'13	
	160 Mar 29 j 06:16	0°♁		162 Sep 11 j 07:57	22°♍13'22	
	160 Apr 22 j 15:24	0°♁		162 Sep 14 j 14:02	20°♍15'27	-8°-23'-3
				162 Sep 14 j 20:39	20°♍05'19	8°22'25
superior conj	160 Apr 26 j 21:29	5°♁13'43	0°-35'-37	162 Sep 15 j 09:27	19°♍45'45	0.27533 AU
minimum elong	160 Apr 27 j 04:23	5°♁34'55	0°35'19	162 Sep 18 j 09:07	17°♍58'03	
max. Earth dist.	160 Apr 27 j 15:01	6°♁07'37	1.73532 AU	162 Oct 05 j 14:07	12°♍20'00	
asc. node	160 May 12 j 09:35	24°♁16'13		162 Oct 19 j 11:15	15°♍51'43	-4.6m
	160 May 17 j 01:36	0°♁		162 Oct 28 j 04:27	20°♍58'10	
evening rise	160 Jun 02 j 08:01	19°♁58'13		162 Nov 08 j 18:13	0°♁	
	160 Jun 10 j 12:11	0°♁		162 Nov 25 j 08:45	15°♁48'53	46°54'51
	160 Jul 04 j 23:02	0°♈		162 Dec 08 j 17:33	0°♍	
	160 Jul 29 j 10:59	0°♍		163 Jan 04 j 02:32	0°♁	
	160 Aug 23 j 01:40	0°♁		163 Jan 29 j 09:59	0°♁	
desc. node	160 Aug 31 j 23:05	10°♁47'13		163 Feb 16 j 18:13	22°♁03'47	
	160 Sep 16 j 21:10	0°♍		163 Feb 23 j 07:49	0°♁	
	160 Oct 12 j 00:55	0°♁		163 Mar 20 j 01:44	0°♁	
	160 Nov 06 j 21:55	0°♁		163 Apr 13 j 17:52	0°♁	
evening max el	160 Dec 01 j 19:14	27°♁00'34	47°18'25	163 May 08 j 08:44	0°♁	
	160 Dec 04 j 18:09	0°♁		163 May 28 j 22:21	25°♁08'00	
asc. node	160 Dec 23 j 02:12	16°♁48'13		163 Jun 01 j 21:45	0°♁	
greatest brilliancy	161 Jan 08 j 04:16	27°♁24'02	-4.6m	163 Jun 09 j 21:26	9°♁47'20	
	161 Jan 15 j 05:09	0°♁		163 Jun 26 j 08:03	0°♁	
retrograde	161 Jan 21 j 19:55	0°♁51'54		163 Jul 01 j 01:41	5°♁49'55	1.73308 AU
	161 Jan 28 j 05:48	30°♁				
evening set	161 Feb 08 j 12:27	24°♁43'32		163 Jul 04 j 04:41	9°♁41'05	0°53'19
min. Earth dist.	161 Feb 11 j 01:40	23°♁08'14	0.27956 AU	163 Jul 03 j 20:13	9°♁15'01	0°53'00
inferior conj	161 Feb 11 j 19:43	22°♁39'47	8°37'46	163 Jul 20 j 15:15	0°♈	
minimum elong	161 Feb 11 j 17:30	22°♁43'18	8°37'43	163 Aug 09 j 03:39	24°♈11'26	
morning rise	161 Feb 14 j 22:47	20°♁43'04		163 Aug 13 j 19:58	0°♍	
direct	161 Mar 04 j 16:37	14°♁39'30		163 Sep 06 j 23:35	0°♁	
greatest brilliancy	161 Mar 15 j 13:32	16°♁49'57	-4.5m	163 Sep 29 j 11:05	27°♁54'26	
	161 Apr 05 j 19:26	0°♁		163 Oct 01 j 03:35	0°♍	
desc. node	161 Apr 13 j 15:43	6°♁39'11		163 Oct 25 j 09:11	0°♁	
morning max el	161 Apr 22 j 20:06	15°♁09'54	45°56'38	163 Nov 18 j 18:05	0°♁	
	161 May 07 j 14:37	0°♁		163 Dec 13 j 10:22	0°♁	
	161 Jun 04 j 05:26	0°♁		164 Jan 07 j 19:31	0°♁	
	161 Jun 30 j 09:36	0°♁		164 Jan 20 j 13:57	14°♁30'32	
	161 Jul 25 j 17:48	0°♁		164 Feb 03 j 21:11	0°♁	
asc. node	161 Aug 04 j 18:58	12°♁06'38		164 Feb 12 j 03:18	8°♁26'14	46°12'39
	161 Aug 19 j 11:24	0°♈		164 Mar 07 j 22:10	0°♁	
	161 Sep 12 j 18:10	0°♍		164 Mar 18 j 01:00	6°♁05'47	-4.5m
	161 Oct 06 j 17:57	0°♁		164 Apr 01 j 16:28	9°♁54'13	
morning set	161 Oct 17 j 12:24	13°♁32'02		164 Apr 17 j 14:50	4°♁59'34	
	161 Oct 30 j 14:21	0°♍		164 Apr 23 j 02:41	1°♁37'46	4°03'32
	161 Nov 23 j 09:56	0°♁		164 Apr 23 j 10:33	1°♁25'19	4°01'30
desc. node	161 Nov 24 j 08:48	1°♁11'57		164 Apr 23 j 07:27	1°♁30'13	0.28942 AU
				164 Apr 25 j 16:55	30°♁	
superior conj	161 Nov 27 j 07:21	4°♁54'00	0°-7'00	164 Apr 29 j 06:23	27°♁53'31	
minimum elong	161 Nov 27 j 05:27	4°♁48'01	0°06'56	164 May 11 j 03:41	23°♁34'13	
behind sun begin	161 Nov 26 j 05:02	3°♁31'09		164 May 14 j 16:10	23°♁19'40	
behind sun end	161 Nov 28 j 05:52	6°♁04'54		164 May 27 j 17:06	26°♁18'18	-4.5m
max. Earth dist.	161 Nov 29 j 02:43	7°♁10'28	1.71032 AU	164 Jun 03 j 20:14	0°♁	
	161 Dec 17 j 06:16	0°♁		164 Jul 02 j 10:07	23°♁01'59	45°46'46
evening rise	162 Jan 08 j 02:05	27°♁22'29		164 Jul 09 j 13:00	0°♁	
	162 Jan 10 j 04:26	0°♁		164 Aug 06 j 16:21	0°♁	
	162 Feb 03 j 05:45	0°♁		164 Sep 01 j 06:53	29°♁30'03	
	162 Feb 27 j 12:08	0°♁		164 Sep 01 j 17:02	0°♈	
asc. node	162 Mar 17 j 11:48	22°♁00'12		164 Sep 26 j 15:36	0°♍	
	162 Mar 24 j 01:56	0°♁		164 Oct 20 j 23:18	0°♁	
	162 Apr 18 j 02:07	0°♁		164 Nov 13 j 23:30	0°♍	

	164 Dec 07 j 21:03	0°♁			desc. node	167 Jun 08 j 15:33	16°♁17'56	
desc. node	164 Dec 21 j 20:33	17°♁32'59			retrograde	167 Jun 11 j 07:17	16°♁26'00	
	164 Dec 31 j 18:43	0°♁			evening set	167 Jun 26 j 19:37	11°♁49'55	
morning set	165 Jan 02 j 05:24	1°♁48'45			inferior conj	167 Jul 02 j 17:19	8°♁18'34	-5°-15'-44
	165 Jan 24 j 17:50	0°♁			minimum elong	167 Jul 02 j 07:45	8°♁33'23	5°13'32
					min. Earth dist.	167 Jul 02 j 19:51	8°♁14'37	0.28841 AU
superior conj	165 Feb 12 j 09:35	23°♁16'39	-1°-24'-57		morning rise	167 Jul 07 j 19:39	5°♁13'45	
minimum elong	165 Feb 12 j 07:04	23°♁08'50	1°24'57		direct	167 Jul 24 j 08:40	0°♁02'33	
max. Earth dist.	165 Feb 16 j 12:49	28°♁25'24	1.72165 AU		greatest brilliancy	167 Aug 07 j 19:13	3°♁41'26	-4.5m
	165 Feb 17 j 19:14	0°♁				167 Sep 10 j 18:53	0°♁	
	165 Mar 13 j 23:44	0°♁			morning max el	167 Sep 12 j 01:02	1°♁14'00	46°19'27
evening rise	165 Mar 23 j 14:43	11°♁52'58			asc. node	167 Sep 29 j 18:45	19°♁45'10	
	165 Apr 07 j 08:03	0°♁				167 Oct 09 j 00:01	0°♁	
asc. node	165 Apr 13 j 23:47	8°♁09'46				167 Nov 03 j 17:16	0°♁	
	165 May 01 j 20:39	0°♁				167 Nov 28 j 10:47	0°♁	
	165 May 26 j 14:01	0°♁				167 Dec 22 j 18:37	0°♁	
	165 Jun 20 j 13:29	0°♁				168 Jan 15 j 23:20	0°♁	
	165 Jul 15 j 22:20	0°♁			desc. node	168 Jan 19 j 08:21	4°♁11'15	
desc. node	165 Aug 03 j 13:10	21°♁33'26				168 Feb 09 j 03:55	0°♁	
	165 Aug 10 j 23:24	0°♁				168 Mar 04 j 09:38	0°♁	
	165 Sep 07 j 09:44	0°♁			morning set	168 Mar 18 j 02:22	16°♁54'49	
evening max el	165 Sep 18 j 01:17	10°♁51'20	46°58'58			168 Mar 28 j 17:01	0°♁	
	165 Oct 09 j 07:56	0°♁				168 Apr 22 j 02:03	0°♁	
greatest brilliancy	165 Oct 27 j 03:39	10°♁56'10	-4.7m					
retrograde	165 Nov 07 j 10:15	13°♁19'26			superior conj	168 Apr 24 j 14:38	3°♁06'13	0°-38'-32
evening set	165 Nov 21 j 18:12	9°♁15'01			minimum elong	168 Apr 24 j 22:01	3°♁28'52	0°38'14
asc. node	165 Nov 24 j 16:19	7°♁36'36			max. Earth dist.	168 Apr 25 j 13:34	4°♁16'41	1.73510 AU
inferior conj	165 Nov 27 j 23:27	5°♁37'27	0°51'26		asc. node	168 May 11 j 11:37	23°♁49'53	
minimum elong	165 Nov 27 j 21:30	5°♁40'26	0°50'48			168 May 16 j 12:13	0°♁	
min. Earth dist.	165 Nov 27 j 16:34	5°♁47'57	0.26365 AU		evening rise	168 May 31 j 02:49	17°♁55'53	
morning rise	165 Dec 04 j 00:50	2°♁05'03				168 Jun 09 j 22:54	0°♁	
	165 Dec 08 j 11:20	30°♁				168 Jul 04 j 09:59	0°♁	
direct	165 Dec 18 j 05:48	28°♁01'46				168 Jul 28 j 22:21	0°♁	
	165 Dec 28 j 10:46	0°♁				168 Aug 22 j 13:38	0°♁	
greatest brilliancy	165 Dec 29 j 22:21	0°♁34'50	-4.7m		desc. node	168 Aug 31 j 01:12	10°♁16'44	
	166 Feb 05 j 22:15	0°♁				168 Sep 16 j 09:57	0°♁	
morning max el	166 Feb 06 j 10:07	0°♁29'27	46°39'18			168 Oct 11 j 15:01	0°♁	
	166 Mar 06 j 05:06	0°♁				168 Nov 06 j 14:30	0°♁	
desc. node	166 Mar 16 j 06:08	11°♁15'58			evening max el	168 Nov 29 j 11:22	24°♁43'10	47°19'38
	166 Apr 01 j 14:45	0°♁				168 Dec 04 j 17:39	0°♁	
	166 Apr 27 j 06:24	0°♁			asc. node	168 Dec 22 j 04:10	15°♁37'50	
	166 May 22 j 12:16	0°♁			greatest brilliancy	169 Jan 05 j 21:04	25°♁06'56	-4.7m
	166 Jun 16 j 10:48	0°♁			retrograde	169 Jan 19 j 11:31	28°♁32'50	
asc. node	166 Jul 07 j 09:08	25°♁27'13			evening set	169 Feb 06 j 01:35	22°♁27'52	
	166 Jul 11 j 02:18	0°♁			min. Earth dist.	169 Feb 08 j 15:17	20°♁51'49	0.27894 AU
	166 Aug 04 j 10:56	0°♁			inferior conj	169 Feb 09 j 10:33	20°♁21'26	8°35'33
morning set	166 Aug 04 j 16:21	0°♁16'45			minimum elong	169 Feb 09 j 07:31	20°♁26'13	8°35'25
	166 Aug 28 j 13:51	0°♁			morning rise	169 Feb 12 j 13:44	18°♁24'34	
max. Earth dist.	166 Sep 07 j 17:17	12°♁40'34	1.71840 AU		direct	169 Mar 02 j 07:24	12°♁22'28	
					greatest brilliancy	169 Mar 13 j 01:15	14°♁30'25	-4.6m
superior conj	166 Sep 10 j 20:21	16°♁35'29	1°21'31			169 Apr 06 j 04:08	0°♁	
minimum elong	166 Sep 11 j 01:33	16°♁51'46	1°21'27		desc. node	169 Apr 12 j 17:55	5°♁43'44	
	166 Sep 21 j 13:11	0°♁			morning max el	169 Apr 20 j 10:59	12°♁55'55	45°57'32
	166 Oct 15 j 11:06	0°♁				169 May 07 j 08:36	0°♁	
evening rise	166 Oct 20 j 05:15	5°♁58'08				169 Jun 03 j 19:39	0°♁	
desc. node	166 Oct 26 j 23:03	14°♁25'36				169 Jun 29 j 22:10	0°♁	
	166 Nov 08 j 09:07	0°♁				169 Jul 25 j 05:29	0°♁	
	166 Dec 02 j 08:19	0°♁			asc. node	169 Aug 03 j 21:04	11°♁38'10	
	166 Dec 26 j 10:10	0°♁				169 Aug 18 j 22:38	0°♁	
	167 Jan 19 j 17:39	0°♁				169 Sep 12 j 05:12	0°♁	
	167 Feb 13 j 11:52	0°♁			greatest brilliancy	169 Sep 15 j 20:45	4°♁32'40	-3.9m
asc. node	167 Feb 17 j 01:54	4°♁16'43				169 Oct 06 j 04:55	0°♁	
	167 Mar 11 j 01:19	0°♁			morning set	169 Oct 15 j 00:53	11°♁05'57	
	167 Apr 07 j 03:47	0°♁				169 Oct 30 j 01:18	0°♁	
evening max el	167 Apr 23 j 19:00	16°♁50'20	45°20'24			169 Nov 22 j 20:54	0°♁	
	167 May 08 j 12:14	0°♁			desc. node	169 Nov 23 j 10:47	0°♁43'42	
greatest brilliancy	167 May 28 j 11:07	13°♁06'16	-4.5m					

superior conj	169 Nov 24 j 16:55	2°♁18'34	0°-3'00	morning rise	172 Apr 26 j 21:29	25°♃46'59	
minimum elong	169 Nov 24 j 16:06	2°♁16'01	0°02'58	desc. node	172 May 10 j 05:36	21°♃16'09	
behind sun begin	169 Nov 23 j 13:49	0°♁53'15		direct	172 May 12 j 07:57	21°♃11'00	
behind sun end	169 Nov 25 j 18:24	3°♁38'47		greatest brilliancy	172 May 25 j 08:50	24°♃09'16	-4.5m
max. Earth dist.	169 Nov 26 j 06:53	4°♁18'04	1.71019 AU		172 Jun 04 j 22:03	0°♃	
	169 Dec 16 j 17:13	0°♃		morning max el	172 Jun 30 j 01:54	20°♃52'01	45°46'16
evening rise	170 Jan 05 j 12:23	24°♃50'08			172 Jul 09 j 08:33	0°♃	
	170 Jan 09 j 15:23	0°♃			172 Aug 06 j 07:09	0°♃	
	170 Feb 02 j 16:45	0°♃		asc. node	172 Aug 31 j 09:01	28°♃57'45	
	170 Feb 26 j 23:15	0°♃			172 Sep 01 j 06:03	0°♃	
asc. node	170 Mar 16 j 13:58	21°♃32'18			172 Sep 26 j 03:45	0°♃	
	170 Mar 23 j 13:23	0°♃			172 Oct 20 j 11:00	0°♃	
	170 Apr 17 j 14:15	0°♃			172 Nov 13 j 10:57	0°♃	
	170 Apr 17 j 14:15	0°♃			172 Dec 07 j 08:21	0°♃	
	170 May 13 j 07:01	0°♃			172 Dec 20 j 22:32	17°♁03'58	
	170 Jun 09 j 03:33	0°♃		desc. node	172 Dec 20 j 22:32	17°♁03'58	
evening max el	170 Jul 04 j 06:01	25°♃44'54	45°42'39	morning set	172 Dec 30 j 14:53	29°♁12'50	
desc. node	170 Jul 06 j 03:25	27°♃32'43			172 Dec 31 j 05:55	0°♃	
	170 Jul 08 j 18:36	0°♃			173 Jan 24 j 04:56	0°♃	
greatest brilliancy	170 Aug 11 j 10:39	23°♃38'09	-4.5m				
retrograde	170 Aug 22 j 04:09	25°♃41'52		superior conj	173 Feb 09 j 21:52	20°♃51'06	-1°-24'-28
evening set	170 Sep 08 j 23:12	19°♃50'00		minimum elong	173 Feb 09 j 18:23	20°♃40'16	1°24'27
inferior conj	170 Sep 12 j 03:35	17°♃54'32	-8°-29'-18	max. Earth dist.	173 Feb 13 j 22:35	25°♃52'12	1.72106 AU
minimum elong	170 Sep 12 j 09:26	17°♃45'35	8°28'49		173 Feb 17 j 06:14	0°♃	
min. Earth dist.	170 Sep 12 j 23:02	17°♃24'45	0.27598 AU		173 Mar 13 j 10:41	0°♃	
morning rise	170 Sep 15 j 19:24	15°♃41'40		evening rise	173 Mar 21 j 05:38	9°♃37'10	
direct	170 Oct 03 j 03:53	9°♃57'58			173 Apr 06 j 19:02	0°♃	
greatest brilliancy	170 Oct 17 j 03:00	13°♃30'57	-4.6m	asc. node	173 Apr 13 j 01:50	7°♃42'23	
asc. node	170 Oct 27 j 06:31	19°♃37'37			173 May 01 j 07:48	0°♃	
	170 Nov 09 j 01:23	0°♃			173 May 26 j 01:32	0°♃	
morning max el	170 Nov 22 j 21:24	13°♃21'08	46°54'23		173 Jun 20 j 01:41	0°♃	
	170 Dec 08 j 11:57	0°♃			173 Jul 15 j 11:42	0°♃	
	171 Jan 03 j 17:24	0°♃		desc. node	173 Aug 02 j 15:17	20°♃57'13	
	171 Jan 28 j 23:12	0°♃			173 Aug 10 j 14:58	0°♃	
desc. node	171 Feb 15 j 20:19	21°♃32'27			173 Sep 07 j 06:15	0°♃	
	171 Feb 22 j 20:04	0°♃		evening max el	173 Sep 15 j 14:30	8°♃26'36	46°56'41
	171 Mar 19 j 13:20	0°♃			173 Oct 10 j 03:09	0°♃	
	171 Apr 13 j 05:01	0°♃		greatest brilliancy	173 Oct 24 j 16:37	8°♁26'24	-4.7m
	171 May 07 j 19:35	0°♃		retrograde	173 Nov 04 j 22:44	10°♁49'01	
morning set	171 May 26 j 16:50	23°♃04'50		evening set	173 Nov 19 j 06:40	6°♁43'57	
	171 Jun 01 j 08:28	0°♃		asc. node	173 Nov 23 j 18:16	4°♁09'46	
asc. node	171 Jun 08 j 23:23	9°♃20'32		inferior conj	173 Nov 25 j 11:27	3°♁07'21	0°26'47
	171 Jun 25 j 18:44	0°♃		minimum elong	173 Nov 25 j 10:25	3°♁08'55	0°26'26
max. Earth dist.	171 Jun 28 j 21:06	3°♃49'00	1.73348 AU	min. Earth dist.	173 Nov 25 j 05:55	3°♁15'47	0.26358 AU
					173 Nov 30 j 18:45	30°♃	
superior conj	171 Jul 01 j 23:15	7°♃37'26	0°50'52	morning rise	173 Dec 01 j 14:14	29°♃33'39	
minimum elong	171 Jul 01 j 14:58	7°♃11'54	0°50'32	direct	173 Dec 15 j 18:13	25°♃31'37	
	171 Jul 20 j 02:01	0°♃		greatest brilliancy	173 Dec 27 j 12:45	28°♃07'32	-4.7m
evening rise	171 Aug 06 j 20:59	22°♃02'37			173 Dec 31 j 11:56	0°♃	
	171 Aug 13 j 06:53	0°♃		morning max el	174 Feb 04 j 00:18	28°♁06'49	46°40'40
	171 Sep 06 j 10:44	0°♃			174 Feb 05 j 21:26	0°♃	
desc. node	171 Sep 28 j 13:11	27°♃25'30			174 Mar 05 j 21:37	0°♃	
	171 Sep 30 j 15:04	0°♃		desc. node	174 Mar 15 j 08:15	10°♃38'24	
	171 Oct 24 j 21:05	0°♃			174 Apr 01 j 04:42	0°♃	
	171 Nov 18 j 06:34	0°♃			174 Apr 26 j 19:00	0°♃	
	171 Dec 12 j 23:43	0°♃			174 May 22 j 00:05	0°♃	
	172 Jan 07 j 10:31	0°♃			174 Jun 15 j 22:08	0°♃	
asc. node	172 Jan 19 j 16:05	13°♃50'36		asc. node	174 Jul 06 j 11:19	25°♃00'03	
	172 Feb 03 j 16:31	0°♃			174 Jul 10 j 13:21	0°♃	
evening max el	172 Feb 09 j 17:22	6°♃08'09	46°15'26	morning set	174 Aug 02 j 09:31	28°♃07'30	
	172 Mar 08 j 19:39	0°♃			174 Aug 03 j 21:52	0°♃	
greatest brilliancy	172 Mar 15 j 17:23	3°♃56'05	-4.5m		174 Aug 28 j 00:49	0°♃	
retrograde	172 Mar 30 j 09:00	7°♃45'47		max. Earth dist.	174 Sep 05 j 07:12	10°♃19'34	1.71896 AU
evening set	172 Apr 15 j 09:48	2°♃47'24					
	172 Apr 19 j 23:49	30°♃		superior conj	174 Sep 08 j 11:37	14°♃18'32	1°22'22
inferior conj	172 Apr 20 j 19:22	29°♃29'06	4°20'35	minimum elong	174 Sep 08 j 16:05	14°♃32'31	1°22'20
minimum elong	172 Apr 21 j 03:37	29°♃16'05	4°18'31		174 Sep 21 j 00:16	0°♃	
min. Earth dist.	172 Apr 21 j 00:13	29°♃21'27	0.28932 AU		174 Oct 14 j 22:21	0°♃	

evening rise	174 Oct 17 j 16:42	3°♌28'07		morning max el	177 Apr 18 j 00:38	10°♋37'22	45°58'39
desc. node	174 Oct 26 j 01:03	13°♌56'23			177 May 07 j 02:37	0°♍	
	174 Nov 07 j 20:32	0°♎			177 Jun 03 j 10:04	0°♏	
	174 Dec 01 j 19:53	0°♐			177 Jun 29 j 10:58	0°♑	
	174 Dec 25 j 21:58	0°♒			177 Jul 24 j 17:26	0°♓	
	175 Jan 19 j 05:49	0°♋		asc. node	177 Aug 02 j 23:11	11°♈08'58	
	175 Feb 13 j 00:45	0°♌			177 Aug 18 j 10:08	0°♍	
asc. node	175 Feb 16 j 04:03	3°♌44'22			177 Sep 11 j 16:29	0°♎	
	175 Mar 10 j 15:40	0°♏		greatest brilliancy	177 Sep 19 j 06:38	9°♎27'54	-3.9m
	175 Apr 06 j 21:41	0°♑			177 Oct 05 j 16:07	0°♒	
evening max el	175 Apr 21 j 11:49	14°♑41'48	45°21'11	morning set	177 Oct 12 j 14:00	8°♒41'09	
	175 May 08 j 21:14	0°♓			177 Oct 29 j 12:29	0°♌	
greatest brilliancy	175 May 26 j 02:01	10°♓55'41	-4.5m				
desc. node	175 Jun 07 j 17:38	14°♓14'38		superior conj	177 Nov 22 j 02:53	29°♌43'33	0°01'00
retrograde	175 Jun 08 j 23:35	14°♓16'25		minimum elong	177 Nov 22 j 03:09	29°♌44'23	0°01'00
evening set	175 Jun 24 j 09:46	9°♓43'15		behind sun begin	177 Nov 21 j 00:40	28°♌21'02	
inferior conj	175 Jun 30 j 09:28	6°♓08'37	-4°-59'-39	behind sun end	177 Nov 23 j 05:37	1°♎07'43	
minimum elong	175 Jun 30 j 00:10	6°♓23'03	4°57'26		177 Nov 22 j 08:06	0°♎	
min. Earth dist.	175 Jun 30 j 11:30	6°♓05'27	0.28855 AU	desc. node	177 Nov 22 j 12:51	0°♎14'57	
morning rise	175 Jul 05 j 14:24	2°♓59'58		max. Earth dist.	177 Nov 23 j 09:09	1°♎18'51	1.71017 AU
	175 Jul 11 j 16:14	30°♑			177 Dec 16 j 04:30	0°♐	
direct	175 Jul 22 j 01:34	27°♑52'37		evening rise	178 Jan 02 j 22:27	22°♐15'51	
	175 Aug 01 j 21:34	0°♓			178 Jan 09 j 02:44	0°♑	
greatest brilliancy	175 Aug 05 j 09:51	1°♓29'05	-4.5m		178 Feb 02 j 04:09	0°♋	
morning max el	175 Sep 09 j 16:26	28°♓59'19	46°17'45		178 Feb 26 j 10:49	0°♌	
	175 Sep 10 j 16:59	0°♍		asc. node	178 Mar 15 j 15:58	21°♌02'35	
asc. node	175 Sep 28 j 20:49	19°♍03'25			178 Mar 23 j 01:16	0°♏	
	175 Oct 08 j 15:57	0°♎			178 Apr 17 j 02:50	0°♑	
	175 Nov 03 j 07:06	0°♒			178 May 12 j 20:58	0°♓	
	175 Nov 27 j 23:38	0°♌			178 Jun 08 j 20:31	0°♍	
	175 Dec 22 j 06:53	0°♎		evening max el	178 Jul 01 j 18:47	23°♍24'25	45°40'41
	176 Jan 15 j 11:11	0°♐		desc. node	178 Jul 05 j 05:35	26°♍39'47	
desc. node	176 Jan 18 j 10:34	3°♐41'29			178 Jul 08 j 21:03	0°♎	
	176 Feb 08 j 15:27	0°♑		greatest brilliancy	178 Aug 08 j 22:49	21°♎17'14	-4.5m
	176 Mar 03 j 20:55	0°♋		retrograde	178 Aug 19 j 17:01	23°♎22'04	
morning set	176 Mar 15 j 17:19	14°♋38'22		evening set	178 Sep 06 j 14:23	17°♎27'18	
	176 Mar 28 j 04:07	0°♌		inferior conj	178 Sep 09 j 17:24	15°♎34'00	-8°-34'-40
	176 Apr 21 j 13:03	0°♏		minimum elong	178 Sep 09 j 22:27	15°♎26'15	8°34'19
				min. Earth dist.	178 Sep 10 j 12:49	15°♎04'15	0.27660 AU
superior conj	176 Apr 22 j 07:45	0°♏57'29	0°-41'-25	morning rise	178 Sep 13 j 06:14	13°♎25'29	
minimum elong	176 Apr 22 j 15:33	1°♏21'29	0°41'06	direct	178 Sep 30 j 17:46	7°♎36'14	
max. Earth dist.	176 Apr 23 j 12:20	2°♏25'21	1.73482 AU	greatest brilliancy	178 Oct 14 j 19:33	11°♎11'36	-4.6m
asc. node	176 May 10 j 13:37	23°♏22'23		asc. node	178 Oct 26 j 08:28	18°♎19'18	
	176 May 15 j 23:12	0°♑			178 Nov 09 j 06:28	0°♒	
evening rise	176 May 28 j 21:45	15°♑52'53		morning max el	178 Nov 20 j 10:48	10°♒55'13	46°53'56
	176 Jun 09 j 09:57	0°♓			178 Dec 08 j 06:00	0°♌	
	176 Jul 03 j 21:16	0°♍			179 Jan 03 j 08:15	0°♎	
	176 Jul 28 j 10:01	0°♏			179 Jan 28 j 12:33	0°♐	
	176 Aug 22 j 01:53	0°♒		desc. node	179 Feb 14 j 22:24	21°♐00'21	
desc. node	176 Aug 30 j 03:20	9°♒45'21			179 Feb 22 j 08:32	0°♑	
	176 Sep 15 j 23:06	0°♌			179 Mar 19 j 01:13	0°♋	
	176 Oct 11 j 05:36	0°♎			179 Apr 12 j 16:28	0°♌	
	176 Nov 06 j 07:51	0°♐			179 May 07 j 06:43	0°♏	
evening max el	176 Nov 27 j 02:38	22°♐21'45	47°20'24	morning set	179 May 24 j 11:00	20°♏59'54	
	176 Dec 04 j 18:59	0°♑			179 May 31 j 19:24	0°♑	
asc. node	176 Dec 21 j 06:20	14°♑23'43		asc. node	179 Jun 08 j 01:32	8°♑53'41	
greatest brilliancy	177 Jan 03 j 14:48	22°♑48'30	-4.7m		179 Jun 25 j 05:38	0°♓	
retrograde	177 Jan 17 j 02:24	26°♑10'52		max. Earth dist.	179 Jun 26 j 18:27	1°♓53'22	1.73383 AU
evening set	177 Feb 03 j 14:04	20°♑10'10					
min. Earth dist.	177 Feb 06 j 05:01	18°♑32'09	0.27828 AU	superior conj	179 Jun 29 j 17:41	5°♓32'49	0°48'20
inferior conj	177 Feb 07 j 01:04	18°♑00'31	8°32'25	minimum elong	179 Jun 29 j 09:36	5°♓07'54	0°48'00
minimum elong	177 Feb 06 j 21:15	18°♑06'32	8°32'11		179 Jul 19 j 12:58	0°♍	
morning rise	177 Feb 10 j 04:43	16°♑02'50		evening rise	179 Aug 04 j 14:34	19°♍54'07	
direct	177 Feb 27 j 21:25	10°♑02'56			179 Aug 12 j 17:59	0°♎	
greatest brilliancy	177 Mar 10 j 13:19	12°♑08'56	-4.6m		179 Sep 05 j 22:04	0°♒	
	177 Apr 06 j 11:06	0°♋		desc. node	179 Sep 27 j 15:10	26°♒55'41	
desc. node	177 Apr 11 j 19:55	4°♋47'29			179 Sep 30 j 02:41	0°♌	

	179 Oct 24 j 09:06	0°♁			182 Mar 05 j 13:35	0°♁	
	179 Nov 17 j 19:08	0°♁		desc. node	182 Mar 14 j 10:16	10°♁01'33	
	179 Dec 12 j 13:11	0°♁			182 Mar 31 j 18:16	0°♁	
	180 Jan 07 j 01:47	0°♁			182 Apr 26 j 07:21	0°♁	
asc. node	180 Jan 18 j 18:10	13°♁09'49			182 May 21 j 11:43	0°♁	
	180 Feb 03 j 12:35	0°♁			182 Jun 15 j 09:20	0°♁	
evening max el	180 Feb 07 j 07:52	3°♁50'38	46°17'59	asc. node	182 Jul 05 j 13:24	24°♁32'54	
	180 Mar 10 j 02:14	0°♁			182 Jul 10 j 00:18	0°♁	
greatest brilliancy	180 Mar 13 j 09:09	1°♁44'29	-4.5m	morning set	182 Jul 31 j 02:30	25°♁58'06	
retrograde	180 Mar 28 j 01:49	5°♁35'57			182 Aug 03 j 08:42	0°♁	
evening set	180 Apr 13 j 04:39	0°♁33'33			182 Aug 27 j 11:38	0°♁	
	180 Apr 14 j 03:37	30°♁		max. Earth dist.	182 Sep 02 j 19:15	7°♁53'19	1.71947 AU
inferior conj	180 Apr 18 j 11:49	27°♁18'52	4°37'30				
minimum elong	180 Apr 18 j 20:24	27°♁05'19	4°35'23	superior conj	182 Sep 06 j 02:52	12°♁02'10	1°23'06
min. Earth dist.	180 Apr 18 j 16:28	27°♁11'32	0.28924 AU	minimum elong	182 Sep 06 j 06:34	12°♁13'45	1°23'04
morning rise	180 Apr 24 j 12:14	23°♁39'22			182 Sep 20 j 11:11	0°♁	
desc. node	180 May 09 j 07:42	19°♁01'18			182 Oct 14 j 09:24	0°♁	
direct	180 May 09 j 23:48	19°♁00'47		evening rise	182 Oct 15 j 04:12	0°♁58'58	
greatest brilliancy	180 May 23 j 00:37	21°♁59'14	-4.5m	desc. node	182 Oct 25 j 03:07	13°♁28'03	
	180 Jun 05 j 17:31	0°♁			182 Nov 07 j 07:45	0°♁	
morning max el	180 Jun 27 j 18:24	18°♁43'08	45°45'57		182 Dec 01 j 07:16	0°♁	
	180 Jul 09 j 03:45	0°♁			182 Dec 25 j 09:34	0°♁	
	180 Aug 05 j 21:54	0°♁			183 Jan 18 j 17:47	0°♁	
asc. node	180 Aug 30 j 11:02	28°♁25'11			183 Feb 12 j 13:25	0°♁	
	180 Aug 31 j 19:02	0°♁		asc. node	183 Feb 15 j 06:04	3°♁12'22	
	180 Sep 25 j 15:53	0°♁			183 Mar 10 j 05:49	0°♁	
	180 Oct 19 j 22:41	0°♁			183 Apr 06 j 15:39	0°♁	
	180 Nov 12 j 22:23	0°♁		evening max el	183 Apr 19 j 04:06	12°♁32'40	45°21'49
	180 Dec 06 j 19:38	0°♁			183 May 09 j 09:03	0°♁	
desc. node	180 Dec 20 j 00:45	16°♁35'46		greatest brilliancy	183 May 23 j 17:16	8°♁45'55	-4.5m
morning set	180 Dec 28 j 00:50	26°♁38'29		retrograde	183 Jun 06 j 15:12	12°♁07'03	
	180 Dec 30 j 17:04	0°♁		desc. node	183 Jun 06 j 19:48	12°♁07'00	
	181 Jan 23 j 15:58	0°♁		evening set	183 Jun 21 j 23:56	7°♁36'37	
				inferior conj	183 Jun 28 j 01:30	3°♁59'01	-4°-42'-58
superior conj	181 Feb 07 j 10:16	18°♁25'57	-1°-23'-49	minimum elong	183 Jun 27 j 16:32	4°♁12'59	4°40'46
minimum elong	181 Feb 07 j 05:49	18°♁12'07	1°23'48	min. Earth dist.	183 Jun 28 j 03:27	3°♁55'58	0.28872 AU
max. Earth dist.	181 Feb 11 j 09:50	23°♁23'43	1.72054 AU	morning rise	183 Jul 03 j 08:57	0°♁46'24	
	181 Feb 16 j 17:11	0°♁			183 Jul 04 j 18:28	30°♁	
	181 Mar 12 j 21:37	0°♁		direct	183 Jul 19 j 18:00	25°♁42'54	
evening rise	181 Mar 18 j 20:30	7°♁21'14		greatest brilliancy	183 Aug 03 j 00:19	29°♁16'40	-4.5m
	181 Apr 06 j 06:03	0°♁			183 Aug 04 j 11:55	0°♁	
asc. node	181 Apr 12 j 03:50	7°♁14'40		morning max el	183 Sep 07 j 06:56	26°♁42'53	46°16'12
	181 Apr 30 j 19:02	0°♁			183 Sep 10 j 14:07	0°♁	
	181 May 25 j 13:08	0°♁		asc. node	183 Sep 27 j 22:51	18°♁22'33	
	181 Jun 19 j 13:57	0°♁			183 Oct 08 j 07:25	0°♁	
	181 Jul 15 j 01:11	0°♁			183 Nov 02 j 20:33	0°♁	
desc. node	181 Aug 01 j 17:22	20°♁20'45			183 Nov 27 j 12:06	0°♁	
	181 Aug 10 j 06:43	0°♁			183 Dec 21 j 18:46	0°♁	
	181 Sep 07 j 03:23	0°♁			184 Jan 14 j 22:41	0°♁	
evening max el	181 Sep 13 j 04:32	6°♁04'24	46°54'25	desc. node	184 Jan 17 j 12:32	3°♁12'03	
	181 Oct 11 j 04:50	0°♁			184 Feb 08 j 02:39	0°♁	
greatest brilliancy	181 Oct 22 j 05:31	5°♁57'13	-4.7m		184 Mar 03 j 07:53	0°♁	
retrograde	181 Nov 02 j 11:30	8°♁18'58		morning set	184 Mar 13 j 08:18	12°♁22'59	
evening set	181 Nov 16 j 19:27	4°♁13'17			184 Mar 27 j 14:53	0°♁	
inferior conj	181 Nov 22 j 23:27	0°♁37'40	0°01'55				
minimum elong	181 Nov 22 j 23:22	0°♁37'47	0°01'54	superior conj	184 Apr 20 j 01:01	28°♁50'19	0°-44'-14
transit begin	181 Nov 22 j 19:19	0°♁43'56		minimum elong	184 Apr 20 j 09:12	29°♁15'28	0°43'53
transit end	181 Nov 23 j 03:25	0°♁31'38			184 Apr 20 j 23:41	0°♁	
min. Earth dist.	181 Nov 22 j 19:04	0°♁44'18	0.26351 AU	max. Earth dist.	184 Apr 21 j 10:24	0°♁32'58	1.73452 AU
asc. node	181 Nov 22 j 20:29	0°♁42'10		asc. node	184 May 09 j 15:49	22°♁56'32	
	181 Nov 24 j 00:17	30°♁			184 May 15 j 09:49	0°♁	
morning rise	181 Nov 29 j 03:25	27°♁02'54		evening rise	184 May 26 j 16:44	13°♁51'07	
direct	181 Dec 13 j 06:57	23°♁02'08			184 Jun 08 j 20:42	0°♁	
greatest brilliancy	181 Dec 25 j 02:14	25°♁39'34	-4.7m		184 Jul 03 j 08:18	0°♁	
	182 Jan 02 j 07:20	0°♁			184 Jul 27 j 21:29	0°♁	
morning max el	182 Feb 01 j 14:28	25°♁44'42	46°42'01		184 Aug 21 j 13:57	0°♁	
	182 Feb 05 j 19:26	0°♁		desc. node	184 Aug 29 j 05:17	9°♁14'03	

	184 Sep 15 j 12:04	0°♍			187 Mar 18 j 12:43	0°♋		
	184 Oct 10 j 20:01	0°♌			187 Apr 12 j 03:33	0°♍		
	184 Nov 06 j 01:12	0°♋			187 May 06 j 17:31	0°♌		
evening max el	184 Nov 24 j 16:49	19°♋58'37	47°21'14	morning set	187 May 22 j 05:23	18°♌56'30		
	184 Dec 04 j 21:11	0°♋			187 May 31 j 06:03	0°♌		
asc. node	184 Dec 20 j 08:24	13°♋08'28		asc. node	187 Jun 07 j 03:39	8°♌27'36		
greatest brilliancy	185 Jan 01 j 08:37	20°♋31'09	-4.7m		187 Jun 24 j 16:14	0°♌		
retrograde	185 Jan 14 j 16:55	23°♋50'04		max. Earth dist.	187 Jun 24 j 17:21	0°♌03'27	1.73414 AU	
evening set	185 Feb 01 j 02:16	17°♋54'05						
min. Earth dist.	185 Feb 03 j 19:10	16°♋13'09	0.27762 AU	superior conj	187 Jun 27 j 12:23	3°♌29'53	0°45'44	
inferior conj	185 Feb 04 j 15:38	15°♋40'49	8°28'18	minimum elong	187 Jun 27 j 04:33	3°♌05'44	0°45'25	
minimum elong	185 Feb 04 j 11:03	15°♋48'03	8°27'59		187 Jul 18 j 23:37	0°♌		
morning rise	185 Feb 07 j 20:08	13°♋41'46		evening rise	187 Aug 02 j 08:30	17°♌47'45		
direct	185 Feb 25 j 10:57	7°♋44'22			187 Aug 12 j 04:47	0°♌		
greatest brilliancy	185 Mar 08 j 02:31	9°♋49'38	-4.6m		187 Sep 05 j 09:08	0°♌		
	185 Apr 06 j 15:27	0°♋		desc. node	187 Sep 26 j 17:19	26°♌27'04		
desc. node	185 Apr 10 j 21:58	3°♋53'41			187 Sep 29 j 14:07	0°♌		
morning max el	185 Apr 15 j 13:52	8°♋18'47	45°59'55		187 Oct 23 j 21:00	0°♌		
	185 May 06 j 19:46	0°♍			187 Nov 17 j 07:38	0°♋		
	185 Jun 02 j 23:54	0°♌			187 Dec 12 j 02:37	0°♋		
	185 Jun 28 j 23:17	0°♌			188 Jan 06 j 17:06	0°♋		
	185 Jul 24 j 04:59	0°♌		asc. node	188 Jan 17 j 20:11	12°♋28'54		
asc. node	185 Aug 02 j 01:11	10°♌40'33			188 Feb 03 j 09:05	0°♍		
	185 Aug 17 j 21:19	0°♌		evening max el	188 Feb 04 j 23:12	1°♍35'42	46°20'48	
	185 Sep 11 j 03:29	0°♌		greatest brilliancy	188 Mar 11 j 01:15	29°♍34'08	-4.5m	
greatest brilliancy	185 Sep 22 j 01:43	13°♌38'16	-3.9m		188 Mar 11 j 22:54	0°♌		
	185 Oct 05 j 03:04	0°♌		retrograde	188 Mar 25 j 19:07	3°♌26'50		
morning set	185 Oct 10 j 02:55	6°♌16'27			188 Apr 07 j 22:14	30°♍		
	185 Oct 28 j 23:25	0°♌		evening set	188 Apr 10 j 23:39	28°♍20'25		
				inferior conj	188 Apr 16 j 04:18	25°♍09'17	4°53'58	
superior conj	185 Nov 19 j 12:35	27°♌08'37	0°05'02	minimum elong	188 Apr 16 j 13:11	24°♍55'16	4°51'50	
minimum elong	185 Nov 19 j 13:56	27°♌12'51	0°04'57	min. Earth dist.	188 Apr 16 j 08:23	25°♍02'51	0.28912 AU	
behind sun begin	185 Nov 18 j 12:26	25°♌52'35		morning rise	188 Apr 22 j 02:52	21°♍32'41		
behind sun end	185 Nov 20 j 15:25	28°♌33'06		direct	188 May 07 j 16:05	16°♍51'22		
max. Earth dist.	185 Nov 20 j 11:16	28°♌20'00	1.71015 AU	desc. node	188 May 08 j 09:54	16°♍52'00		
desc. node	185 Nov 21 j 15:02	29°♌47'24		greatest brilliancy	188 May 20 j 15:29	19°♍48'57	-4.5m	
	185 Nov 21 j 19:02	0°♌			188 Jun 06 j 07:38	0°♌		
	185 Dec 15 j 15:27	0°♋		morning max el	188 Jun 25 j 11:33	16°♌36'42	45°45'40	
evening rise	185 Dec 31 j 08:21	19°♋42'11			188 Jul 08 j 22:10	0°♌		
	186 Jan 08 j 13:43	0°♋			188 Aug 05 j 12:13	0°♌		
	186 Feb 01 j 15:13	0°♋		asc. node	188 Aug 29 j 13:07	27°♌53'40		
	186 Feb 25 j 22:02	0°♍			188 Aug 31 j 07:41	0°♌		
asc. node	186 Mar 14 j 18:02	20°♍34'04			188 Sep 25 j 03:45	0°♌		
	186 Mar 22 j 12:51	0°♌			188 Oct 19 j 10:09	0°♌		
	186 Apr 16 j 15:06	0°♌			188 Nov 12 j 09:40	0°♌		
	186 May 12 j 10:40	0°♌			188 Dec 06 j 06:49	0°♌		
	186 Jun 08 j 13:24	0°♌		desc. node	188 Dec 19 j 02:46	16°♌07'14		
evening max el	186 Jun 29 j 07:50	21°♌05'58	45°38'45	morning set	188 Dec 25 j 10:23	24°♌03'05		
desc. node	186 Jul 04 j 07:36	25°♌46'38			188 Dec 30 j 04:10	0°♋		
	186 Jul 09 j 00:34	0°♌			189 Jan 23 j 02:57	0°♋		
greatest brilliancy	186 Aug 06 j 09:35	18°♌56'00	-4.5m					
retrograde	186 Aug 17 j 06:20	21°♌03'23		superior conj	189 Feb 04 j 21:59	15°♌58'45	-1°22'-59	
evening set	186 Sep 04 j 05:08	15°♌05'57		minimum elong	189 Feb 04 j 16:37	15°♌42'00	1°22'57	
inferior conj	186 Sep 07 j 07:09	13°♌14'15	-8°-39'00	max. Earth dist.	189 Feb 08 j 21:48	20°♌57'27	1.71999 AU	
minimum elong	186 Sep 07 j 11:24	13°♌07'45	8°38'45		189 Feb 16 j 04:04	0°♋		
min. Earth dist.	186 Sep 08 j 02:18	12°♌44'58	0.27729 AU		189 Mar 12 j 08:28	0°♍		
morning rise	186 Sep 10 j 17:22	11°♌09'43		evening rise	189 Mar 16 j 10:56	5°♍04'09		
direct	186 Sep 28 j 08:01	5°♌15'10			189 Apr 05 j 16:58	0°♌		
greatest brilliancy	186 Oct 12 j 12:33	8°♌53'40	-4.6m	asc. node	189 Apr 11 j 06:02	6°♌47'54		
asc. node	186 Oct 25 j 10:41	17°♌04'20			189 Apr 30 j 06:08	0°♌		
	186 Nov 09 j 09:35	0°♌			189 May 25 j 00:39	0°♌		
morning max el	186 Nov 18 j 01:16	8°♌32'33	46°53'25		189 Jun 19 j 02:11	0°♌		
	186 Dec 07 j 23:30	0°♌			189 Jul 14 j 14:39	0°♌		
	187 Jan 02 j 22:44	0°♌		desc. node	189 Jul 31 j 19:24	19°♌44'16		
	187 Jan 28 j 01:33	0°♋			189 Aug 09 j 22:35	0°♌		
desc. node	187 Feb 14 j 00:26	20°♋29'12			189 Sep 07 j 01:04	0°♌		
	187 Feb 21 j 20:39	0°♋		evening max el	189 Sep 10 j 19:02	3°♌44'03	46°52'03	

	189 Oct 12 j 16:18	0°♁		morning set	192 Mar 10 j 23:04	10°♁06'15	
greatest brilliancy	189 Oct 19 j 18:59	3°♁29'38	-4.7m		192 Mar 27 j 01:51	0°♁	
retrograde	189 Oct 31 j 00:06	5°♁49'32					
evening set	189 Nov 14 j 08:35	1°♁43'13		superior conj	192 Apr 17 j 18:04	26°♁41'45	0°-46'-59
	189 Nov 17 j 09:41	30°♁		minimum elong	192 Apr 18 j 02:36	27°♁07'59	0°46'39
inferior conj	189 Nov 20 j 11:33	28°♁08'44	0°-22'-45	max. Earth dist.	192 Apr 19 j 05:58	28°♁32'09	1.73421 AU
minimum elong	189 Nov 20 j 12:26	28°♁07'25	0°22'29		192 Apr 20 j 10:33	0°♁	
min. Earth dist.	189 Nov 20 j 08:28	28°♁13'26	0.26351 AU	asc. node	192 May 08 j 17:52	22°♁29'31	
asc. node	189 Nov 21 j 22:32	27°♁15'44			192 May 14 j 20:41	0°♁	
morning rise	189 Nov 26 j 16:26	24°♁32'52		evening rise	192 May 24 j 11:27	11°♁47'50	
direct	189 Dec 10 j 19:48	20°♁33'23			192 Jun 08 j 07:41	0°♁	
greatest brilliancy	189 Dec 22 j 15:32	23°♁11'29	-4.7m		192 Jul 02 j 19:32	0°♁	
	190 Jan 03 j 13:04	0°♁			192 Jul 27 j 09:09	0°♁	
morning max el	190 Jan 30 j 04:07	23°♁20'57	46°43'07		192 Aug 21 j 02:17	0°♁	
	190 Feb 05 j 16:42	0°♁		desc. node	192 Aug 28 j 07:25	8°♁42'34	
	190 Mar 05 j 05:24	0°♁			192 Sep 15 j 01:21	0°♁	
desc. node	190 Mar 13 j 12:22	9°♁24'58			192 Oct 10 j 10:51	0°♁	
	190 Mar 31 j 07:50	0°♁			192 Nov 05 j 19:09	0°♁	
	190 Apr 25 j 19:41	0°♁		evening max el	192 Nov 22 j 06:34	17°♁33'46	47°22'03
	190 May 20 j 23:20	0°♁			192 Dec 05 j 01:12	0°♁	
	190 Jun 14 j 20:31	0°♁		asc. node	192 Dec 19 j 10:25	11°♁50'21	
asc. node	190 Jul 04 j 15:23	24°♁05'28		greatest brilliancy	192 Dec 30 j 01:43	18°♁12'15	-4.7m
	190 Jul 09 j 11:14	0°♁		retrograde	193 Jan 12 j 07:27	21°♁29'01	
morning set	190 Jul 28 j 19:41	23°♁49'22		evening set	193 Jan 29 j 14:13	15°♁37'53	
	190 Aug 02 j 19:31	0°♁		min. Earth dist.	193 Feb 01 j 09:26	13°♁53'37	0.27697 AU
	190 Aug 26 j 22:29	0°♁		inferior conj	193 Feb 02 j 06:17	13°♁20'45	8°23'20
max. Earth dist.	190 Aug 31 j 06:01	5°♁23'08	1.71998 AU	minimum elong	193 Feb 02 j 00:56	13°♁29'11	8°22'54
				morning rise	193 Feb 05 j 11:55	11°♁19'59	
superior conj	190 Sep 03 j 18:37	9°♁47'23	1°23'41	direct	193 Feb 23 j 00:17	5°♁25'13	
minimum elong	190 Sep 03 j 21:32	9°♁56'32	1°23'39	greatest brilliancy	193 Mar 05 j 16:27	7°♁30'43	-4.6m
	190 Sep 19 j 22:07	0°♁			193 Apr 06 j 18:22	0°♁	
evening rise	190 Oct 12 j 16:14	28°♁31'31		desc. node	193 Apr 10 j 00:10	3°♁00'44	
	190 Oct 13 j 20:27	0°♁		morning max el	193 Apr 13 j 03:39	6°♁00'40	46°01'08
desc. node	190 Oct 24 j 05:17	13°♁00'02			193 May 06 j 12:52	0°♁	
	190 Nov 06 j 18:57	0°♁			193 Jun 02 j 13:55	0°♁	
	190 Nov 30 j 18:39	0°♁			193 Jun 28 j 11:52	0°♁	
	190 Dec 24 j 21:13	0°♁			193 Jul 23 j 16:49	0°♁	
	191 Jan 18 j 05:53	0°♁		asc. node	193 Aug 01 j 03:20	10°♁11'44	
	191 Feb 12 j 02:19	0°♁			193 Aug 17 j 08:44	0°♁	
asc. node	191 Feb 14 j 08:08	2°♁39'56			193 Sep 10 j 14:43	0°♁	
	191 Mar 09 j 20:20	0°♁		greatest brilliancy	193 Sep 23 j 20:02	16°♁30'42	-3.9m
	191 Apr 06 j 10:18	0°♁			193 Oct 04 j 14:14	0°♁	
evening max el	191 Apr 16 j 19:42	10°♁21'18	45°22'39	morning set	193 Oct 07 j 15:56	3°♁51'25	
	191 May 10 j 01:10	0°♁			193 Oct 28 j 10:36	0°♁	
greatest brilliancy	191 May 21 j 08:30	6°♁35'50	-4.5m				
retrograde	191 Jun 04 j 06:40	9°♁57'51		superior conj	193 Nov 16 j 22:24	24°♁33'03	0°09'00
desc. node	191 Jun 05 j 21:46	9°♁54'46		minimum elong	193 Nov 17 j 00:48	24°♁40'36	0°08'53
evening set	191 Jun 19 j 14:24	5°♁29'43		behind sun begin	193 Nov 16 j 02:17	23°♁29'43	
inferior conj	191 Jun 25 j 17:42	1°♁49'37	-4°-26'-1	behind sun end	193 Nov 17 j 23:18	25°♁51'28	
minimum elong	191 Jun 25 j 09:06	2°♁03'03	4°23'51	max. Earth dist.	193 Nov 17 j 15:57	25°♁28'18	1.71018 AU
min. Earth dist.	191 Jun 25 j 19:53	1°♁46'13	0.28885 AU	desc. node	193 Nov 20 j 17:00	29°♁18'17	
	191 Jun 28 j 16:36	30°♁			193 Nov 21 j 06:16	0°♁	
morning rise	191 Jul 01 j 03:32	28°♁33'10			193 Dec 15 j 02:42	0°♁	
direct	191 Jul 17 j 10:05	23°♁33'16		evening rise	193 Dec 28 j 18:24	17°♁08'01	
greatest brilliancy	191 Jul 31 j 15:16	27°♁04'50	-4.5m		194 Jan 08 j 01:00	0°♁	
	191 Aug 06 j 02:53	0°♁			194 Feb 01 j 02:33	0°♁	
morning max el	191 Sep 04 j 21:08	24°♁25'33	46°14'42		194 Feb 25 j 09:31	0°♁	
	191 Sep 10 j 10:40	0°♁		asc. node	194 Mar 13 j 20:12	20°♁05'03	
asc. node	191 Sep 27 j 01:01	17°♁42'12			194 Mar 22 j 00:42	0°♁	
	191 Oct 07 j 22:48	0°♁			194 Apr 16 j 03:44	0°♁	
	191 Nov 02 j 10:01	0°♁			194 May 12 j 00:50	0°♁	
	191 Nov 27 j 00:37	0°♁			194 Jun 08 j 07:01	0°♁	
	191 Dec 21 j 06:43	0°♁		evening max el	194 Jun 26 j 22:03	18°♁49'34	45°36'59
	192 Jan 14 j 10:15	0°♁		desc. node	194 Jul 03 j 09:40	24°♁51'33	
desc. node	192 Jan 16 j 14:36	2°♁42'37			194 Jul 09 j 06:24	0°♁	
	192 Feb 07 j 13:57	0°♁		greatest brilliancy	194 Aug 03 j 19:37	16°♁33'34	-4.5m
	192 Mar 02 j 18:59	0°♁		retrograde	194 Aug 14 j 20:14	18°♁44'19	

evening set	194 Sep 01 j 19:40	12° Υ 44'51		minimum elong	197 Feb 02 j 03:16	13° \approx 10'33	1°21'56
inferior conj	194 Sep 04 j 21:03	10° Υ 54'07	-8°-42'-21	max. Earth dist.	197 Feb 06 j 11:08	18° \approx 34'31	1.71946 AU
minimum elong	194 Sep 05 j 00:28	10° Υ 48'54	8°42'13		197 Feb 15 j 15:13	0° X	
min. Earth dist.	194 Sep 05 j 15:28	10° Υ 25'59	0.27794 AU		197 Mar 11 j 19:36	0° Υ	
morning rise	194 Sep 08 j 05:01	8° Υ 53'05		evening rise	197 Mar 14 j 01:12	2° Υ 45'38	
direct	194 Sep 25 j 22:53	2° Υ 54'00			197 Apr 05 j 04:10	0° C	
greatest brilliancy	194 Oct 10 j 04:54	6° Υ 34'38	-4.6m	asc. node	197 Apr 10 j 08:04	6° C 19'47	
asc. node	194 Oct 24 j 12:45	15° Υ 50'43			197 Apr 29 j 17:30	0° II	
	194 Nov 09 j 11:30	0° A			197 May 24 j 12:24	0° C	
morning max el	194 Nov 15 j 16:37	6° A 11'37	46°52'41		197 Jun 18 j 14:41	0° Q	
	194 Dec 07 j 16:55	0° M			197 Jul 14 j 04:29	0° M	
	195 Jan 02 j 13:21	0° X		desc. node	197 Jul 30 j 21:30	19° M 06'57	
	195 Jan 27 j 14:47	0° C			197 Aug 09 j 15:00	0° A	
desc. node	195 Feb 13 j 02:32	19° C 57'24			197 Sep 07 j 00:00	0° M	
	195 Feb 21 j 09:01	0° \approx		evening max el	197 Sep 08 j 09:06	1° M 21'42	46°49'27
	195 Mar 18 j 00:29	0° X			197 Oct 14 j 23:12	0° X	
	195 Apr 11 j 14:54	0° Υ		greatest brilliancy	197 Oct 17 j 09:20	1° X 01'54	-4.7m
	195 May 06 j 04:36	0° C		retrograde	197 Oct 28 j 11:59	3° X 18'44	
morning set	195 May 19 j 23:51	16° C 52'32			197 Nov 10 j 08:18	30° M	
	195 May 30 j 17:00	0° II		evening set	197 Nov 11 j 21:49	29° M 11'43	
asc. node	195 Jun 06 j 05:37	8° II 00'12		inferior conj	197 Nov 17 j 23:34	25° M 38'45	0°-47'-26
max. Earth dist.	195 Jun 22 j 16:33	28° II 13'29	1.73445 AU	minimum elong	197 Nov 18 j 01:23	25° M 36'00	0°46'52
	195 Jun 24 j 03:09	0° C		min. Earth dist.	197 Nov 17 j 22:08	25° M 40'57	0.26352 AU
				asc. node	197 Nov 21 j 00:31	23° M 49'00	
superior conj	195 Jun 25 j 07:02	1° C 25'50	0°43'05	morning rise	197 Nov 24 j 05:03	22° M 01'49	
minimum elong	195 Jun 24 j 23:29	1° C 02'37	0°42'46	direct	197 Dec 08 j 08:09	18° M 03'31	
	195 Jul 18 j 10:36	0° Q		greatest brilliancy	197 Dec 20 j 05:16	20° M 42'50	-4.7m
evening rise	195 Jul 31 j 02:24	15° Q 40'14			198 Jan 04 j 11:06	0° X	
	195 Aug 11 j 15:55	0° M		morning max el	198 Jan 27 j 16:37	20° X 53'28	46°44'11
	195 Sep 04 j 20:31	0° A			198 Feb 05 j 13:28	0° C	
desc. node	195 Sep 25 j 19:24	25° A 57'16			198 Mar 04 j 21:10	0° \approx	
	195 Sep 29 j 01:52	0° M		desc. node	198 Mar 12 j 14:29	8° \approx 48'11	
	195 Oct 23 j 09:13	0° X			198 Mar 30 j 21:28	0° X	
	195 Nov 16 j 20:30	0° C			198 Apr 25 j 08:10	0° Υ	
	195 Dec 11 j 16:30	0° \approx			198 May 20 j 11:06	0° C	
	196 Jan 06 j 09:02	0° X			198 Jun 14 j 07:49	0° II	
asc. node	196 Jan 16 j 22:20	11° X 46'47		asc. node	198 Jul 03 j 17:34	23° II 38'17	
evening max el	196 Feb 02 j 15:29	29° X 21'56	46°23'34		198 Jul 08 j 22:16	0° C	
	196 Feb 03 j 06:45	0° Υ		morning set	198 Jul 26 j 12:59	21° C 40'45	
greatest brilliancy	196 Mar 08 j 18:20	27° Υ 23'58	-4.5m		198 Aug 02 j 06:27	0° Q	
	196 Mar 15 j 07:13	0° C			198 Aug 26 j 09:27	0° M	
retrograde	196 Mar 23 j 12:21	1° C 16'21		max. Earth dist.	198 Aug 28 j 18:34	2° M 58'15	1.72058 AU
	196 Mar 31 j 09:45	30° Υ					
evening set	196 Apr 08 j 18:40	26° Υ 06'12		superior conj	198 Sep 01 j 10:29	7° M 32'43	1°24'06
inferior conj	196 Apr 13 j 20:42	22° Υ 58'36	5°10'00	minimum elong	198 Sep 01 j 12:38	7° M 39'28	1°24'07
minimum elong	196 Apr 14 j 05:49	22° Υ 44'12	5°07'53		198 Sep 19 j 09:12	0° A	
min. Earth dist.	196 Apr 14 j 00:02	22° Υ 53'19	0.28895 AU	evening rise	198 Oct 10 j 04:13	26° A 03'29	
morning rise	196 Apr 19 j 17:14	19° Υ 25'03			198 Oct 13 j 07:41	0° M	
direct	196 May 05 j 08:34	14° Υ 41'07		desc. node	198 Oct 23 j 07:15	12° M 30'45	
desc. node	196 May 07 j 11:48	14° Υ 46'24			198 Nov 06 j 06:20	0° X	
greatest brilliancy	196 May 18 j 04:59	17° Υ 36'12	-4.5m		198 Nov 30 j 06:14	0° C	
	196 Jun 06 j 18:30	0° C			198 Dec 24 j 09:04	0° \approx	
morning max el	196 Jun 23 j 04:24	14° C 28'51	45°45'19		199 Jan 17 j 18:10	0° X	
	196 Jul 08 j 16:26	0° II			199 Feb 11 j 15:23	0° Υ	
	196 Aug 05 j 02:40	0° C		asc. node	199 Feb 13 j 10:16	2° Υ 07'13	
asc. node	196 Aug 28 j 15:16	27° C 21'33			199 Mar 09 j 11:07	0° C	
	196 Aug 30 j 20:35	0° Q			199 Apr 06 j 05:35	0° II	
	196 Sep 24 j 15:53	0° M		evening max el	199 Apr 14 j 10:35	8° II 07'50	45°23'35
	196 Oct 18 j 21:54	0° A			199 May 10 j 23:08	0° C	
	196 Nov 11 j 21:12	0° M		greatest brilliancy	199 May 18 j 22:53	4° C 24'22	-4.5m
	196 Dec 05 j 18:13	0° X		retrograde	199 Jun 01 j 22:13	7° C 48'39	
desc. node	196 Dec 18 j 04:47	15° X 37'58		desc. node	199 Jun 04 j 23:52	7° C 37'39	
morning set	196 Dec 22 j 19:56	21° X 26'54		evening set	199 Jun 17 j 04:58	3° C 22'16	
	196 Dec 29 j 15:27	0° C			199 Jun 22 j 21:09	30° II	
	197 Jan 22 j 14:09	0° \approx		inferior conj	199 Jun 23 j 09:54	29° II 40'08	-4°-8'-43
				minimum elong	199 Jun 23 j 01:41	29° II 52'57	4°06'36
superior conj	197 Feb 02 j 09:32	13° \approx 30'07	-1°-22'00	min. Earth dist.	199 Jun 23 j 12:28	29° II 36'08	0.28897 AU

morning rise	199 Jun 28 j 22:03	26°♊20'08	
direct	199 Jul 15 j 01:46	21°♊23'25	
greatest brilliancy	199 Jul 29 j 07:02	24°♊54'09	-4.5m
	199 Aug 07 j 06:02	0°♋	
morning max el	199 Sep 02 j 11:25	22°♋08'38	46°13'17
	199 Sep 10 j 06:31	0°♌	
asc. node	199 Sep 26 j 03:04	17°♌02'07	
	199 Oct 07 j 13:56	0°♍	
	199 Nov 01 j 23:23	0°♎	
	199 Nov 26 j 13:07	0°♏	
	199 Dec 20 j 18:42	0°♐	
	200 Jan 13 j 21:52	0°♑	
desc. node	200 Jan 15 j 16:47	2°♑13'22	
	200 Feb 07 j 01:18	0°♒	
	200 Mar 02 j 06:06	0°♓	
morning set	200 Mar 08 j 13:18	7°♓47'46	
	200 Mar 26 j 12:47	0°♈	
superior conj	200 Apr 15 j 10:50	24°♈32'24	0°-49'-42
minimum elong	200 Apr 15 j 19:41	24°♈59'36	0°49'22
max. Earth dist.	200 Apr 17 j 00:20	26°♈27'42	1.73389 AU
	200 Apr 19 j 21:23	0°♉	
asc. node	200 May 07 j 19:52	22°♉02'23	
	200 May 14 j 07:31	0°♊	
evening rise	200 May 22 j 06:03	9°♊44'21	
	200 Jun 07 j 18:38	0°♋	
	200 Jul 02 j 06:44	0°♌	
	200 Jul 26 j 20:46	0°♍	
	200 Aug 20 j 14:31	0°♎	